Career Decision-making Self-Efficacy of Higher Education Students in Tanzania: Does Age, Gender, and Year of Study Matter?

Jaquiline Amani

Mkwawa University College of Education, Faculty of Education,
Department of Psychology,
Iringa, Tanzania.
Email: Jacque@muce.ac.tz

Abstract
This article presents the findings of study that deployed a cross-sectional survey design to examine a perceived self-efficacy in career decision-making of undergraduate students in Tanzania. Specifically, the study examined the extent to which age, gender, and year of study influence self-efficacy in career decision-making among students in higher education institutions of Tanzania. The study used a sample of 204 business and engineering undergraduate students randomly drawn from two purposively selected public higher education institutions the University of Dar es Salaam and the University of Dodoma. The results showed that the majority of respondents had high career decision-making self-efficacy in terms of goal selection, occupational information, problem-solving, planning, and self-appraisal. Moreover, with the exception of age, the t-test results revealed significant differences in career self-efficacy between female and male students as well as between first and final year students. The results contribute to a better understanding of the development of career decision-making self-efficacy in relation to the students' gender, age, and year of study in sub-Saharan Africa.

Key words: Perceived career self-efficacy, university students, age, gender, year of study, Tanzania.

Background

Making career decisions is a lifelong process which requires the exploration of the world of work in relation to individuals' abilities, interests, skills and values. Career decision-making begins during childhood when children start thinking about and developing their initial career interests and continues throughout one's life-span (Correll, 2001; Hartung, Porfeli & Vondracek, 2005). According to Seligman (1994), at the age of 12, children start developing their career self-concept and values which help them to pilot and justify their fantasy choices. Over the years, scholars across the world have paid increasing attention to the process through which individuals make career decisions. One of the widely researched upon constructs in relation to the career choice process is the Career Decision-making Self-Efficacy (CDMSE). CDMSE refers to people's judgment in their ability to engage in behaviours related to their career choices, development, and adjustment (Niles & Sowa 1992; Taylor & Betz 1983). It involves an individual's belief that he or she can successfully complete tasks necessary for making career choices (Taylor & Betz 1983).

The role of self-efficacy in career decision-making has been widely researched (Anderson & Betz 2001; Betz & Luzzo, 1996; Chung 2002). These studies have systematically shown that career decision-making self-efficacy is related to people's career goals and development. Other scholars have extended their research on the role of career self-efficacy to successful job search behaviour and job performance (Bandura, 1997; Nesdale & Pinter, 2000). Through one's efficacy in making career decisions, relevant information regarding the complex nature of the career development process can be explored and attained (Niles & Sowa, 1992). Research further indicates that individuals with low self-efficacy levels for career decision-making are

always undecided when it comes to career planning (Taylor & Betz, 1983). In the same vein, Bandura (1997) elaborates that individuals with high career self-efficacy tend to expect success for themselves and seek positive support and outcomes for their career aspirations. He further asserts that the higher career self-efficacy the greater the career goals and the stronger the commitment to the chosen career (ibid.). Implicitly, one's commitment to career planning, intentions and implementation is highly related to one's level of self-efficacy in making career decisions (Chung, 2002). As such, people with high career self-efficacy are more likely to attempt and successfully execute career-related tasks than those with low self-efficacy, who find it difficult to do so due to self-doubt (Chung, 2002; Bandura, 1997). Despite massive acknowledgement on the rationale and significance of career self-efficacy in career decision-making, planning, commitment and development, other scholars assert that individuals have some behavioural areas in which they lack confidence in abilities to execute various tasks. As a result, they avoid certain behaviours and/or limit the range of career options and success (Betz & Hackett, 2006; Leong & Barak, 2001). Thus, an investigation on the development of career decision-making self-efficacy is critical in order to raise awareness which, in turn, can instil confidence in the career decision-making process of individuals in various contexts.

