ISSN No:-2456-2165

ICT Utilisation and Mental Healthcare Service Provision in the Northwest and Southwest Communities of Cameroon.

Azinwi Terence Niba (Ph.D research Fellow)
Department of Educational psychology
Faculty of Education, The University of Bamenda, Cameroon

Abstract:- The aim of this study was to investigate ICT utilization and its effects on the effectiveness of mental healthcare service provision in secondary schools in Northwest and Southwest communities of Cameroon. More specifically, the study explored the extent to which demographic variations in ICT use, telephone use, affect mental healthcare service provision effectiveness in secondary schools. The study employed the survey research design with a mix of both quantitative and qualitative techniques. Quantitative data were collected through a questionnaire while a semi-structured interview guide and an observation schedule were used to collect qualitative data from a sample of 150 secondary school mental health professionals.The purposive and snowball sampling techniques were used to select the sample of the study. Data were analyzed with the aid of the Statistical Package for Social Sciences (SPSS) version 23.0 for Windows. Descriptive statistics such as simple percentages, mean scores and standard deviation, and inferential statistics such as the one sample t-test, one-way analysis of variance (ANOVA's F-test) and the Pearson Correlation test were used to analyze quantitative data while qualitative data were analyzed using content analysis with the support of ATLAS.ti software version 8.0. The findings revealed that demographic variations in ICT use ($r=0.581$, $df=98$, $p<0.05$), and the use of telephones ($r=0.741$,$df=98$, $p<0.05$) have a positive correlation with mental healthcare service provision effectiveness in secondary schools. Based on the findings, recommendations to trainers of mental health professionals, and mental health professionals on measures to enhance ICT integration in mental health research and practice, as well as suggestions for further studies were made.

Keywords:- *ICT Utilisation, Demographic Characteristics, Telephone, and Mental Healthcare Service Provision.*

I. INTRODUCTION

Information and Communication Technologies (ICTs) are a powerful force in today's globalized society. Greaves (2005) asserts that the advent of ICTs has perhaps been the single massive drive impacting institutions through development, innovation and productivity all over the world. ICTs are revolutionizing all the ways of living; they are changing all aspects of life and lifestyle like education, work and mental health. According to UNESCO (2021), Information and Communication Technology (ICT) refers to a diverse set of technological or digital tools and resources used to transmit, store, create, share or exchange information. These technological tools and resources include telephones (fixed or mobile or smartphones), computers (desktops, laptops, tablets, printers, scanners, projectors, photocopiers), the internet (websites, blogs, social media, videoconferencing and emails), broadcast technology (radio, television, satellite) among others. These devices are increasingly being used nowadays for work and education including the provision of mental healthcare services. Vinluan (2011) argues that the internetremains one of the brand-new technologies that has greatly impacted mental healthcare practice.

Mental healthcare represents a profession that specifically works with people dealing with cognitive, behavioral, and emotional issues (American Counselling Association, 2014). Mental health professionals include guidance counsellors, psychologists, psychiatrists, family therapists, mental health or psychiatric nurses, social workers and clinical psychologists among others who work with individuals, families, groups, and communities to deal with mental health issues and improve mental well-being (Elraz, 2018). These mental health professionals work in a wide range of settings in the community, including: mental health clinics, schools, private practices, hospitals, community health centers, correctional facilities (prisons and reformatory centers), businesses/work places, colleges and universities, social service agencies, international relief organizations and government agencies (Cherry, 2021).

European Centre for the Development of Vocational Training (2005) insists that one of the challenges that every mental healthcare system currently faces is how practitioners can make the best use of technology particularly in providing servicesfor their clients. The various kinds of ICT products available and having relevance to mental health such as teleconferencing, email, audio conferencing, television lessons, radio broadcasts, interactive radio counselling, interactive voice response system, audiocassettes and CD ROMs are being used in mental healthcare practice for different purposes including the provision of mental health services (Sharma, 2003; Sanyal, 2001; Bhattacharya & Sharma, 2007).

Talking about telephone utilization and mental healthcare service provision, there are now services comprising a menu of pre-coded messages or direct contact with prescribed scripts. There are also highly interactive engagements with skilled professionals (Huws & Denbigh, 1999). The anonymity this process brings to the therapeutic

interaction is motivating to clients. Indeed, the use of the telephone in mental health has been so effective that Tait (1999) argued that the telephone has become normalized as a medium for mental health services in ways that have yet to happen in the case of computer-mediated communications. Watts and Dent (2002) observed that apart from websites, there has been growing interest in the use of telephone helplines in mental health services.

Theoretically, many theories have been linked to the use of ICT in mental health services. Among them, are the Technology Acceptance Model (TAM) by Fred Davis (1989), the Diffusion of Innovations (DOI) Paradigm by Everette Rogers (1995) and the Client –Centred theory by Carl Rogers (1957).

Contextually, Neba (2010) maintains that the ICT sector in Cameroon has rapidly evolved over the years though it still leaves much to be desired. Before 1990, the only means of communication were the fixed phone and the national postal service; there was only one national radio station and one national television station. All these were owned by the state. There were no computers (PCs) let alone the internet. Having been connected to the Internet since 1997 (Lange, 2008), Cameroon has since been resolutely committed to being part and parcel of the "information and communication society". But, as in most African countries, mobile telephone is the main driver of access to ICT in Cameroon, where the ICT sector gets between 28% and 29% of the total investment expenditure and knows no funding gap (Dominguez, Torres & Foster, 2011).

