Deanship of Graduate Studies

Al-Quds University



Psychometric Properties and Factorial Structure of Social Networks Addiction Scale within Arabic Language & Palestinian Context

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M.Sc Thesis

Jerusalem / Palestine

1442/2021

Psychometric Properties and Factorial Structure of Social Networks Addiction Scale within Arabic Language & Palestinian Context

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This thesis is submitted in partial fulfillment of requirements for the Master's degree of Digital Media & Communications from the Faculty of Media in the college of Arts, Al-Quds University

1442/2021

Al-Quds University

Deanship of Graduate Studies

Masters of Digital Media & Communications, Faculty of Media

Thesis Approval

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Jerusalem – Palestine 1442/2021

Dedications

To my kind mother and father To my smart daughter To my loving wife And all my extended family To my friends To Rabab

To those great people who inspired me ...

Wissam Huvan

Declaration:

I certify that this thesis submitted for the degree of master, is the result of my own research, except where otherwise acknowledged, and that this study or any part of the same has not been submitted for a higher degree to any other university or institution.

Signed: Wiss

Wissam Ibrahim Mohammad Atwan

Date: August 8th 2021.

Acknowledgments

I would like to pay my deep gratitude and respect for the generous people whose assistance was a millstone to achieve this humble addition to knowledge

То

Dr. Nader Salha ... My supervisor and Mentor, the Father of this program

Dr. Waleed Shurafa ... A teacher ... a dreamer ... and a fighter

Dr. Fayez Mahamid ... Mr. Tha'er Nassar

And all the academic and administrative staff of Al-Quds University, specially the Modern Media Institute staff for the precious knowledge they have delivered and the professional academic environment they have provided

То

Major General/ Nidal Abu Dukhan ...

Commander of the National Security Forces, A man with vision, and an inspiring leader

Brigadier General/ Hafez Rifai'... A friend and Supporter

Brigadier General / Eyad Abbas ... A knowledge seeker and Supporter

And all my fellow officers in the National Security Forces for their unlimited support for knowledge and the scientific research

The ministry of education, schools and universities for their kind cooperation

To the kind students who participated in this research

Wissam . Auran

الخواص النفسية و البنية العاملية لمقياس الإدمان على وسائل التواصل الاجتماعي باللغة العربية في السياق الفلسطيني

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الملخص:

إن المجتمع الفلسطيني و خصوصاً الجبل الشاب قد أصبح أكثر تعرضاً لموضوع الادمان الرقمي حيث أن الفلسطينييون يرزحون تحت وطئة الاحتلال الاسر ائيلي وكذلك تبعات جائحة فاير ووس كورونا. إن مقياس الادمان على وسائل التواصل الاجتماعي هو مقياس نفسي معرف و معتمد عالمياً إلا أن هذا المقياس الادمان على وسائل التواصل الاجتماعي هو مقياس نفسي معرف و معتمد عالمياً إلا أن هذا المقياس لم يسبق له العمل في البيئة الفلسطينية و باللغة العربية، و عليه فإن البحث يسعى إلى تقنين مقياس و فحص درجات ادائه في السياق الفلسطيني و باللغة العربية، و عليه فإن البحث يسعى إلى تقنين المقياس و فحص درجات ادائه في السياق الفلسطيني و باللغة العربية، و من ثم مقارنة نتائج مقياس المقياس و فحص درجات ادائه في السياق الفلسطيني و باللغة العربية، و من ثم مقارنة نتائج مقياس الادمان على وسائل التواصل الاجتماعي بمقياس الصحة النفسية لفحص أثر الادمان على صحة الشباب النفسية. بلغ حجم العينة المدروسة في البحث 727 طالب و طالبة من مختلف مناطق فلسطين في الفئة العربية مالدون الزمان الادمان على صحة الشباب النفسية. بلغ حجم العينة المدروسة في البحث 727 طالب و طالبة من مختلف مناطق فلسطين في الفئة العربية مان دمان على معاد الانترنت، النفسية. بلغ حجم العينة المدروسة في البحث 727 طالب و طالبة من مختلف مناطق فلسطين في الفئة ومقياس ادمان شبكات التواصل الاجتماعي، مقياس الرفاهية النفسية الخاص بمنظمة الصحة العالمية ومقياس المان شبكات التواصل الاجتماعي، مقياس الرفاهية النفسية الخاص بمنظمة الصحة العالمية ومعاملات الاتساق الداخلي للمقياس كانت أكثر من المتوقع حيث سجل معامل كرونباخ الفا علامة ومعاملات الاتساق الداخلي للمقياس كانت أكثر من المتوقع حيث سجل معامل كرونباخ الفا علامة ومعاملات الاتساق الداخلي للمقياس كانت أكثر من المتوقع حيث سجل معامل كرونباخ الفا علامة ومعاملات الاتساق الداخلي و هالم في في البحث يسع ومعاملات الرائبة و المصاحب و عليه فواذ ورائبة الفري وومعاملات الاتساق الداخلي قال علامة ومعاملات الاتساق الداخلي للمقياس كانت أكثر من المتوقع حيث سجل معامل كرونباخ الفا علامة ومعاملات الاتساق الداخلي للمقياس كانت أكثر من المتوقع حيث ملول مي ورائبة والمام قوم و ويامي في ولمري وومعاملات الاتساق الداخلي قامياس كانت أكثر من المتوقع حيث سجل معامل كرونباخ الفا علامة ومعاملات الولي وال والمالي

Abstract

The Palestinian society especially the youth have become more vulnerable to digital addiction, as they are in a very unique situation because of the Israeli occupation and the COVID19 aftermath. The *Social Networks Addiction Scale* is an internationally valid and reliable scale for social networks addiction measurement, yet it has never been tested before in Arabic language and on Palestinian subjects. The research seeks to validate the factorial and psychometric traits of this scale within the Palestinian community and then correlate the addictive behavior to the social media platforms of choice and the psychological well-being of the studied sample. The n=727 students from both genders aged 16-20 years old. Through employing *Young Internet Addiction Test, Social Media Addiction Scale*, WHO *Quality of Life* scale and the psychological scale of General Well-being. The scale achieved high scores regarding internal consistency EFA & CFA yielded four different dimensions than the original six; and upon the validity of the scale, it reflected a 46% addiction level among young Palestinians. Also the results indicated a ten times negative impact of social media addiction over the general well-being and quality of life within the study community, comparing addictive to non-addictive youth.

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Definitions:

<u>Measurement</u>: the procedure to obtain numerical values detecting, items, relations or proceedings conferring to logical framework. (Verma J., 2019)

<u>Variable</u>: is an occurrence that may diverge from person to person, place to place and time to time.(ibid)

Construct: A dormant variable that cannot be directly perceived. (ibid)

<u>Reliability</u>: A concept reflecting consistency of measurements. (O'Donoghue, 2007)

<u>Validity</u>: The aptitude and authenticity indicating that the test should measure what it is supposed to measure. (Nuzzo, 2014)

<u>Social media addiction (SNA)</u>: It is the compulsive use of SNSs that resembles behavioral addiction symptoms. (Chiu, 2014)

<u>Scale of General Well-Being "SGWB"</u>: is scale measuring general well-being as well as fourteen specific well-being constructs as lower-order indicators of well-being: happiness, vitality, calmness, optimism, involvement, self-awareness, self-acceptance, self-worth, competence, development, purpose, significance, self-congruence and connection. (Longo Y. C., 2018)

<u>Glocal</u>: The term Glocality is coined from combining the words global-local and was originally presented by Japanese companies as it reflects the fusion of global incidents on local level and vice versa in a way that makes almost all connected humans involved in related issues (Meyrowitz, 2005).

<u>Information flooding</u>: This concept is is different from, but related to, the widely-discussed problem of "information overload." Overload is the result of too much information, flooding is the cause. Information overload describes consumers making cognitive mistakes because they are overwhelmed and confused by the amount of information. Overload is a well-established, widely discussed concept. Information flooding describes why there is so much information that consumers become overloaded. It captures that companies intentionally overload consumers with information to gain strategic advantages. (Schulz, 2014, p. 756)

List of Abbreviations:

Abbreviation	Words
SNS	Social Networks Sites
SNA	Social Networks Addiction
ICTs	Internet Computer Technologies
IAT	Internet Addiction Test
COVID19	Corona Virus Disease 2019
QOL	Quality of life
SGWB	Scale of General Well Being
MoE	Ministry of Education
EFA	Exploratory Factor Analysis
CFA	Confirmatory Factor Analysis
WEMWBS	Warwick-Edinburgh Mental Well-being Scale

Chapter One: Background & Rational

1.1 Introduction:

Digital media become tremendously integrated in our lives to the point of wrapping us up within the info-sphere; re-shaping our identities and reality, the concerns of these technologies effects on children and adolescents grow bigger by day. The effects and implications that such technologies inflect on our lives became tremendous in a magnitude that might outsize our comprehension and surely our expectations. Introducing a new paradigm in the modern cognitive science, behavioral psychology, sociology and even politics, digital media is transforming reality rapidly and the human behavior in particular. (Kline, 2003; Miller, 2005; Floridi, 2007; Allais, 2007; Floridi, 2014; Hansen, 2013)

This process of transformation as Feldman (2003) suggested, had been solidified by the increasing movement of humanity from analogue into a digitally engulfed world to the point of total emersion, a paradigm shift for humanity smartly described by Marshal McLuhan:

"One thing about which fish know exactly nothing is water, since they have no anti-environment which would enable them to perceive the element they live in." McLuhan (1968) , implying that the digitally wrapped up environment as a post-digital phenomenon is not a container rather an invisible dynamic process, that amplifies an irrational mass behavior over the residents of the infosphere, turning us into fish swimming in this medium, especially in business and politics (Hansen, 2013). Accordingly, nature of such ubiquitous digital media could easily cause the user a problematic irrational use of digital devices wither it is a computer or a smart phone that could develop into an addictive behavior especially over the social networking sites (SNSs).

In a highly digitally mediated world where SNSs provide socialization for the masses and where the "online" status is the new norm (Kuss D. a., 2017) even turning from "*Online*" to "*Onlife*" (Floridi L., 2014) the SNSs became the main reason people especially the young people use their smart phones excessively (Andreassen, 2013). The excessive use could escalate into social networks addiction (SNA) (Cerniglia, 2019). It has been found that SNSs engagement could obstruct offline social interaction and other offline activities that are considered essential for the proper growth of adolescents (Davies, 2008).

