

**WhatsApp Usage and Psychological Well-Being of Students in Mixed Secondary Schools in Masinga Sub County, Machakos County, Kenya**

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**Abstract**

The purpose of this study was to investigate WhatsApp usage and wellbeing of students in mixed secondary schools at Masinga Sub County in Machakos County, Kenya. The study was guided by four research questions focusing on; what is the prevalence of WhatsApp usage among students, what is the prevalence of students' psychological wellbeing in connection with depression, anxiety and stress, what are the effects of WhatsApp usage on students' psychological well-being, and What are the strategies used to improve WhatsApp usage among students in mixed secondary school students at Masinga Sub County in Machakos County, Kenya. The study was founded on Generalist Intervention Model and System Theory. The study adopted convergent mixed method research design. The target population was 51 deputy principals, 782 teachers, and 3360 form two students. Systematic sampling was used to sample 10 schools, purposive sampling technique was used to select 10 deputy principals, simple random to sample 156 teachers, and stratified and simple random sampling technique was applied to sample 360 form-two students. Questionnaire and interview guide were used for data collection. Field data was analyzed and presented in tables, frequencies and percentages. The study findings may be meaningful to policy makers, students, teachers and local communities in the sub county as key stake holders. Findings show that WhatsApp usage among the students is widespread in mixed secondary schools. There is a strong significant relationship between students' WhatsApp use and students' psychological well-being ( $r = 0.779$ ,  $p \text{ value} = 0.001$ ). Changes in WhatsApp usage would predict changes in students' psychological well-being. The study recommends that; school administrators should put in place stringent strategies to control the use of social media among secondary school students and Ministry of Education should develop policies for curbing the use and challenges associated with social media by secondary school students

**Keywords:** Kenya, Machakos County, anxiety disorder; Mental health; Peer pressure; social media; WhatsApp Messenger

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**Background**

The students' mental health has been the major focus globally among many scholars. The mental health includes life satisfaction, self-esteems and affects status (Ibrahim & Sulaiman, 2014). The study conducted by Strickland, (2017) noted that social media more so the students who prefer to use WhatsApp before bed which leads to poor sleep or insomnia, high level of anxiety, and depression hence affecting their mental health and well-being. The study conducted by Anderson and Jiang (2018) has noted that 51% of youth have social media account such as WhatsApp, Facebook with 85% stay online almost every hour, 69% use snap chart. Strickland, (2014) who established that students waste time in social media with majority using an average of 3 to 4 hours of their time on daily basis. Across all continent the adoption of the smartphones as the most preferred means of communication has taken new trend, this has made people to reduce the use computers more frequently and majority has intensified the use of mobile devices in all communication purposes making mental health a huge challenge (Chaffe,2017). According to Ponsakakulvanich and Margolin (2017), social media can generate positive impact on wellbeing which includes emotional support to boost their self-esteems. Acceptance of information communication technology in academic system contributes to knowledge development among students. The successfulness of learning is identified through the utilization of the technology platforms.

Montag, Blaszkiewicz, Sarisyka, Lachmann, Trendafilove and Markowetz, (2015) reported that majority of young people in every morning, they wake up to check their online communications from their WhatsApp applications. In an event that they do not receive messages, they tend to get upset and agitated. The consequences of this negative feelings it generates many questions and doubts. These negative psychological feelings are associated with stress, guilt, anxiety and even depression. These negative feelings are often associated with low self-esteem in young people thus affecting their mental well-being. Kamaku and Mberia (2014) reported that the evolutions of the use of smartphones have improved drastically over the years in the sub-Saharan Africa.

Global System for Mobile Communications GSMA report (2013). An association of mobile network operators with 747 million Sims those are active in Africa representing 75% of the regional population. However, it is challenging to have an accurate mobile owner as many students are not allowed to use mobile while at school among other key factors surrounding the phone usage. Apeanti and Danso, (2013) emphasized on some of the common benefits associated to WhatsApp mobile software which has huge potential that could improve better knowledge development among the high school students which can enable them enhance technological positive experiences. Mikre (2011) suggested that the individual policy makers such as general

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administration, lecturers and students are encouraged to put into consideration on WhatsApp integration in the higher learning systems.

