

**DETERMINANTS OF SOCIAL NETWORK SITE PREFERENCES FOR
ACCESSING REPRODUCTIVE HEALTH INFORMATION among University
Students in Nairobi**

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ABSTRACT: *In Kenya, the youth represent 35% of the total population. The youth have been found to be very sexually active and experimental. For these youth to navigate this stage successfully there is a need to ensure they have adequate access to reproductive health information. There exist mechanism put in place by the government and other stakeholders to address the communication of health information to the youth. However, these methods are still inadequate. With the access to the internet through mobile phones and primarily by the youth being on the rise, there is growing interest in research on how social networking sites (SNS) can be integrated to the provision of health information to the young people which the study sought to address. This study was anchored on the uses and Gratification Theory and the Technology Acceptance Model. The study adopted a mixed research design method combining both quantitative and qualitative data. The study found out that gratification, perceived ease of use, perceived usefulness with gender as a moderating factor affect the preference of choice of social networking site for access of health information among the university student in Nairobi county.*

KEYWORDS: *Social networking sites, reproductive health, preference*

INTRODUCTION

Health is considered as one of the key economic pillars of any country and therefore any country with poor health system, its economic growth is likely to be affected (Mugo & Nzuki, 2014). Gyimah, Brempong and Kimenyi (2013) notes that health is one of the major challenges facing the youth that and is central to Africa's economic development.

The youth are at the exploration stage, the lack of guidance and a direction can lead to the youth falling into a deep abyss of unhealthy behaviors which may ultimately affect their future development. Paul, (2012), suggest that there is a need to come up with intervention mechanisms that will make the youth to stop and think before the consequences of the actions they take concerning the sexuality. This concurs with a study by FHI 360/PROGRESS and the Ministry of Health (2011) which indicated the Sexual and Reproductive Health (SRH) needs of the youth need to be better addressed adequately. Otherwise the country will suffer multiple consequences on the social,

economic, health and education levels. The study suggests that health stakeholders need to integrate ICT technology into the intervention mechanisms targeting to reach youth with SRH information and take the advantages of these technologies, which are popular with youth. Traditional mass media methods have been leveraged for decades for health promotion and education activities, but still, there is a reach gap especially when the youth are involved. ICTs have the potential to impact public health in multiple areas, including information seeking, health-care follow-up, data storage, interactive health messaging and professional development (Leow et al., 2012).

The Health stakeholders both government and private sector are still stuck to the outdated 'top-down' communication approach. These approaches have been found to have less impact on young people who may prefer to access information from their friends, family or the Internet. Therefore, Health promotion specialists continually search for new and efficient methods of reaching people of various ages (Thackeray et al., 2012).

With increase of access to internet through mobile telephony and emerging web 2.0 technologies such as What app, Facebook, Twitter among other, commonly referred to Social Networking Sites (SNS), public health communication strategies are also changing to match the increasingly influential and rapidly evolving social media revolution (Newbold & Campos, 2011).

Boyd and Ellison (2013) define Social Networking Sites (SNS) as a networked communication platform in which participants 1) have uniquely identifiable profiles that consist of user-supplied content, content provided by other users, and/or system-provided data; 2) can publicly articulate connections that can be viewed and traversed by others; and 3) can consume, produce, and/or interact with streams of user-generated content provided by their connections on the site (Boyd & Ellison, 2013). Young people are frequent users of SNS, with access at least once a day. Although the usage is mostly for communication with their peers, these technologies can be harnessed to address some of the challenges the youth face when trying to access reproductive health information (Gold et al., 2011; Levac & O'sullivan, 2010), a potential that Newbold (2015) notes remains the poorly exploited.

THEORETICAL REVIEW

Croyle (2005) indicated that theories of health behavior and their applications are at the individual (intrapersonal), interpersonal, and community/environmental/ecological levels.

This study is anchored on the Uses and Gratification Theory (UGT) which focuses on the motivations of media users. UGT largely focuses on social and psychological motivations. This theory is supported by the Technology Acceptance Model (TAM) which addresses this shortcoming by presenting technologically-driven motivations.

Uses and gratification theory

The uses and gratifications theory examine the motivations of media users and answers how and why an active audience uses the media (Rubin, 2009; Scherer, 2010). The theory

seeks to understand and explain the psychological needs that shape peoples reason for using the Media and the reasons which motivate them to engage in certain media use behaviors.