In an under occupation community like the Palestinian case, and with the unprecedented aftermath of the COVID19 pandemic, the adolescents face huge challenges regarding the issue of digital addiction and SNA in particular as a compensatory mechanism for the outdoor activities and the hampered right of movement. These challenges draw the attention to better understanding of these transformations and to develop tools and mechanisms of diagnosis and management of this kind of mental and behavioral disorders that resulted from the post digital condition, with special regard to the fact of severe lack of such academic research in the Palestinian society. The research aims to localize and validate a SNA tool and then apply the results of that tool to assess the levels of SNA addiction among the Palestinian youth and to what extent this addiction has an effect on their mental health and wellbeing.

1.2 Problem statement

Human culture was shaped and being re-shaped by the digitally massive immersions of technologies in every aspect of our lives; we turned not only to insatiable consumers for media and technology, but also to be totally ruled by their terms and methods. Such culture

faces challenges regarding the preservation of human values and humanism against the new post-digital age of ubiquitous computing and artificial intelligence, datafication (Livingstone, 2019). The need arises for moral¹ and ethical limitations of the process especially in the post-digital age (Malle, 2014, p. 1) and these moral and ethical boundaries should be consistent with the digital rights, also regarding the teenager's socio-behavioral trends in the community with special focus on the digital media usage and addiction trends among them. (McLuhan, 1967; Debray, 2000; Gere, 2009; Berry, 2012; Shaw, 2017; Deibert, 2019).

The high penetration rates among the Palestinian population and especially the young generation and the high percentage of SNS usability, arise the concerns about addictive traits among those children and teenagers and their relevance to their socio-behavioral states and their mental health and mental well-being in particular. These concerns were magnified after the onset of the CoVid19, where children and teenagers suffered from reduced outdoors time and physical attendance to educational institutions. Accordingly, a valid and effective diagnostic tool to detect the SNS addictive traits among the youngsters in Palestine is an issue of a great importance to help minimizing the negative effects of digital addiction on the young generation's mental health and well-being.

1.3 Research rational and justifications

With more than 3.25 million internet users in Palestine in Jan 2020 and an annual increase of 1.2% of users and a 64% internet penetration among the total population of the West bank and Gaza, the usage and engagement trends for the Palestinians forms a strong basis for this study. (Hootsuite &. W., 2021)

Few studies have been conducted on social behavior related issues in Palestine, but none considered the issue of SNS addiction among teenagers with relevance to general wellbeing and mental health (Jabr, 2013;Wilson, 2021). Because of the dramatically increasing level of interaction between human beings and digital media starting from a

¹ Human moral competence consists of four broad components: (1) A system of norms and the language and concepts needed to communicate about these norms; (2) moral cognition and affect; (3) moral decision making and action; and (4) moral communication (Malle, 2014).

very young age and due to the COVID19 pandemic emergency declaration in occupied Palestine which proposed the home vicinity E-schooling, and reducing the outdoors time available for the young, had a huge impact over psycho-social mental well-being (Hyde, 2005; Tang et al, 2020).

Globally, the research regarding student's internet addiction still growing, (Koo, 2021) most of the studies focus on how to help students use the internet to adjust and explore potential, but a handful of them have looked into the association between problematic internet use among students and their mental health and wellbeing (ibid). This research fills a gap in the scientific literature regarding the mental health for the youngsters in the Palestinian community with relevance to problematic internet use.

1.4 Research Goals

The study aims to localize and validate the social networking sites addiction (SNA) scale, and to employ a comparison with Young's internet addiction test (IAT) and the Quality of life (QOL) scale and the Scale of General Well Being². The process will legitimize the results of the SNA scale correlated with the most favorable SNS platform of choice among the study population.

The research measures also the psycho-social well-being of the study community through two psychometric scales; the Quality of Life scale and the Scale of General Well-being. By correlating the psycho-social well-being traits of the study community with the usage and engagement patterns with SNS. Ultimately this thesis will provide a scientific applied basis for the first localized Palestinian digital media social addiction psychometric scale.

1.5 Research Questions

In order to achieve the study goals, the following questions will drive the research:

² <u>SGWB</u> is a psychometric scale that contains fourteen common constructs: happiness, vitality, calmness, optimism, involvement, self-awareness, self-acceptance, self-worth, competence, development, purpose, significance, self-congruence and connection (Longo Y. C., 2018)

- Is the Social Network Addiction (SNA) scale valid and functional in Arabic language among the Palestinian digital community?
- Is there a statistically significant effect of the social networks addictive patterns on both; the mental wellbeing, and quality of life status of the Palestinian young digital residents?

1.6 Research Hypothesis

There is a certain degree of addictive behavior among the Palestinian youth because of internet and SNS usage with correlation to the preferred social network of choice. The international Social media addiction scale is functional and valid in Palestinian context and in Arabic language. Accordingly, there is an effect of digital addiction, especially social media platforms addiction on Palestinian youth mental well-being.



Figure 1 - Hypothetical Paradigm

1.7 Limitations

The addressed limitations for the research were:

- Accessibility of the studied sample mobile phones data.
- Geographical outreach due to the Israeli occupation and the COVID19 emergency declaration.
- Insufficient cooperation from MoE and schools.
- Lack of financial support to cover a wider section of the study community.

1.8 Boundaries

The time boundaries of the study were between Jan 2021 and Aug 2021, while the geographical boundaries were set to the whole historical Palestinian lands. The study community was the teenagers aged 16-20 years and the study sample consisted of a 727 teenagers from both sexes and from thirteen districts.

Chapter Two: Theoretical Framework & Literature Review

2.1 Digital Media in the Post Digital Age

At the dawn of web 3.0, many challenges raise against the humans digital rights by employing the technologies of semantic computing, big data and data mining to reach the optimal medium, the totally invisible one (McLuhan, 1967). *Semantic web* "Web3.0" is the evolution of "Web 2.0" were the content of the web become marked up to enable the machines understand the data independently and act on their own without human mediation (Dwivedi, 2011, p. 257; Choudhury, 2014). Through *RFID*³ and *NFC*⁴ not only the smart phones and computers are connected, but every other electronic device, transmitting environmental data including temperature, humidity, movement, audio-visual feed and quantity. The rise of semantic web that relies on the collective of these sensors is referred to as wireless sensor network that secretes huge amount of data *big data*⁵ to servers through gateways to be processed by middleware. This is the core of *the internet of things* were ubiquitous computing, and context aware codes, are the basic pillars of

³ Radio Frequency Identification (RFID) is a short ranged communication tech that works via radio electromagnetic field with unique identifiers for each device (Whitmore, 2015).

⁴ Near Field Communication (NFC) is a short range radio communication that works in close proximity with unique identifier (UID) (Whitmore, 2015).

⁵ It is defined as the data that exceeds the processing capacity of conventional database systems; it is too big and too fast for conventional computing abilities. (Dumbill, 2013)

ambient intelligence, the infancy phase of the future AI. (Wahlster, 2006; Metz, 2007; Hendler, 2009; Cook, 2009; Whitmore, 2015; Hiremath, 2016)

AI is defined as the output of algorithms that consist of electronic elements which gain their meaning from Boolean logic and tree structure of neural nets, a process much inferior to the human intelligence⁶ and may not match, in the near future at least. (Shoham, 1987; Gilder, 2018) Russell and Norvig (2016, p. 30) suggested that intelligence is all about acting rationally⁷ independently, while Gilder (2018, p. 62) stressed on the blind spot of AI that consciousness is the source of thoughts not their outcome. Apparently AI and datafication will be behind huge transformations in the digital culture and humanities within the next decade, affecting the humanity in every aspect of life not only psychosocial human interaction.

Although the debate regarding our brains functionality wither is digital or analogue has never been concluded yet⁸, there is some sort of consensus in the community of cognitive science explaining the tangible effects of digital media over the discrete human brain regarding the level of analysis to explain cognition⁹. (Van Gelder T., 1998; Eliasmith, 2000) Such theoretical debate emphasizes the ability of digital media transforming human cognition and thereby human behavior in almost every aspect of our daily lives, not only by exerting an external effect on the humans but also as an extension of the human senses themselves. (McLuhan M. a., 1967; Powers, 1989; Burnett, 2004; Logan, 2010; Säljö, 2010)

McLuhan (1967) discussed the nature of media in an unprecedented way; he argued that perception is a result of audio-visual interaction with the environment; the senses of sight and hearing are highly selective regarding which stimuli they detect, thus considering television as a touchable medium. Additionally, Mireille Chalvon (1977) stresses on the powerful effects of Television over the youth as an environmental factor turning the

⁶ It is defined consensually as the ability to connect symbols and objects, formulating of numerical correlations, setting up goals and rewards schemes that allow iteration, optimization and convergence of solutions. (Gilder, 2018, p. 61)

⁷ An intelligent agent will take the best possible course of action in a situation to achieve optimal goal, consisting with Turing test of intelligence and its factors.

⁸ The perception of the existence has been debated for centuries, but Kant (1780) suggested that human brains perform through "modes of representation". A principle established the foundation for interpreting the nature of discreteness in the brain functionality. (Allais, 2007)

⁹ It is suggesting that the human brain's discreteness is consistent with the major espoused theories of the cognitive science; symbolism (Newell, 1994), connectionism (Churchland, 2016) and dynamism (Van Gelder T. a., 1995).

perception into a time-space phenomena that highly correlates with the nature of medium rather than any other factor. Consisting with McLuhan's statement:

"The Medium is the Message", (1967)

Regis Debray (2000) discussed the role of the media transforming ideas into real physical actions that drive humans' behavior. Debray presented the term mediology; he defined it as the field of studying cultural transmission of ideas in societies by the regimes of the image (Icon, Idol and the vision), thus transforming those ideas into action. He explained the functionality of the medium in every form possible being an inter-disciplinary approach. (Debray, 1999). Debray explained the power of media as a mediating vehicle that transmits symbol in two pathways, technical devices¹⁰ and organic devices¹¹ (Floridi, 2014). To distinguish the process of transmission from simple social communication, Debray (1999) stressed on the presence of an organized hierarchical institution that can rearticulate *praxis*¹² and *techné*¹³, where *praxis* cannot exist or function without *techné*, eventually reshaping the human culture in every possible way.

The Web 3.0 technologies are promising of another paradigm shift in the global culture generally and communicative mode specifically, implying on us to understand and test the communicative principles of digital media that are changing from human-human interaction into human-computer one, with huge focus on individuality (Ershov, 2015, p. 207). The characteristics of Post-digital age revolve around the artificial intelligence, affective computing¹⁴, quantum computing, deep machine learning, social algorithm capitalism, cybernetics¹⁵ and complexity theory¹⁶. A set of factors that will exert profound changes on human and humanism in the future not excluding cultural and inter-personal interactions, introducing a new age beyond conventional digitalism. (Peters M. A., 2019)

The *post digital* concept is not related to certain event or condition rather it is a critique of the digital world; examining its construct, theories and consequences, in other simple

¹⁰ (Surfaces of inscription of signs, coding procedures, broadcasting devices).

