A Multi-Criteria Perceptional Analysis Towards Integrating ICT for the Control of Child Abuse and Trafficking

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Abstract: *The informative role of communication technology in education and national development cannot be over emphasized. It has brought significant changes and improvement in this present century. With the ever increasing rate in the adoption and usage of ICT gadgets, there still exists a noticeable gap due to poor mindset, disbelief, negligence and lack of technological know-how of deployable innovations towards its application in curbing the menace (Child abuse and trafficking) which has a negative effect on the development of any nation. This paper examined through a well-planned and systematically conducted research the beneficial roles of integrating ICT for the control of Child abuse and human trafficking with a prior knowledge of the methods and adopted by child traffickers. In order to ascertain the investigate role ICT can play in putting an end to the menace, five selected ministries in the western part of Nigeria, precisely Ogun state were selected as case study. A simple random technique was used to select a total of two hundred respondents; data collected were analyzed using the statistical Chi-square formulae. Based on the result obtained, it clearly depicts that ICT can play a significant role in controlling child abuse and human trafficking in the society if properly utilized with a great and promising mindset. However, the successful introduction and implementation of the use of ICT based gadgets requires the cooperation of government, non-governmental or private organizations and individuals in sharing information and communicating in a timely manner to avert the associated problems that may arise due to child abuse and trafficking*

Keywords *—* ICT, Gadgets, Organizations, Digital Crime, Child Abuse, Human Trafficking, Control, Government.

1. INTRODUCTION

The arrival of a child especially among newly married couples always marks a turning point in the historical life of a family and a nation at large. It is also an incontrovertible fact that children are considered as important symbol of status and cherished in every part of the world [21]. A woman without a child is often regarded as being barren in some communities [3] when such a woman dies; her abdomen will be slit across before burial in order to express the contempt with which she was held or as a reprisal for her failing to fulfill her functions in life. Marriages without children have often led to a serious problem in the family and sometimes to divorce or separation between the husband and wife [27]. Despite the importance attached to child bearing and upbringing, many children have become victim of abuse and neglect [22]. In developing countries like Nigeria, the rate at which these important symbols of status (children) are being abused and trafficked is very alarming thus necessitating the intervention of reasonable members of the society and some international organizations.

Child Abuse as defined by the United Nations International Children's Emergency Fund [26] is the proportional harm (which can be physical, verbal or emotional) that results from human action or inaction that is proscribed and preventable or a manifestation of inadequate child care by parents and caretakers towards children of less than 18 years of age. It occurs in different forms and varies in degree ranging from child prostitution, child labor, child slavery and any form of physical abuse inflicted on the child [5]. Varied forms of mental torture of the child, Early and child marriage, abortion, child abandonment, battering, violent acts, kicking and slapping, economic exploitation and street hawking, children used as beggars in the street, Mental cruelty, Withdrawal of love and malnourishment of the child are also forms among the varied forms in which child abuse can be perpetrated [1].

Human trafficking and child abuse are crime against humanity. It attracts local, national and international condemnation [15] with diminished reputation on any nation where such acts are observed. The application and usage of computers and ICT gadgets in recent times has shown that it helped solved human most challenging problems in various fields of life such as astronomy, physics, medicine, economy, traffic management, agriculture, businesses etc., having observed the advantages aroused with the introduction of ICT, it thus possess a question "Can ICT be deployed to solve social problem of Child Abuse and trafficking in the society?" which is the main reason for this research. This paper is organized as follows: Section 1 gives a brief introduction about child abuse and human trafficking with the importance of children and the goal of this paper. Section 2 presents

a detailed review of previous work from which different forms of abuses were classified; types of technologies used by traffickers are highlighted. In section 3, the methodology adopted in carrying out the research was clearly explained in details and results obtained analyzed. Lastly section 4 gives the recommendation and conclusion of the research work.

2   RELATED WORKS

Tower, 2008 defined child abuse and listed numerous ways through which a child can be physically abused. Apart from the inflicting physical pain or torture on the child, [4] emphasised that abuse could be any non-accidental behaviour by parents, caregivers, other adults or older the norms of adolescents that is outside conduct and entails a substantial risk of causing physical or emotional harm to a child or young person. Such behaviours may be intentional or unintentional and can include acts of omission (i.e. neglect) and commission.   (The National Domestic Violence Hotline, 2010) in its report highlighted some forms of activities which could be termed as sexual abuse without neglecting the fact a child may also suffer from emotional abuse by the infliction of anguish, pain, or distress through verbal or non-verbal acts as depicted by the National Centre on Elder Abuse Administration on Aging NCEA, 2015).