Knowledge of the career decision-making self-efficacy among university students has been an area of keen interests among scholars in the field of Psychology. The argument can be partly explained by the fact that at the university level students undergo a critical transition period from college to the world of work. At this stage, individuals ought to make realistic career choices and plan for them accordingly. In this regard, knowledge of the efficacy among university students in making and implementing career decisions is worth researching. Indeed, undergraduate students' career decision-making self-efficacy is critical to the retention in their chosen fields of study, ability to relate their own skills to specific job requirements, search for their chosen careers upon graduation and commitment to their future careers. Many studies have examined the determinants of career decision-making self-efficacy around the world. Some scholars have linked the development of CDMSE with an individual's socio-economic status (Bozgeyikli, Eroglu & Hamurcu, 2009); occupational barriers and career maturity (Luzzo 1994); age and gender (Choi, Park, Yang, & Lee 2012; Burger, Reisberg, Bailey, Hamann, Raelin, & Whitman, 2010) and career exploration behaviour (Gushue, Scanlan, Pantzer, & Clarke, 2006). Gushue *et al*. (2006) investigated the relationship between career decision-making self-efficacy, vocational identity and career exploration behaviour using a sample of 72 high school students in the United States. The results showed that higher levels of career decision-making self-efficacy are associated with self-conception and greater engagement with career exploration activities. A study by Burger *et al*. (2010) assessed the development of career self-efficacy between male and female engineering undergraduate students in four higher learning institutions. Results from their survey showed that women had higher career decision-making self-efficacy than male students. In Tanzania, a survey by Mbilinyi (2012) compared the determinants of career decision making among secondary school students in both rural and urban settings. The findings revealed that career decision making differed by sex, self-concept, and self-efficacy.

On the other hand, evidence from previous literature indicates a dearth of empirical studies on career decision-making self-efficacy in developing countries in general and Tanzania in particular. Little is, therefore, known about whether or not age, gender and year of study contribute to career decision-making self-efficacy, particularly among students in Tanzania's higher education institutions. Therefore, this study sought to fill this gap in knowledge by examining the contribution of age, gender, and year of study to the development of career decision-making self-efficacy among business and engineering undergraduate students in

Tanzania. More specifically, the study assessed the level of perceived career decision-making self-efficacy among business and engineering undergraduate students; examined the extent to which career decision-making self-efficacy differs for male and female students; examined the extent to which career decision-making self-efficacy differs between first-years and finalists, and across age groups.

Theoretical Assumptions

In attempt to address the career development needs of a diverse population several career theories have been developed. The Social Cognitive Career Theory (SCCT) championed by Lent, Hackett and Brown (1994) was one of the cognitive theories of career choice. SCCT is derived from Albert Bandura's (1986) Social Cognitive Theory to explore how career choices are made and how choices are turned into actions. The theory is grounded on the fact that an individual's choice of a career is highly dependent on self-efficacy beliefs (Lent, Hackett, & Brown 1994). Betz and Hackett (2006) claim that almost every individual lacks confidence in the ability to produce the right behaviour in different contexts, which may result in avoiding certain behaviours or not being motivated to cultivate career-related behaviours (Betz & Hackett, 2006). The implication is that high self-efficacy leads to cultivating certain behaviours while low self-efficacy leads to avoiding certain behaviours (Betz & Taylor, 2012). In 1983, Taylor and Betz developed the Career Decision Self-Efficacy Scale which measures an individual's degree of belief that he/she can successfully complete the tasks necessary for making career decisions in terms of goal selection, occupational information, problem-solving, planning, and self-appraisal (Prideaux & Creed, 2001). Taylor and Betz's (1983) work paved the way for several reviews, validations, and empirical studies on a variety of behaviours and in different contexts regarding career decision-making processes. In this study, the scale was adopted in line with the Social Cognitive Career Theory (SCCT) championed by Lent, Hackett, and Brown (1994) to explore the career decision making self-efficacy of undergraduate students.

Methods

The study employed a cross-sectional survey design in this quantitative inquiry using a sample of 204 business and engineering undergraduate students. The undergraduate students were drawn from two public institutions of higher learning, University of Dodoma a relatively new establishment which is located in Tanzania's capital and University of Dar es Salaam, the oldest university in the country which is situated in the country's commercial city. These programmes were selected because they lead to specific professions upon graduation such that it was more viable to explore about perceived career decision making self-efficacy among the targeted group than other general programmes. Furthermore, in the targeted study areas the business and engineering were among the fields of study with less proportion of female students compared to their counterparts.

The sample size for this study was determined using a formula proposed by Yamane (1967) cited in Israel (1992) at 95% confidence level and sampling error of =.05 based on the students' population in each sampled field of study in respective universities. Accordingly, the sample size for this study was set at 273. The Table of Random Numbers was employed to select the targeted respondents in their respective fields of specialisations using simple random sampling.