¹¹ (Institutions, languages, rituals)

¹² Action of man on men.

¹³ Action of man on things.

¹⁴ It is the study and development of systems and devices that can recognize, interpret, process, and simulate human affects. It is an interdisciplinary field spanning computer science, psychology, and cognitive science (Tao, 2005). ¹⁵It is a trans disciplinary approach for exploring regulatory systems—their structures, constraints, and possibilities (Schiehlen, 2019)

¹⁶ There is no one identifiable complexity theory. Instead, a number of theories concerned with complex systems gather under the general banner of complexity research. The exact nature of complexity research is hard to discover due to the large degree to which complexity ideas are traded across disciplinary boundaries. (Thrift, 1999)

words, it is a new critique of the digital reason¹⁷ (Gunkel, 2017; Jandrić, 2019) which has two major elements; the mathmatico-technical control system and the political economics of that system. Trying to explain how these elements have shifted semiotics to an indexical and audio-visual level where definitions of digital become obsolete (Cramer, 2015), as Nicholas Negroponte predicted three decades ago;

" like air and drinking water, being digital will be noticed only by its absence, not its presence". (Negroponte, 1998, p. 288)

The promising potentials of fifth-generation internet (5G) and quantum computing¹⁸ will serve the evolution of computational power of current computing architect and will set the stage for a totally different approach of computing architecture where technologies like Hadoop¹⁹ may disappear. Eventually, such technologies are introducing new laws of physics and even new chemical formulas that may change way we think and live. The deep learning²⁰ and algorithm capital²¹ are other aspects that will influence economy and the full automation (Morris, 2017), where the machine learning AI will re-design the labor market creating new jobs but disestablishing many others thus enforcing the gig economy²² in a more profound way. Such changes will affect the general population welfare and the world's economy as a whole and also provide instant multilingual communication for the web content, a set of factors that will shed lots of weight on the socio-behavioral model in digitized communities around the globe, making the human interaction much more easier, especially in the age of social networks sites (SNSs). (Peters M. A., 2019).

 ¹⁷ Digital reason is the philosophical arguments regarding digital technology regarding how we conceptualize digital innovations and their structures and impacts within rhetorical theory (Gunkel, 2017).
¹⁸ Quantum computers are not just a faster computer. They enable an entirely different approach to performing

¹⁸ Quantum computers are not just a faster computer. They enable an entirely different approach to performing calculations – an approach that asks the question, what if we go beyond limit of classical computers and into the subatomic, or quantum realm, to perform computational work that allows us to solve unsolvable - problems like simulating the interactions among molecules as the grow in size, since the exhibit exponential growth in complexity and other scientific issues. (Commence, 2018)

¹⁹ It is a framework that allows for the distributed processing of large data sets across clusters of computers using simple programming models. (Hadoop, 2019)

²⁰ Defined by Morris (2017) as a type of machine learning, a technique that allows computer systems to improve with experience and data.

²¹ It is an aspect of informationalism (informational capitalism) or "cybernetic capitalism," a term that recognizes more precisely the cybernetic systems similarities among various sectors of the post-industrial capitalist economy in its third phase of development - from mercantilism, industrialism to cybernetics - linking the growth of the multinational infoutilities (e.g., Goggle, Microsoft, Amazon) and their spectacular growth in the last twenty years, with developments in bio-capitalism and the informatization of biology, and fundamental changes taking place with algorithmic trading and the development of so-called financialization (Peters M. A., 2012)

²² workers are no longer employed in 'jobs' with a long-term connection with a company but are hired for 'gigs' under 'flexible' arrangements as 'independent contractors' or 'consultants, 'working only to complete a particular task (Friedman, 2014).

The increasing popularity of SNSs in recent years caused a profound transformation in many methods of interpersonal communication, focusing on methods of displaying one's identity (to be discussed thoroughly in next chapter), which has traditionally occurred in private and non-mediated setups, have become institutionalized and mediatized through SNSs interface (Marwick, 2011; Anderson, 2012; Enli, 2012;Farrukh, 2021). As a hyper-communicative medium, social media operate in a rich 'performative palette'²³ setting, where users not only consume but also generate multimedia, storytelling, diverse expression, cultural references, humor, and other content during their social interaction. (Papacharissi 2010, p. 307). These and other features of social media enabled the growth of '*networked publics*' around diverse domestic, local, and global issues, allowing for more flexible and innovative practices of self-expression and socio-behavioral interactions. (Bennet, 2010; Boyd D., 2010; Bechmann, 2012; Loader, 2012; Boyd D., 2015; Wright et al. 2016).

Digital media in general and social media settings in particular, have the power of amplifying and magnifying aspects of the alleged truth, they can distort it by that power, because we tend to rely on information technologies in the process of decision making. Such technologies provide short cuts for the traditional search processes for the needed information to build up reason. In the age of digital revolution and big data²⁴, humans cannot cope with the huge amounts of available data to be searched and processed. Digital media technologies also provide a tempting quick bypass of the traditional slow gate-keepers of truth, checking for the authenticity and validity of the searched data from the source, and thus increasingly relying on the digital media as a source of the information needed in the decision-making process. (Hansen, 2013)

A few academic papers support the idea of digital media do enhance rationality or at least don't undermine it. The major issue in such arguments is focused on the claim of empowering the media consumers by facilitating inter-conversation among them which allows more rational decisions of purchasing or voting and the existence of multiple media

²³ Facebook users recognize the site as multifunctional and use it in order to achieve diverse aims: sustaining social ties, gaining and reinforcing social capital, keeping up to date with old and new friends, organizing social events, dating, and so on (Anderson et al., 2012). As a result, SNS such as Facebook bring multiple audiences into one single context (Marwick, 2011), a unified category of "Facebook friends." Furthermore, the audience on Facebook is often concealed. Many users can hardly remember whom they listed as friends and cognitively cannot conceive of them all simultaneously (Boyd, 2007; Marwick, 2011; Anderson, 2012; Ellison, 2013).

²⁴ Big Data is the Information asset characterized by such a High Volume, Velocity and Variety to require specific Technology and Analytical Methods for its transformation into Value (De Mauro, 2016)

equilibria and that personal motivation leads the audience to follow up media with similar slants. (Duggan, 2008; Todd Powers, 2012) Regarding this matter, the literature agrees on the necessity of ethical and moral aspects of the digital media to insure rational usability. (Lum, 2006; McMullen, 2012)

Ethics and morality of digital media can be easily manipulated by a logic distortion effect called info-storms²⁵. Info-storms can manipulate the process of decision making by affecting rationality. As decision making process in modern digitalized societies takes place in social settings, thus communication and intelligent information processing are main keys for informed decision making process, and as this process is vulnerable to the derailing agents of the information phenomena²⁶, it is easy to manipulate the logic of the masses by such agents. (Ryan, 2003; Hansen, 2013; Hendricks, 2016)

Digital media is built-up today on personal data surveillance that submits to the authority of the data managing algorithms. (Deibert, 2019) A decision made with our total voluntary consent, that leads to amplify ignorance, prejudice and chaos and thereby manipulating the public and damaging the integrity of a well-informed decision making process. Such effects leave deep marks on the cognitive and mental well-being of children and young people in a larger scale than adults, where "Information operations²⁷," take place to manipulate the public and shift their opinion towards certain issues amplifying their desire to consume, generate and regenerate media in an unprecedented magnitude (Weedon, 2017). Such technological involvements and their impacts could have high risk on mental and general wellbeing of humans, especially the young generations.

2.2 Psychology of the social networks

Current Web 2.0 and Web 2.5 technologies allow users not only to consume but also to create content, the complex interactive nature of web2 platforms and technologies is very

²⁵ The increasing dependability of humans on Information Technologies in the process of decision making, allow these technologies to increase the numerical reach of false information and beliefs proportionally to the point of total submission for the falsely trends created by this process. (Hansen, 2013)

²⁶ The three derailing agents of information are: Pluralistic ignorance(No one believes, but everyone thinks that everyone believes) (Breed, 1961), Informational cascades(using popularity as a measure of quality) (Velasquez, 2012) and Belief polarization(reproducible product of group deliberation where each of the group members following a discussion ends up holding a more extreme position regarding some viewpoint than they did prior to deliberation) (Cooper, 2001)

²⁷Defined as actions taken by organized actors (governments or non-state actors) to distort domestic or foreign political sentiment, most frequently to achieve a strategic and/or geopolitical outcome (Weedon, 2017)

consistent with human cognition (Yin, 2021). We are highly interactive creatures that rely greatly on communication and collaboration; Web 2.0 technologies are magnifying these human traits (Anderson J. R., 2018). Our cognition as humans is context dependent as the major traits of cognition are considered to be distributed (Hutchins, 1995; Dror, 2008), collaborative (Rogers, 1993) and constructive interaction dependent (Miyake, 1986). The importance of contextual nature of human cognition and behavior was present strongly in the literature notably in Bronfenbrenner's *Ecological Systems Theory* which discussed the transactional interactions between human beings and their environment. (Bronfenbrenner, 1994). Environmental insights are strongly present in the research literature regarding online behavior understanding, especially digital behavior (Dourish, 2004; Notley, 2009; Cook, 2011; Terras, 2012; Terras, 2013).