The mobile telephone was introduced in Cameroon in the year 2000. Before this, Cameroon had just the fixed phone, which was mainly at the urban centers and completely absent in the rural areas. This greatly hindered communication between the urban and the rural areas. Most recently, fiber optics technology is creeping into Cameroon. This will surely go a long way to address some of the setbacks. However, Neba (2018) admits that Cameroon has witnessed a great improvement in the use of ICT in enterprises and organizations in the country, especially in the use of computers. The use of mobile phones has greatly solved communication problems between the urban and the rural areas, though there are some remote areas in Cameroon that still do not have access to any mobile telephone networks and internet facilities.

Neba (2010) however notes that ICT measurement in Cameroon is still at an infant stage. According to Bakehe, Fambeu and Piaptie (2017), information and communications technology (ICT) has grown over the past decade thanks to the mobile telephone revolution and the exponential growth of the Internet. Today, information is instantaneous and available worldwide.

The use of ICT in mental healthcare by professionals generally seems to be increasing and dramatically growing. However, while there is a great deal of knowledge about how ICT is used in mental health services in developed countries, there is not much information on how they are being used by mental health professionals in the provision of services in developing countries, Cameroon inclusive.

Tamukong (2007) explains that in 2007, information and communication technology (ICT) draft policies from 28 African countries including Cameroon were developed in a participatory manner with the involvement of the Economic Commission for Africa. All the countries looked at ICT as a means to solving many developmental problems and have thus generated visions and/or goals that implicate ICT in social and economic development through poverty eradication, better education and good governance, agriculture, environment, science, tourism, culture and employment, and health including mental health. The policies indicated that the major problems/difficulties facing ICT in Africa and which the countries intended to resolve immediately include inadequate infrastructure, insufficient human resources and inadequate access. Tchinda (2007) corroborates the argument by insisting that Cameroon is among the sub-Saharan African countries that are making enormous progress in the utilization of information and communications technologies (ICTs) in the provision of mental health services.

According to UNICEF-at a glance (Cameroon Statistics, 2006) in 2004, key strategies on using ICT were highlighted in the first official draft of the Cameroon National Information and Communication Infrastructure (NICI) policy and plan prepared by the government with support from the United Nations Development Program (UNDP) and the United Nations Economic Commission for Africa (UNECA). In this document, the Cameroonian government recognizes ICT as a national priority in priority sectors including the health sector under which there is the mental health subsector.

Irrespective of the fact that Cameroon like most African countries is still in the initial stage of integrating ICT in healthcare at large and in mental healthcare to be more specific as stipulated by Mbangwana and Otang (2006), there is much evidence from other studies that paves the way for a promising and more fruitful mental healthcare future with the use of ICT. However, according to the United Nations Development Programme (2006) and Mbangwana (2008), there is not yet any specific policy guiding the use of ICT in the health sector and in the mental health subsector in Cameroon, as well as in the other sectors of national life notably education, which has led to each mental health specialist applying ICT using his/her own method or programme. The integration of ICT in communities for mental health purposes, therefore, seems to be done on an informal basis at the moment.

Prime Minister's Decree n°087/CAB/PM of 27 June 2005 created a Committee for the integration of ICT in Cameroon. These decisions and texts, therefore, indicate willingness and acceptance by the government to lay the groundwork for ICT use in the country to promote the health sector and the mental health subsector by extension. In Cameroon, it is evident that ICT has the potential to significantly increase access and coverage for mental health services, freeing it from constraints of time and space. For

ISSN No:-2456-2165

example, Achale, Tani and Chongwain (2007) found that the obstacles that hindered the effective adoption and utilization of ICT in service provision included: inadequate computers and other ICT equipment, lack of skills and knowledge in ICT usage, poor and slow internet connections, high cost of ICT equipment and irregular electricity supply. With the above contextual argument at hand, this study therefore came in to fill the gap of the above studies by investigating the use of ICTs and its effect on the effectiveness mental healthcare service provision in Northwest and Southwest communities of Cameroon.

II. STATEMENT OF THE PROBLEM

Based on observation and interaction, this researcher has realized that some mental healthcare professionals especially those working in secondary schools in Cameroon are ineffective as seen in the poor provision of mental healthcare services in secondary schools. This unfortunate situation has to some extent led to poor academic performance, wrong choice of careers, disciplinary problems, deviant behaviour, high rates of school drop-out and other challenges confronting clients (students and others) in Cameroon schools today. Therefore, the present study investigates the utilization of ICT among mental healthcare practitioners in schools in the Northwest and Southwest communities of Cameroon in the provision of mental healthcare services.

A. Specific objectives

- To examine the effect of demographic characteristics on ICT use for mental healthcare provision in schools.
- To examine the extent to which the use of telephones affects mental healthcare provision in schools.

III. METHODOLOGY

The research design used in this study was the cross sectional survey design wherein both quantitative and qualitative techniques were used to manage the data collected for the study. This required some form of triangulation. The study was carried out in the Northwest and Southwest Regions of Cameroon. The target population was made up of315 school mental health professionals in secondary schools in the Northwest (NW) and Southwest (SW) Regions of Cameroon. Meanwhile, the accessible population included 191 school mental health professionals in secondary schools in Mezam Division and Fako Division of the Northwest and Southwest Regions.

The sample consisted of 150 participants drawn from Fako and Mezam Divisions. In Fako division, 71 participants were selected from 32 institutions/secondary schools while 79 were selected from 31 institutions/ secondary schools Mezam division. The purposive and snow ball sampling techniques were adopted in selecting 150 mental health professionals.

