Factors influencing occupational aspirations among girls in secondary schools in Nairobi region - Kenya

Josephine Kisilu, Elishiba Kimani, and Donald Kombo

Full Length Research

Factors influencing occupational aspirations among girls in secondary schools in Nairobi region - Kenya

[1]Josephine Kisilu, [2]Elishiba Kimani*, and [3]Donald Kombo

[1]Department of Educational Psychology,Kenyatta University,P.O. Box 43844-00100,Nairobi, Kenya.
E-mail: Jnkisilu@Yahoo.Com.Telephone: 0722342106
[2*]Department of Gender And Development Studies,Kenyatta University,P.O. Box 43844-00100,Nairobi, Kenya.
E-mail: Elishibakimani@Yahoo.Com.Telephone: 254 723 702 041
[3]Department of Educational Foundation,Kenyatta University,P.O. Box 43844-00100,Nairobi, Kenya.

The main purpose of this study was to find out the factors, which influence occupational aspirations of girls in secondary schools. This study focused on the premise that the occupational aspiration for girls is majorly influenced by the stereotypes in the socialization process that dictates on what are and should be. The result is that majority of secondary school girls end up choosing wrong and unfulfilling careers. This study was carried out in two girls' secondary schools in Nairobi region- Kenya (day and boarding). The rationale for the selection of the schools was based on the oldest and biggest in the region. Form four girls formed the study sample. Their inclusion was based on the assumption that they were mature and had selected their examinable subjects which eventually determined the careers they were likely to engage in. Survey design was employed as it allowed the collection of the data through a designed questionnaire. A total of 87 female students participated in the study. Data was analyzed using descriptive statistics. The findings revealed that there are factors that affect secondary school girls' occupational aspirations, grounded on the family settings, parenting, siblings, and other relatives. Other factors were the students' personality and self-esteem, the school environment, friends and role models. The identified strategies to enhance positive occupational aspirations included the provision of adequate information on career choice, role models, guest speakers, deliberate motivation for girls to do well in school and a favorable environment for girls to do well and aspire for good careers.

Key Words: Factors, influencing, occupational, aspirations, Nairobi, Kenya.

INTRODUCTION

Most youth recognize the importance of education for their future jobs, and see university as the path to future achievement. Such beliefs about the job relevance and education are strong predicators of aspirations. Further they play a substantial role in shaping the anticipated pathways of young people, (Aspirations of Canadian youth-May 2004). Moreover, the major role of attending literacy classes is to have a better, occupation in future job market. Thus, the major role of going to school is associated with a brighter future in earning and learning. The type of occupation one will hold is determined during school days.

Education system in Kenya allows student to choose their career path in secondary education, depending on the subjects they opt to specialize in. The choice is further affirmed through the performance in Kenya Certificate of Secondary Education (KCSE). At this time, most of them are between the ages of 17 – 18 years. O'Keyet al. (1993) observes that at this age, students often get trapped on career choices. Drummond and Ryan (1995), state that during this stage, the student's self-concept is determined by what parents, teachers, peers and counselors expect of them. Beyond academic performance, studies on gender and occupational choice observe that early experiences that children have in school and out of school impress on their minds what to desire to do in the field of work, Nwachukwu (1987); Ndanbuki (1987).

Influence from the peer parents and teachers influence students, occupational aspirations. Girls are found to be influences by female role models as well as that of their female parents/guardians and other female relatives and

family friends. Boys on the other hand are influenced by the male counterparts, Mugenda et al. (2010). The school too is said to be a determinant factor, mainly based on its track record in performance, Arasa (1995). Equally important is the family social-economic status in terms of the number of children, occupation and the economic status. Aswani, (1992) observes that family's economic status impacts positively in children's high occupational aspirations

In most cases the purpose of schooling is to get prepared to work in the future or ably take part as future adults and parents. To ensure that this happens, many parents, especially those who are aware, aspire to influence the occupational aspirations for their children. In most cases the career choice for girls and boys from all perspectives is influenced by the values that are held, on what either gender can do, on the basis of the held stereotypes, from the socialization process. The problem is aggravated by to lack of proper government guided procedures for post-secondary education, lack of appropriate information from school career counselors and parents. It is out of this concern that reason that this study was conceived to investigate on the factors that influence on occupational aspirations among girls in secondary schools in Nairobi Region in Kenya. The study aims to enlighten parents, teachers and counselors on the need to rise up to their responsibility and take interest in re-dressing the stereotypes that shape the occupational aspirations of the young boys and girls. The major emphasis should be the interests and capacities, rather that the socialized values and aspirations, purely on the basis of gender.

