

Influence of Population Growth on Land Use in Uganda. A Case Study of Biguli Subcounty Kamwenge District

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Abstract: *In this study, the Biguri sub-county was used as a case study to examine the impact of population expansion on land use in Uganda. The study's goals were to identify the markers of population increase on land usage in Kamwenge district's Biguli Sub County. the investigation into the connection among population increase and land use in Biguli sub county, as well as the consequences of population increase on land usage in Biguli sub county. The study primarily used qualitative methods of data collecting to gather data, using both primary and secondary information in its analysis. Data was gathered via a research questionnaire, which involved asking the researcher questions and recording the respondents' responses. The results showed that the effects of population expansion on land use included high rates of urbanization, which led to environmental contamination and deforestation as well as high rates of bush fire. Campaigns to raise awareness: The government should consequently step up its informational and advocacy efforts, utilizing all available channels of communication, to raise public knowledge of the aims, objectives, and status of the execution of the harmful consequences of population expansion.*

Keywords: population growth and land use

Background of the study

The number of people has been growing, and this trend is projected to continue. The population of the globe was 7.3 billion as of 2015, and it is projected to increase to 9.6 billion in 2050 AND 10.9 billion in 2100. (UN, 2015). In developing countries, the populace is anticipated to increase from 5.9 billion in 2013 to million annually in 2050. From the viewpoint of the past, projected demographic growth in the world appears moderate, but in absolute terms, it is rather significant. It is anticipated that global population growth would be uneven, with the some regions likely to have substantially quicker growth than others and some possibly experiencing population declines (UN, 2013). While increasing agricultural manufacturing to feed the expanding population has accelerated the pace of Land Use and Land Lover Changes, the rapid population growth that Africa is experiencing has also led to the growth of urban centers, caused incursion into forests, raised the number of farmlands, and decreased the size of the accessible arable farmland. In contrast to Northern Africa's 1.7% and Southern Africa's 1.1% annual growth rates, the tropical region is expanding faster, at 2.6% annually (UN Population, 2012). LULCC are a consequence of social, economic, cultural, demographic, and environmental factors that are essentially a hallmark of human communities, according to Prakasam (2010).

After its independence proclamation, Uganda's population has increased. According to last census data, there were 44.27 million people living there in 2019. (UNBS, 2010). According to Newmark (2013), Uganda's population will increase by 2.8% year, reaching 51 million by 2025. (Miller & Spoolman, 2012). based on Kiage et al (2007).

When motivated to complete was placed on the distribution of resources in the region as well as the result of demand from the Kamwenge chiefdom, Kamwenge district was established in 2000 and separated from Kabarole district. Ever since, Kamwenge's population has grown, notably in the Biguli subcounty, which has put a lot of strain on the land.

PROBLEM STATEMENT

Population and land use are intertwined in a complex and dynamic way, and many social, cultural, political, and environmental factors that play different roles in different contexts moderate this link (Richards, 2017). As a result, one of the primary reasons for ecological deterioration is frequently cited as the rapid rise of the world population. Population mostly affects the environment by altering how land is used and how industry functions² (Turner and Meyer, 2018).

Scientists refer to this environmental distortion as a "ecological footprint" and it happens when population grows. This philosophy is based on the notion that every human has some basic necessities, such as access to land, water, and energy.

Specific objectives

1. To find out the indicators of population growth on land use in kiguli sub county in kamwenge district.
2. To determine the effects of population growth on land use in Biguli Sub county
3. To analyze the relationship between population growth and land use in Biguli sub county

Research questions

The study endeavored to answer the following questions,

1. What are the indicators of population growth on land use in Biguli subcounty?
2. What are the effects of population growth on land use in Biguli subcounty?
3. What is the relationship between population growth and land use in Biguli subcounty?

Methodology

Research design

A case study research strategy was used for the study, and both qualitative and quantitative data were collected.

The study employed both qualitative and quantitative methods and approaches. using numerical data or a quantitative approach to quantify and present data, such as using proportions and frequencies. The responses and justifications that respondents offered in the questionnaires that were given were analyzed and described with the aid of qualitative methodologies.