The respondents completed a questionnaire that assessed their demographic variables and career decision-making self-efficacy. Nineteen items measuring the students' career decision self-efficacy were adopted from Betz Klein and Tylor's (1996) Career Decision Self-Efficacy Short Form (CDSE-SF) Scale. Undergraduate students rated their confidence in ability to

complete successfully a variety of career-related tasks on a 4-point Likert-type scale ranging from *no confidence* (1) to *complete confidence* (4). Scores above the mean indicated higher levels of career decision-making self-efficacy. Empirical studies by Betz Klein and Taylor (1996), Luzzo (1993), Chung (2002), Nasta (2007), and Nilsson Schmidt and Meek (2002), which examined the psychometric properties of the CDMSE, confirmed its high internal consistency. For example, Nilsson Schmidt and Meek (2002) reported an internal consistency of .97, Chung (2002) reported a coefficient alpha of .93 and Luzzo (1993) reported an internal consistency of r=.83 test-retest reliability for the same scale. In this study, the internal consistency for CDSE-SF Scale measured by Cronbach alpha was r =.83. Permission to adopt CDSE-SF was granted.

Prior to the study, the questionnaire was pre-tested for its reliability using a sample of 100 undergraduate students at the Dar es Salaam University College of Education (DUCE), a constituent non-main campus based college of the University of Dar es Salaam, which did not participate in the main study. The selected sample shared similar characteristics with the study population based at the UDSM main campus and UDOM. The analysis of the findings of the pilot study was useful in ascertaining the applicability, validity and usefulness of the research design and the proposed tools subsequently applied in data collection. The internal consistency for the CDSE-SF scale during pilot stage was r=.93.

The study observed ethical procedures such as seeking research clearance, getting informed consent from the participants, and assuring them of confidentiality and anonymity. The analysis of the data was done quantitatively through IBM SPSS Version 20. A frequency run was done to check for the data entry consistency. Students' level of perceived career self-efficacy was established descriptively through frequency and percentages. An independent sample t-test was run to establish the differences in career self-efficacy among variables of interest which are age, gender, and year of study.

Results

Respondents' Characteristics

In all, 204 respondents (79% response rate) completed a questionnaire. Out of these, 131 (64.2%) came from the University of Dar es Salaam and 73 (35.8%) from the University of Dodoma. The majority of the respondents,113 (55.4%), were pursuing a Bachelor's degree in Business studies. The respondents' ages ranged from 21 to 40 years. The majority of the respondents were aged 21-30 (88.7%) years. More than two-thirds of the respondents, 134 (65.6%), were males and majority of the students, 118(57.8%), were first years. Table 1 summarises the respondents' profile:

Table 1: Respondents' Profile

Variables	Field of Study			
	Business Studies (n=113)		Engineering Studies (n=91)	
	N	%	N	%

Name of University				
University of Dodoma	55	48.6	18	19.8
University of Dar es Salaam	58	51.4	73	80.2
Total	**113**	**100**	**91**	**100**
Gender of the Respondents				
Male	70	61.9	64	70.3
Female	43	38.1	27	29.7
Total	**113**	**100**	**91**	**100**
Year of Study				
First year	52	46	66	72.5
Final year	61	54	25	27.5
Total	**113**	**100**	**91**	**100**
Age of the Respondents				
21-30 years	100	88.5	81	89
31-40 years	13	11.5	10	11
Total	**113**	**100**	**91**	**100**

Perceived Career Self-Efficacy

To determine the level of the perceived career self-efficacy, the respondents were provided with 19 statements, which measured the individual's degree of beliefs that he or she can successfully complete the tasks necessary for making career decisions in terms of goal selection, occupational information, problem-solving, planning and self-appraisal. Table 2 presents responses for each item:

Table 2: Undergraduate Students' Perceived Career Decision-making Self-efficacy

SN	Items	Business Studies (n=113)		Engineering Studies (n=91)	
		Very Much confidence	Very Little Confidence	Very Much Confidence	Very Little Confidence
1	Use the internet to find information on the occupations you are interested in	75 (66.4%)	38 (33.6%)	64 (70.3%)	27 (29.7%)
2	Make a plan of your goals for the next five years	88 (77.9%)	25 (12.1%)	73 (80.2%)	18 (19.8%)
3	Select one occupation from a list of potential occupations you are considering	85 (75.2%)	28 (24.8%)	72 (79.1%)	19 (20.9%)
4	Determine the steps you need to take to enter successfully your chosen career	91 (80.5%)	22 (19.5%)	75 (83.5%)	16 (16.5%)
5	Persistently work at your career goal even when you get frustrated	85 (75.2%)	28 (24.8%)	66 (72.5%)	25 (27.5%)
6	Determine what your ideal career would be	88 (77.9%)	25 (12.1%)	80 (87.9%)	11 (12.1%)
7	Find out about the employment trends for an occupation over the next ten years	60 (53.1%)	53 (46.9%)	59 (64.8%)	32 (35.2%)
8	Join a career that will fit your preferred lifestyle	54 (47.8%)	59 (52.2%)	72 (79.1%)	19 (20.9%)
9	Prepare a good curriculum vitae	70 (61.9%)	43 (38.1%)	63 (69.2%)	28 (30.8%)
10	Decide what you value most in an occupation	89 (78.8%)	24 (11.2%)	71 (78.9%)	19 (21.1%)
11	Find out about the average annual earnings of people in a given occupation	64 (56.6%)	49 (43.4%)	63 (69.2%)	28 (30.8%)
12	Make a career decision and then not worry about whether it was right or wrong	68 (60.2%)	45 (39.8%)	53 (58.2%)	38 (41.8%)

13	Change occupations if you are dissatisfied with the one you initially entered.	66 (58.4%)	47 (41.6%)	74 (81.3%)	17 (18.7%)
14	Figure out what you are and are not prepared to sacrifice to achieve your career goals	76 (67.3%)	37 (32.7%)	59 (65.5%)	31 (34.5%)
15	Talk to a person already employed in a field you are interested in	97 (85.8)	16 (14.2%)	78 (86.6%)	12 (86.6%)
16	Enter a career that will match your interests	98 (86.7%)	15 (13.3%)	75 (82.4%)	16 (17.6%)
17	Identify employers, firms and institutions relevant to your career possibilities	93 (82.3%)	20 (17.7%)	77 (85.6%)	13 (14.4%)
18	Find information on graduate or professional schools	83 (73.5%)	30 (26.5%)	73 (80.2%)	10.8%)
19	Successfully manage the job interview process	83 (73.5%)	30 (26.5%)	72 (79.1%)	19 (12.9%)

On average, Table 2 indicates that the majority of the participants in each field of study (68.4%) demonstrated high confidence in their ability to use the internet to find information on occupations of interest to them (see item 1). This denotes that they were confident about using the internet to search for career-related information. Moreover, the results revealed that more than three-quarters of the students in each field were capable of choosing a career from a long list of potential occupations they were considering (see item 3).

Furthermore, about 78.8 percent of respondents both in Business and Engineering studies were very confident in making a decision on what they value in their careers (item 10). Such confidence indicated that what an individual values most in a certain career is important when it comes to career decision-making. With respect to the ability to identify employers, firms and institutions relevant to their prospective careers, the results show that more than 80 percent of the students from each field were very confident in that regard. Also, on the aspect of the students' ability to prepare curriculum vitae (CV), the findings show that, on average, less than three quarters of the students in each of the fields of study scored relatively low (item 9), implying that they lacked generic skills in, for example, preparing a CV, which is essential when looking for a job.

Interestingly, most of the students in each field of study, who took part in this survey thought that they were not only capable of entering a career that suits their preferred lifestyles and interests (items 8 &16), but were also capable of changing their occupation when they were dissatisfied with the one they had initially entered. Above all, the students' confidence in seeking career information from individuals who were already employed in the fields they were interested in was reported by both sets of students pursuing engineering and business studies. Generally, the findings show that the spirit of career self-determination and appraisal among the students was high as most of them were confident in determining their ideal careers.

The descriptive analysis reveals further that the mean score for this scale was 76.8 whereas the standard deviation was 11.01. The results reveal that 89 (67.9%) of the respondents at the University of Dar es Salaam and 45 (61.6%) of those at the University of Dodoma scored above the average. This implies that, more than 60 percent of the respondents from both universities had high career decision-making self-efficacy, implying that they were confident in making career decisions in terms of planning, setting career goals, searching for occupational information and making self-appraisal.