Statement of the problem
This study takes the occupational aspirations to mean the desires, thought of and verbalized by young individuals that influence what they aspire to study and engage in the world of work. The study concern is grounded on the recognition that in many cases students occupational aspirations are more influenced by the stereotypes held on what men and women can be, rather than their potentials, interests, value and special abilities. Further in the absence of proper career guidance, many other factors influence students' occupational aspirations, emanating from the family members, teachers, relatives and peers, Aswani (1992). As a result, many students in Kenya end up in occupations that they had not aspired for. Yet at the secondary school level, students are given opportunities to select subjects that dictate the areas they would wish to specialize in middle level colleges and the universities. Although the selection is assumed to be on the basis of their performance, their interests are never considered, while majority choose careers according to influence by peers, teachers, financial capability of the parents or with no specific reasons. The problem of the study is grounded on the fact that as studies reveal, girls are more affected than boys due to the stereotypes that

often push them into specific jobs that are assumed to be meant for them. While the same applies for boys, theirs assumed careers and occupations are the better and often well paid. It is out of this concern that this study intended to establish the factors influencing occupational aspirations among girls in Secondary School in Kenya. The study was done in Nairobi Region.

Objective of the study
The Overall objective of the study was to investigate on the factors that influence occupational aspirations among girls in secondary schools in Nairobi region of Kenya. The specific objectives were to:
- investigate on the factors which influence the occupational aspirations of girls in secondary schools;
- to suggest strategies to enhance positive occupational aspirations among girls in secondary schools.

Significance of the study
This study is significant in that performance of students' in the final examinations in Kenya has great influence on future occupation. As parents and teachers play a great role in influencing their children towards their occupations therefore the findings, conclusion and recommendations may help parents to create an enabling environment toward nurturing their children's aspirations. It is anticipated that the information will help secondary school, particularly the female students to keep a braised of their aspiration towards realistic careers in life.

Theoretical framework
This study was guided by two theories, namely the Structural Theory, which focuses on individual characteristics and occupational tasks and the Developmental Theory, which focuses on human development across life span. The Structural theory, which began with Parson, who proposed that a choice of a location depends upon the knowledge of oneself, thorough knowledge of job specifications and, the ability to make a proper match between the two. Specific factors for interaction according to the theory are the clear understanding of the self, one's aptitudes, abilities, interests, ambitions, resources and limitations. These are further reinforced by a thorough knowledge of the occupational requirements, conditions of success, advantages and prospects in different lines of work. However, for successful choice of the occupation, Parsons observes that reasoning on the relations of all these variables is important.

The developmental theory formulated by Super (1957) recognizes the changes that people go through as they mature and which influence their occupational choice. According to this theory, career patterns are determined by socio-economic factors, mental and physical abilities, personal characteristics and the opportunities to which persons are exposed. People seek career satisfaction through work roles through which they can express
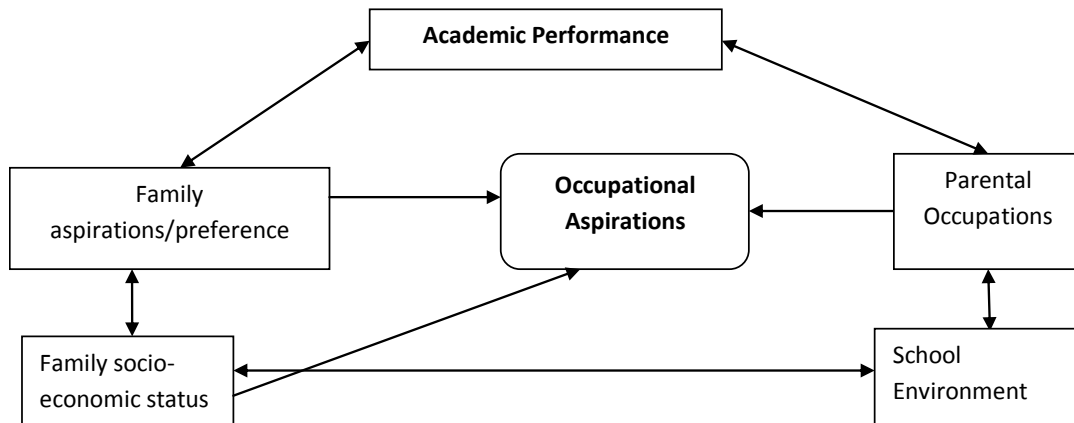
Figure 1: Determinants of girls' occupational preference