The cyber environment set the stage for a wide range of contexts of interactions, where the content creation is a milestone of Web 2.0 platforms and technologies, SNSs are on top of them. Cyber contexts have transactional traits that overcome the traits of traditional natural human interaction due to active engagement wither online or offline. This process becomes clearer as user move from one context to another; learning and at the same time teaching new skills and experiences that will inform their interaction as well as the others. To keep up, users must capture progressive changes between contexts which add new blocks of mental frames to them upon the exposure to these varied contexts. (Terras M, 2015)

Boyd and Ellison, (2007) defined social media networks, (SNSs) as a technical platforms that have three major characteristics; (1) they offer a cyber space for users by which they can create and present their identity in various contexts (personal, commercial, political, religious, ...etc), (2) the potential to select their audience wither organically selected or advertised, (3) the opportunity to analyze and understand the structure and nature of their cyber community (friends circles) friends and connections. Accordingly, SNSs are unlike other forms of digital platforms; by providing users with ability to benefit from their social circle where they identify certain social, commercial and other types of opportunities never existed before, and also the impression management by which they can select how would they appear. Such characteristics of SNSs make them of very high appeal for highly diverse set of users. (Papadimitriou, 2016)

Maintaining SNSs presence requires by default content creation in various contexts, this process is highly challenging for users as they have to cope with a very fast pace of

technical changes and contextual variances, such challenges overwhelm user's cognition and diminish their ability to understand the potential impact this new communicative mode has on behavior. The main source of these challenges is the fact that written and spoken language characteristics are rapidly changing because of technology (Papadimitriou, 2016). The substantial impact of web2.0 technologies over lexical and iconic characteristics of lingual communication, introducing new words like blog, tweet, selfie and Twiplomacy gave the technology tremendous impact over our natural communicative mode and thus our cognition and behavior. (Terras M, 2015)

To answer the question regarding what makes humans run themselves into such a highly challenging and volatile medium, the matter of motives related to such ICTs makes a priority, especially in the Trans-theoretical Model of behavior. According to Prochaska and DiClemente (1982), humans change to meet a challenge only if forced by a more powerful external power or if the change can bring substantial opportunity, giving it the name affordance, where opportunity is a resource that has been offered for a human who can detect and seize (Gibson, 1979). Recalling the contextual paradigm that has been discussed earlier in this chapter, the interaction between human being and an opportunity is a direct result to context and culture (Mantovani, 1995; Norman, 1999), also the level of interaction is related to the context of medium; (1)physical structure of the medium (*direct affordance*) and the (2)convayed meaning and benifiets (*mediated affordance*). This argument is correlated with Maslaw's hirerchy of needs where he ordered the basic needs of human being, strating from; physiological, safety, emotional belonging, esteem and finally self actualization. Related to the most significant psychological needs in Maslaw's hirerchy, belonging and esteem, SNS's engament motives must answer one of these needs:

- 1. Safety needs: The ability to control the sphere of friends and the level of interaction with this sphere.
- 2. Associative needs: The ability to communicate and exhchange thoughts and feelings.
- 3. Estimatation needs: The more friends user's have , reflects their popularity which give the feeling of being appreciated and worthy.
- 4. Self-realization needs: The ability to reflect the self-image of choice by user allows them to feel more confident and relaxed within their online sphere of friends.

Accordinly, humans use SNSs as an "Interreality" realm, where they seek social support extending their sphere, as a social expression of identity elaborating and promoting their defenition in social context and also as a tool of social expolration and analysis of others, which lead to continuous need to be online and connected. (Riva, 2016).

2.3 Cyber-Psychology & Digital Addiction

Cognitive-developmental theory is an influential theory in the field of youth psychology, developed during the 1930s by the Swiss psychologist Jean Piaget. Piaget's (1936) theory of cognitive development explains how a young human being constructs a mental model of the world. He disagreed with the idea that intelligence was a fixed trait, and regarded cognitive development as a process which occurs due to biological maturation and interaction with the environmental contexts. (Piaget, 1936)

According to Piaget's (1970), young people are defined as knowledge seekers. Their cognitive perception is drawn from their interaction with the environment (Wadsworth, 1996)²⁸, whereas according to social learning theory (Maisto, 1999), their social role development is promoted through a vast system of social influences with modeling operations, serving as a major conveyor of information. This is consistent with Bandura's (1978) social learning theory which dictates that young people learn and develop according to surrounding environment stimuli. Recent studies Show that children start to interact with digital media from a very young age (4 months) and the average watching hours per week for children aged 6-11 years reach up to 28 hour per week.²⁹ (Bandura, 1978; Coon, 2002; Leonard Epstein ,Et Al, 2008; McDonough, 2009; Singer D. S., 2012)

A huge leap in clinical developmental psychology has been achieved after Julian Rotter presented his social learning theory (1954), introducing a different scope of social roles and motivations other than Freud's psycho-analysis module.³⁰ Rotter followed by others

²⁸ Introduction to Jean Piaget's theory of cognitive development

²⁹ Among children ages 6–11, viewing and peripherals utilization spikes during prime time, with the exception of video games—an after school time slot favorite

³⁰ The main idea in Julian Rotter's social learning theory is that personality represents an interaction of the individual with his or her environment. One cannot speak of a personality, internal to the individual that is independent of the environment. Neither can one focus on behavior as being an automatic response to an objective set of environmental stimuli. Rather, to understand behavior, one must take both the individual (i.e., his or her life history of learning and experiences) and the environment (i.e., those stimuli that the person is aware of and responding to) into account. Rotter

suggested that children develop their behavioral-cognitive module under the effect of certain social interactions. (Bandura, 1978; Rotter, 1982) Accordingly, the sociobehavioral model of youngsters is greatly affected by social modeling; digitally mediated modeling systems are considered to be essential factors in this process, being so, this can easily lead to excessive involvement in such mediated environment that could lead to an addictive behavior among the users, young people in particular. (Bussey, 1984; Dorman, 1997; Signorielli, 1998; Aubrey, 2004; Halford, 2007; Tikhonov, 2015)

The concept of addiction has conventionally been related with substance consumption. The Diagnostic and Statistical Manual of Mental Disorders-DSM-5 (APA, 2013) and the World Health Organization's International Classification of Diseases (ICD-11) (WHO, 2018) acknowledged the resemblances rather than the differences between addiction types, representing an emerging problem related to non-substance intake addiction types, like digital addiction (Griffiths e. a., 2016), recognizing the main concept that pleasurable behavior could lead to addiction (Enrique Echeburúa, 2010). According to Tikhonov and Bogoslovskii (2015, p. 97) internet addiction is the "*non-chemical dependency on the use of internet*". User's suffer from this disorder undergo the experience of excessive desire to access the internet regardless to their other life demands like work, health, study and family, a situation that might lead to a partial or total impairment or distress. (Shaw, 2008)

SNS addiction is relatively a new kind of addiction affecting the humans, especially among the youth. Many studies have pointed to the grave concerns of internet addiction in general and of social networks in particular (Cardak, 2013; Muñoz, Fernández, & Gámez, 2010), disturbing their personal and social life and reducing their academic performance. Digital addiction has even been identified as a key factor that affects the quality of sleep and performance (Garett et al., 2018; Alsulami et al., 2019), which has drastic impact on mental and physical health and especially for the suitable progress of academic performance. (José, 2020)

Kimberly Young (2011) introduced the first experimental research on Internet addiction in 1996 at the American Psychological Association's annual conference; she has matched the principles for pathological gambling defined by the DSM-IV (American Psychiatric Association 1994) to diagnose the Internet addiction as a psychological disorder. Subsequently a set of scales were developed by Young to distinguish internet dependent

describes personality as a relatively stable set of potentials for responding to situations in a particular way. (Mearns, 2008)

and internet addicted behavior. The addictive behavior was identified mainly as loss of control on self-actions, withdrawal and relapse. Young founded that addictive behavior is combined with lowered social, academic, labor and financial functionality of the affected individuals; accordingly she has identified digital addiction as mental disorder that requires diagnosis, treatment and above all; prevention. Young related internet addiction to substance addiction but also introduced self-prevention techniques that allow avoiding addictive behavior and emotional relief. She also presented four levels of psychological triggers that lead to the internet addictive behavior; (1) applications popularity that draws user's attention to use the application even more and more, (2) emotional involvement that creates a sense of serenity that reliefs pain and stressful feelings and discomfort, (3) cognitive alteration that cause the user's a sense of relief of destructive thinking and negative thoughts and (4) distressful life happenings that lead to dissatisfaction with one's life, the more combined of such factors lead to higher chances of digital addiction.(Ibid; Shek D.T.L., 2016)

From another perspective, Kuss & Griffiths (2017, p. 311) discussed internet addiction as a type of technological addiction rather a mental disorder like Young did. Despite the different conceptualization of the addiction, they categorized six major dimensions of this kind of addiction consistent with Young's and the principles for pathological gambling defined by the DSM-IV (American Psychiatric Association 1994). The dimensions were; Salience, Mood modification, Tolerance, Withdrawal, Conflict and Relapse.

Despite the debate among psychologists and clinicians regarding the classification of internet addiction as a mental disorder, they agree that the symptoms of this kind of addiction reflect other compulsive and impulsive psychological disorders like extreme usage, negative consequences, tolerance and withdrawal resembling other addictive practices. Because of internet services specifications which have certain psychological traits that induce mood modification, time distortion, gratification and increased internet surfing time in online services like shopping, porn and gambling sites, the chance of getting involved in addictive behavior increases. Such symptoms and effects cause severe deficiencies in various life aspects of the addicted users which legitimize the claim to classify and standardize internet addiction as a mental disorder according to Young and other scholars (Young K. S., 2012; Shek D.T.L., 2016). Accordingly the American Psychiatric Association is considering modifying the classification of Internet addiction in the revised DSM-V, this consideration comes from the fact that lack of official

classification for the internet addiction hampered the development of effective treatment protocols precisely build up for internet addiction patients. (Shek D.T.L., 2016; APA, 2020)

To properly conceptualize digital addiction as a mental disorder, a set of fundamental issues should be identified; the first one is the consistency of designated symptoms, the second is the validity of the diagnostic tools and criteria while the third is the distinguished internet addictive behavior from any other mental disorders (Young K. S., 2012). Despite this conceptualization, some research show that addictive internet use is associated with other mental disorders like obsessive-compulsive disorder and depression, this correlation is attributed to a set of possibilities; (1) the other psychiatric conditions could cause the internet addiction syndrome, (2) the internet addiction syndrome could cause psychiatric conditions, (3) the relation between psychiatric conditions and internet addiction could be reciprocal, eventually the correlation between addiction and psychiatric conditions may be caused by genetic or environmental origins. (Shek D.T.L., 2016)

The Internet Addiction Test (IAT) introduced by Kimberly Young (2012) is the most famous psychometric tool to assess digital addiction on the internet. The scale consists of twenty items that measure mild, moderate and sever levels of addictive behavior. The main conceptual framework of the test is build up on regarding the addictive internet using as a sort of impulsive-control disorder that is related to online activities and media. The scale was valid in the Palestinian context in 2018 by Mahamid & Berrte (2018), achieving high internal concistency score in Cronbach's Alpha test by (0.87). The validity achieved through context and construct validity. And the final number of valid items was 19 questions in addition to demographic factors and variables. The questions are responded to through a 5 step likert scale, and it's results are like the following:

- Controlled use (19-49), where subject show no addiction or very slight addictive behavior, that has no serious effects on, financial and academic performance and with no effect on social life of the subject.
- Moderate internet addiction problem (50-79) where subjects show moderate degree of addictive behavior that has mild to moderate effects on the test subject.
- Severe (80-95), the internet addictive behavior has serious effects on subjects mental wellbeing and daily activities performance.