Stafford (2004) observed three types of audience gratifications that content gratifications, process gratification, and social gratifications. This theory assumes that mass media users are goal oriented in their behavior and are active media users. They are aware of their needs and select appropriate media to gratify their needs. The rapid growth of SNS has strengthened the potency of Uses and Gratification theory because it requires high interactivity from the users (Shubha, 2015).

Quan-Haase and Young, (2010) indicate that gratifications obtained refer to those gratifications that audience members experience through the use of a particular medium. Gratifications sought (also often referred to as “needs” or “motives”) refer to those gratifications that audience members expect to obtain from a medium before they have encountered it. This theory is appropriate for this study as users log on to SNS platforms with priority based on their interest and seeking some form of gratification. Users are rational and choose the preferred SNS platform(s) that best fulfills these gratifications.

One of the criticisms of UGT research in technology is that it has mostly concentrated on social and psychological motivations behind the usage leaving out the technologically-driven needs (Sundar and Limperos, 2013). Therefore, to address this shortcoming, the researcher uses the Technology, acceptance model.

Technology Acceptance Model (TAM)

TAM is derived from the theory of reasoned action (Azjen and Fishbein 1980) and addresses the issue of how users come to acceptance and use a technology (Davis, 1989).

Davis (1989), proposed that , the use of any is a response that can be explained or predicted by user motivation, which is in turn, influenced by an external stimulus consisting of the actual system's features and capabilities. Perceived usefulness (PU) and perceived ease of use (PEOU) are the causal external linkage the influence the choice of the relevant technology. The author further observed that perceived usefulness (PU) and perceived ease of use both influenced attitude toward using the system which in turn will influence the actual system use. Davis, Bagozzi, and Warshaw, (1989) modified the theory to include behavioral intention as a new variable being influenced by perceived usefulness (PU) and perceived ease of use (Venkatesh & Davis, 1996).

Conceptual Framework

In this study, gratification, perceived ease of use, perceived usefulness with gender as the moderating variable was found to be the influencers of the preference of choice of SNS for access of reproductive health information.