Determination of Sample size

Those who reside in Biguli Sub County and local council officials were employed as strata in a stratified sample approach. Using proportionate allocation, large samples from each stratum were obtained, and basic random and purposeful sampling methods were used to select the samples from every stratum. participants in total were chosen through proportionate allocation.

Method and process for sampling

The stratified sampling approach was combined with conventional random sampling. With the method of stratified sampling, the researcher separated the population sample into a series of divisions before selecting samples from the subgroups. This allowed study participants an equal chance to contribute to the research at hand.

Data collection methods

Observation method

In this method a researcher used his naked eyes and look around the area of study and take observe of population growth on the land use in Biguli Sub County in kamwenge district.

Interview method

Here the researcher interacted with both local people and local council leaders and some district leaders in order to collect more data about the influence of population growth on land use in Biguli Sub County and in Kamwenge district at large.

Questionnaire method

With this method, the researcher set both open ended and close ended questions and give them to the respondents and pick them later after they have been answered.

RESULTS

Descriptive statistics

The descriptive statistics include: Age, Sex, Level of education, Level of experience of the respondents.

Age of the respondents

Age distribution among the respondents was presented in the study.

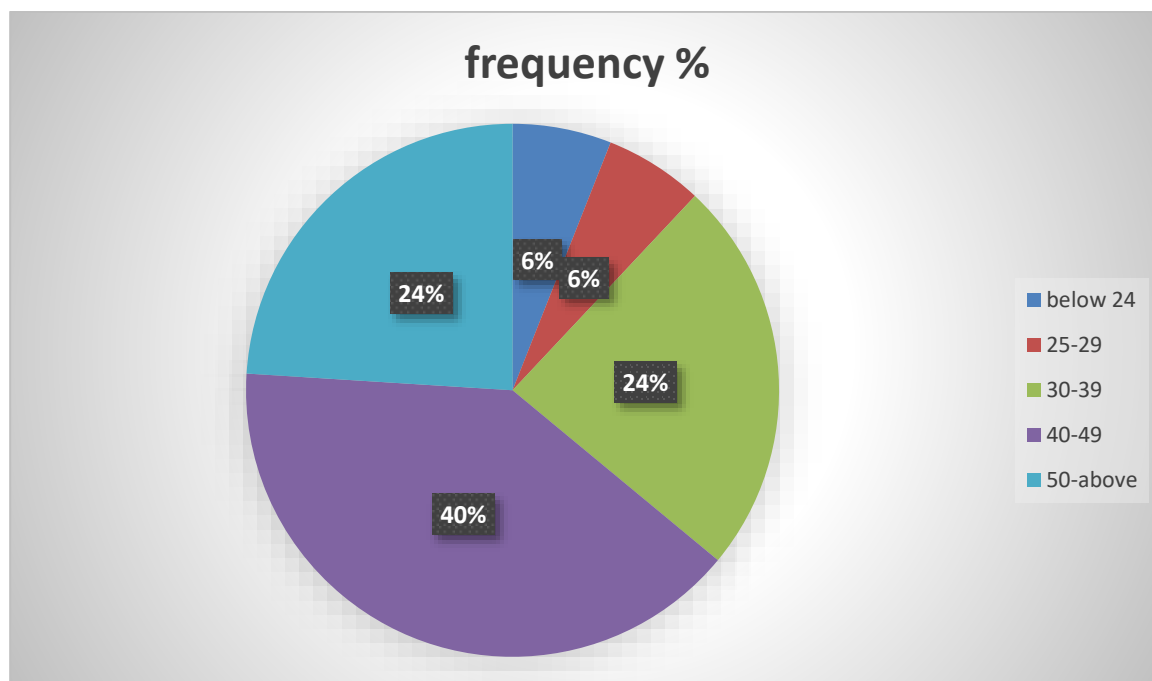
Respondents were asked Questions related to their age and tire results reveal in the table below.

