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The influence of family background on academic performance of Persons with Disabilities in Special Schools in Meru County, Kenya

Amos Chege Kirongo[1*], Kelly Maganah[1], Dorothy G. Bundi[1], Guyo Sarr Huka[1], Dismas Kitaria[1] and Geoffrey Muchiri Muketha[2]

[1]Meru University of Science and Technology, Meru, Kenya. [2]Muranga University of Technology, Muranga, Kenya.

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ABSTRACT

This paper presents a focused examination of the influence of family background on the academic performance of Persons with Disabilities (PWDs) in special schools within Meru County, Kenya. The academic performance of PWDs in special schools is influenced by a range of factors, including family background. By studying the specific case of Meru County, Kenya, this research seeks to explore the unique challenges and opportunities that PWDs face in this region and how their family environment can impact their academic achievements. Family support and involvement have been identified as crucial determinants of academic success for people with disabilities. Positive family environments, characterized by supportive parents and engaged family members, create a conducive atmosphere that fosters self-esteem, motivation, and academic self-efficacy among PWDs. Conversely, negative family backgrounds, such as limited resources, low socioeconomic status, and lack of familial support, can hinder the academic progress of PWDs. Cultural attitudes, societal stigma, and discrimination towards disabilities can impact the educational opportunities and experiences of PWDs, consequently affecting their academic performance. Understanding the influence of family background on the academic performance of PWDs in special schools in Meru County is vital for designing effective interventions and support systems. By recognizing the importance of family involvement, providing targeted resources and support services, and promoting positive attitudes towards disabilities, educators, policymakers, and stakeholders can work towards creating an inclusive educational environment that maximizes the academic

Introduction

The World Health Organization (WHO), states that disability is affecting to up to 15% of every population of whom the population being affected most is the children (WHO, 2022). This has been estimated to about 200 million children who experience different kinds of disability. This number is expected to increase more due to the increase in population worldwide and a rise in chronic health related conditions.

The Kenya National Survey for Persons with Disabilities (KNSPWD) adds that the number of people living with disability is in increase due to various factors like aging and medical advancements that prolong life.

According to a survey done by the Kenya Na-

tional Bureau of Statistics, it showed clearly that Meru County recorded the highest number of people living with disability having a population of 49,815 out of which the majority are affected visually and the rest having issues dealing with mobility (KNBS, 2023). This presents a focused examination of the influence of family background on the academic performance of Persons with Disabilities (PWDs) in special schools within Isiolo and Meru Counties in Kenya.

The socio-economic statuses of the parents which entails their professional and academic achievements, wealth status, revenue and job affiliation is directly associated with students gain academically (Feng et al., 2010). Living with children who have different forms of disabilities may have profound results. This is due to the demand on financial costs, adequate time, physical and emotional support and many other logistical complexities of raising these people with disabilities. This requires a unique shared experience for families to bring up these children effectively (Benmarrakchi et al., 2017).

Research conducted on PWDs points out that parents are important assets in providing education for the special needs students as they become instruments of love, and provide stimulation and various experiences that are essential to the child's development (Ali et al., 2020). They then state how parents are responsible in making sure that their homes are safe and providing a peaceful and lovely environment for nurturing their children, which in turn helps and encourages these PWDs to prepare for school. While they are guided by their caregivers and parents, the learners end up to perform well in their academics, hence among vital indicators of child's academic achievement, parental interest is among the determinants of the child's academic success (Ali et al., 2020; Benmarrakchi et al., 2017; Khetarpal, 2014; Laabidi et al., 2014; Raja, 2016; Sampson et al., 2014; Spector, 2014).

Research Methodology

This study presents a thorough examination of the methods utilized in the execution of this research. The objective of this study was to examine the effects of information and communication technology (ICT) training materials on the scholastic achievements of students with special educational requirements in three specialized educational institutions: Athi Special School in Maua, Igoji School for the Physically Challenged in Meru County, and Alakara Small Home in Isiolo County (Kirongo et al., 2022). The study is structured in the following manner:

Research Design

The chosen methodology for this study is research design. The research employed a mixed-methods methodology, integrating both quantitative and qualitative approaches to achieve a comprehensive comprehension of the research issue.

Research Sample

This study utilized purposive sampling to pick three specific schools in Meru and Isiolo Counties that have been furnished with ICT training resources. The study encompassed a sample of children with exceptional educational needs who were selected from the educational institutions, together with their respective caregivers and educational staff members.