The research about the SNA is facing a group of methodological challenges (Kuss D. a., 2017), the employment of varied conceptualizations, measurement tools and cut-off values put obstacles in the process of developing this branch in cyber-psychology. According to Griffiths (2005) the behavioral addiction psychological model is based on six major criteria: salience, mood modification, tolerance, withdrawal, relapse, and conflict. Stressing that:

"Any behavior that fulfills the aforementioned six criteria can be operationally defined as an addiction" (Griffiths M. D., 2014, p. 121)

The literature consensus regarding those criteria is very clear as a handful of research applied these dimensions on many behavioral addiction researches in issues like; shopping, work, Facebook addiction, smartphone addiction, internet addiction, gambling addiction and social media addiction. This consensus provides strong base for the employment of such criteria in the SNA research. (Clark et al., 2008; Kuss et al., 2013; Billieux et al., 2015; Andreassen et al., 2016; Monacis et al., 2016; Shahnawaz, 2020)

The criteria or dimensions of the SNA scale are:

- 1. Salience: When the need to use social networks is dominant over use's life and present in his or her feelings, thoughts almost always.
- 2. Mood modification: When the use of SNSs has a positive effect on user's mood.
- 3. Tolerance: When the amount of time spent on SNSs is not enough to achieve the previous effect and so more time is needed on SNSs.
- 4. Withdrawal: User feels distressed when not be able to use SNSs due to any other reason than his or her own well.
- 5. Conflict: When the usage of SNSs would cause conflicts with user's daily activities.
- 6. Relapse: When user go back to addictive behavior on SNS after trying to regulate or stop that behavior.

The scale can be used in either to detect or explain the addiction dimensions, or to diagnose patients, dimension exploration score is calculated by the summation of each dimensions questions score. A total score can be obtained by summing up all the items. The score can range from 21 to 147. Any score above a total score of 84 signifies addiction

with three levels of diagnosis, mild, moderate and severe. (Griffiths M., 2005; Shahnawaz, 2020)

2.4 Psychometric and Factorial properties of the scales

Factorial analysis is statistical methodology to reduce multiple variable data into specific factors to explain the data, to become easier to comprehend and also to ease the correlation among these variables. This kind of analysis is used for both levels of exploration and confirmation of the data. The exploratory factor analysis (EFA) aims to develop a statistical model to explore the research community behavior on the basis of a few concealed variables, and eventually reduce the variables into correlated components or dimensions. While in confirmatory factor analysis (CFA), the component construct provided by exploratory model is examined for applicability in a variety of the search population, research question or investigated issues, in this case the CFA should explain the functionality of the SNA scale dimensions in Arabic among the Palestinian youth. In this research framework, it is of importance to properly distinguish factorial analyses wither exploratory or confirmatory from basic component analysis of the variables, in which the data is reduced through linear combination of variables to construct the set of basic components. The EFA and CFA are derived from the statistical relationships of the independent variables. (Verma, 2019)

Psychological research generally aims to answer a wide range of questions and hypothesis, mainly this discipline in scientific research is focused on five major areas; comprehending the nature of psychological traits, , developing the research paradigms, properly understanding research problems, providing statistical insights and achieving research objectives. To cover these disciplines a variety of research approaches can be utilized such as; (1) Descriptive approach focusing on describing the general characteristics of the research population. (2) Comparative approach focusing on comparing the statistical data of two or more research groups. (3) Inferential approach focusing on illustrating conclusions about the research population through statistical inferences derived from both theory and hypothesis data. (4) Predictive approach focusing on the futuristic estimation of the research sample characteristics. (5) Developmental approach focusing on the change on

children's behavioral traits over different spans of their age based on the same tools to detect changes over time, in some cases studies worked out through this approach called longitudinal studies. (6) Relational approach focusing on investigating the relationships among diverse variables that represent psychological traits of the research sample which is the approach of choice in this applied research. Relational approach is mainly focused on clearing the correlations among statistical parameters of the sample from one side and with psychological traits and dimensions in the research by applying statistical techniques like correlation coefficient, Chi-Square, Phi coefficient and multiple rank correlations, and this approach as will be shown in Chapter three will assist to achieve research goals. (Ibid)

According to Verma (2019) the psychometry is a field in psychology that investigates the paradigm of psychological theories and data measurement methods to achieve proper understanding of such constructs and relations. This investigation is carried out through the measurement and quantification of knowledge, abilities and personality traits to achieve the validity, reliability and stability of psychological assessment tools. According to the same source, psychological assessment is the process of testing individual's behavior under specific conditions through standardized and valid tools according to scientific standard procedures that are based on reliability and validity. (Ibid)

The psychometric properties of a test are varied, but the most important and related tests for the case at hand are the following:

- A. Internal Consistency: This concept determine the tools ability to deliver a consistent results from different variables within the tool so there are no significant variances among the tool questions regardless to any combination between them in case the questions were divided into two or more groups. The Major three tests to achieve this goal are:
 - a. <u>Cronbach's Alpha Test</u>: The most used test of reliability applied in the humanities research tools, when the questions are measured through Likert scale. Reliability indicates the ability to measure the target concept which it is supposed to measure and how it will measure it through implicit variables that are hard to be measured directly. It can also be used to test separate dimensions within the tool. (Cronbach, 1951) The Formula of the test is as following:
Where *n* is the number of questions, *c* is the average covariance between item pairs and *v* is the average variance.(Verma J. P.-S., 2018)

$$\alpha = \frac{n \cdot \bar{c}}{\bar{v} + (n-1) \cdot \bar{c}}$$



- b. <u>Guttman Split-Half Test</u>: The items of the tool are to be divided into two parts equally; the positive correlation between the two parts will reflect higher consistency of the tool. The major advantage of the test is that it is needed to be executed on the tool for one time only, saving time and effort applying it again but on the other side it will diminish the test-retest method. The test is computed based on the same equation of Cronbach's Alpha test. (Verma J. , 2019)
- c. <u>Spearman-Brown coefficient</u>: The test is applied on the tool to determine its reliability through clarifying the non-linear relationship between the tool length and its' reliability assuming that test length must increase when larger values approaching a result of (1.0). (Wainer, 2001; IBM, 2014)
- B. Validity Tests: The concept of validity is dependent on the relevance of the tool to the studied issue, in other words; can the tool really detect what it is supposed to measure. Unfortunately, validity is defined mathematically in coefficients like reliability, so in order to establish the validity of psychological tools; the research must apply as much as possibly reasonable methods to validate the tool, and those are the most applicable validity tests used in the psychological research:
 - a. <u>Construct Validity</u>: This test reflect the associations between the score of the tool and the theoretical framework of that tool. It is the sum of behaviors which can be assumed representational of a specific psychological occurrence. In the case of SNA scale, the construct validity test should reflect the associations of the scale dimensions with the SNA itself. (Verma J., 2019; Wortmann, 2021)

b. <u>Concurrent Validity</u>: This test is achieved by comparing the tool's results with a tool that has been proved to be valid. A correlation coefficient that proofs the relations between the tools' questions and the results of the questions of the other valid tool. It must also differentiate between subcategories within the study sample (including demographic variables and internal tool dimensions), that it should detect according to theoretical framework. (Verma J., 2019; Nazlıgül, 2021)

2.5 Quality of life scale

The definition and conceptualization of the "*Quality of Life*" "QOL" concept is still a matter of debate among scholars of psychology and sociology (Celestine, 2021), this debate originates from a group of factors in both research and practice among psychologists. Firstly; scholars have various definitions for the term "QOL", in a comprehensive review of 75 papers related to this concept, only 15% of them defined it before applying the scientific studies (Gill, 1994). The second issue is that people have high diverse attitudes towards the issue of "QOL" as their interests could give high importance for certain kind of activities or accomplishments while other people have a totally opposite vision regarding the same issues (Liu, 1976). Thirdly; the scientific literature is struggling to clear the overlapping between the concepts of QOL and life satisfaction, which cause certain kind of elusiveness regarding this concept (Landesman, 1986).

To resolve the previously mentioned issue, Felce and Perry (1995) introduced a matrix of four dimensions to properly articulate the concept of QOL.

Approach		Main poir	nt of focus		Measurement method
First	Life	conditions;	social,	physical,	Numerical value compared
	relatio	onships			to larger population.
Second	The pe	ersonal satisfact	ion regard	ing the first	Subjective reaction to the
	approa	ach points			conditions.

Table 2.5.1 : QOL dimensional model table:

Third	A combination of objective life conditions	Numerical value of both
	and satisfaction of these conditions	attitudes.
Fourth	Rather than direct measurement from	The weight of the value
	subject, it focuses on assessment of	depends on the significance
	satisfaction of certain domains of life	of each domain according
	according to the importance the subject	to the subject of study.
	give to these domains.	

According to Gill and Feinstine (1994) there are almost a (150) tools for QOL assessment in a range of forms and methods that contain various dimensions and domains with subscales. The research has chosen the short form of the scale developed by the World Health Organization (WHO), where they defined QOL as the perception of subject's to their position in life with relevance to the cultural context and also with relevance to their goals and expectations in their lives. (WHO, 2012)

The 5-item World Health Organization Well-Being Index (WHO-5) is a short and generic global rating scale measuring subjective well-being. Because the WHO considers positive well-being to be another term for mental health, the WHO-5 only contains positively phrased items. The WHO-5 items are:

- 1. I have felt cheerful and in good spirits,
- 2. I have felt calm and relaxed,
- 3. I have felt active and vigorous,
- 4. I woke up feeling fresh and rested
- 5. My daily life has been filled with things that interest me.

The respondent is asked to rate how often each of the 5 statements applies to him or her when considering the last 14 days. Each of the 5 items is scored from 5 (all of the time) to 0 (none of the time). The raw score therefore theoretically ranges from 0 (absence of well-being) to 25 (maximal well-being) (Staehr, 1998).

The QOL scale is applied within the research tool for two reasons; firstly to measure the QOL score among the studied sample and then to help assessing their psychological wellbeing with relevance to the SNA addiction, explaining the nature of correlations between social networks addiction and the QOL scale score. Secondly to test the concurrent validity of the social network addiction scale as the QOL is a valid and applied psychometric scale in the psychological research.

2.6 Scale of General Well-Being "SGWB"

According to Deci and Ryan (2008), mental wellbeing is a subjective mental health assessment that means experiencing a high level of positive effect and high degree of satisfaction of one's life. It also described as the person's psychological functioning, life satisfaction and the ability to develop and maintain mutual beneficial relationships. Also it is the person's ability to maintain self-acceptance, personal satisfaction, purpose, autonomy and self-esteem. (Stewart-Brown, 2008). One of the most famous significant tools to measure the mental wellbeing is the Warwick-Edinburgh Mental Well-being Scale "WEMWBS".