Maheshwari (2014) reported that majority of students spent most of the time chatting with virtual friends, sharing video, movies, gabbling and ex-changing photos on the WhatsApp messenger. The longer usage and feeling of the need for an increased duration on online so as to obtain the desired pleasure on WhatsApp. This excessive time on WhatsApp use the student's leading to behaviour addictions and thereafter building developing mental health issues which this study is out to investigate and advice accordingly.

In Kenya a high rate of smartphone buying is reported and 8.3 million Kenyan are active on social media (Muasya, Musyoka, Wachira, Odek, Ochieng, & Sang, 2020). According to Otieno, and Akwala, (2018) the study has noted that majority of young people in Kenya spend averagely 3 hours to 4 hours in each day on social media with frequent visits to different social platforms recognized as WhatsApp at 74%, twitter 50% and Facebook at 70% with others following closely according to the active users reported. The integration of the Information communication technology (ICT) can positively enhance the outcome of learning. Scholars have proved that WhatsApp may have both negative and positive effects on the user. While some proved that it is a good social networking tool, others critiqued its overuse which they perceived causes mental problems to the youth (Masika, Omondi, Natembeya, Mugane, Bosire & Kibwage 2015). This study hence seeks to explore whether excessive use of WhatsApp may affect students' psychological well-being.

### **Problem Statement**

Whatsapp was design to help improve the social interaction among the public including students' population what app as a social media helps students to send and receive text messages, images, audio, video, documents. However, there is a challenge presented to students due to anonymity features in WhatsApp which enable the students to hide their identity while online and interacting with their fellow class mates and teachers, this allows student to use pseudo names. The secondary students in Masinga sub county have been reported among the student population to use such names while alluring their fellow students both male and female. Student use this platform to seduce their friends, sending them nudes and videos which contribute to extreme behaviour of bullying with the ability to affect emotional behaviour of students and mental health. In addition, majority of students with smart phone take longer time online charting friends affecting their normal class concentration which create conflict not only with teachers but also parents. The consequence of the failure to monitor students WhatsApp use in the learning facilities is that majority will develop indiscipline cases as the WhatsApp lack self-regulation due to peer pressure that contribute to student vulnerability that may lead to serious impact such as anxiety, depression and addition related problems among the secondary students. It is in this context that the researcher conducted an investigation on WhatsApp use and mental health of secondary school students at Masinga Sub County in Machakos County, Kenya.

### **Research Question**

What are the effects of WhatsApp usage on students' psychological well-being among students in mixed secondary school students at Masinga Sub County in Machakos County, Kenya?

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### **Theoretical Framework**

The study was guided by the Ecological System Theory developed by Urie Bronfenbrenner (1979). The framework is based on five systems which influence an individual attitude and behavior through their life span: This includes the chronosystem, macrosystem, ecosystem, mesosystem and microsystem. This microsystem relates to factors of personal level, families and community such as school environment. The theory is recognized in the social work as the person-in environment perspective. This perspective offers insights into how the environment shapes the individual attitude and behavior by the larger social context of social media or WhatsApp. The theory will guide the study through examination of WhatsApp as part of the system that can contribute to mental health symptoms and behaviours. This theory provides an explanation as to why there could be association or correlation found in WhatsApp use and mental health of secondary school students.

The system theory provides unifying approach in addressing challenges that can arise from the negative consequences of using WhatsApp. The theory has a powerful interactive process that can serve as a model for detecting and dealing with challenges related to the use of WhatsApp (Rutan, Stone & Shay, 2014). The model is dynamic, implying that it is relevant in changing the circumstances of students who are addicted to the use of WhatsApp in such a way that it is affecting their academics as well as their overall wellbeing. It offers diverse ways in which such issues can be handled, using multiple approaches.

The Ecological System Theory has some inherent weaknesses. It has a tendency of offering generalized ideas. This is because it fails to give outright measures to take in specific situations. However, this weakness has been deemed by others as a leeway for practitioners to apply a broad range of solutions and strategies rather than sticking to one possibly ineffective strategy (Rutan, Stone & Shay, 2014). The theory is relevant in this study to explain how children typically find themselves enmeshed in various ecosystems, from the most intimate home ecological system to the larger school system, and then to the most expansive system which includes the use of WhatsApp to interact with the society and the culture.