Table 1: Age distribution of respondents

Age group	Frequency	Percentage	Degrees
Below 24	3	6%	22
25-29	3	6%	22
30-39	12	24%	86
40-49	20	40%	144
50-above	12	24%	86
Total	50	100%	360

Source: primary data, 2020

Figure 1: A pie chart showing age distribution of respondent



Source primary data 2020

From the table and figure 1, 3 (22%) of the respondents were below 24 years, 3(22%) were

Between 25-29 years of age. 12(86%) were between 30-39 years of age, 20(14.4%) were between 40-49 years and 12(86%) were above 50 years of age. This shows that data was collected from nature People.

The Sex of the respondents

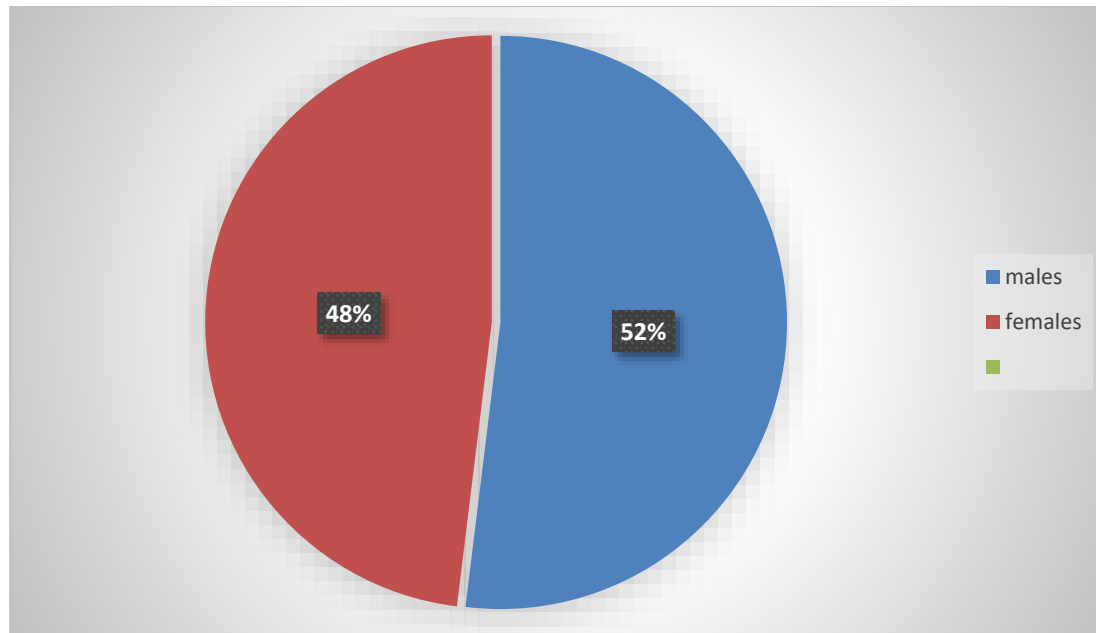
The researcher was interested in finding out the number of females and males in the whole of the population, and compares the percentage composition of the two. Therefore, sex of the respondents was considered.

Table 2: Sex of the respondents

Sex	Frequency	Percentage	Degrees
Males	26	52%	187
Females	24	48%	173
Total	50	100%	360

Source: primary data, 2019

Figure 2: a pie chart showing sex of respondents



From table and figure 2 above, it was found out that 52% (187) of the respondents were males and 48% (173) were females. This implies that next media employs more females than males.

The educational level of respondents

Respondents were asked questions related to their educational status and their responses are shown in the table below:

Table 3: respondent’s level of education

Level of education	frequency	percentage
A ‘level	08	8
Graduate	20	48
Diploma	10	28
Post graduate	08	8
Others	04	4
Total	50	100

Source primary source

The table above 3 presents that the majority of the respondents represented by 48% were graduates, 12% post graduates, 28% obtained diploma, 8% obtained a ‘level and the least were others with just 4% this implies that the researcher obtained valid and reliable data since the respondents were in position to read and translate the questions