Some major factors resulting to child trafficking as stated by the (International Programme on the Elimination of Child Labour - International Programme on the Elimination of Child Labour [12] are poverty, violence and discrimination. The International Labour Organization (2015) estimated that about 115 million children are being trafficked and engaged in various forms of hazardous work. [24] emphasised the outgrowing rate at which underage girls are malleable and more easily trained into their prospective roles as prostitutes. Child trafficking is difficult to regulate especially when the family members leverage on a child to ensure that begging is carried out, [6] itemized conditions which could make curbing trafficking.

[2] recommended the active involvement of indigenous government and Non-Governmental Organizations such as "National Council of Women Societies, Women Consortium of Nigeria Women Trafficking and Child Labour Eradication Foundation (WOTCLEF)" in any program toward eliminating child trafficking.

2.1 Technologies Adopted for Human and Child Trafficking

Traffickers can exploit technology for their own illegal purposes. For instance, technologies offer traffickers anonymity. Prior to the internet, traffickers were forced to reach consumers and conduct business through underground networks. Due to the anonymity of the internet, both traffickers and consumers can conduct business online with minimal risk of being identified [7]. Pre-paid and disposable mobile phones are purchased without long-term contracts and personal identification or credit checks are not required. These phones provide a high level of anonymity and make it more difficult for law enforcement to obtain incriminating evidence for the prosecution of human traffickers. Unrestricted communication is carried out by Traffickers who use pre-paid, disposable, or pay-as-you-go mobile phones to text information, send photos, or communicate directly with consumers in real-time [16]. Disposable mobile phones can be programmed to transmit false identification.

The internet also offers communication tools for traffickers to recruit victims, share information with consumers and other traffickers, and conduct financial transactions [10]. Like disposable phones, the internet offers a high level of anonymity through password protected sites, sending messages through 're-mailers' (identifying information on an email is removed and replaced with false information), or using websites or message boards that do not leave traceable transmissions or illegal materials to be discovered by law enforcement. The internet also provides an efficient mode for financial exchanges between traffickers and consumers. Online financial transactions can be completed very quickly and make tracking them difficult. The internet also allows 'virtual identities', which translates to anonymity, to send or accept money to specific accounts. Finally, technologies provide traffickers with new forums to recruit victims and advertise to consumers, including chat rooms, social media sites, and advertisement websites.

Traffickers may use websites and online classifieds (e.g., Craigslist) to advertise a fraudulent job (e.g., modelling, nannies, escort) to entice victims/survivors to leave home. Online classified sites and social media sites (e.g., twitter) are used to post advertisements of victims/survivors to consumers usually using covert and deceptive language. The Trafficking in Persons industry seems to have benefited from the advancement of technologies by providing more effective, efficient, and anonymous ways for traffickers to recruit, advertise, and communicate with consumers and victims [9].

2.2 Investigative and Combative Role of ICT in Human Trafficking

In July 2004, the Council of Europe's Convention on Cybercrime came into effect which provides procedural and investigative tools for law enforcers around the globe to prevent and combat all types of internet crime, including trafficking in persons. In addition to this Convention, Interpol, the world's largest international police organization, made combating trafficking in persons one of its five key priorities. Interpol provides an intelligence clearing house on traffickers to help identify international links in trafficking investigations and they have established a standardized format for exchanging information across the globe through their communications system. The United Nations Office on Drugs and Crime (UNODC) states that law enforcement and other

personnel respond to trafficking in persons that has been committed through the use of modern technology and that all parties receive training on new technological advances and how to combat trafficking committed through the use of technologies.

However, United Nations Convention against Transnational Organised Crime (UNTOC) (2010) stated that nations must establish policies to regulate the internet due to its role in trafficking women and children Computer-based e-training on identifying and responding to human trafficking is provided for law enforcement students. Face recognition technology is being developed in order to track photos of victims/.survivors across multiple websites and mapping technologies are used to extract location-based information to locate potential victims/survivors mentioned in United Nations Convention against Transnational Organised Crime (UNTOC) [12]. Law enforcement may also utilize crowdsourcing technologies which enable groups to send information that can help with an investigation. For example, a program can be developed where the public can text or email about places where they know trafficking occurred. This information can be placed on an electronic map to help track trafficking cases or identify high-risk areas.