The instruments used were a questionnaire, a semi-structured interview guide and an observation schedule/guide. The researcher developed and named the questionnaire as The Use of ICTS and Counselling Effectiveness Questionnaire (TUOIACEQ) for practicing counsellors. The Statistical Package for Social Sciences (SPSS) software version 23.0 was used to analyze the quantitative data collected, particularly the close-ended questionnaire items. In presenting demographic information, bar and pie charts were used.

Descriptive statistics such as frequencies tables containing the various weighted responses, percentages, measures of central tendencies (mean), and dispersion (standard deviation) were generally used to provide answers to the research questions. The independent *t* test, one-way analysis of variance (ANOVA's F-test) and the Pearson correlation test was also used to compare means within the variables under investigation, thereby supplying the inferential statistics for this study. Independent sample t-test was used at the 0.05 significance level to establish the difference between demographic variables and the use of ICTs for effective mental healthcare service provision. The Pearson product moment correlation was used to determine the magnitude and direction of the relationship between telephone use with respect to mental healthcare service provision effectiveness. The relationships were established at the 0.05 level of significance. ATLAS.ti software version 8.0 was used for qualitative analysis which adopted the Qual-quandominant paradigm in presenting the exploratory thematic view of the observed and interviewed cases. The codes in each primary document were in sync with the hermeneutic unit. Quotations were used dominantly in the software over visualization.

IV. RESULTS

A. Research question one: What is the extent to which demographic characteristics affect ICT use for mental healthcare service provision effectiveness?

The mean of real limits of numbers were used to statistically determine the extent to which demographic characteristics affect ICT use for mental healthcare service provision effectiveness. $1 \geq x \leq 1.49$=very low extent, $1.5 \geq x \leq 2.49$=low extent, $2.5 \geq x \leq 3.49$=high extent, $3.5 \geq x \leq 4.0$=very high extent. The first eight demographic variables will be presented textually while the last seven will be presented using charts.In terms of gender, the results revealed that male mental health professionals use ICTs more than their female counterparts. Mental health professionals in urban areas use ICT tools more effectively than their colleagues in the rural setting, while there is no difference between language and ICT effectiveness.

The results of the following seven demographic characteristics are analysed in greater detail as follows under the different subheadings with the aid of illustrations:

ISSN No:-2456-2165

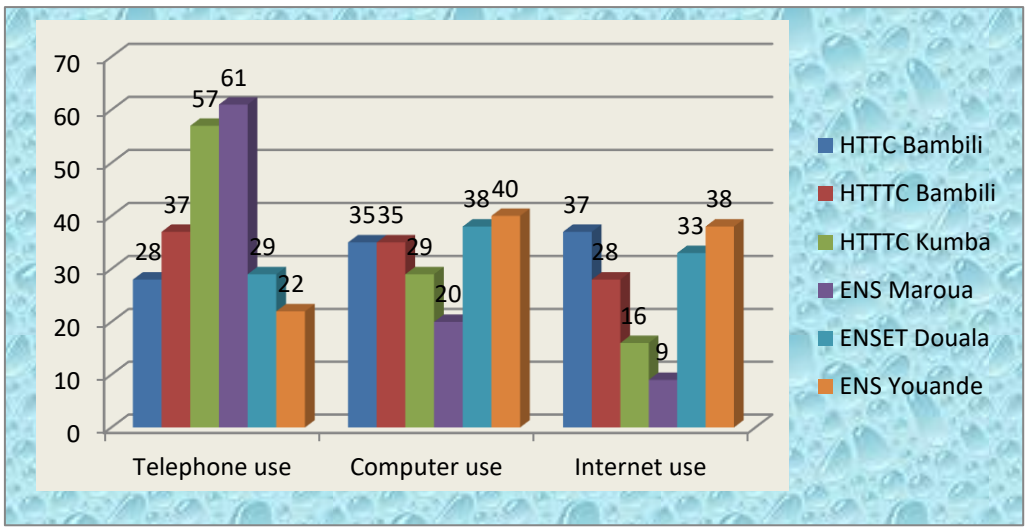

Fig. 1: Identification of mental health professionals according to Training school

From Figure 1, it could be seen that mental health professionals who received training in ENS Maroua used telephones the most (f=61, %=61.0), closely followed by mental health professionals from HTTTC Kumba (f=57, %=57.0). Also, mental health professionals from HTTTC Bambili used telephones for mental healthcare service provision less than those in the previous schools (f=37, %=37.0). Mental health professionals from ENSET Douala (f=29, %=29.0), HTTC Bambili (f=28, %=28.0), and ENS Yaoundé (f=22, %=22.0), were also noted to be using telephones but to a less extent. This therefore reveals that the training school attended by mental health professionals in the course of their training has a role to play on their usage of ICT tools during mental healthcare service provision.