Further analysis was specifically done with respect to the fields of specialisation. In this regard, the results show that students undertaking business studies in both institutions had high career self-efficacy than those pursuing engineering in either university. Specifically, more than three-quarters (75.2%) of the business students scored above the mean whereas only 59.3 percent of the students majoring in engineering scored above the mean. These results are partly attributable to societal beliefs, perceptions, and attitudes towards science relative to other fields (Kihwele, 2014). Over many years, science subjects have been perceived generally in Tanzania to be difficulty compared to arts and business studies. This perception might affect the students' expectations and beliefs that they have the necessary skills to succeed in engineering compared to business studies. Figure 1 shows the level of perceived career self-efficacy of undergraduate students by their fields of specialisation:

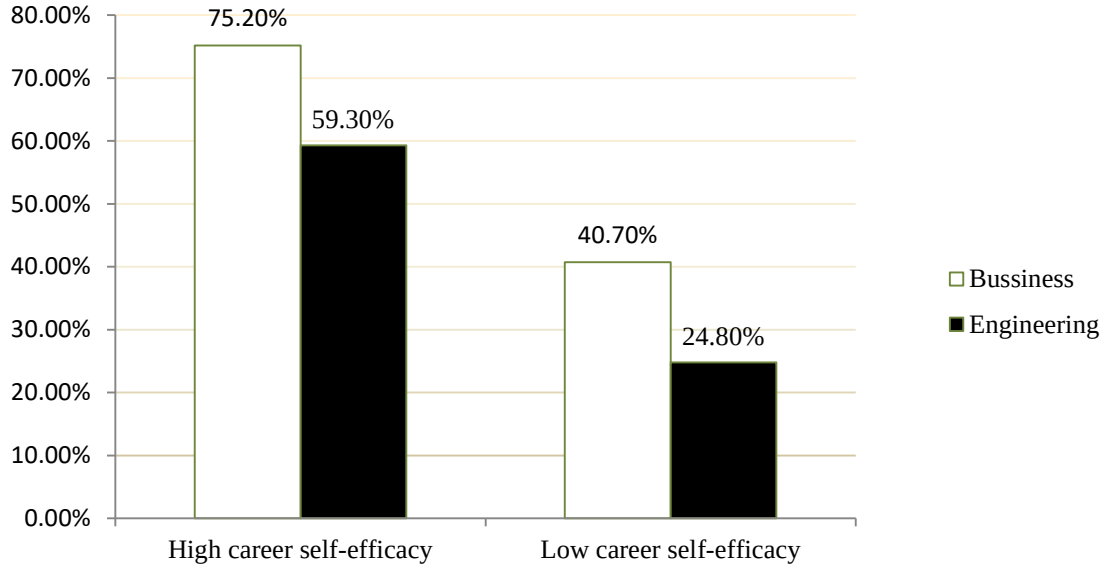

Figure 1: Perceived career self-efficacy by students' field of specialisation

Perceived Career Self-Efficacy by Age, Gender and Year of Study

The study further assessed how age, gender and year of study explain students' career decision-making self-efficacy in both groups. In particular, the findings showed significant impact of gender t (204) =3.29, p=.024. Female students were less confident in making career decision matters (M= 76.6, SD=11.1) than male students (M= 83.2, SD=4.3). The variable of age, on the other hand, had no statistically significant difference in career decision-making self-efficacy t (204)= 1.46, p=.74. With respect to the year of study, the study found a statistically significant variation in career-self-efficacy between first-year students (M= 67.10, SD=8.8) and finalists (M= 77.26, SD=6.4); t (204) = 3.46, p= <.005. This implies that finalist students developed confidence in making career choices than first-years.

Discussion and Implications

According to the Social Cognitive Career Theory (1994), self-efficacy is one of the cognitive attributes which affects ones' career decision making. This means that individual's career choice is highly dependent on self-efficacy beliefs. Confidence that one has the necessary skills to succeed in setting career goals, searching for career information, planning and joining

business and engineering careers was the goal of this study. After all, for an individual to commit successfully to pursuing a certain career path he or she must feel to be competent enough to possess the skills or to perform the tasks necessary in a given career. In this study, the undergraduate students' self-judgment in the ability to complete successfully the tasks necessary for making career decisions were assessed using Betz Klein and Tylor's (1996) Career Decision-making Short Form Scale (CDSE-SF). The items captured major five career choice competencies: First, accurate self-appraisal, for example, the ability to assess accurately one's abilities; second, occupational information i.e. confidence to find out the employment trends for an occupation over the next 10 years; third, goal selection, which has to do with the ability to select one's probable occupation from a list of occupations one is considering; fourth, planning, that is, making a plan of one's goals for the next five years; and, fifth, is problem-solving, meaning the ability to change occupations if one is dissatisfied with one's initial choice.