3. METHODOLOGY

A descriptive survey was adopted in carrying out this research which generated adequate and better samples of the population to the study. The population of study comprises of young individuals and adults in five selected social organizations (private and government owned) namely: Ministry of Women Affair and Social Development, Oke Mosan, Abeokuta, Gideon Orphanage Home, Asero, Abeokuta, Stephen Center International, Aregbe, Abeokuta, Ministry of Women Affair and Social Development, Oke-Ilewo, Abeokuta and Ministry of Women Affair and Social Development, Odeda. The stages in this research include data collection through questionnaire, classification and analysis of data was performed to determine the correlating effect of using ICT as a tool to curb child trafficking and Abuse. The latest stage deals with the presentation and interpretation of the results.

3.1 Sample size and Sampling Techniques

A sample of two hundred (200) respondents drawn through a multi stage sampling techniques was used in this research. It comprises of both young individuals and adults in Ministry of Women Affair and Social Development, Oke Mosan, Abeokuta, Gideon Orphanage Home, Asero, Abeokuta, Stephen Centre International, Aregbe, Abeokuta, Ministry of Women Affair and Social Development, Oke-Ilewo, Abeokuta and Ministry of Women Affair and Social Development, Odeda respectively all situated at Ogun State, Nigeria.

3.2 Research Instrument

The research instrument used in carrying out the research is Questionnaire. The Questionnaire was designed to collect information needed for this research. The questionnaire is divided into two sections; section A and B. Section A comprises of the personal data of the respondents, while Section B comprises of statement questions that are used to measure the research topic.

3.3 Method of Data Collection

The instrument used for the data collection is questionnaire which was designed by the researcher to elicit vital information from respondents in the selected organization. The questionnaires were divided into two sections namely: section A and section B respectively.

Section A comprises of demography information to be supplied by the respondents. This include; age, gender and marital status, years in service of the respondents. Section B comprises of fifteen questions on the ICT: a panacea for control of child abuse and trafficking in our society. The respondents were required to indicate their perception by ticking ($\sqrt{}$) after each statement under the columns. Agree – A and Disagree – D

4. DATA ANALYSIS AND PRESENTATION

The data collected were grouped into different categories based on the following criteria:

i. Organization of Respondents

The respondents for the research were randomly selected number of forty (40) respondents from each selected organization. Table 1 below shows the number and equivalent percentage representing the selected respondents for the research.

Table 1: Organization of respondents

S/N	ORGANIZATION	Frequency	Percentage %
1	Gideon Orphanage Home, Asero, Abeokuta	40	20
2.	Stephen Centre, Aregbe, Abeokuta	40	20
3.	Ministry of Women Affairs and Social Development, Oke Mosan	40	20
4.	Ministry of Women Affair and Social Development, Odeda	40	20
5.	Ministry of Women Affair and Social Development, Oke-Ilewo	40	20
	Total	**200**	**100%**

ii. Age of Respondents

The age of respondents being an important factor in the selection and usage of ICT related tools is also put into consideration and analyzed into three categories as shown in Fig 1. A total of sixty-five (65), one hundred and eleven (111) and twenty-four (24) respondents were recorded for age group 16-20 years, 21-25 years and above 26 years respectively.
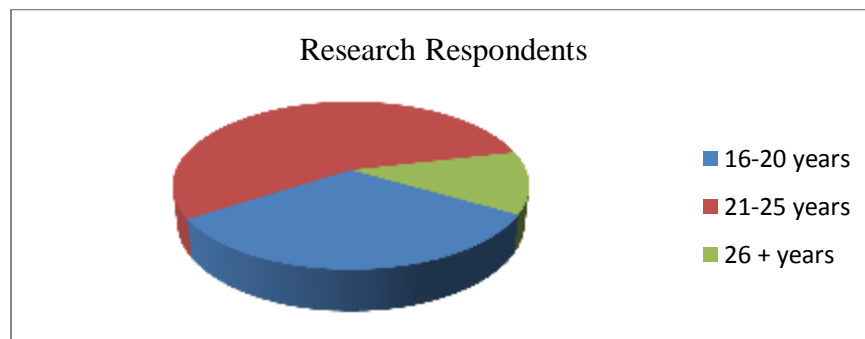

Fig.1 Respondents grouped based on age

iii. Gender and Marital Status of Respondents

A grouping of respondents based on gender and marital status expressed in percentage is depicted as shown in Table 2. This reveals that female have the highest frequency of the count. The information below (see Table 2) shows that 99 respondents representing 49.5% are male and 101 respondents representing 50.5% are female. This reveals that female have the highest frequency of the count. Similarly, 150 respondents representing 75.0% of the total research population are single and 50 respondents representing 25% are married which shows that there are more singles than married in the research sample.