themselves, implement and develop their self-concepts. Career maturity, a main concept in Super's theory is manifested in the successful accomplishment of age and stage development tasks across the life span, Kharchenko (1997). The assumption held is that an understanding of these stages helps in career guidance in that educators, parents are able to understand their teenagers and provide appropriate vocational guidance. The theory identifies six factors in vocational maturity, namely, awareness of the need to plan ahead, decision making skills, knowledge and use of information resources, general world of work information and detailed information about available occupations. The factors are very important to develop in any education system and at all levels, as a way of ensuring that students have the information and knowledge to make occupational choices, regardless of the held values and aspirations over what girls and boys can either do or not do.

Conceptual framework
This conceptual framework for the study is based on a number of assumptions, which hinge on relationships of the identical concepts. While the academic aspirations are considered to be central in this study, it dictates the operations and influences of other factors, namely family and school environment. Since the influence may be either positive or negative, academic performance of an individual student is likely to influence future occupational aspirations.

Thus among the specific factors likely to impact on girls' occupational aspirations are the parental occupation, family size and social-economic status. On the other hand, school environment may, to some extent dictate the performance and finally occupational aspirations. The family can influence either positively or negatively. However, it is important to note that the identified factors do not operate in isolation of each so that chances are that they are intertwined, as demonstrated in the following conceptual framework (Figure 1).

STUDY METHODOLOGY
The study adopted a survey research design, which according to Orodho, (2003) allows for the collection of vital data through interviews or questionnaires to a selected sample of respondents. The design was also useful in collecting information about people's attitudes, opinions, habits or perceptions about issues under investigation, Orodho and Kombo, (2002). Further, the study was carried out in Nairobi Region, which forms the capital city of Kenya. It is the smallest region with an area of 696 square kilometers of land. It has a population of 214, 3254 and a population density of 3,079 people per square kilometer (Kenya Bureau of Statistics – 1999).

The region has 5 National and 41 provincial schools. Out of the 41 schools, 15 are mixed schools (for boys and girls), 11 are boys' only schools and 15 are girls' only schools. The 15 girls' only schools are further categorized into 7 day girls' schools and 8 girls' boarding schools. Only two girls' secondary schools were randomly selected for the stud, one being a day school and the other one being a boarding school. The schools were State House girls (Boarding school) and Ngara Girls school (Day school). The selected schools had been in existence for more than 20 years. On the other hand, one class in form four streams was randomly selected from each school. In total 87 students were selected as study respondents, comprising 40 from State House Girls School and 47 from Ngara Girls School. Form four students were selected because the subjects taken at this stage formed a base for future career choice and in higher levels in the education ladder. The main instrument used to collect data was the Questionnaire, administered to the form four girls for the purpose of collecting vital data on the basis of which the findings, conclusions and recommendations were made.