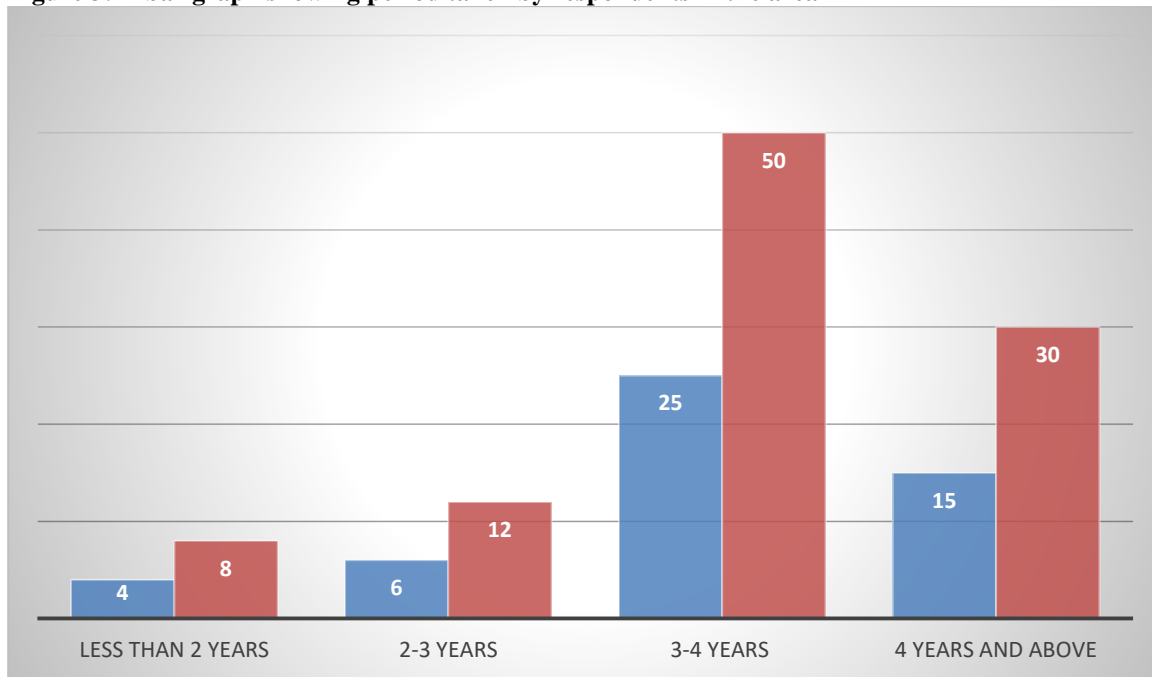
Level of experience

Table 4 period taken by respondents in the area

category	frequency	Percentage (%)
Less than 2 years	4	8
2-3years	6	12
3-4 years	15	30
4 years and above	25	50
Total	50	100

Source primary data 2020

Figure 3: A bar graph showing period taken by respondents in the area



Level of experience of the respondents

Effects of population growth on land use.