### **Review of Empirical Review**

Aslam and Anwar (2013) studied effects of social networking platforms on academic performance among students and behaviour in universities in Pakistan. The findings were that positive and significant connection between a social networking sites and students' academic performance and their behaviour. Twitter and Facebook are often utilized by students. Sponarski, Vaske, Bath, and Loeffler, (2016) undertook their study on social media use among the children wellness within the United Kingdom. The study established that the time spend by students had an effect on the way they attend to their lessons at school, family challenges and their whole life cycle. Furthermore, the study espoused that more effort is spend on social network such as WhatsApp and Facebook compared to the effort they use towards their academic work and families.

Deepa (2020) studied impact of social media on mental health of students in two universities. Findings showed that there is a significant relationship between time spent on social media and the number of social networking sites. There is a positive correlation between feeling anxious and serious active on social networking sites than in real life. This study concludes that

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more usage of social media, number of social network sites and too much of time spent on social networking sites is affecting the student's mental health such as depression and anxiety. Aizenkot and Kashy-Rosenbaum (2021) examined the prevalence and expressions of cyberbullying in Israel. Results showed that nearly 30% of the respondents reported personal victimization from cyberbullying in their WhatsApp classmate groups, and almost 60% reported victimized aggression at least once in the recent past.

Umar and Idris (2018) examined influence of social media on psychosocial behaviour and academic performance of secondary school students in Nigeria. Findings showed that the use of social media influences students' psychological well-being. This was due to the pressure of being perfect, to look perfect, act perfect, to have the perfect group of friends, the perfect amount of likes and followership, and the rest. Failure for the students to meet the ridiculous levels, results in serious backwardness both academically and psychologically. Social media also gave rise to cyberbullying, glamorizes drug abuse and can sometimes make students unhappy, fear of missing out, and lastly it leads to restlessness.

Bano, Cisheng, Khan., Nawaz, and Abbas (2019) explored whether and how WhatsApp interactions can improve students' psychological well-being. Results showed that time spent on WhatsApp positively influenced student psychological well-being. The study was conducted in higher learning institutions in a county that faces security challenges. Bruno and Lawyer (2020) investigated the impact of the use of WhatsApp on students' socio-emotional development and academic achievement.

Findings showed that video chatting, online chatting through WhatsApp and frequent use of WhatsApp has a significant effect on students' socio-emotional development and academic achievement. Mashewari (2014) studied the impact of lifestyle of youth in Tanzania. The study established that WhatsApp influence their educational language and destroys their writing abilities and the way they construct sentences hence lowering their academic abilities. Through high concentration on what is trending on social network which affect their ability to pick accurate information and concentration due to gossips and gutter press information around the world

### **Research Design and Methodology**

The study adopted a convergent mixed research design. The researcher collected both quantitative and qualitative data at the same time, analyzed them concurrently and compared data to see if findings confirm or differ from each other. The study population in this study was 11, 504 students, 782 teachers, and 51 deputy principals. Systematic random sampling was used to select the schools, purposive sampling for deputy principals, simple random sampling for teachers, and proportional stratified sampling for students. The sampling matrix is shown in Table 1:

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**Table 1: Sampling Matrix**

Category	Target population	Sampling procedure	Actual Sample	Percentage (%)
Deputy Principals	51	Purposive sampling	10	20
Teachers	782	Simple random sampling	156	20
Students	3360	Proportionate stratified/ simple random	360	10.7
<b>Total</b>	<b>4193</b>	-	<b>526</b>	average (17%)

Source: Wambua (2022)

### Data Collection and Analysis

The study used both questionnaire and interviews guide to collect data from the field respondents. The researcher considered 10% of the sampled schools hence one school which was not included in the final study. To ensure content validity, the researcher sought expert opinion from the lectures, research consultants and specialists in psychological well-being. Reliability was tested using Cronbach’s Alpha Coefficient. The alpha coefficient for teachers’ questionnaire was 0.804 and students’ questionnaire was 0.776. Descriptive and inferential statistics were used in analyzing data with the help of SPSS Version 23.