STUDY FINDINGS AND DISCUSIONS
The study respondents were aged between 16 and 19

Table 1: Frequency on the number of family members

No. of Family Members	State House Girls		Ngara Girls		Total
	Freq.	%	Freq	%	
1	0	0%	2	4.25%	2
2	4	10%	3	6.38%	7
3	4	10%	10	21.28%	14
4	9	22.5%	7	14.89%	16
5	10	25%	9	19.15%	19
6	5	12.5%	8	17.02%	13
7	6	15%	6	12.76%	12
8	2	5%	2	4.25%	4
Total	40	100.00%	47	100.00%	87

Table 2: Birth Order of the study respondents

Birth Order	State House Girls		Ngara Girls		Total
	Frequency	%	Frequency	%	
1	9	22.5%	6	12.76%	15
2	8	20%	8	17.02%	16
3	9	22.5%	4	10.64%	13
4	3	7.5%	7	14.89%	10
5	00	0%	00	0%	00
6	1	2.5%	3	6.38%	4
Last Born	11	25%	16	34.04%	27
Only Child	00	0%	2	6.38%	2
Total	40	100.00%	47	100.00%	87

years of age. According to Super's formalization of stages and development task, these students are in the expletory stage (Super 1957). Accordingly, this is a stage characterized by 'Try Out' through classes, work experiences and hobbies. Further it is a stage at which skills are developed, relevant information collected and vocational and other choices made.

Factors found to influence occupational aspirations among the secondary school girls
Number of family members
As shown in table 1, out of the 87 students in the study, 2 (4.25%) came from a family where they were the only children; 7 came from a family with two children; 14 were 3 in their family; 16 reported that their family had 4 children; 19 7 children while 4 reported that their family had 8 children. The implication of this in the occupational preference was reflected on the birth order of the respondents as shown in table 2.

Birth order of the respondents
As shown in table 2 most (27) of the respondents were the last born in their families while two of them were the only children in their families. Fifteen of the respondents indicated that they were the first born in their families; 16 reported that they were second born; 13 were third born; 10 were fourth born while four of them were sixth born in their families. The findings indicated that family members especially the parents and older siblings affect the occupational and career choice.

Influence by siblings and parents
However 50 respondents (57.5 %) stated that they would choose different occupations from those of their siblings and parents. On the other hand the remaining 37 (42.5%) indicated that they would prefer same occupations as their parents and older siblings. This thus indicated that the level of education of the parents and other siblings may have an impact on the students' occupational choice. Majority of the respondents 65 (75.8%) affirmed that girls occupational choice were more influenced by their mothers and older sisters than their fathers and older brothers. The findings conform to Mugenda, Kimani, Maina, Wainaina (2010) whose study confirmed mother's level of education contributes more to girls aspirations for higher education. The study agrees with Swift (1967) who says that the positive attitudes of educated parents towards education are easily transferred to their children. In this case, the family acts as a source of ideology, providing beliefs, values and codes of behavior (Anthony and Chiland (1978).

These results agree with a study done by Kitivo (1989), who observed that the more educated a parent is the greater, the stress on the standards of excellence for the children. A parent thus plays a vital role in shaping the child. The results also agree with a study done by Mukonyi (1987), who confirmed that parents influence their children's occupation a great deal.

Influence by identified role models
Asked to name identified role models who could have

Table 3: Identified role models and other factors influencing the occupational aspirations

Person	State House Girls		Ngara Girl		Total
	Frequency	%	Frequency	%	
Mother	4	10%	4	10.64%	8
Peers	1	2.5%	1	2.1%	2
Aunt	4	10%	6	12.76%	10
Uncle	3	7.5%	4	10.64%	7
Self-motivation	12	30%	10	21.28%	22
Father	6	15%	4	10.64%	10
Other Role Models	5	12.5%	10	21.28%	15
Sibling	2	5%	4	10.64%	6
Teachers	3	7.5%	2	4.24%	5
Total	**40**	**100.00%**	**47**	**100.00%**	**87**

Table 4: Effect of occupational aspirations on academic performance

Statement	SD	D	U	A	SA	Total
I base my aspirations on my class performance	25	33	5	12	22	87
Academic education is a requirement in the professional field	00	2	4	28	53	87
Passing in examinations leads to prestigious occupations	6	8	00	28	45	87
I want to pursue my occupation through higher education	6	2	00	20	59	87

influenced the girls' occupational aspirations, the study respondents indicated that these were mothers, fathers, peers, teachers, siblings, uncles/aunts, role models and self, as shown in table 3.