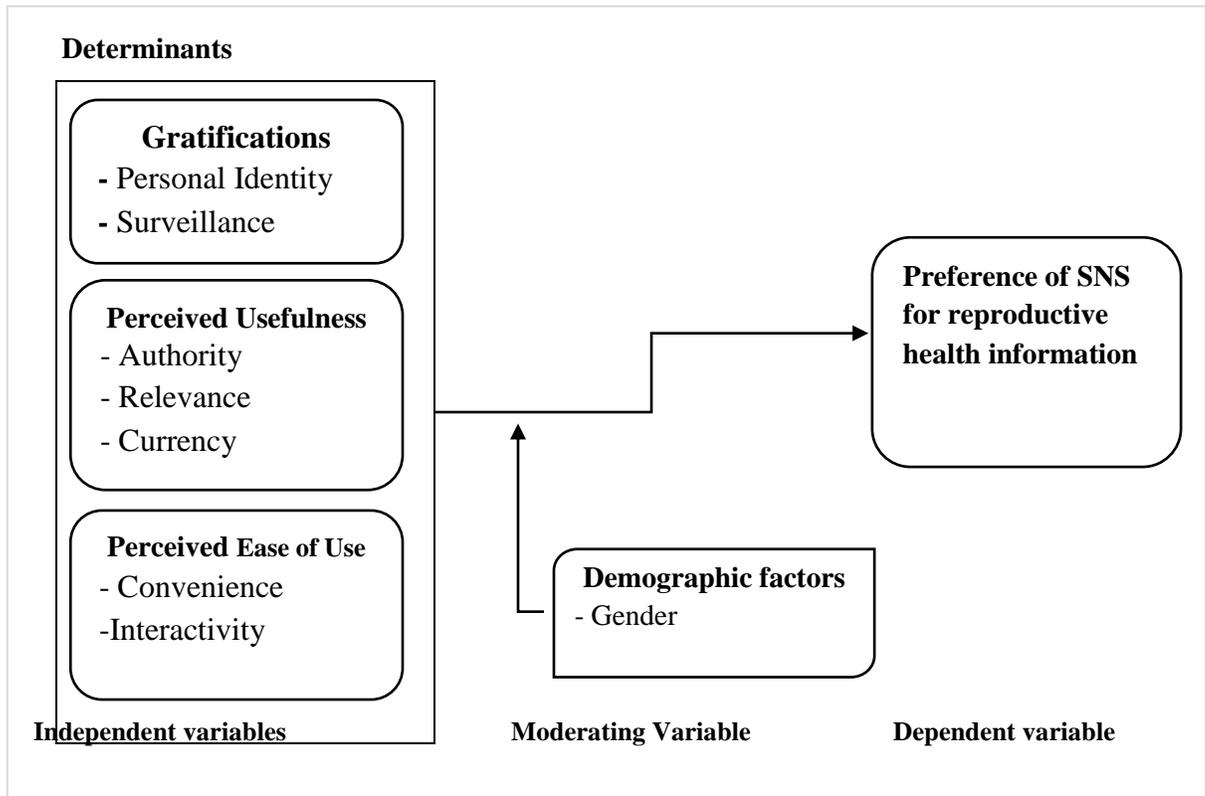


Figure 1: Conceptual Framework

METHODOLOGY

The study used stratification and simple random sampling to ensure good representation of the study population that included all the university students. The first strata was categorized as per university type: public and private. The population was further stratified according to gender as in table 1.1 below:- simple random sampling was used to choose respondents within the given strata.

Table 1: Strata by University type and Gender

Strata	Proportion	Sample size (n)	Male (20%)	Female (80%)
Public Universities	84.30%	325	65	260
Private Universities	15.70%	60	12	48
Total	100	385	77	308

1.0 Data collection /Analysis

Quantitative data was collected using questioners while interviews of key informants was used to gather qualitative data. SPSS version 22, was used to analyze quantitative data. The statistics included frequencies, correlation, and regressions. Qualitative data from key informants that included communication lecturer, the university counselors, and health provider was used to complement the quantitative statistics.

RESULTS

The results of the study are based on the following research objectives: The influence of gratifications, perceived usefulness, perceived ease of use with demographics as a moderating factor of social network site choice preferences for accessing reproductive health information among university students.

Regression Analysis of gratifications on the preference of SNS

The study sought to influence of gratifications on the preference of SNS using objective 1 and the hypothesis as stated below.

Objective 1: To find out how gratifications influence preference of SNS

H₀₁: gratifications has a significant effect on the preference of SNS

To determine the relationship, the model $Y = \beta_0 + \beta_1 X_1 + \varepsilon$ was fitted. The regression results were as shown in table 2.

Table 2 Regression Results of gratifications on the preference of SNS

Model Summary						
Model	R	R Square	Adjusted R Square	Std. The error of the Estimate		
1	.789 ^a	.623	.637	.63763		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	39.065	1	39.065	96.082	.000 ^b
	Residual	124.006	305	.407		
	Total	163.071	306			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.967	.147		13.346	.000
	gratification	.481	.049	.489	9.802	.000

The regression results in table 2 show that the effect of gratifications on the preference of SNS was significant ($F(1, 305) = 96.082, p = 0.000 < 0.05$). With $R = 0.789$ and $R^2 = 0.623$, the model implies that about 78.9% of preference of SNS changes were accounted for by gratifications, while a variation of 62.3% in preference of SNS was brought about by gratifications.

The F test was significant with a p-value =0.000 which was less than the standard p-value of 0.05, and this meant that the model was significant. From ANOVA, since p-value p=0.000 and was lower than p=0.05 (p-value 0.000<0.05), then the contribution of gratification to the preference of SNS was significant, and the conclusion is that gratification causes preference of SNS to increase. The equation that was fitted for the model was

$$Y = 1.967 + 0.481X_1$$

The coefficient for gratifications (β) was also significant ($\beta = 0.481$, $t = 9.802$, $p = 0.000 < 0.05$) indicating that gratifications increased preference of SNS by about 0.481 units. Since p-value =0.000 < 0.05, the null hypothesis was rejected and concluded that there was a statistically significant relationship between gratifications and preference of SNS.

Regression Analysis of perceived ease of use on preference of use

Objective 2: To find out how perceived ease of use influences preference of SNS

H₀₂: perceived ease of use has significant effect on preference of SNS

To determine the relationship, the model $Y = \beta_0 + \beta_2X_2 + \varepsilon$ was fitted. The regression results were as shown in table 3.