### Data Analysis, Presentation and Discussion of Findings

**Table 2: Students’ Responses on Effect of WhatsApp Access (n=273)**

Statements	Always		Often		Sometimes		Rarely		Never		M
	F	%	F	%	F	%	F	%	F	%	
Bully, embarrass or intimidate others	181	66.3	58	21.2	19	7.0	12	4.4	3	1.1	1.53
Physically abusive of others	124	45.4	109	39.9	4	1.5	28	10.3	8	2.9	1.85
Deliberately destroy property	28	10.3	64	23.4	42	15.4	109	39.9	30	11.0	3.18
Argue with and insult adults	68	25.0	103	37.7	9	3.2	44	16.1	49	18.0	1.91
Lonely or isolate yourself from others	100	36.6	86	31.5	0	0	71	26.0	16	5.9	1.49
Feel, anxious frustrated, stressed or depressed	95	34.8	83	30.4	20	7.3	34	15.0	41	15.0	1.69
Abandon academic activities	85	31.1	110	40.3	9	3.3	39	14.3	30	11.0	2.48
To cause riots or disorder in school	9	3.3	6	2.2	24	8.8	88	32.2	146	53.5	1.56
To invade on people ‘s privacy or to steal people ‘s private information	167	61.2	82	30.0	12	4.4	2	0.7	10	3.7	1.24

Source: Wambua (2022)

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Findings imply that access to social media have various effects on students’ psychological well-being. Some social media users are bullied, embarrassed, or intimidated by other social media users. Social media trolls may make them feel embarrassed and hence isolate themselves from other people. Other users may also be intimidated which affects their mental health. Arguments on social media content may result to physical fights among the students and they may end up causing both physical and mental injuries to each other.

Some graphical contents posted in social media may show violence and such students may deliberately destroy belonging of others. The violence could also cause violence and riots in school. Social addicts isolate themselves from other people. When social media users cannot match the lifestyle of their peers that that follow online, they may feel frustrated by life, get stressed or depressed which may eventually lead to abandonment of academic activities. Social media users also invade the privacy of others like trolling them on the inboxes often which may be irritating to them. The findings are in agreement with Sponarski, Vaske, Bath, and Loeffler (2016) that the time spend by students on social media affect how they attend to their lessons at school, life challenges and their whole life cycle. Deepa (2020) also concluded that more usage of social media, number of social network sites and too much of time spent on social networking sites is affecting the student’s mental health such as depression and anxiety.

**Table 3: Teachers’ Responses on Effect of WhatsApp Access (n=112)**

Statements	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		M
	F	%	F	%	F	%	F	%	F	%	
The students use of WhatsApp leads to Cyber Bulling	4	3.6	6	5.4	1	0.9	28	25.0	73	65.2	4.57
There is possible Infringement of individual privacy through WhatsApp use	5	4.5	7	6.3	17	15.2	30	26.8	53	47.3	3.94
The students WhatsApp use contribute to mental Anxiety	6	5.4	11	9.8	9	8.0	26	23.2	60	53.6	3.90
The student WhatsApp use can lead to depression	13	11.6	17	15.2	4	3.6	32	28.6	46	41.1	4.28
The student use of WhatsApp lead to stress	9	8.0	17	15.2	12	10.7	23	20.5	51	45.5	3.71

Source: Wambua (2022)

Findings were supported by interviewee 04, one of the deputy principals sampled in the study who said that:

Some students become addicted to the phone and they can barely function without it and some even sleep for a few hours. Some have emotional problems especially if the people they thought are their friends read but do not respond to their chats. They usually say that they were blue ticked. Some of them become withdrawn and do not have real conversations with their parents or siblings at home. They

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can lock themselves in their bedrooms and just chat with their friends on WhatsApp (Deputy Principal, Interviewee 04, 17 August, 2022).

Teachers' and deputy principals' sentiments are in agreement with the students that WhatsApp usage affect students' psychological well-being. Findings are in agreement with Bhatt and Arshad (2016) that the WhatsApp as a social platform is addictive in nature hence create depression and anxiety. The study further revealed that WhatsApp is a medium of making communication easier and faster thereby by enhancing effective flow of information, idea sharing and connecting people easier. Umar and Idris (2018) also found that the use of social media influences students' psychological well-being. This was due to the pressure of being perfect, to look perfect, act perfect, to have the perfect group of friends, the perfect amount of likes and followership, and the rest.