Trends observed in table 3 indicate however that some of the respondents (22) made their occupational choices based on their own goals and aspirations. Fifteen of them were influenced by other role models, (who included historical and media personalities); 8 by their mothers; 2 were influenced by their fellow peers; 10 by their families; 7 by their uncles; 10 by their fathers; 6 by their brothers and five were influenced by their teachers. When asked if the choice for their occupation was the best, 73 of the respondents reported that their occupational choice was the best while 14 of them reported that their occupational choice was not the best according to their ratings. It is evident from the table that majority of the respondents were self motivated. Mothers and other family members were also ranked highly.

Academic performance of girls in secondary schools
As shown in table 4, occupational aspiration was influenced by academic performance in that the occupational success was associated with high academic performance. The table however shows that only 34 of them did agree with the fact that their class performance did influence their future aspirations. On the other hand it was amazing to note that 81 of the students agree with the statement that academic education is a requirement in the professional field which implies that they recognize the need for education in their future educational aspirations. Seventy three (73) of the respondents reported that the only way to join a prestigious occupation was through passing in exams which also reflects that

there is need for high academic achievement if one aspires to join the prestigious occupations. Finally 79 of the students reported that they wanted to pursue their occupations through higher education which on the other hand clearly revealed that the students do recognize that higher education as a good avenue to better and prestigious occupation. The findings agrees with that of Jimmy (2005), whose study concluded that there was a significant relationship between the learner's educational and occupational aspirations.

School environment
The school environment was found to have had a role to play in influencing the occupational aspirations of the students, especially in terms of performance record and ability to influence to perceptions and expectations of students through interactions with the staff and other students. The school environment was found to play some part in this, especially in terms classrooms, laboratories, and dormitories, surrounding environment, school discipline, library and availability of relevant test books. However, tables 5 and 6 shows a variability of the favorability in the two schools under study and from the students' perspective. As the two tables demonstrate, majority of the students indicated their schools had favorable facilities and therefore positively influenced their occupational perception. However, the trends shows that in the two schools, all the aspects were rated as favorable in influencing the students perception towards higher academic achievement and therefore higher levels of occupational aspirations.

The findings agree with a study done by Somerset (1971), who examined on the issue of socio-economic status and the impact of the school type on one's

Table: 5: Responses of students on the role of school environment in influencing their occupational perception at Statehouse Girls School

Statement	VF	F	NS	UF	VUF	Total
Classrooms	0	30	6	4	0	40
Desk Arrangement	0	32	2	6	0	40
Laboratories	5	28	7	0	0	40
Dormitories	5	27	4	2	0	40
Ablution	7	18	12	3	0	40
Surrounding Environment	10	24	0	0	6	40
School Discipline	6	16	11	7	0	40
Library	23	16	1	0	0	40
Students Text Books	4	14	0	8	14	40
Total Frequency	**60**	**205**	**51**	**30**	**14**	

Table 6: Responses of students on the role of school environment in influencing their occupational perception at Ngara Girls School

Statement	VF	F	NS	UF	VUF	Total
Classrooms	0	32	6	7	2	47
Desk Arrangement	0	33	9	5	0	47
Laboratories	8	30	7	2	0	47
Dormitories	7	25	8	7	0	47
Ablution	7	18	12	3	7	47
Surrounding Environment	5	20	0	15	7	47
School Discipline	7	20	13	7	0	47
Library	20	17	1	9	0	47
Students Text Books	5	16	0	12	14	47
Total frequency	**69**	**211**	**56**	**67**	**30**	