The Warwick-Edinburgh Mental Well-being Scale "WEMWBS" was developed by scholars in Warwick and Edinburgh universities as a tool of mental well-being assessment in 2007, the scale has (14) items with five option responding set, covering dimensions like social functioning and mental health.

Based on the "WEMWBS", the Scales of General Well-being "SGWB" was developed by Longo, Coyne and Joseph (2018), the scale measuring general well-being as well as fourteen specific well-being constructs as lower-order indicators of well-being: happiness, vitality, calmness, optimism, involvement, self-awareness, self-acceptance, self-worth, competence, development, purpose, significance, self-congruence and connection. The SGWB produced responses covering the entire range of the 5-point response format. On average, means approximated the middle value of the 5-point format (Longo Y. C., 2018).

The minimum score of the scale is 14 while the highest score is 70.(Ibid; Stewart-Brown, 2008)

- 1. I've been feeling optimistic about the future
- 2. I've been feeling useful
- 3. I've been feeling relaxed

- 4. I've been feeling interested in other people
- 5. I've had energy to spare
- 6. I've been dealing with problems well
- 7. I've been thinking clearly
- 8. I've been feeling good about myself
- 9. I've been feeling close to other people
- 10. I've been feeling confident
- 11. I've been able to make up my own mind about things
- 12. I've been feeling loved
- 13. I've been interested in new things
- 14. I've been feeling cheerful

The research applied this scale to measure the mental bell-being of the research sample to correlate with the SNA.

2.7 Palestinian postmodernity and Israeli occupation

Since over a century, the Palestinians have been through a set of devastating dramatic transformations of their socio-political structure, a change that has been intensified throughout the digital revolution within the postmodern era since the invention of the internet through Web 2.0 technologies and up to the dawn of semantic Web 3.0. The disconnectivity of Palestinian national and political transformations caused the grand "horizontal" knowledge in the community to become vertically narrow, marginalized and scattered within the public sphere; which caused a collapse of the grand Palestinian narrative and though compromising the Palestinian identity itself. This epistemological tension is present and strongly affected by the transformation of the Palestinian community into postmodernity; while still, under occupation jeopardizing the identity construct on both personal and community levels.

From a sociological perspective, the concept of identity anomalies consists with Jean-François Lyotard critique for postmodernism and how it acts as a catalyst for the need of metanarratives of *Globalization* where the loss of faith in the Metanarratives has a huge influence how communities perceive reality thus replacing the metanarratives with little personal narratives to justify and explain the social transformation that affects the identity regardless to the grand or metanarrative, where Lyotard said:

"The narratives we tell to justify a single set of laws and stakes are inherently unjust" (Elliott, 2003, p. 211).

The arguments of Lyotard regarding the need of legitimizing the episteme are conducted throughout the language games³¹ where the rules don't carry within themselves their own legitimization rules. This implies certain level of personal and communal vulnerability. This vulnerability contributes to the dialectic of how the common perception of the Palestinian identity is crystalized under relationships of tension and transformations of the post-digital age under Israeli occupation (Arnheim, 1974; Lemke, 1998; Floch, 2005; Krzyżanowski, 2010)

At the age of digital media, the cyberspace became the space where national territories are lost and were the inter-national encounters take place (Horálek, 2016, p. 147). As the digital media power becomes more invading by means of datafication, nationalism is not only still holding against the convergence of the world, but getting powerful in an unorthodox framework that is contradictive to Gellners' theory³². Nations protect their borders to successfully manage their territory, economy, values and symbols but from the other way around, they dwell in an international environment through the internet joining their local and diaspora citizens on day to day connections regardless to boarders, territories and the brutal siege of occupation in the Palestinian case, making the national more international, understandable yet locally different, transforming humans into a "*Glocal*³³ beings" within the info-sphere. (Anderson, 1991; Eriksen, 2007; Ershov, 2015)

³¹ Lyotard relies on Wittgenstein's idea of language games to demonstrate that reason and representation cannot be totalizing. The end of metanarratives means that no single overarching theory can pretend to account for everything. (Woodward, 2021)

³² According to Ernest Gellners (1983), nationalism revolves around satisfying the national principles relying on the specific ideology of having identical state and national boarder. Gellners' philosophy is attached to a narrow set of ideological ideas, as he defines nationalism as "a political principle, which holds that the political and the national unit should be congruent" (1983, p. 1)

³³ The term Glocality is coined from global-local and was originally presented by Japanese companies as it reflects the fusion of global incidents on local level and vice versa in a way that makes almost all connected humans involved in related issues (Meyrowitz, 2005).

With respect to digital media eras, each one is characterized by different manifestations of info-flooding³⁴, multimedia convey the authoritarian speech of reshaping the perception of the audience through a wide set of logical derailing agents³⁵. No difference between the pre , mid, and post-digital ages due to the mere existence of the info-flooding but with different manifestations and intensities.

The postmodern media discursive paradigm provides short cuts for the traditional search processes for knowledge, which cannot cope with the huge amount of available data. As decision making process in modern industrialized/digitized societies takes place in social settings, thus communication and intelligent information processing are main keys for informed decision making process, and as this process is vulnerable to the derailing agents of the information phenomena, it is possible to manipulate the logic of the masses by such agents, youngsters in particular. (Ryan, 2003; Hansen, 2013; Hendricks, 2016).

Through knowledge/power operations in history, the logic of the masses within the public sphere was constantly altered and manipulated, these manipulations are translated into making perceptions for the path that epistemology should take as Foucault proposed:

"Truth is a thing of this world: it is produced only by virtue of multiple forms of constraint" (Foucault, 1977, p. 131);

It can never exist outside power relations. Each epistemological era or discipline - modernity and postmodernity, colonialism and post-colonialism, etc - in this regard- are characterized by norms through which the bio-powers³⁶ function (Foucault, 1990). In addition to using knowledge as a tool of domination, the new norms imposed as part of

³⁴ "Information flooding" is different from, but related to, the widely-discussed problem of "information overload." Overload is the result of too much information, flooding is the cause. Information overload describes consumers making cognitive mistakes because they are overwhelmed and confused by the amount of information. Overload is a well-established, widely discussed concept. Information flooding describes why there is so much information that consumers become overloaded. It captures that companies intentionally overload consumers with information to gain strategic advantages. (Schulz, 2014, p. 756)

³⁵ The three derailing agents of information are: Pluralistic ignorance(No one believes, but everyone thinks that everyone believes) (Breed, 1961), Informational cascades(using popularity as a measure of quality) (Velasquez, 2012) and Belief polarization(reproducible product of group deliberation where each of the group members following a discussion ends up holding a more extreme position regarding some viewpoint than they did prior to deliberation) (Cooper, 2001)

³⁶ Bio-power is a type of power that focuses on the regulation of populations and the control of bodies (Foucault, 1990)

these disciplines are used to assign certain identities. This captivity allows for certain types of self-reflection, identification and alteration will facilitate control and even normalizing control. The production of new knowledge obtained from the new disciplines and norms allow different, normal and conventional ways of management of the domestic inside a system where obedience "usually to norms" is a must (Foucault, 1995). Knowledge, accordingly, becomes a tool of subjugation and control instead of a tool of enlightenment.

The differentiations of modernity and postmodernity and their representations and norms, could be assigned to certain paradoxical, semi-democratically introduced norms and also understanding power and hegemony relations through domination, repression and subjugation in complex hybrid situations. By the virtue of this power, which sprouts from everywhere within the visual landscape (including the screen time), it penetrates through all levels of society and discourses. It is further reproduced in democratic, quasi-free³⁷ and juridical forms; literally saying; norms of obedience. (Foucault, 1978)

Resisting this untraditional type of media power is rather a complex issue, it is a tension inside the power relations themselves and not external. Building on this, sovereignty acquires new dimensions. Globalization and resulting theories for both Foucault and Jean-Francois Lyotard turn knowledge from mere historic profiling into discourse production mechanisms. Duly, discourses of the post-modern condition have their specific rules. Thus, the traditional theory "is always in danger of being incorporated into the programming of the social whole as a simple tool for the optimization of its performance;

"This is because of its desire for unitary and totalizing truth lends itself to the unitary and totalizing practice of the system's managers." (Lyotard, 1982, p. 12).

Knowledge, by this sense, creates new forms of constraints; meta-narratives of modernism are neutralized; they are commonly replaced by little narratives; theory becomes immersed in the normalization of power relations and products, this argument is brutally hitting the heart of local cultures and communities in a globalized unitary info-sphere and the Palestinian community is on top of them suffering the brutality or colonial settlement Israeli occupation. (Alazzeh, 2020)

³⁷ The terms comes from the field of physics describing the state of an electron in a metal or conductor that moves freely and in this context conveys the high volatility of the concept. (quasifree, 2021)

The Palestinian youth in the occupied Palestinian lands by the Israeli military force, face all sorts of stressful challenges. The daily and also nightly horrifying activities of the Israeli military make it difficult for such youth to live normal life, in addition to poverty, high unemployment rates, hampered right of movement and many other factors, and above all, the total distress situation because of the failure of the peace process due to continuous Israeli settlement vigorous expansion on Palestinians lands. These factors make the Palestinian youth a highly vulnerable population towards maladaptive and problematic internet and social networks addiction (Mahamid F. A., 2018).

Digital exodus is caused by the Israeli measures in which Palestinian youth find shelter on the internet and social media

2.8 COVID 19 impact

Coronavirus disease 2019 (COVID-19) is a contagious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first known case was identified in Wuhan, China in December 2019. The disease has since spread worldwide, leading to an ongoing pandemic. (Page J, 2021) On Thursday March the fifth 2020, the Palestinian government declared the emergency status due to the virus outbreak, limiting the freedom of movement, the educational system, transportation system and almost every aspect of the daily lives of the Palestinian citizens. This has led to serious effects on the economy and the education system which had a direct effect on children and youth in Palestine. (WHO, 2021)

During the period of emergency state declaration enforced by the Palestinian government due to COVID-19 pandemic, digital methods of communications like video calls and social media platforms have brought people closer together, making social isolation more tolerable. The increased dependency of ICTs throughout the state of emergency, especially of social networks as a way of getting informed, educated, and entertained, has become essential part of daily life due to the practices of isolation and limitation of movement performed by the government. However the advantages of such technologies during the COVID19 emergency state are combined with disadvantages and risks, like addictive behavior among the youth and decreased educational performance.

2.9 Previously related studies

The internet addiction and SNA are relatively new issues within the scientific literature worldwide as they have become clearly noticeable during the last decade, the Arabic communities and cultures are not an exception but with a scarcer amount of applied research conducted on this discipline. The Palestinian community has very specific traits due to a set of factors and the Israeli occupation that manifests in every aspect of the lives of Palestinians is engaged in digital trends and effects, addiction as one of them. In this chapter the research will review a group of studies that examined the digital addiction issues locally and regionally.