The results indicate that more than 60 percent of undergraduate students in both groups demonstrated higher careerself-efficacy in planning for their career goals, searching for occupational information, deciding on suitable careers in their life and, ultimately, having the capacity to change their careers whenever necessary to improve their prospects in life. This orientation is evident from both responses across various items in the CDSE-SF scale and overall descriptive analysis of the mean scores (see Table 2). The implication of the analysis of the responses across various items is that the respondents had high confidence in their ability to enforce successfully various career-related decisions. The results of this study build on previous empirical studies to provide additional support for psychometric qualities of Career Decision-making Self-Efficacy Short Form Scale. Tracing back from the conception of career self-efficacy, individuals usually tend to engage in or avoid specific tasks based on their self-judgment of their competence in accomplishing the tasks (Bandura, 1986).

Furthermore, the findings indicate that, with the exception of age, undergraduate students' career decision-making self-efficacy significantly differs in terms of gender and years of study. Female students were less confident in making self-judgment that they possessed requisite skills and competence to succeed in business and engineering careers in the foreseeable future. In fact, literature indicates many factors which contribute to the disparity between male and female students' confidence in career decision-making across diverse population. Some of these factors stem from social, cultural, and biological perspectives. Cultural beliefs about gender, for example, bias individuals' perceptions of their competences in various career-related tasks (Nicolao, 2014; Correll, 2001; Mutekwe, Modiba & Mophaso, 2011). As such, cultural beliefs about gender influence men and women substantially and hence, the resultant different career choices and persistence in the selection of these choices in future along gender lines (Correll, 2001; Mutekwe, Modiba & Mophaso, 2011). Also, the evidence available shows that occupations have been historically segregated by gender, whereby children—as part of social conditioning—learn early about the stereotypical expectations regarding work and career choices (Purvis, 1987; Mutekwe, Modiba, & Mophaso, 2011). The persistency of these stereotypical expectations tends to have more negative effects on female than on male students as they tend to hold low career expectations than their male counterparts (Mutekwe, Modiba, & Mophaso 2011; Purvis, 1987). Consequently, this might lead to discrepancies between the number of female and male students in terms of their confidence in career decision-making. From a biological perspective, males are viewed as heavier and stronger than females and so they tend to occupy positions which require physical strength or other related qualities which might result in differences in the career decision-making process (Purvis, 1987).

With regard to the year of study, finalists reported higher career self-efficacy than first-years. This could be explained by the fact that finalist students have spent more years at the university than first-year students. As such, career exploration was more evident to them than it was to their fellow students in the lower levels. Finalists' experiences and exposure to learning and occupational information through their longer stay at the university than that of freshmen and women can also explain their higher confidence level in making career decisions.

Generally, the findings draw support from previous similar studies in different contexts. For example, Stacy (2003) found that university students possessed a favourable level of career decision-making self-efficacy, indicating that they had a high level of confidence in their ability to make career decisions. Additionally, Kostko's (n.d.) study in Thailand found that students had high level of confidence in their abilities to make career decisions. According to Sterrett (1998), a belief that one can successfully search for a job is necessary to initiate a job search behaviour, obtain employment, and stick with a job once it is obtained. Similarly, Van Ryn and Vinokur (1992) found that the higher the individual level of career self-efficacy, the more job search behaviours and positive employment outcomes. Low career self-efficacy, on the other hand, leads to a lack of full awareness of an individual's potential to pursue successfully different occupations in the world of work (Betz & Hackett, 1981). Indeed, the findings by Mbilinyi (2012) and Idd (2007) in Tanzania support the fact that self-efficacy is an important construct when it comes to students' career decisions at different levels of education. This paper argues that when students develop and maintain confidence in making career decisions through various sources and experiences in their course of life they could choose academic majors and/or programmes and subsequent careers from a list of alternative job options available. Thus, university counsellors should pay attention to various sources of career self-efficacy, which are critical for both female and male students as they shift from college to join the labour market. In fact, university students with higher career self-efficacy are not only capable of making their occupational plans and choices but also persist in pursuing those choices. These findings match very well with Bullock-Yowell, Andrews, and Buzzetta's (2011) explanation that high confidence levels of career decision self-efficacy has significant implications for the career development process and outcomes.