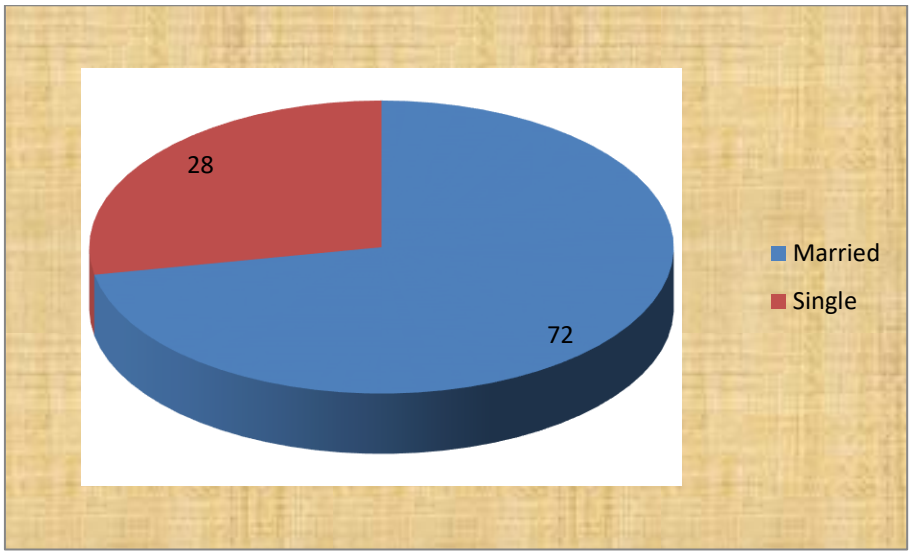

Fig. 2: Identification of mental health professionals according to Marital status

According to Figure 2, based on the statistics collected, majority of the mental health professionals were married people (f=72, %=72.0) while very few were single (f=28, %=28.0). By virtue of qualitative data collected, married mental health professionals seem to have a better career and use ICT tools for mental healthcare service provision purpose better than those who are single.

ISSN No:-2456-2165

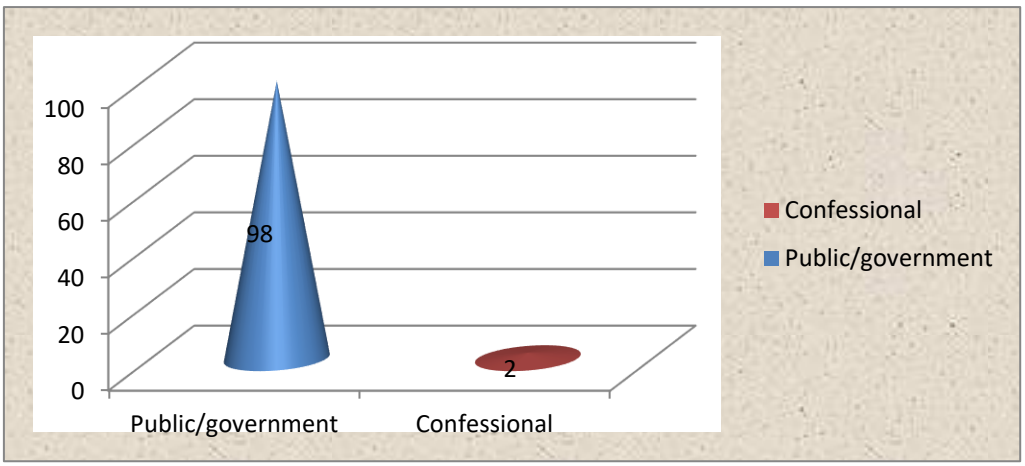

Fig. 3: Identification of mental health professionals according to School type

Based on Figure 3, an overwhelming majority of the mental health professionals used for the study were from public schools (f=98, %=98.0) while only (f=2, %=2.0) were from confessional schools.

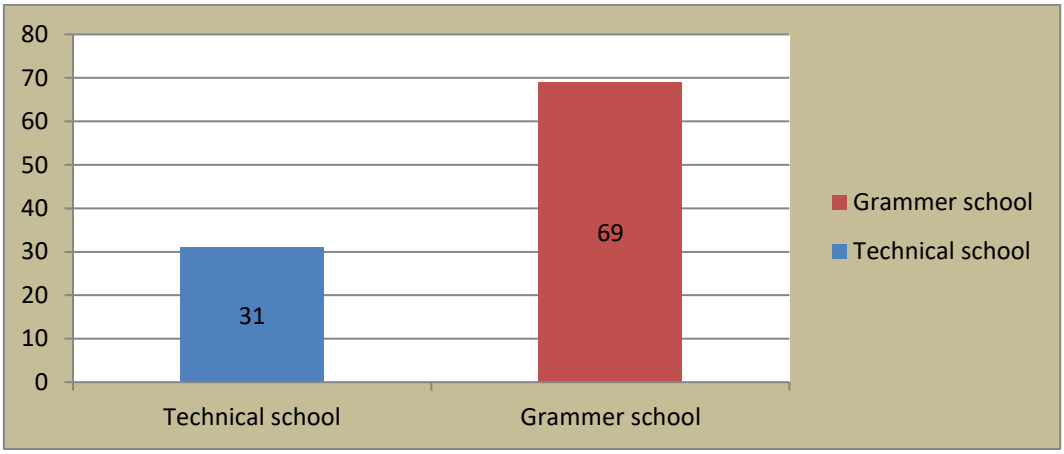

Fig. 4: Identification of mental health professionals according to Institution/ work setting

From Figure 4, based on statistics more mental health professionals were gotten from grammar schools (f=69, %=69.0) than in technical schools (f=31, %=31.0). However, those who were in technical schools used ICT tools more effectively than their colleagues in grammar schools.