In one of the most recent research conducted in Arab world in 2021, regarding the psychological traits of SNSs interactivity, **Fekih-Romdhane and associates(2021)** aimed to measure the effect of SNA on the youth mental health to reveal wither SNA is related to mental illness or not. The study sample consisted of 1007 college students from both genders in Tunisia. The study measured the psychotic-like experiences in the sample through the positive sub-scale of community assessment and the Arabic Social Media Addiction Scale (ASMAS). The study found that 86.4% of students spent time on the internet, 98.5% were using SNS regularly. The study also found that there was a direct positive correlation between the total number of hours the youth spent on SNSs and the incidence of psychosis among the studied sample, suggesting that SNS has a deteriorating effect on the mental health and mental wellbeing of the youth. (Fekih-Romdhane, 2021)

The study of **Guelmami and associates (2021)** aimed to test and validate the psychometric properties of the Social Media Disinformation Scale (SMDA-12) and the correlation between the confidence, consumption and sharing levels with mental health and awareness regarding the COVID19 pandemic. The sample size was 874 subjects with a mean age of 30.6 years; they were subjected to a set of assessment tools; SMDS-12, the Internet Addiction Test, the COVID-19 Fear Scale, and the 10-item Perceived Stress Scale. The three factor structure of the scale explained 73% of the variance score, confirmatory factor analysis confirmed the appropriateness of the scale and the construct validity yielded

satisfying results. In addition the internal consistency tests scores varied from 0.89 to 0.88 and the correlations showed a positive relationship between digital addiction and negative mental and psychological dimensions the study assessed. Eventually the study concluded that the (SMDA-12) is credible to assess the social media disinformation with relevance to mental and psychological issues and disorders (Guelmami, 2021).

Another interesting Tunisian study that was carried out by **Ghali and associates (2019**), the study worked on localizing the Bergen Facebook Addiction Scale in Arabic language and within an Arabic culture. The study was worked out based on the cross-section approach executed on secondary school students. A test retest was conducted with Cronbach's alpha coefficient measurement. The total number of study sample was 1399, 60.5% females, and out of the total no. almost 72% of the study sample showed non addictive behavior regarding the Facebook. The median hours spent on Facebook by the study sample was three hours and the Cronbach's alpha 0.87. Interestingly the study found out that the Facebook addictive youth had an addictive behavior related to online gaming and the addictive students were more depressed than other normal students. The study recommended that the Arabic version of BFAS can be used as a screening diagnostic tool for Facebook addiction among school students (Ghali, 2019).

The concept of Internet addiction itself was the core of a study carried out by **Mahamid** and Berte (2018) in Al-Najah University in Palestine. The study aimed to test the relevance of internet addiction with the geo-political vulnerability of the Palestinian community being under the Israeli occupation. The study sample was (744) students from the university and they were all living under the militarized occupation in West Bank and Gaza. The study found that 47% of the studied students showed an addictive behavior, the males were at higher risk of addiction than females and the younger the age of the students was the more addictive behavior they show.

The students were selected randomly from the Al-Najah University student's community through class lists of compulsory courses. The sample size was almost 5% of the total population of the university students. The internet addictive behavior was tested through Young IAT consisting on 19 items. The tool items were reviewed by a psychologists

committee to check for validity and comprehensiveness. The tool measured the addictive behavior on three levels, mild, moderate and sever, 53% of the sample reported No to mild addictive behavior, while 42.4% reported moderate addictive behavior while 4.7% reported sever internet addiction. The study concluded that the addictive traits values among the sample were very high compared to other societies. This elevation could easily attached to the nature of the geo-political situation in Palestine were there are no many places for amusement to entertain the population and outdoor activities are very limited. (Mahamid F. A., 2018)

In a relevant study discussing the internet, social media and gaming addictions, **Berte and associates (2021)** investigated the levels of addictive patterns with relevance to selfefficiency among university students in Palestine in 2018. The total number of study sample was (505) students from both genders. The study applied the Young IAT that consisted of twenty items and a response on 5 step likert scale. The Young IAT was validated within Palestinian context by Mahamid and Berte in 2018. (Mahamid, 2018) The sample was collected through compulsory class lists. The data were processed statistically to evaluate the degree of internet addiction within the sample and through calculating Person's correlation coefficient; the study explored the relationship between digital addiction and self-efficiency as perceived by the studied students.

The study founded that 49% of the studied students were slightly addictive, 45.2% were moderately addictive and 5.8% of them were severely addictive, and males were more addictive than females. As for perceived self-efficiency, the study results showed that internet addictive behavior has a negative effect on self-efficiency and how students perceive such ability in themselves. The study eventually stressed out on the awareness of the internet addiction especially among university students in Palestine as a high risk group of such kind of addiction. (Berte at al, 2021)

A study carried out in the UAE in by **Alkaabi and associates** (2016) came with quite similar results about the effect of SNA over performance and efficiency, Sultan Alkaabi and associates investigated the effects of SNA on student's educational motivations in universities. The study relied on focus group methodology to investigate the relationship between learning motivations and the social networks usage among the students in school. Thirteen focus groups with 83 students in four governmental universities were met to extract the data and feedback from. The collected and analyzed data from the students suggested a negative correlation between SNA and educational motivation among the student. (Alkaabi, 2016)

The Algerian study carried out by **Kiouas & Kaddouri (2021)** intended to explore the relationship between SNA especially on Facebook and social alienation among universities students. The study sample consisted of 210 students selected by snow balling technique. The Bergen Facebook Addiction Scale (BFAS) was applied to measure the addictive behavior in the sample combined with Travis Alienation Scale to measure the psychological impact over the sample. The study also relied in the relational descriptive approach to explore the correlations between addictive behavior and social isolation among students. The study found out that there is a positive correlation between SNA on Facebook and the social isolation among the students suggesting that regulations and awareness efforts must be applied to protect the students from the harmful effects of SNA. (Kiouas, 2021)

The anti-addictive intervention was the focus of the study published by **Affouneh and associates (2021)**, where they discussed the efficiency of social skills training in reducing the risk of internet addiction (Affouneh et al, 2021), the research aimed to assess the effectiveness of limited time group training improving their social skills and thus reducing digital addiction among them with relevance to high risk environment like the Palestinian one. The study sample consisted of 30 university students who reported high scores in internet addiction.

The group was divided into two halves, one taking the training and the other for control. The test group spent eight weeks of internet addiction reduction training. Then it was tested through two tools, the Internet Addiction Test (IAT) and the Social Skills Questionnaire (SSQ). The data was processed through two-way covariance (ANCOVA) to explain the differences of addictive behavior among the study groups with relevance to demographic variables like age and gender. The study concluded that social training to counter addictive behavior was effective reducing such behavior not only internet addiction but also other kinds of addictive behaviors. And thus this study encouraged the implementation of social skills training among the vulnerable and high risk groups regarding addiction (Affouneh et al, 2021).

A Saudi Arabian study carried out by **Asem A. Alageel and associates (2021)** in (IMSI) university regarding the smartphones addiction among post-graduate students and its relevance with negative psychological and mental traits among students like depressions and hyper activity disorder. The study utilized a cross-sectional online survey where a six sections online questionnaire was delivered for the study sample (n=506) to be filled; the sections contained the following tools; Smartphone Addiction Scale (SAS), Patient Health Questionnaire (PHQ9) for Depression, Athens Insomnia Scale (AIS), the Fagerström Test for Cigarette Dependence Questionnaire (FTCd), and the adult ADHD Self-Report Scale (ASRS-v1.1). Half the participants were classified as smartphone addicts and they were two times more vulnerable to sleeping difficulties and cigarettes consumption. Generally speaking, the study provides another proof of digital media negative effects on mental wellbeing of the study sample. (Alageel, 2021)

The study of **Mahamid and associates (2021)** regarding the psychometric properties of Covid19 stress scale in Arabic language and in Palestinian context is highly relevant in this research theoretical framework as it aimed to test and eventually localize an international psychological diagnostic tool in the Arabic language in Palestine. The study sample consisted of 860 Palestinian adults living in the West Bank; within the age span 20-48 years. The sample was outreached through online advertisement and campaigns to respond to the questionnaire. The study utilized the confirmatory factor analysis, descriptive statistics, concurrent validity and internal consistency tests for analysis. The study was successful achieving reliability and validity for the scale through such statistical methods with regard to the concept of localizing an international psychological tool within Palestinian context.

Although a handful of related studies were reviewed, none of them discussed the psychometric properties and factorial results of a SNSs diagnostic test, which sets strong base for this research to fill an important gap in the field locally and regionally. Interestingly, almost all these studies agreed upon the negative mental and psychological side effects of digital addiction over human and the youth in particular. The studies also utilized a wide set of psychological tools to either measure the addictive behaviors or detect the mental and psychological status of their studied samples, but only very limited number of them combined more than two tools within the same questionnaire. The mental issues those studies have discussed were relatively diverse but none of them to the best knowledge of this research, crossed the line of independent scientific disciplines and clearly discussed the core issues and factors effects the digital media in general and social media in particular have on developmental psychology. Interestingly, in this literature review, we have found that despite the fact that Palestine is a state under brutal militarized occupation but the academic prestigious research in Palestine in the field of cyber-psychology is competing other Arabic countries.

Chapter Three: Methodology & Procedures

3.1 Methodological approach

The research relies on a mixed qualitative-quantitative analytical approach based on relational descriptive methodology; it is conducted depending on applied online data collection from the study sample to identify the SNS platforms addiction level among the research community by determining the internal and concurrent validity and factorial properties of the social networking addiction scale with relevance to *Young internet addiction scale*, *Quality of life scale* and the *General well-being scale*. The addictive traits were correlated with the SNS platform of choice among the study sample and usability patterns. In addition there was a further assessment for the dimensional properties of the scale to test its efficiency in Arabic and within the Palestinian community.

The data were collected by the researcher through an online questionnaire that has been built up on "Google Forms", it is composed of 61 questions in addition to the demographic variables. The data collection tool was delivered to the research community through online means due to COVID19 pandemic emergency declaration procedures.

3.2 Research tools: Design, Validity and Stability

The research tool was designed upon scientific literature to meet the objectives of the research and then was presented to a committee of arbitrators from Al-Quds University and Al-Najah University. After obtaining the necessary official permissions from the Ministry of Education, the link was shared with 33 Palestinian targeted schools distributed on thirteen districts, in addition to 9 universities and community colleges. The school teachers and administrators helped spreading the link among the students and encouraging them to fill the questionnaire. The analytical-descriptive approach was adopted to design the study tool, data collection and analysis, while the quantitative approach was adopted to analyze and interpret the results.