Table 7: Enhancing occupational aspirations of girls in secondary schools

Factors	Frequency	Percentage
Through Guidance and Counseling	19	21.84%
Motivate and Encourage them	10	11.49%
Provide role model especially women	15	17.24%
Career advisors and counseling on the benefits of higher education	7	8.0%
Creating more vacancies in the University and Lowering the entry point for girls	5	5.75%
Encourage girls to venture in science related subjects	6	6.9%
Encourage girls to boost their self esteem	7	11.49%
Avail appropriate information on different careers and how to achieve them	10	11.49%
Deliberate activities to encourage the girls set attainable goals and aspirations	8	9.2%
Total	**87**	**100.00%**

aspirations. He found that majority of the students in national schools had high educational and occupational aspirations as compared to those in District schools. The schools studied had high scores, library facilities, laboratories, dormitories and school discipline. The schools are expected to perform well and have high academic and occupational aspirations. Kibera (1993) found that better equipped and staffed schools produce students with higher educational and occupational aspirations.

Socio-economic status of the family in influencing the students' occupational aspirations
Asked whether their families' economic status played any role in occupational choice, 20 respondents strongly

disagreed; 48 disagreed; 17 agreed while 12 strongly agreed with the statement that their families financial status did influence their future goals and aspirations. The findings agree with that of Arasa (1995) and Aswani (1992). The study by Mugenda, Kimani, Maina and Wainaina confirms the same, with an observation that girls tended to be more influenced by the career of the mothers, more than that of their fathers.

Strategies of enhancing occupational aspirations of girls in secondary schools
When asked to give suggestions on what can be to enhance the occupational aspirations and as table 7 shows, 19 (21.84%) of them reported that guidance and counseling was an effective means of enhancing the girl

aspirations, while 15 (17.24%) reported that there was need to provide the girls with role model and especially female role models who were highly educated and in prestigious occupations.

It was also indicated that there was need to provide the girls with career information so that they can be able to make informed choices and to set attainable goals. On the other hand, ten (11.49%) of the respondents indicated that there was need to motivate and encourage the girls by teachers and parents and also advice girls on the benefits of higher education and to create more opportunities for girls to join the universities by lowering the entry points into the universities. Other strategies for enhancing occupational aspirations included the provision of more opportunities in the university through Affirmative Action (lowering of one point), encouraging girls to venture in to the science related subjects and also encouraging them to have higher self-esteem. On the deliberate activities to encourage the girls set attainable goals and aspirations, study respondents specified the invitation of guest speakers mainly professionals and Chief Executive Officers of successful organizations, country-wide.

CONCLUSION

The findings of this study indicated the need to engage on enhancing occupational aspirations for girls in secondary schools. The fact that the factors that affect the aspiration negatively mainly on schools, homes, and the students' personality means that something can not only be done but that it needs to be done urgently. Further the strategies that the study identified for remedy are practical, especially the provision of relevant information, role models, career advisors and deliberately encouraging the girls to take sciences and also to boost their self-esteem.

REFERENCES

Arasa JN (1995): Relationship between students' attitudes towards, parental education and parental involvement with children's school work among slums children. Unpublished master's thesis, Kenyatta University, Kenya.

Aswani JS (1992). Some of the home environment factors that influence educational and occupational aspirations of standards eight pupils. Unpublished master's thesis, Kenyatta University

Brun G (1978). Conflicted Parents: High and Low Vulnerability of Children to Divorce, in E.J Antony Chiland and C. Komperuik (Eds): The child in His Family. 4: 253-259. J. Wiley and Sams: New York.

Caplow T (1954). The Sociology of Work. University of Minnesota Press. Minneaspolis

Cook TD, Church MB, Ajanaku S, Schadish WR, Kim, Cohen R (1996). The development of occupational aspirations and expectations among inner-city boys. Child development, 67: 3368-3385.

Coxon PM, Jones LC (1979). Measurement and Meanings: Techniques and Methods of studying occupations cognitions. MacMillan Press Ltd, London.

Durojaiye MO (1970). School Educational and occupational choice. Social Psychological research in Nigeria international secondary school. West African J. Edu. 14(1): 63.

Drummond R, Ryan CW (1995). Career Counseling: A Development Approach. Merrill Publishing Co.

Ryan CW (1995). Career Counseling: A Development Approach. Merrill Publishing Co.

FAWE (2001). Fawe News: The News Magazine about the Education of Girls and Women in Africa. 9(FAWE): Nairobi,Kenya.