Data Collection

Quantitative data was collected through the administration of a structured questionnaire to children, educators, and caregivers at Athi Special School, Igoji School for the Physically Challenged, and Alakara Small Home. The purpose of this questionnaire was to evaluate the usage of information and communication technology (ICT) resources and its influence on academic achievement.

Qualitative data was collected through the utilization of in-depth interviews and focus group discussions with students, educators, and caregivers affiliated with the aforementioned educational institutions. The purpose of these data collection methods was to obtain comprehensive insights

into the participants' experiences and perceptions pertaining to information and communication technology (ICT) training materials.

Data Analysis

The data obtained from the question-naires was subjected to statistical analy-sis using the software program IBM SPSS Statistics 22.0.

This analysis was conducted individu-ally for each of the schools. The study included descriptive statistics, correla-tion analysis, and regression analysis to evaluate the association between the utilization of information and communi-cation technology (ICT) and academic achievement.

Ethical Considerations

Ethical considerations were taken into account, and the necessary ethical ap-proval was acquired from the appropriate authorities and organizations. All partici-pants in the study conducted at three schools provided informed consent, so guaranteeing the maintenance of their privacy and confidentiality.

Data Validity and Reliability

Measures were implemented to guar-antee the reliability and validity of the research instruments, including the ad-ministration of a pre-test for the ques-tionnaire and the utilization of member checking during qualitative interviews.

Constraints

It is imperative to recognize potential constraints, such as the narrow scope of this study limited to three schools in Me-ru and Isiolo Counties, and the applicabil-ity of the findings to other geographical areas.

Education Level		Frequency	Percent	Valid Percent
Valid	No Formal Education	10	12.8	12.8
	Primary	14	17.9	17.9
	Secondary	29	37.2	37.2
	Graduate	25	32.1	32.1
	Total	78	100.0	100.0

Table 1: Parents'/Guardians' Level of Education

Employment Status		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Employed	25	32.1	32.1	32.1
	Informal Employment	28	35.9	35.9	67.9
	Formal Employment	25	32.1	32.1	100.0
	Total	78	100.0	100.0	

Table 2: Parents'/Guardians' nature of employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	58	74.4	74.4	74.4
	No	8	10.3	10.3	84.6
	Never Discuss	12	15.4	15.4	100.0
	Total	78	100.0	100.0	

Table 3: Parental Support and Encouragement

Findings

The Influence of Family Background on Academic Performance of PWDs

The primary aim of this study was to examine the im-pact of family backgrounds on the academic performance of Persons with Disabilities (PWDs) when utilizing ICT re-

sources. The research study aimed to explore the parents' or guardians' educational background and the nature of their employment.

Guardians' Level of Education

The study established parents' or guardians' level of education as shown in the Table 1.

The findings, as depicted in table 1, reveal that 14 (17.9%) of the parents or guardians of the respondents have completed primary education, 29 (37.2%) have attained secondary education, and 25 (32.1%) hold graduate degrees. However, the study also reveals that 10 (12.8%) of the parents or guardians of the respondents have not obtained any formal education. It is noteworthy that a majority of the parents have received a formal education, which plays a significant role in supporting the academic achievements of PWDs.

Guardians' nature of employment

The study established parents'/guardians' nature of employment. The results are as tabulated in the Table 2.

Based on the results presented in Table 2, it was found that a significant majority of the parents or guardians of the sampled students with special needs, comprising 53 individuals (67.9%), have a stable source of income. This indicates that a large proportion of parents are capable of fulfilling the financial requirements of their children while they are in school. Conversely, 25 parents or guardians (32.1%) reported being unemployed.

Support and Parental Encouragement

The study went further to establish whether the respondents had parental or guardians' support and encouragement to continue pursuing their studies. The response was captured as recorded in Table 3.

According to the data presented in Table 3, it was found that the majority of respondents, ac-counting for 74.4%, reported receiving support and encouragement from their parents or guardi-ans. Conversely, 10.2% of the respondents stated that they did not receive any support or encour-agement. The remaining 15.3% of the respond-ents had not yet discussed the topic of support and encouragement with their parents or guardi-ans.

Hypothesis Testing for Family Background as a Factor

The hypothesis testing for family background as a factor was conducted based on the hypothe-sis that there is no significant relationship be-tween family background and the use of ICT in academics for PWDs in Meru County. The testing was performed using Multiple Linear Regression at a confidence level of 5%.

Model Summary

The model summary is depicted in Table 4 showing the Family Background Model Summary.

The model summary reveals the following sta-tistics:

R: The correlation coefficient is .562a, indicat-ing a moderate positive relationship between the predictors and the use of ICT in academics.