Table 3: Regression Results of perceived ease of use on preference of SNS

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.655 ^a	.429	.432	.70703		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.603	1	10.603	21.211	.000 ^b
	Residual	152.468	305	.500		
	Total	163.071	306			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.959	.097		30.414	.000
	Perceived ease of use	.246	.053	.255	4.606	.000

The regression results in table 3 show that the effect of perceived ease of use on the preference of SNS was significant ($F(1, 305) = 21.211$, $p = 0.000 < 0.05$). With $R = 0.655$ and $R^2 = 0.429$, the model implies that about 65.5% of preference of SNS changes were accounted for by perceived ease of use, while a variation of 42.9% in preference of SNS was brought about by perceived ease of use.

The F test was significant with a p-value =0.000 which was less than the standard p-value of 0.05, and this meant that the model was significant. From ANOVA, since p-value p=0.000 and was lower than p=0.05 (p-value 0.000<0.05), then the contribution of perceived ease of use to the preference of SNS was significant, and the conclusion is that perceived ease of use causes preference of SNS to increase. The equation that was fitted for the model was

$$Y = 2.959 + 0.246X_2$$

The coefficient for perceived ease of use (β) was also significant ($\beta = 0.246$, $t = 4.606$, $p = 0.000 < 0.05$) indicating that perceived ease of use increased preference of SNS by about 0.246 units. Since p-value =0.000 < 0.05, the null hypothesis was rejected and concluded that there was a statistically significant relationship between perceived ease of use and preference of SNS.

Regression of perceived usefulness on the preference of SNS

The study sought to influence of perceived usefulness on the preference of SNS using objective 3 and the hypothesis as stated below.

Objective 3: To find out how perceived usefulness influence preference of SNS

H03: Perceived usefulness has a significant effect on the preference of SNS

To determine the relationship, the model $Y = \beta_0 + \beta_3X_3 + \varepsilon$ was fitted. The regression results were as shown in table 4.

Table 4: Regression Results of perceived usefulness on the preference of SNS

Model Summary						
Model	R	R Square	Adjusted R Square	Std. The error of the Estimate		
1	.417 ^a	.174	.171	.66465		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.334	1	28.334	64.139	.000 ^b
	Residual	134.737	305	.442		
	Total	163.071	306			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.477	.117		21.084	.000
	Perceived usefulness	.357	.045	.417	8.009	.000

The regression results in table 4.33 show that the effect of perceived usefulness on the preference of SNS was significant (F (1, 305) =64.139, p=0.000<0.05). With R =0.417

and $R^2 = 0.174$, the model implies that about 41.7% of preference of SNS changes were accounted for by perceived usefulness, while a variation of 17.4% in preference of SNS was brought about by perceived usefulness.

The F test was significant with a p-value =0.000 which was less than the standard p-value of 0.05, and this meant that the model was significant. From ANOVA, since p-value $p=0.000$ and was lower than $p=0.05$ ($p\text{-value } 0.000 < 0.05$), then the contribution of perceived usefulness to the preference of SNS was significant, and the conclusion is that perceived usefulness causes preference of SNS to increase. The equation that was fitted for the model was

$$Y = 2.477 + 0.357X_1$$

The coefficient for perceived usefulness (β) was also significant ($\beta = 0.357$, $t = 21.084$, $p = 0.000 < 0.05$) indicating that perceived usefulness increased preference of SNS by about 0.357 units. Since $p\text{-value} = 0.000 < 0.05$, the null hypothesis was rejected and concluded that there was a statistically significant relationship between perceived usefulness and preference of SNS.

Regression Analysis of multivariate analysis of independent variables and preference of SNS

The study sought to determine the influence of gratifications, perceived ease of use and perceived usefulness on the preference of SNS using objective 4 and the hypothesis as stated below.

Objective 4: To find out how gratifications, perceived ease of use and perceived usefulness influence preference of SNS

H₀₄: gratifications, perceived ease of use and perceived usefulness has a significant effect on the preference of SNS

To determine the relationship, the model $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$ was fitted. The regression results were as shown in table 4.34.

Table 5: Regression Results of gratifications, perceived ease of use and perceived usefulness on the preference of SNS.