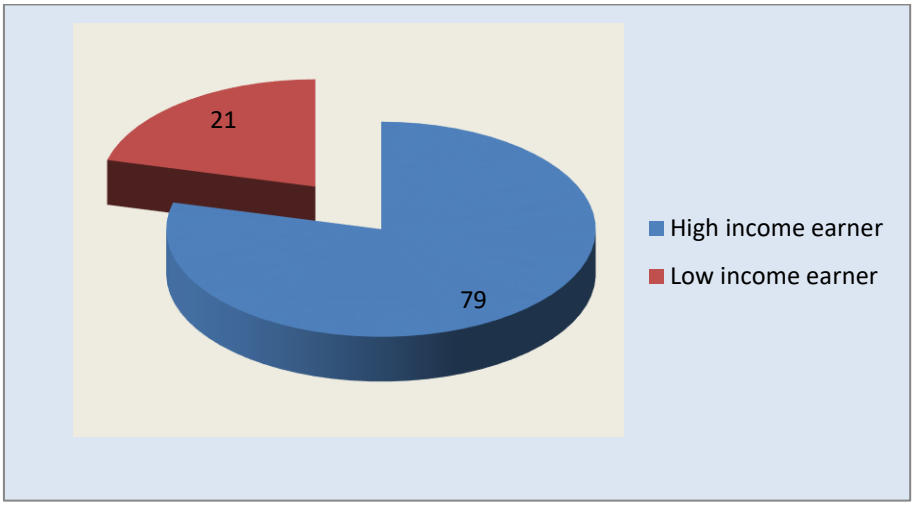

Fig. 5: Identification of mental health professionals according to Socio-economic status

ISSN No:-2456-2165

From Figure 5, more mental health professionals used for the study were high income earners and used ICT tools to a high extent (f=79, %=79.0) compared to their low income earner colleagues (f=21, %=21.0).

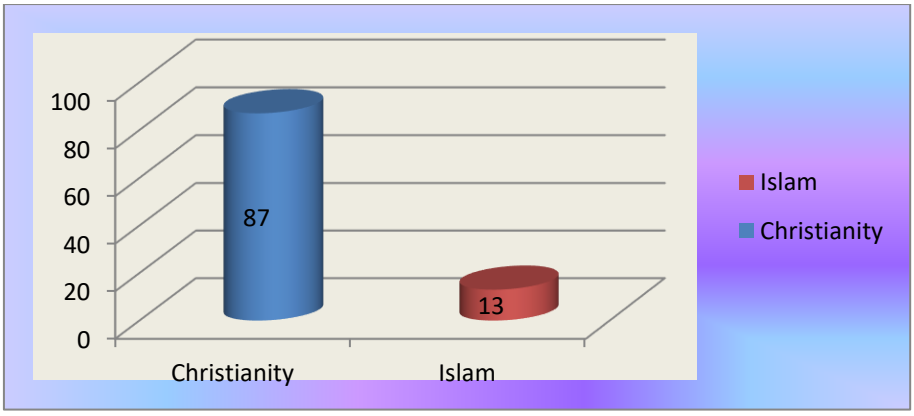

Fig. 6: Identification of mental health professionals according to Religion

Based on Figure 6, it was seen that majority (f=87, %=87.0) of the mental health professionals used for this study were Christians while only (f=13, %=13.0) were Muslims. Based on the data collected,Christians use ICT tools to a very high extent compared to their Muslim colleagues who use ICT tools at a very low extent.

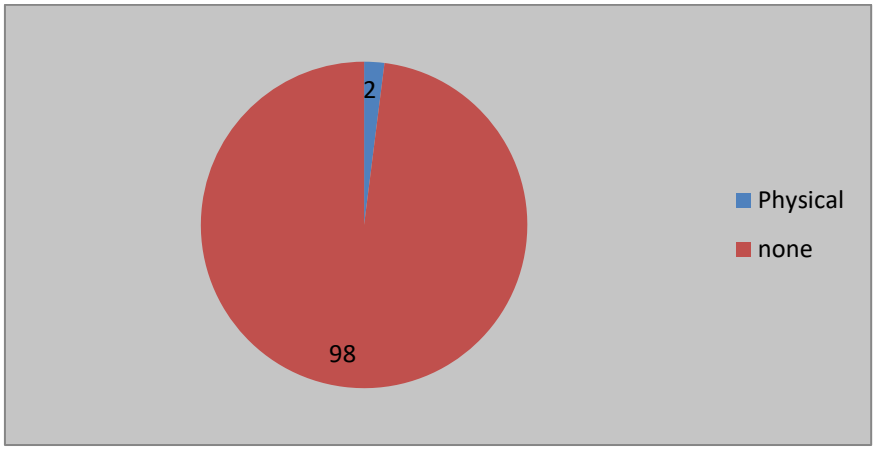

Fig. 7: Identification of mental health professionals according to Disability

According to Figure 7, mental health professionals responses on disability status portrayed that only (f=2, %=2.0) two of them acknowledged having a physical disability while (f=98, %=98.0) were of the view that they have no physical disability.

- **Demographic information from qualitative analysis**

Demographic information was sought from the research participants (cases) prior to conducting the in-depth interviews. The Qual-quan analytics approach was employed to illustrate a qualitative dominance of the data collected. There were 17 and 8 male and female cases respectively; portraying males sample dominance in the study. Age wise presentation of cases shows 31-40years dominance. The least age bracket that used ICT tools for mental healthcare service provision was 50 years and above.

Majority of the cases interviewed (9) were divisional and regional chiefs of services from the North West region; however, regional inspectors from the south west region constituted the least cases interviewed (3). Majority of the cases interviewed were DIPCO holders (17) while those mental health professionals with both Masters and DIPCO were of the minority (7). Majority of the cases were assertive of the fact that they have received training in ICT (19) however some were not proficient in the use of ICTtools for mental healthcare (internet) due to less frequent practice. Cases 4,8,15,17,21,24 said they had not received training in the use of ICT tools for mental healthcare service provision.