R Square: The coefficient of determination is .316, indicating that 31.6% of the variance in the use of ICT in academics can be explained by the predictors.

Adjusted R Square: The adjusted R square is .288, which takes into account the number of

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.562ᵃ	.316	.288	.538
a. Predictors: (Constant), Encouragement and Support from Parents, The Parents Level Of Education, The Nature of Parents Profession				

Table 4: Family Background Model Summary

predictors and provides a more conservative estimate of the variance explained.

Standard Error of the Estimate: The standard error of the estimate is .538, representing the average distance between the observed values and the predicted values by the model.

The findings of the study revealed that students who receive parental support, whose parents have employment (whether formal or informal), and whose parents have an educational background are 31.6% more likely to perform well in academics compared to those who do not receive such support. However, it should be noted that this level of prediction is relatively weak, which may introduce bias into the conclusions drawn.

To further investigate the impact of parental support, the nature of parents' profession, and parents' level of education on students' exam scores, a multiple regression analysis was conducted. The results of the regression indicated that the model accounted for 31.6% of the variance in exam performance. Moreover, the analysis confirmed that the constructed model significantly predicted exam performance, as evidenced by the statistical results: $F (3, 74) = 11.374$, $p = .000$.

The variables examined in the study, namely parental support, nature of parents' profession, and parents' level of education, made a relatively weak but statistically significant contribution to the predictive model. The coefficients (B) and their corresponding p-values were as follows: -.031 (p = .789) for parental support, .404 (p = .000) for nature of parents' profession, and .047 (p = .465) for parents' level of education. The final predictive model can be expressed as follows:

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.119	.392		-.302	.763
	The Parents Level Of Education	.047	.064	.074	.735	.465
	The Nature of Parents Profession	.404	.106	.511	3.816	.000
	Encouragement and Support from Parents	-.031	.115	-.036	-.269	.789
a. Dependent Variable: PWDs Performance						

Table 5: Regression Analysis for family background factors

Formula 1:

*Academic Performance = -.119 + (.047 * Parents' level of education) + (.404 * Nature of parents' profession) + (-.031 * Parental support)*

Notably, the nature of parents' profession emerged as a highly significant factor (p = .000), indicating a strong relationship with academic performance. However, the parents' level of education and support and encouragement from parents did not show statistical significance in the study, as their p-values were greater than 0.05 (p > 0.05). Therefore, based on a 5% confidence interval, the null hypothesis could not be rejected.

Summary of the Findings

The objective of this study was to investigate the potential impact of various factors, with a focus on family history, on the academic performance of individuals with special educational needs. Specifically, the study aimed to explore if the utilization of ICT resources played a role in this relationship, considering the diverse range of manifestations of special educational requirements. The research was conducted with a well defined purpose and hypothesis.

The utilization of Information and Communication Technology (ICT) has significantly influenced

the development of knowledge and competencies among educational personnel. The findings of this study hold significant significance for the professional practices of special education instructors as well as the responsibilities of caregivers within educational settings.

This study was conducted with the hypothesis that there is no significant correlation between family background and the utilization of information and communication technology (ICT) in academic pursuits among persons with disabilities (PWDs) in Meru County.

This study highlights the significant importance of information and communication technology (ICT) in augmenting the productivity of children who have unique educational requirements. Upon successful training in the appropriate utilization of Information and Communication Technology (ICT), these children demonstrate a discernible enhancement in their productivity, resulting in a subsequent decrease in the level of support necessitated from their families. The regression analysis yielded a result for family background (β= -.119, t= -.302, p>0.05). This the finding suggests that the null hypothesis could not be rejected at 95% confidence interval that there is no statistically significant relationship between family background and student achievement.

The significance of these findings is substantial for educators and caregivers in the field of special education, as they underscore the capacity of information and communication technology (ICT) to enhance the capabilities and provide assistance to individuals with special educational needs in Meru County.

Conclusion and Recommendation

In summary, the findings from the regression analysis (β=-.119, t= -.302, p>0.05) suggest that there is no statistically significant association between familial background and academic performance among individuals with disabilities (PWDs) in the specific setting of Meru County, as examined in this study. In light of the absence of statistical significance, it is advisable to pursue addi-

tional study in order to investigate alternative factors that could potentially impact the academic performance of individuals with disabilities. Furthermore, it is imperative for educators and policymakers to maintain their emphasis on delivering efficient information and communication technology (ICT) training materials, as these resources possess the capacity to greatly influence student academic performance, regardless of their familial circumstances.

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