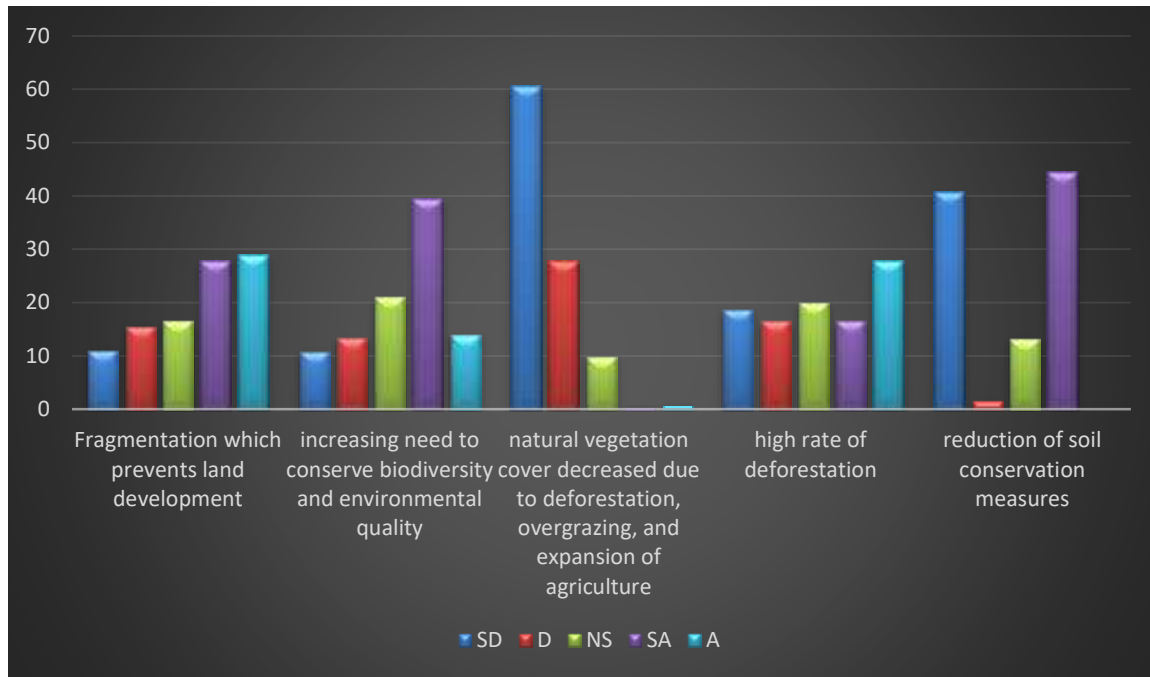
Table 5: Distribution of the respondents on the effects of population growth on land use.

No.	Statement	SD %	D %	NS %	SA %	A %	TOTAL %
1	Fragmentation which prevents land development	11.1	15.5	16.7	27.8	28.9	100
2	an increasing need to conserve biodiversity and environmental quality	10.9	13.4	212.2	39.4	14.1	100
3	natural vegetation cover decreased due to deforestation, overgrazing, and expansion of agriculture	60.6	27.8	10.0	0.6	1.0	100
4	High rate of deforestation	18.8	16.7	20.0	16.7	27.8	100
5	Reduction of soil conservation measures	40.6		1.7	13.3	44.4	100

6	High rate of urbanization	3.3	5.0	15.0	45.6	31.3	100
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Source; primary data, 2020

Figure 4: The table shows the effects of population growth on land use.



Source Primary data, 2019

SA-strongly agree, A- agree, NS- not sure, D- disagree, SD- strongly disagree

Effects of population growth on land usage are seen in Table 5. This is demonstrated by the fact that 56.7% of respondents thought that fragmentation limits land development. 53.5% of those polled concurred that more needs to be done to protect biodiversity and protection of the environment. According to 44.5% of respondents, natural vegetation cover has reduced as a result of deforestation, overgrazing, and increased cultivation. According to 57.7% of respondents, the rate of deforestation is high. While 76.9% of respondents strongly disagreed with the statement that soil management measures should be reduced, 88.4% of respondents agreed that urbanization was occurring at a rapid rate.