Conclusion

Based on the results of this study, it is apparent that career decision-making self-efficacy is partly related to gender and the year of study of the students. These findings have further implications for both perceived and actual difficulties in planning, making, and actualising career decisions. As such, students in the first-year need more support to define their long-term career plans than their final year counterparts for them to remain committed to their long-term career plans so that they can end up finally living up to those dreams. Thus, counsellors in universities should be aware of how the career decision-making self-efficacy unfolds among university students, the essential factors that contribute to career decision-making and how to facilitate the career plans among prospective graduates as they are in their final stages of joining their careers that could transform their lives for good or even doom their prospects. Consequently, the counsellors may use knowledge of career decision-making self-efficacy to develop appropriate interventions which can enhance female students' career self-efficacy to bring about gender parity in the handling of such matters between the sexes.

References

Anderson, S. L., & Betz, N. E. (2001). Sources of social self-efficacy expectations: their Assessment. *Journal of Vocational Behaviour, 58,* 98-117.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Review, 84,* 191-215.

Bandura, A. (1986). *Social foundations of thought and action.* Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman.

Betz, N. E., & Hackett, G. (1981).The relationship of career-related self-efficacy expectations perceived career options in college women and men. *Journal of Counseling Psychology, 28,* 399 - 410.

Betz, N. E., & Luzzo, D. A. (1996). Career assessment and the career decision-making self-efficacy scale. *Journal of Career Assessment, 4,* 413-428.

Betz, N., & Hackett, G. (2006). Career self-efficacy: Back to the future. *Journal of Career Assessment, 14,* 3-11.

Betz, N.E., & Taylor, K. M. (2012).*Career decision self-efficacy scale and short form sampler set: Manual, instrument and scoring guide*. United States: Mind Garden Inc. Retrieved from http://www.mindgarden.com/products/cdse.htm.

Betz, N.E., Klein, K, & Taylor, K.M. (1996). Evaluation of a short form of the career decision making self-efficacy scale. *Journal of Career Assessment, 4,* 47-57.

Bozgeyikli, H., Eroglu, S. E, & Hamurcu, H. (2009). Career decision making self-efficacy, career maturity and socioeconomic status with Turkish Youth. *Georgian Electronic Scientific Journal: Education Science and Psychology, 1* (14) 15-24.

Bullock-Yowell, E., Andrews, L., & Buzzetta, M. E. (2011). Explaining career decision making self-efficacy: Personality, cognitions, and cultural mistrust. *The Career Development Quarterly, 59,* 400-411.

Burger, C., Reisberg, R., Bailey, M., Hamann, J., Raelin, J., & Whitman, D. (2010). The effect of gender on support and self-efficacy in undergraduate engineering programs.*Proceedings of the 2010 ASEE Annual Conference.* Available: http://www.coe.neu.edu/pathways/EffectofGender.pdf.

Choi, B. Y., Park, H., Yang, E., Lee, S. K., Lee, Y., & Lee, S. M. (2012). Understanding career decision self-efficacy: A meta-analytic approach. *Journal of Career Development, 39*(5), 443–460. http://dx.doi.org/10.1177/0894845311398042.

Chung, Y.B. (2002). Career decision making self-efficacy and career commitment: Gender and ethnic differences among college students. *Journal of Career Development, 24*(4). https://doi.org/10.1023/A:1015146122546.

Correll, J. S. (2001). Gender and the career choice process: The role of biased self-assessments. *American Journal of Sociology, 106* (6), 1691-1730.

Gushue, G. V., Scanlan, K. R. L., Pantzer, K. M., & Clarke, C. P. (2006). The relationship of career decision-making self-efficacy, vocational identity, and career exploration behavior in African American high school students. *Journal of Career Development, 33,* 19-28.

Hartung, P. J., Porfeli, E. J., & Vondracek, F. W. (2005). Child vocational development: A review and reconsideration. *Journal of Vocational Behavior, 66,* 385-419. http://dx.doi.org/10.1016/j.jvb.2004.05.006.