Model Summary						
Model	R	R Square	Adjusted R Square	Std. The error of the Estimate		
1	.731 ^a	.534	.575	.62141		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.066	3	15.355	39.764	.000 ^b
	Residual	117.005	303	.386		
	Total	163.071	306			
Coefficients						

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.824	.148		12.361	.000
	gratification	.410	.061	.417	6.737	.000
	Perceived ease of use	.170	.066	.176	2.565	.011
	Perceived usefulness	.253	.060	.296	4.238	.000

The regression results in table 5 show that the effect of gratifications, perceived ease of use and perceived usefulness on the preference of SNS was significant ($F(3, 303) = 39.764, p = 0.000 < 0.05$). With $R = 0.731$ and $R^2 = 0.534$, it implies that about 73.1% of preference of SNS changes were accounted for by gratifications, perceived ease of use and perceived usefulness, while a variation of 53.4% in preference of SNS was brought about by gratifications, perceived ease of use and perceived usefulness.

The F test was significant with a p-value = 0.000 which was less than the standard p-value of 0.05, and this meant that the model was significant. From ANOVA, since p-value $p = 0.000$ and was lower than $p = 0.05$ (p-value $0.000 < 0.05$), then the contribution of gratifications, perceived ease of use and perceived usefulness to the preference of SNS was significant, and the conclusion is that gratifications, perceived ease of use and perceived usefulness causes preference of SNS to increase. The equation that was fitted for the model was

$$Y = 1.824 + 0.410X_1 + 0.170X_2 + 0.253X_3$$

The coefficient for gratifications, perceived ease of use and perceived usefulness (β) were also significant with p-value < 0.05 indicating that gratifications, perceived ease of use and perceived usefulness increased preference of SNS by about 0.410, 0.170 and 0.253 respectively. Since p-values were less than 0.05, the null hypothesis was rejected and concluded that there was a statistically significant relationship between gratifications, perceived ease of use and perceived usefulness and preference of SNS.

Regression Analysis of the independent variable and the dependent variable in the presence of moderating variable

The study sought to find out how gratifications, perceived ease of use and perceived usefulness in the presence of demographic characteristics influence preference of SNS using objective 5 and the hypothesis as stated below.

Objective 5: To find out how gratifications, perceived ease of use and perceived usefulness in presence of demographic characteristics influence preference of SNS

H₀₅: gratifications, perceived ease of use and perceived usefulness in presence of demographic characteristics has significant effect on preference of SNS

To determine the relationship, the model $Y = \beta_0 + \beta_1 X_1 * M + \beta_2 X_2 * M + \beta_3 X_3 * M + \varepsilon$ was fitted. The regression results were as shown in table 4.35.

Table 6: Regression Results of gratifications, perceived ease of use and perceived usefulness in the presence of demographic characteristics on the preference of SNS

Model Summary						
Model	R	R Square	Adjusted R Square	Std. The error of the Estimate		
	.726 ^a	.527	.569	.62397		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	45.103	3	15.034	38.615	.000 ^b
	Residual	117.968	303	.389		
	Total	163.071	306			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	2.469	.093		26.647	.000
	Gratification*demo	.106	.021	.504	5.007	.000
	Perceived ease of use*demo	.152	.030	.572	5.131	.000
	Perceived usefulness*demo	.113	.025	.510	4.602	.000

The regression results in table 4.35 show that the effect of gratifications, perceived ease of use and perceived usefulness in the presence of demographic characteristics on the preference of SNS was significant ($F(3, 303) = 38.615, p = 0.000 < 0.05$). With $R = 0.726$ and $R^2 = 0.527$, the model implies that about 72.6% of preference of SNS changes were accounted for by gratifications, perceived ease of use and perceived usefulness in the presence of demographic characteristics, while a variation of 52.7% in preference of SNS was brought about by gratifications, perceived ease of use and perceived usefulness in the presence of demographic characteristics.