Table 2. Gender of Respondents and Marital Status.

Gender	Frequency	Percentage %	Marital status	Frequency	Percentage %

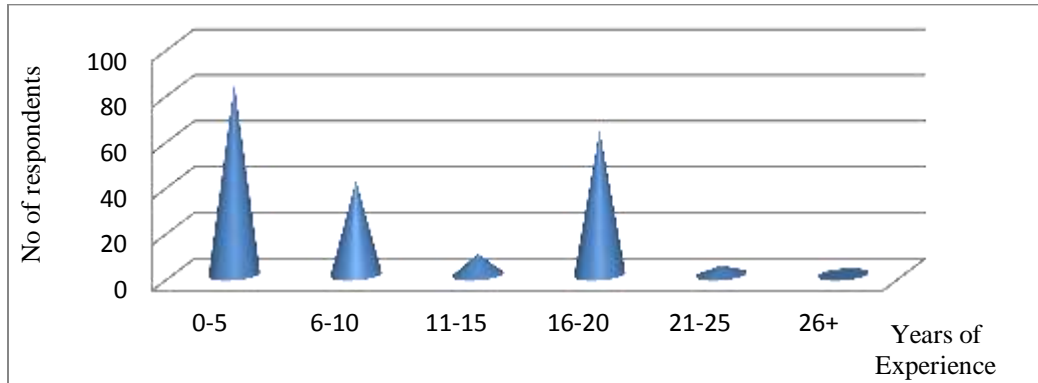| Male	99	49.5	Single	150	75.0
Female	101	50.5	Married	50	25.0
Total	200	100	Total	200	100.0

Fig.2 Respondents years of Experience/service

iv. Years of Experience/Service of Respondents

Fig.2 above shows the working experience in years of the research sample. Eighty-three (83) respondents representing 41.5% fall between 0 to 5 years, 41 respondents representing 20.5% have 6 to 10 years, 9 respondents representing 4.5% have 11 to 15years, 63 respondents representing 31.5% have 16 to 20years, and 4 respondents representing 2.0% have 21to 25years and none respondents have the working experience of 26 years and above. This reveals indicates that the respondents have sufficient years of working experience in their different positions.

v. Analysis of Collected Data

Several data analysis application software and tools have been provided to aid in the quick, careful, detailed and more accurate analysis of data. In this paper, the Statistical Package for Social Sciences (SPSS) was adopted for this research because of its associative nature with the sole aim to determine the level of relationship and dependence of the research items.
A whole collection of data was grouped into two batches and analyzed using the Chi-square with an associated degree of freedom. The first batched data was used to test the hypothesis (Ho_1): The role played by the ICT in assuring security will not significantly reduce child abuse and trafficking in the society at 0.05 level of significance while the other was used to test the hypothesis (Ho_2): The use of ICT based facilities for child protection will not significantly reflect on abuse and trafficking in our society at the same significant level. Fig. 3 and fig.4 respectively depicts the result obtained from the analysis.

Test Statistics										
	Q2	Q3	Q7	Q8	Q9	Q11	Q14	Q19	Q20	RQ1
Chi-Square	1.008E2[a]	35.280[a]	36.980[a]	40.500[a]	25.920[a]	28.880[a]	25.920[a]	56.180[a]	46.080[a]	1.092E2[b]
df	1	1	1	1	1	1	1	1	1	9
Asymp. Sig.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Fig.3 Batched data for the testing of Ho_1

Fig.4 Batched data for the testing of **Ho$_2$**

From Fig 3. above, the columns Q2, Q3, Q7,… Q20 denote various sampled questions selected to form the first batch for which the initial hypothesis (Ho$_1$) was tested while column RQ1 represents the resultant of the cumulative Chi-square values and degree of freedom (df). Similarly, RQ2 in fig. 4 shows the resultant cumulative Chi-square values for Q1, Q4, Q5… Q18 with the degree of freedom used in the testing of the later hypothesis (Ho$_2$).

Furthermore, in order to determine the level of associativity and dependence of the variables towards the validation of the hypothesis, a comparison is performed between the calculated and critical values as shown in Table 3.

Table 3: Hypothesis Validation Table.