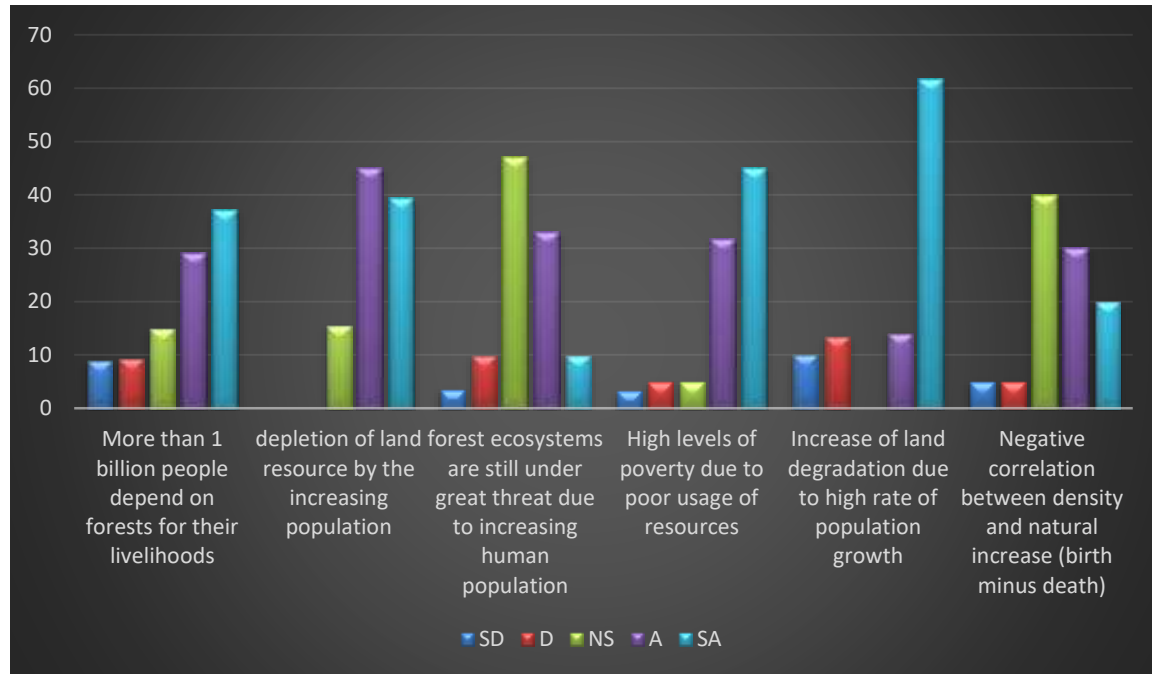
Relationship between population growth and land use

Table 6 Distribution of the respondents on the relationship between population growth and land use

No.	Statement	SD %	D %	NS %	A %	SA %	TOTAL %
1	More than 1 billion people depend on forests for their livelihoods	8.9	9.4	15	29	37.2	100
2	depletion of land resource by the increasing population			15.6	45	39.4	100
3	forest ecosystems are still under great threat due to increasing human population		10	47	33	10	100

4	High levels of poverty due to poor usage of resources	3.3	5.0	5.0	31.7	45.0	100
5	Increase of land degradation due to high rate of population growth	10.1	13.4		14.1	61.6	100
6	Negative correlation between density and natural increase (birth minus death)	5	5	40	30	25	100

Source primary data 2020



SA- Strongly Agree, A- Agree, NS- Not sure, D- Disagree SD- strongly disagree

The connection among Uganda's population increase and land use is depicted in graph 5 opposite. This is based on the findings that 66.6% of that are that more than a billion individuals rely on forests to survive, 84.4% of strongly agree that the world's land resources are being depleted by an expanding population, 43% of respondents agreed that tropical rainforests are still in grave danger as a consequence of growing populations, 76.7% of participants believed that there is a high level of poverty as a result of inefficient resource use

Effect of working environment on development of journalism in Uganda.