**Table 4: Students' Psychological Well-being**

<b>Psycho-social Wellbeing</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Autonomy	273	6.00	20.00	12.154	3.638
Positive relations with others	273	6.00	25.00	19.022	2.783
Environmental mastery	273	6.00	24.00	15.941	3.670
Personal growth	273	9.00	28.00	20.626	3.019
Purpose in life	273	13.00	26.00	20.260	2.794
Self-acceptance	273	7.00	23.00	14.033	3.922

In general, students showed higher levels of personal growth, purpose in life, positive relations with and lower levels of self-acceptance, environmental mastery, and autonomy. The psychological well-being indicator with the highest score was personal growth, followed by purpose in life, positive relations with others, environmental mastery, self-acceptance, and autonomy. Findings are in agreement with Pinqart et al. (2015) students who set their academic goals have a high purpose in life. Terenzini et al. (2018) reported that high school students' personal growth increases during the first years of their academic life.

**Table 5: Correlation Coefficients**

<b>Variables</b>		<b>Whats App use</b>	<b>Psychological well-being</b>
WhatsApp use	Pearson Correlation	1	
	Sig. (2-tailed)		
Psychological well-being	Pearson Correlation	.779**	1
	Sig. (2-tailed)	.000	

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

Source: Author 2022



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The correlation results show that there is a strong significant relationship between students' WhatsApp use and students' psychological well-being ( $r = 0.779$ ,  $p$  value = 0.001). The relationship was significant since the  $p$  value 0.000 was less than 0.05 (significant level) and it was a strong relationship since Pearson correlation value is close to 1. Findings are in agreement with Deepa (2020) who found that there is a positive correlation between usage social networking sites social networking sites and feeling anxious. Furthermore, Bano, Cisheng, Khan., Nawaz, and Abbas (2019) showed that time spent on WhatsApp positively influenced student psychological well-being. Bano, and Khan (2019) showed that time spent on WhatsApp positively influenced student psychological well-being.

**Table 6: Regression Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	2.902	0.762		2.065	0.004
	WhatsApp usage	0.412	0.064	0.611	4.668	0.000

**a. Dependent Variable: psychological well-being**

Source: Author 2022

According to Table 5,  $Y$  (psychological well-being) =  $2.902 + 0.412X_1$  (WhatsApp use) +  $\epsilon$

From the results, findings revealed that WhatsApp use has a significant effect on students' psychological well-being ( $\beta_1 = 0.412$ ,  $p$  value = 0.000). The relationship was considered significant since the  $p$  value 0.000 was less than the significant level of 0.05. Therefore, changes in WhatsApp usage would predict changes in students' psychological well-being. The findings are in agreement with Bruno and Lawyer (2020) that video chatting, online chatting through WhatsApp and frequent use of WhatsApp has a significant effect on students' socio-emotional development and academic achievement.

**Conclusions**

WhatsApp usage has a negative impact on students' psychological health. Users of social media go through stressful, depressing, and anxious times. Others develop aggressive tendencies, low self-esteem, and social isolation. Accepting who they are and being extremely nervous about not living the life they see on social media are the causes of this. Parents and teachers can instruct children on how to use WhatsApp. This will guarantee that students use social media for both academic and personal growth

**Recommendations**

School administrators should put in place stringent strategies to control the use of social media among secondary school students. academically. Schools should come up with measures that curb inappropriate use of mobile phones while the teacher is teaching. School authorities should further impose appropriate consequences on student to enable them manage social media use.

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Parents need to ensure that the students are trained on better usage of the social media so as to minimize time wastage on chatting and other irrelevant engagements that are not of major importance on their lives. The parents should also closely monitor their children while using social media. They may also seek services of IT professionals to help them track the activities of their children while using WhatsApp.

All the stakeholders and especially Communication Commission of Kenya (CCK) and communication network providers' needs to come up with means of filtering information that reaches the young people through social media platforms. This will help minimize exposing them to pornographic and other unwarranted materials. School administration and parents should team together to educate adolescents on the risks and benefits of social media networking by highlighting on the problematic behaviors and how these sites can improve their lives socially.

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