S/N	Metrics	Hypothesis		Remark
		Ho$_1$	**Ho$_2$**	
1	**X^2 - Cal. Value**	109.2	102.1	Rejected
2	**X^2 - Crit. Value**	16.919	15.507	Rejected

Table 3 above reveals that the calculated Chi-square value 109.2 is greater than the critical value 16.919, at alpha = 0.05 level of significance. Hence the hypothesis (**Ho$_1$**) is rejected. That is, the role played by ICT in assuring security will significantly reduce child abuse and trafficking in our society.
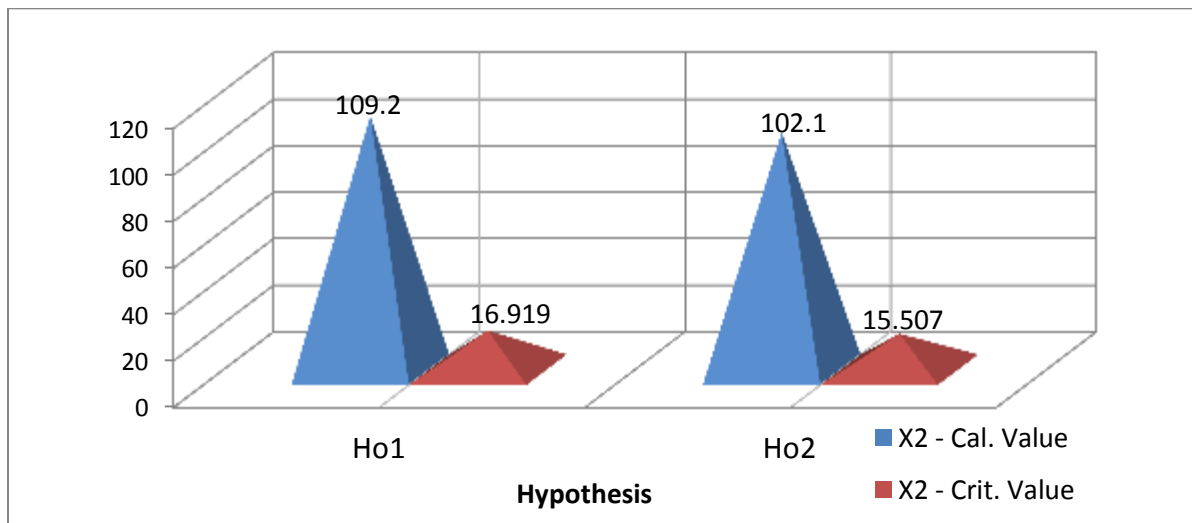

Fig.5 Metric validation for the dual hypothesis

Similarly, values depicted in fig.5 for the second hypothesis (**Ho₂**) reveals that the hypothesis is rejected since the calculated Chi-square value 102.1 is greater than the critical value 15.507, at alpha = 0.05 level of significance. This indicates that the use of ICT based facilities for child protection will significantly reflect on the abuse and trafficking of children in the society. Figures and Tables

5. Recommendation and Conclusion

To further enhance and strengthen the usage of ICT in curbing the social menace of child abuse and trafficking, the following recommendations are suggested.

i.   A positive and effective collaboration is required between the government and private sectors towards a coordinated approach using ICT devices to share and communicate necessary information to curb child abuse and trafficking in the society.
ii. Private-sector technology firms should be conscious and aware that their services and networks are being exploited by traffickers, therefore necessitating immediate actions to innovate and develop anti-trafficking initiatives through their technologies and policies.
iii. The ultimate beneficiaries of any technological intervention should be the victims and survivors of child abuse and trafficking.
iv. Continuous involvement and research is necessary to ensure that ICT gadgets are user centric and refined over time to most effectively respond to shifts in technology and trafficking.

Child abuse and human trafficking are great menaces that have tainted the image of many great and developing nations most especially in Africa. Well-meaning and promising children who ought to be valiant and strong nation builders are being abused, trafficked or seen living precariously on the streets of major cities. As a result of that, many develop low self-esteem, dissatisfaction, poor self-confidence and psychological distress which may later result into suicide. Conclusively, this research examined the significant role ICT can play when properly deployed to curb child abuse and trafficking in the society. A list of various forms of abuse and ways human traffickers are penetrating their evil acts with the application of technology have been highlighted. Combating actions that could be adopted to prevent the future occurrences thus saving the young child from abuse and trafficking were also enumerated. To further enhance and strengthen the usage of ICT for curbing these menaces, we also provided some useful recommendations.

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