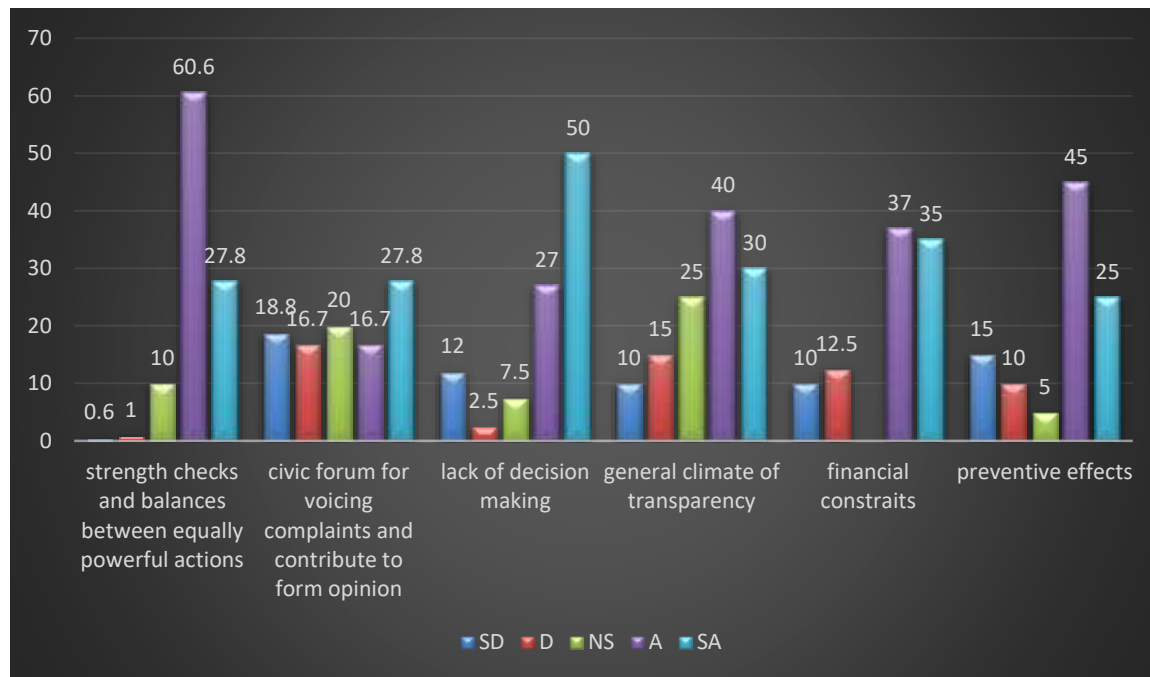
Table 7: Distribution of the respondents on the effect of working environment on development of journalism next media.

NO	STATEMENT	SD %	D %	NS %	A %	SA %	TOTAL %
1	Strength checks and balances between equally powerful actions	0.6	1.0	10.0	60.6	27.8	100
2	Civic forum for voicing complaints and contribute to form public opinion	18.8	16.7	20.0	16.7	27.8	100
3	Lack of decision making	12	2.5	7.5	27	50	100

4	General climate of transparency	10	15	25	40	30	100
5	Financial constraints	10	12.5		37	35	100
6	Preventive effects	15	10	5	45	25	100

Source primary data 2020

Bar graph 6 shows Distribution of the respondents on indicators of population growth on land use



SA-Strongly agree, A-agree, NS-not sure, D-disagree, SD-strongly disagree

Bar graph 6 above show the procedures involved in on indicators of population growth on land use in Biguri Sub County

This is from the fact that: 88.4% of the respondents agreed that Strength checks and balances between equally powerful actions, 44.5% of the respondents agreed in Civic forum for voicing complaints and contribute to form public opinion. 77% of the respondents agreed that there was lack of decision making among the journalists, 70% of the respondents revealed that there was general climate of transparency, 72% of the respondents agreed with the statement of Financial constraints, obtained 70% of the respondents agreed with the statement that Preventive effects. This implies that the procedures involved in the effect of working environment on development of journalism next are effective and efficient.

Conclusion

According to research on the how rising population affects land usage, 56.7% of respondents felt that fragmentation limits land development. 53.5% of those polled concurred that more needs to be done to protect biodiversity and environmental stewardship. According to 44.5% of participants, natural natural vegetation has reduced as a result of destruction, overgrazing, and increased cultivation. According to 57.7% of participants, the deforestation rate is high. 88.4% of people agree with the assertion that there was a significant degree of urbanization, whereas 76.9% of respondents disagreed with the statement "Reduction of soil conservation practices."

Recommendation

To dispel the myth that federal programs are grants from the government and political tools, there needs to be a large campaign of enlightenment. The PWDs should be made aware of the need to adapt their mindset and recognize their abilities. Their poor self will be improved as a result. Hence, using all accessible communication avenues, the government should step up its educational and consciousness initiatives regarding the goals, objectives, and implementation status of the effects of population growth. The research showed that there was a lack of knowledge and abilities to manage the programs.

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