Cases 2 said, “I received training in ICT tool usage in the course of my training in HTTC as a mental health professional though the training wasnot specifically directed towards the use of ICT tools for mental healthcare service provision”. Case 20 was the only female mental healthcare professional who acknowledged to have received training in ICT. She said, “I attended seminars and workshops geared towards the use of ICTS for mental healthcare service provision effectiveness”.

Acquisition of ICT competence is better enhanced in workshops than in the course of training as mental health

ISSN No:-2456-2165

professionals as further asserted by the cases who had received training in mental healthcare. Majority of the mental health professionals interviewed were from urban areas. Cases 13 and 23 were from rural areas however currently works at their regional offices due to the socio political crises plaguing the region.

- ***Verification of hypothesis one***

Ho1: There is no significant difference between some demographic characteristics and ICT use for mental healthcare service provision effectiveness.

Variables		Demographic variables	Mental healthcare service provision effectiveness
Demographic variables	Pearson Correlation	1	.581*
	Sig. (2-tailed)		.001
	N	100	100
mental healthcare service provision effectiveness	Pearson Correlation	.581*	1
	Sig. (2-tailed)	.001	
	N	100	100

Table 1: Correlation between demographic characteristics and ICT use for mental healthcare service provision effectiveness.

*. Correlation is significant at the 0.05 level (2-tailed).

A significant difference was found between demographic characteristics and mental healthcare service provision effectiveness (r=0.581, df=98, p=0.05). Based on the fact that the significance level of the hypothesis was above 0, the null hypothesis that there is no significant difference between some demographic characteristics and ICT use for mental healthcare service provision effectiveness was rejected while the alternative hypothesis was retained.

B. Research question two: What is the extent to which the use of telephones affects mental healthcare service provision effectiveness in secondary schools?

The mean of real limits of numbers were used to statistically determine the extent to which the use of telephones affects mental healthcare service provision effectiveness $1 \geq x \leq 1.49$=very low extent, $1.5 \geq x \leq 2.49$=low extent, $2.5 \geq x \leq 3.49$=high extent, $3.5 \geq x \leq 4.0$=very high extent.

Cumulatively, the gross mean sum was 44.12 on a scale of 60 and 10.20 for the standard deviation. The final mean and standard deviation estimates (x=2.94, SD=0.68) illustrates that to a high extent the use of telephones positively affects mental healthcare service provision effectivenessin secondary schools as the deviation estimate remains positive about the mean.

- **Interview responses on telephone use and mental healthcare service provision**

An overwhelming majority of the cases expressed dominant positive views on the fact that the telephone enhances mental healthcare service provision effectiveness. Case 20 was selected for thematic illustration because she was a female mental health professional and most of her female colleagues did not express a positive view on telephone usage for mental healthcare service provision effectivenessbut she did by quoting:

> *"I have a very positive view about the use of telephones in enhancing mental healthcare service provision effectivenessbecause I often use it to follow-up clients and store mental health information. My phone doubles as a computer and the internet to search for any counselling information online, therefore the use of telephones for effective counseling cannot be over emphasized".*

Majority of the cases (11) expressed dominant views on the fact that they have been using the telephone between 1-4 years for the purpose of mental health and few cases (3, 6, 10, and 12) have used the telephone for 10 years and above. Cases 3, 9, 11 and 20 expressed dominant views on the fact that as mental healthcare professionals they use the telephone to counsel clients at their convenience. In-depth analysis of case 3 was chosen because of the client's experience in using the telephone above 10 years for mental healthcare service provision purposes. He said that:

> *"Over the past ten years in the use of telephone for mental healthcare service provisionI noticed that most clients prefer expressing themselves better on phone most probably because they feel comfortable doing so in an area they so desire that will enable them to provide detailed information about themselves. When clients express themselves on phone they hardly conceal anything about themselves because they know they are in an environment where no one hears them".*

- ***Verification of hypothesis two***

Ho2: There is no significant relationship between the use of telephones and mental healthcare service provision effectiveness in secondary schools.

ISSN No:-2456-2165

Variables		Telephone	mental healthcare service provision effectiveness
Telephone	Pearson Correlation	1	.741**
	Sig. (2-tailed)		.001
	N	100	100
mental healthcare service provision effectiveness	Pearson Correlation	.741**	1
	Sig. (2-tailed)	.001	
	N	100	100

Table 2: Correlation between telephone use and mental healthcare service provision effectiveness

NB: Correlation is significant at the 0.05 level (2-tailed)

There is a significant relationship between the use of telephones in mental healthcare service provision effectiveness ($r=0.741$, $df=98$, $p<0.05$). Based on the fact that the significance level of the hypothesis is above 0, the null hypothesis that there is no significant relationship between the use of telephones and mental healthcare service provision effectivenessin secondary schools was rejected while the alternative hypothesis that there is a significant relationship between the use of telephones and mental healthcare service provision effectivenessin secondary schools was retained.

V. DISCUSSION OF FINDINGS

From the findings, there are significant differences in the usage of ICT tools with respect to gender. Male mental health professionals are more effective in the use of ICT tools than their female colleagues. Age-wise, it was also found that mental health professionals of less than 35 years of age use ICTs more effectively than their older colleagues. Those who were between the ages of 36-45 years use ICT tools more effectively than those who were between the ages of 46-60 years. Also, academic qualification differed significantly with effective use of ICT tools in mental healthcare service provision. Mental health professionals with Master's degree were more proficient in the use of ICT tools than their DIPCO and Bachelor degree colleagues. Mental health professionals who have received training in ICTs were seen to be significantly more effective in the use of ICT tools for mental healthcare purposes than those who had not received any training in ICT. These findings are in consonance with Golden (2017) whose study revealed that a relationship between the independent variables of age and educational experience and the school mental health professional's intent to use ICTs in mental healthcare service provision.