Gazzaniga MS (1980). Psychology. Harper and Row, Publishers, New York. pp. 620-628.

Goodwins JC (1988). Research in Psychology. Methods and design. 2nd edition. John Wiley and Sons, Inc. New York. pp. 513-519.

Jackson JA (1970). Professions and professionalization. Cambridge University Press, Oxford. pp. 12-13.

Jimmy AL (2005). A comparative study of occupational aspirations of Physically Handicapped Secondary School Students and actual job placement of these students. Unpublished master thesis, Kenyatta University, Kenya

Kharchenko I (1997). Education in the system of values and life plans of seniors school students. Methodology and First Result of a Sociological Survey in Narisibirsk. Issue 9 Mascow. Moskorskill Obsch.

Kibera HW (1993). Career aspirations and expectations of secondary school students of 8-4-4 system of education in Kiambu, Kajiado and Machakos District. Unpublished Doctoral thesis, Kenyatta University, Kenya.

Kitivo EM (1989). To study the relationship between secondary schools pupils achievement motivation and Educational/occupational level of their parents. Unpublished master's thesis Kenyatta University.

Kombo DK, Tromp DLA (2006). Proposal and Thesis Writing, Pauline Publications Africa, Nairobi

Miller N, Maruyama G (1976). Ordinal Position and Peer Popularity. Journal of Personality and Social Psychology, 33: 123-131.

Mugenda O, Kimani E, Maina L, Wainaina M (2010). A Survey of Female Representation in Higher Education in Kenya: Identify Opportunities for Policy Action. Longhorn Publications ISBN 978 9966 36 9988

Mukonyi PW (1987). A Comparison of Academic Attitudes and Aspirations of students in Mixed and Single – Secondary Schools and their Relationship to Performance in Kenya Certificate of Education C.K.C.E.) Examinations in Kakamega District Kenya.

Mugenda AG, Mugenda OM (1999). Research Methods: Quantitative and Qualitative approaches. Publishers Acts Press, Nairobi

Mussen, H.P (1993) Handbook of child psychology 4th

edition. John Wiley and sons, Inc Canada.

Myers DG (1992). Psychology. Worth Publishers, Inc. New York.

Ndambuki WP (1987). Kenya's Young peoples stereotypic roles. Unpublished Doctoral thesis, Kenyatta University, Kenya,

Nwachukwu DN (1987), Sex-role stereotype in elementary school reading: implications for vocational development. Ife students in English Language. Obafeni Awalowo University, Ile life, 1(1/2): 25-32.

Orodho AJ (2003). Essential of Education and Social Science Research Methods. Mosoal Publisher, Nairobi.

Orodho AJ, Kombo DK (2002). Research methods. Nairobi. Kenyatta university, institute of open learning.

Proshanky MH, Ittenson HW, Rivlin GL (1970) Environmental Psychology: Man and His Physical setting. New York.

Republic of Kenya, Central Bureau of Statistics (1999). Population and Housing Census, 1. Govt Printer, Nairobi, Kenya.

Schiamberg LB (1985). Human development 2nd edition. Macmillan Publishing company, New York.

Sifuna DN (1976). Vocational Education in Schools, A Historical Survey of Kenya and Tanzania. East Africa Bureau, Nairobi.

Somerset HCA (1971). Educational aspirations of fourth from pupils in Kenya unpublished paper presented at the science conference, Nairobi.

Sulloway FJ (1990). Orthodoxy and Innovation in Science: The Influence of Birth Order in a multivariate context. Paper delivered at the American Association for the advancement ofscience annual meeting.

Super D (1957). Life span, life space approach to career development. J Vocation. Behav. 16: 282

Tembon M, Forl L (2008). Girls Education in the 21st Century: Gender Equality Empowerment, and Economic Growth. The International Bank for Reconstruction and Development: Washington D.C.

Vinacke WE (1968). Foundation of Psychology. Van Nostrand, Reinhold Company. New York

United Nations (1990). Fields of Study of Women in Higher Education. Data high lists no 9 Vienna.