Idd, H. (2007). *Impact of academic performance and perceived self- efficacy on career choice among secondary school students in Dar es Salaam*. (Unpublished M.A.(ASP) dissertation). University of Dar es Salaam, Dar es Salaam.

Israel, G. D. (1992). Sampling the evidence of extension program impact. *Program Evaluation and Organizational Development, Institute of Food and Agricultural Sciences*, University of Florida.PEOD-5.October. Retrieved from http://edis.ifas.ufl.edu.

Kihwele, J.E. (2014). Students' perception of science subjects and their attitude in Secondary schools. *Journal of Educational Research, 1* (1), 1-8.

Kostko. (n.d). Career decision making self-efficacy among high school students in selected public and private schools in Bangkok, Thailand. Retrieved from http://www.assumptionjournal.au.ed.

Lent, R. W., Hackett, G., & Brown, S. D. (1994). Towards a unified social cognitive theory of career, academic interest, choice and performance. *Journal of Vocational Behaviour*,45, 79-122.

Leong, F. T. L., & Barak, A. (Eds.) (2001). *Contemporary models in vocational psychology*.Mahwah, NJ: Lawrence Erlbaum. Associates.

Luzzo, D. A. (1993). Reliability and validity testing of the Career Decision-Making Self-Efficacy scale. *Measurement and Evaluation in Counseling and Development, 26*, 137-142.

Luzzo, D. A. (1994). *Assessing the value of social-cognitive constructs in career development*. Paper presented at the Annual Convention of the American Psychological Association, Los Angeles, CA. August.

Mbilinyi, C. (2012). *Determinants of career decision making among secondary school students in Tanzania.* (Unpublished MA.ASP dissertation). University of Dar es Salaam, Dar es Salaam.

Mutekwe, E., Modiba, M., & Maphosa, C. (2011). Factors affecting female students' career choices and aspirations: A Zimbabwean example. *Journal of Social Science, 29* (2).133-141.

Nasta, K. A. (2007). *Influence of career self-efficacy beliefs on career exploration behaviour*. (Unpublished master's dissertation). The State University of New York at New Paltz. Retrieved from https://dspace.sunyconnect.suny.edu/bitstream/handle/1951/42318/KristenNastaMastersThesis.pdf?sequence=1.

Nesdale, D., & Printer, K. (2000). Self-efficacy and job-seeking activities in unemployed ethnic youth. *Journal of Social Psychology, 140*, 608-614.

Nicolao, J.S. (2014). *The effects of gender stereotyping on career choice among secondary school students in Dar es Salaam.* (Unpublished master's dissertation). Open University of Tanzania, Dar es Salaam.

Niles, S. G., & Sowa, C. J. (1992). Mapping the nomological network of career self-efficacy. *Career Development Quarterly, 41*, 13-22.

Nilsson, J. E., Schmidt, C. K., & Meek, W. D. (2002). Reliability generalization: An examination of the Career Decision-Making Self-Efficacy Scale. *Educational and Psychological Measurement, 62*, 647–658.

Prideaux, L. & Creed, P. A. (2001). Career maturity, career decision-making self-efficacy and career indecision: A review of the accrued evidence. *Australian Journal of Career Development. 10*(3), 7-12.

Purvis, C.R.C. (1987). *The effects of gender-role stereotyping and the career aspirations and expectations of pre-adolescent children of high intellectual ability*. (Unpublished master's dissertation). University of Lethbridge, Lethbridge, Alberta, Canada.

Seligman, L. (1994). *Developmental career counseling and assessment*. London: Sage.

Stacy, M. E.W. (2003). *Influences of selected demographic variables on the career decision making self-efficacy of college seniors.*(Unpublished Doctoral Dissertation), Northwestern State University. Retrieved from http://etd.lsu.edu/docs/available/etd-0405103-105145/unrestricted/Stacy_dis.pdf.

Sterrett, E. A. (1998). Use of a job club to increase self-efficacy: a case study of return to work. *Journal of Employment Counseling*, 35, 69-78.

Taylor, K. M., & Betz. N. E. (1983). Applications of self-efficacy theory to the understanding and treatment of career indecision. *Journal of Vocational Behavior*, *22*, 63-81. (Original CDMSE).

VanRyn, M., & Vinokur, A. (1992). How did it work? An examination of the mechanisms through which an intervention for the unemployed promoted job search behavior. *American Journal of Community Psychology, 20,* 577-597.