Furthermore, statistical evidence points to the fact that mental health professionals who had worked for less than or equal to ten years used ICT tools significantly better than their more experienced colleagues. Those who had got experience between 11-20 years were more effective in the usage of ICT tools than their more experienced colleagues of twenty-one years and above. Moreover, mental health professionals who are high income earners use ICT tools for mental healthcare service provision significantly better than their low income earning colleagues. These findings are also in line with the postulates of Aramide, Lapido and Adebayo (2015) who said scholars have theorized demographic characteristics or factors as having the ability to determine the extent of use or non-use of ICTs. Among the demographic factors that are often cited as having an influence on ICT use are: gender, age, level of education, years of experience and income (UNDP, 2011).

Results also revealed that the training school of the mental health professionals had a significant difference on ICT use effectivenessin mental healthcare service provision. Mental health professionals who schooled in ENS Yaoundé, ENS Douala and HTTC Bambili demonstrated significant effectiveness in the use of ICT tools for mental healthcare purposes as compared to their colleagues from HTTTC Kumba and ENS Maroua. Married mental health professionals significantly use ICT tools effectively for mental healthcare purposes than single mental health professionals. Mental health professionals from public schools use ICT tools significantly more effective than their colleagues from confessional schools. Technical school mental health professionals are significantly more effective in the use of ICT tools than their Grammar school colleagues. Mental health professionals who are Christians use ICT tools significantly more effective than their Muslim colleagues.Mental health professionals in urban areas were significantly more effective in the usage of ICT tools for mental healthcare purposes than their colleagues who were from rural areas.

Not all demographic factors had a significant relationship with the effective use of ICT tools in mental healthcare service provision. Effective use of ICT tools was not significantly different with respect to language use. English speaking mental health professionals had no significant difference in effectiveness of ICT usage in mental healthcare service provision than their French colleagues. It was also found that effective use of ICT tools did not differ significantly with respect to region. In as much as mental health professionals from the Northwest could effectively use these tools those from the Southwest showed no superiority in terms of ICT tools usage for mental healthcare service provision. No significant difference was found between the effective use of ICT tools in mental health service provision with regards to disability types of

the mental health professional. Mental health professionals with physical and learning disability did not differ in terms of effective use of ICT tools.

A positive correlation was found between the use of telephones and mental healthcare service provision effectiveness. The findings showed that mental health professionals use telephones to a high extent to collect educational and career information for clients, to gather background information about clients, to communicate information to clients, to conduct psychological tests on clients, to analyze psychological tests for clients, and to communicate test results of mental health. Lanclos (2017) also mentions other functions of the telephone such as browsing the internet using a mobile browser playing games, video chat, point of sale terminal when paying for goods or services, barcode scanning, creating high quality photographs or videoand determining user's exact location utilizing GPS (global positioning system) satellites.

Mental health professionals also reported that they use telephones for placement of clients in jobs, internships and employment opportunities, for placement of students in various scholarship opportunities and educational programs to high extent and to match the students' aptitudes, abilities and interests with career options. Furthermore, mental healthcare professionals asserted that they use telephone to a high extent to conduct clients' mental health needs assessment surveys, to do ongoing and annual evaluation of mental healthcare services in school, to make adjustments on school mental health programs when the need arises to frequent. This is in consonance with Elder, Wildey, De Moor, Sallis, Eckhardt, Edwards, Erickson, Golbeck, Hovell and Johnston (2011) who stated that direct one-to-one telephone interventions appear to provide cost-effective tobacco-related behaviour modification, thereby portraying the telephone is a valuable ICT tool in the provision of effective mental healthcare services.

The findings that mental health professionals use telephones to actively cooperate with colleagues such as teachers and administrators, to work with members of the community such as parents and other professionals to a low extent and to equally actively cooperate with other mental health professionals within and beyond my school is in consonance with the postulates of Lanclos (2017) who stated that the influence of phones in all spheres of life in today's world cannot be ignored some of these uses include: making phone calls, sending and receiving text messages through the short message service (SMS), sending and receiving emails, photographs and multimedia messages, registering contacts, calculator, currency and alarm functions.

The findings of the study have theoretical, practical and policy implications to mental health research and practice. At the theoretical level, this study has helped to increase the body of knowledge in the fields of information and communication technologies, psychology, education and mental health. The findings indicate that the use of ICTs has a positive effect on mental healthcare service provision effectiveness in secondary schools in Cameroon. It is true that most mental health professional training programs in professional schools and universities in the country do not infuse ICT knowledge and skills into the curriculum. This unfortunate situation impinges negatively on the training of mental health professionals for today's globalized society where technological advancement continues to change patterns in the world of work including professions within the field of mental health.

From a practical perspective, lessons can be transported from this study to real life situations in mental health. The findings have revealed that ICTs, when used properly, have the potential to enhance the effectiveness of mental healthcare service provision. It is true that some mental health professionals are yet to integrate ICTs in their mental healthcare service provision in schools and beyond, which may be a reason why they are usually overwhelmed with work and continue to experience low efficiency levels. These findings therefore mean that practising mental health professionals already using ICTs for effective mental healthcare service provision ought to fine-tune their ICT competencies while those still to adopt ICTs in mental healthcare should join their counterparts in Cameroon immediately. With regards to policy implications, this study can be used to inform government efforts towards the integration of ICT use into all aspects of national life to foster national growth and development especially in the mental health domain.