The F test was significant with a p-value = 0.000 which was less than the standard p-value of 0.05, and this meant that the model was significant. From ANOVA, since p-value $p = 0.000$ and was lower than $p = 0.05$ ($p\text{-value } 0.000 < 0.05$), then the contribution of gratifications, perceived ease of use and perceived usefulness to preference of SNS was significant, and the conclusion is that gratifications, perceived ease of use and perceived usefulness in the presence of demographic characteristics cause preference of SNS to increase. The equation that was fitted for the model was

$$Y = 2.469 + 0.106X_1 * M + 0.152X_2 * M + 0.113X_3 * M$$

The coefficient for gratifications, perceived ease of use and perceived usefulness (β) were also significant with p-value <0.05) indicating that gratifications, perceived ease of use and perceived usefulness increased preference of SNS by about 0.106, 0.152 and 0.113 respectively. Since p-values were less than 0.05, the null hypothesis was rejected and concluded that there was a statistically significant relationship between gratifications, perceived ease of use and perceived usefulness in presin the presence ofaphic characteristics and preference of SNS.

DISCUSSION AND CONCLUSION

Gratifications and Social Network Site preferences

The research sought to find out how gratification influences the preference of social network site by the youth when accessing productive health information. The research findings revealed that gratifications significantly influence SNS preferences for accessing reproductive health information. This is because users choose media which best fulfills gratifications sought from available alternatives. The study further revealed that majority of SNS help users express themselves well and participate in reproductive health discussions among themselves, peers and medical professionals. Also, SNS users can understand their productive health information as well as help users to choose specific information that suits their needs without prejudice.

Perceived Usefulness and Social Network Site preferences for accessing

Reproductive health information

On perceived usefulness and SNS preference, the study established that perceived usefulness significantly influenced the choice of a particular SNS. The media users often seek out a media source that best fulfills their needs with the assumption that the user has choices that can satisfy their needs. The media usefulness plays an active role in choosing and using a particular media platform.

Perceived Ease of Use and Social Network Site preferences for accessing reproductive health information

The study also sought to find the influence of the ease of use of SNS and the preference of choice as a source of reproductive health information of the respondents. The study established that perceived ease of social network sites was significant in influencing preference for accessing reproductive health information that is the easier an individual finds the information they are looking for, the more likely they are to use the social network site regularly.

The study established that social network sites that were easy to use enabled users to conveniently access information anywhere through mobile phones and other portable devices which have sufficient access control mechanisms that allow users to determine who can view the content, activities or personal information. Within a social networking website, the easier an individual finds the information they are looking for, the more

positive the individual feels toward that technology. Hence these SNS tend to attract larger audiences providing an opportunity for health organizations and reproductive health promoters to tap into vast potential users of such information more efficiently. The ease of use of SNS has been precipitated by easy access to the mobile phone devices since users are likely to have their phone with them and within reach most of the time, and therefore they can take part in interventions at any time and anywhere.

Age and gender effect on Social Network Site Preferences for accessing reproductive health information

On demographics factors as a moderating factor on the preference of access to reproductive health information, the study revealed that gender was a significant factor in social network site preference and participation. More specifically, the study found that women are more likely than men to search information including the reproductive health information in addition to entertainment and getting in touch with a family member while men mostly used SNS to meet new people. On age, the study found no significant influence of either gender on the preference of choice of any SNS.

CONCLUSION

This study showed that social network preference for choice of a particular SNS is influenced by gratification, perceived usefulness and the ease of use with demographic factor having a mediating effect.

The study findings confirm that it is essential for productive health information stakeholders to embrace SNS technologies to ensure that the youth who are technology savvy are adequately covered.

Gratification is the highest influencer of the preference to the choice of an SNS by the university student when searching for reproductive health information. The gratification, allows the students to express themselves well and participate in reproductive health discussions among themselves, peers and medical professionals which in return enhances content sharing to a broader user audience. The respondents were in a better position to understand reproductive health information tailored to their needs without prejudice.

The perceived usefulness of the SNS platforms also profoundly influences social network site preference and participation. The influence was because the respondents found the information on SNS easily accessible, can be accessed frequently and instantly and always update. The ability to verify the personal information and professional qualification of the information source also features prominently. The ability to access and access trustworthy and credible information having the least effect.

The respondents confirmed that the ease of use greatly influences the choice of use of a social network site for accessing reproductive health information. This was because the information could be accessed from the internet and from anywhere especially through the mobile phone device. The respondent was less concerned with remaining anonymous when accessing the information.

The study found gender to be a mediating factor to the preference of choice of a particular SNS with female users are more likely to use social network sites compared to their male counterparts. The age was found to have ton influence although younger people use SNS than older people.

Further Research

This study focused mainly on the preference of choice of SNS among the university students. The study recommends for further research to be conducted on a broader age bracket and the more general target population.

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