VI. CONCLUSION

This study concluded that there exist demographic variations in ICT use for effective mental healthcare service provision in secondary schools. From the findings of the study, it was clear that the use of ICTs, specifically telephones, has a positive significant correlation with the effectiveness of mental healthcare service provision in secondary schools in Cameroon. Therefore, it was recommended that counsellors should increase their mastery of the use of information and communication technologies such as telephones. This will improve their overall ICT competencies and equip them for state-of-the-art service delivery in today's globalized society. In addition, training colleges and universities should incorporate and strengthen ICT integration training in their mental health professionals' education programs. They shouldalso ensure that such training is based on equipping the student mental health professionals with skills on actual integration of information and communication technologies in professional mental health practice in clinical and school settings. This would ensure that they are adequately prepared to effectively compete with their counterparts worldwide upon completion of professional training and graduation. Since the research was limited only to school counsellors in the two English-speaking regions of Cameroon it was suggested that another study should be carried out in other regions of the country to compare the findings.

ISSN No:-2456-2165

REFERENCES

[1.] Achale, O.E., Tani, M.C., Chongwain, L. (2007). The Use of Information and Communication Technology (ICT) For Quality Education in Cameroon State Universities. Réseau Ouestet Centre *Africain Recherche en Education* (ROCARE).

[2.] American Counseling Association.(2014). *ACA Code of Ethics*. Alexandra, VA: Author.

[3.] Bakehe, N. P., Fambeu, A. H., &Piaptie, G. B. T. (2017). Internet adoption and use in Cameroon. *Reseaux*, (1), 147-174.

[4.] Bhattacharya, I., & Sharma, K. (2007).India in the knowledge economy–an electronic paradigm. *International journal of educational management, 3(1), 134-146.*

[5.] Cherry, K. (2021).*Mental health counselor.* Retrieved from https://www.verywellmind.com/what-is-a-mental-health-counselor-4157925

[6.] Dominguez-Torres, C., & Foster, V. (2011). Cameroon's infrastructure: a continental perspective.

[7.] Elder, J., Wildey, M., De Moor, C., Sallis, J., Eckhardt, J., Edwards, C., Erickson, A., Golbeck, A., Hovell, M. & Johnston, D. (2011). The long-term prevention of tobacco use among junior high school students: classroom and telephone interventions. *American Journal of Public Health*, 83 (7), 1239-1244.

[8.] European Centre for the Development of Vocational Training.(2005). *ICT skills for guidance counsellors.*Retrieved at 4pm on 25th November, 2018 from http://www.cedefop.europa.eu/en/eventsand-projects/events/ict-skills-guidancecounsellors.

[9.] Greaves, J. (2005). *Effective ICT with limited Resources Central Banking*.XV(3), 79-82.

[10.] Huws, U., Denbigh, A., &O'Regan, S. (1999). Virtually There.The Evolution of Call Centers. *Institute for Employment Studies at http://www.Employment-studies.co. uk September*.

[11.] Lange, P. (2008). The Case for "Open Access" Communications Infrastructure in Africa: The SAT-3/WASC cable–Cameroon case study. *History, 2(1),* 1-13.

[12.] Mbangwana, M. A. &Otang, E. A. (2006).The use of information and communication technologies for counselling.InFonkoua, P.(Ed.). Intégration des TIC dans le Processus enseignements-apprentissage au Cameroun (pp. 119- 144). Yaoundé: Edition Terroirs.

[13.] Mbangwana, M.A. (2008). Introduction of ICT in Schools and Classrooms in Cameroon.In K. Toure, T.M.S. Tchombe, & T. Karsenti (Eds.), ICT and Changing Mindsets in Education. Bamenda, Cameroon: Langaa; Bamako, Mali: ERNWACA / ROCARE.

[14.] Neba, N. D. (2010).Measuring the evolving ICT sector and it impact on business community inCameroon.Retrieved from https://unstats.un.org/unsd/economic_stat/ICT-Korea/Documents/Neba_Cameroon.pdf.

[15.] Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). New York: Free Press.

[16.] Sanyal, M. K. (2001). Adverse Reproductive Outcome Potential of Cancer Therapies During Pregnancy. In *Cancer and Pregnancy* (pp. 174-189). Sage Publications.

[17.] Sharma, R. (2003). Barriers in Using Technology for Education in Developing Countries.*Computers and Education*, 41(1), 49-63.

[18.] Tait, A. (1999). Face-to-face and at a distance: the mediation of mental health counselling through the new technologies. *British Journal of Mental Health*, *27*(1), 113-122.

[19.] Tamukong, J. (2007). Analysis of information and communicfation technology policies in Africa.PanAfrican Research Agenda on the Pedagogical Integration of Integration of Integration of Integration of ICT.RéseauOuestet Centre AfricainRecherche en Education (ROCARE).

[20.] Tchinda, T. J. (2007). ICTs in education in Cameroon.*Survey of ICT and education in Africa: Cameroon country report.* Retrieved from https://www.infodev.org/infodev-files/resource/InfodevDocuments_390.pdf.

[21.] UNESCO. (2021). *Guide to measuring ICT in education.* Retrieved from http://uis.unesco.org/en/glossary-term/information-and-communication-technologies-ict

[22.] Vinluan, L.R. (2011). The Use of ICT in School Guidance: Attitudes and Practices of Guidance Counsellors in Metro Manila, the Philippines. *International Journal for the Advancement of Counselling*, 33 (1), 22–36.

[23.] Watts, A. G., & Dent, G. (2006). The 'P'word: Productivity in the delivery of mental health services. *British Journal of Mental Health*, *34*(2), 177-189.