The tool was designed by combining four psychometric scales, this research adopted *Social Networks Addiction scale* that has been presented by Shahnawaz and Rehman (2020), in addition to another three scales; *Young internet addiction scale*, *Quality of life scale* and *Scale of General Well-Being*. The SNA scale consisted of 21 items on 7 degree Likert scale.

The validity of the scale was initially tested by conducting the internal consistency test to extract the stability coefficient *Cronbach's Alpha* on the entire sample of the study, where the stability coefficient of the tool 0.932 was an excellent stability factor in humanities research, while the minimum accepted score for this test is equal to or above 0.6. (Shannon, 1993)

Table 3.2.1 Cronbach's Alpha test results:

	Cronbach's	
	Alpha Based on	
Cronbach's	Standardized	
Alpha	Items	N of Items
.932	.932	21

Reliability Statistics

The scale was also submitted to divided Cronbach's Alpha test on two parts (Part1 = 11 items from Q1-Q11) and (Part2= 10 items from Q11-Q21) and both tests achieved the

result's (87.8% & 90.6%) respectively, with a correlation score between two forms of (72.2%). The scale also was tested for the Spearman-Brown coefficient scoring 83.9% and Guttman Split-Half coefficient test scoring 83.8%.

Reliability Statistics

Cronbach's Alpha	Part 1	Value	.878	
		N of Items	11 ^a	
	Part 2	Value	.906	
		N of Items	10 ^b	
	Total N o	of Items	21	
Correlation Between Forms			.722	
Spearman-Brown Coefficient	Equal Le	ength	.838	
	Unequal	Length	.839	
Guttman Split-Half Coefficient			.838	

Table 3.2.2 multiple reliability tests results table:

a. The items are: S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11.

b. The items are: S11, S12, S13, S14, S15, S16, S17, S18, S19, S20, S21.

The overall stability and internal validity tests were excellent indicating a high correlation among the scale questions in Arabic despite the relatively short number of items in the scale "21 items", accordingly the scale has shown a high score of validity in the Arabic language and within the unique Palestinian context.

3.3 Research Community and Sample

The study sample consists of 727 university, community college and school students aged 16-20 years old representing the Palestinian youth. The sample was randomly selected upon availability from the online communities of universities and community colleges. As for the school's students and to consider the ethical considerations of scientific research, an official letter was sent to the Ministry of Education (MoE) to seek cooperation as the schools students aged (16-18) are considered minors according to the Palestinian law and need authorization from official entity to get access to such category. The MoE requested a

detailed explanation of the research tool components and the research goals and questions, after reviewing these details, they have sent a list of all public schools within the West Bank region and so the researcher chose two schools from each district randomly, one for male and another for female students with a sum of 33 schools across the West Bank, with a total number of students of 15856 from both genders and the participants from the schools were 389 students. The total number of respondents was 727 students from all educational establishments distributed almost equally over the studied age range.

Age	Total Number	Percentage
16	139	19.1%
17	104	14.3%
18	136	18.7%
19	168	23.1%
20	180	24.8%

Table 3.3.1 study sample age distribution:

Table 3.3.2 the gender distribution of the sample:

Gender	Total	Percentage
	No.	
Male	219	30.1%
Female	508	69.9%

The studied sample demographic distribution was mainly concentrated in the center districts as almost (80%) of the studied sample were in Jerusalem, Ramallah, Bethlehem and Hebron regions.

Table 3.3.3. geographic distribution of the sample

District	Students	%
Jerusalem	239	32.87
Ramallah	70	9.63
Jericho	9	1.24
Bethlehem	89	12.24
Hebron	181	24.90
Gaza	16	2.20
Salfit	2	0.28
Nablus	54	7.43
Tulkarm	22	3.03
Qalqiliya	26	3.58
Jenin	13	1.79
The 48 Region	5	0.69
Tubas	1	0.14
Total	727	100

As for the educational institutions that students belonged to, the majority of the sample came from under graduate education organizations like universities and community college while the rest were school students.

Table 3.3.4 educational level of the sample:

Organization	Students	%
University	400	55%
Community College	19	3%
School	308	42%
	727	

3.4 Data Collection tools

The research collected the required data for analysis through an online questionnaire form delivered online for the research community. The questionnaire was build up on four psychological tools:

- A. Young internet addiction scale (Young, 2011), composed of 20 items:
 - 1. How often do you find that you stay online longer than you intended?
 - 2. How often do you neglect household chores to spend more time online?
 - 3. How often do you prefer the excitement of the Internet to intimacy with your partner?
 - 4. How often do you form new relationships with fellow online users?
 - 5. How often do others in your life complain to you about the amount of time you spend online?
 - 6. How often do your grades or school work suffers because of the amount of time you spend online?
 - 7. How often do you check your email before something else that you need to do?
 - 8. How often does your job performance or productivity suffer because of the Internet?
 - 9. How often do you become defensive or secretive when anyone asks you what you do online?
 - 10. How often do you block out disturbing thoughts about your life with soothing thoughts of the Internet?
 - 11. How often do you find yourself? Anticipating when you will go online again?
 - 12. How often do you fear that life without the Internet would be boring, empty, and joyless?
 - 13. How often do you snap, yell, or act annoyed if someone bothers you while you are online?
 - 14. How often do you lose sleep due to being online?
 - 15. How often do you feel preoccupied with the Internet when off-line, or fantasize about being online?
 - 16. How often do you find yourself saying "just a few more minutes" when online?
 - 17. How often do you try to cut down the amount of time you spend online and fail?
 - 18. How often do you try to hide how long you've been online?

- 19. How often do you choose to spend more time online over going out with others?
- 20. How often do you feel depressed, moody or nervous when you are off-line, which goes away once you are back online?
- B. Social Networks Addiction scale (Shahnawaz, 2020), composed of 21 items.
 - 1. While I work/study, my mind remains on social networking sites.
 - 2. I go to social networking sites instantly after waking up in the morning.
 - 3. I check for updates on social networking sites while studying/working.
 - 4. I check my social networking account before starting any task or activity.
 - 5. I go to social networking sites whenever I am upset.
 - 6. Social networking helps me lift my mood.
 - 7. I feel relaxed whenever I am on social networking sites.
 - 8. These days I spend more and more time on social networking sites.
 - 9. When compared I spend more time on social networking sites now than I did in the past.
 - 10. I need to be on social networking sites for longer time than before to be satisfied.
 - 11. I feel sad when I am unable to log in to social networking sites.
 - 12. I become irritable whenever I cannot log in to social networking sites.
 - 13. I feel frustrated when I cannot use social networking sites.
 - 14. I become restless when I do not get time for social networking.
 - 15. I try to hide the time I spend on social networking.
 - 16. I need to lie to my parents and others when they ask about my social networking usage
 - 17. I ignore my sleep because I have/want to be on social networking sites.
 - 18. I have failed to cut down the time I spend on social networking sites.
 - 19. I have tried to stop using social networking sites, but have failed.
 - 20. I am unable to cut-down the time I spend on social networking sites.
 - 21. My repeated attempts to reduce the time I spend on social networking sites have failed.
- C. Quality of life psychometric scale (WHO, 2012) composed of 5 Items:
 - 1. I have felt cheerful and in good spirits,
 - 2. I have felt calm and relaxed,

- 3. I have felt active and vigorous,
- 4. I woke up feeling fresh and rested
- 5. My daily life has been filled with things that interest me.
- D. Scale of General Well-Being, composed of 14 items:
 - 1. I've been feeling optimistic about the future
 - 2. I've been feeling useful
 - 3. I've been feeling relaxed
 - 4. I've been feeling interested in other people
 - 5. I've had energy to spare
 - 6. I've been dealing with problems well
 - 7. I've been thinking clearly
 - 8. I've been feeling good about myself
 - 9. I've been feeling close to other people
 - 10. I've been feeling confident
 - 11. I've been able to make up my own mind about things
 - 12. I've been feeling loved
 - 13. I've been interested in new things
 - 14. I've been feeling cheerful

3.5 Research procedures

A literature review was carried out to set a basis for the research demonstrating the relationships between digital addiction and social networking addiction in particular with mental health and well-being of the youth. The Social Network Addiction (SNA) scale (Shahnawaz, 2020) was adopted, translated to Arabic and then reviewed and approved by the supervisors. The research tool design was a matrix of four psychometric scales:

- Young internet addiction scale (Young, 2011), composed of 20 items.
- Social Networks Addiction scale (Shahnawaz, 2020), composed of 21 items.
- Quality of life psychometric scale composed of 5 Items (WHO).
- Scale of General Well Being of 14 items.

The tool was build up with demographic variables into a "Google form" and then was submitted for revision to the Ministry of Education for legal, constitutional and ethical considerations. The MoE approved the tool and then provided a list of all schools in the West Bank; the researcher randomly chose two schools from each district in the West Bank, one for males and another for females³⁸ with a total sum of 33 schools holding 15856 students from age 16 to 18. As for the universities and community colleges, the research community was targeted by announcing the tool link on the online forums and communities of these establishments. The data collection started on May 22nd and concluded on June 21st. A total response of (727) responses were received, the data was retrieved from "Google Forms" in an "Excel" file, then a conversion process for the data took place to transform every lexical response into numerical value.

The data then processed by the IBM SPSS v23.0 statistical software to clean the records, validate and investigate the data sets. Upon the cleaning process (5) records were eliminated because of repeated entries and the final number of analyzed records was (722).

3.6 Ethical considerations

The research community consists of diverse age groups with respect to the acting laws in the State of Palestine as part of the study sample are considered minors according to the Palestinian laws³⁹. In order to address the group age (16-17) years, the research applied a formal request for the MoE to authorize this process, which in turn requested the research documentation and a formal letter from Al-Quds university. The MoE also reviewed the data collection tools and methods to ensure the safety of the studied sample. Additionally the research tool was designed to collect non-personal data from the respondents to protect their privacy and anonymity.

³⁸ According to the official Palestinian educational system, high schools are gender separated.

³⁹ Any person below the age 18 is considered minor.

Chapter Four: Results

4.1 Introduction

The logic of the research was designed upon consecutive logical construct, where the hypothesis was built up sequentially to prove the validity and functionality of the SNA scale in the very unique Palestinian context and in Arabic language. The validity of the first step in the hypothetical construct will allow the research to prove or deny the next construct which is to detect tangible levels of social networks addiction among the studied subjects. Eventually, the verification of the previous two assumptions will allow the research to prove the third one which dictates that there is a statistically significant effect of social networking addiction among the youth on their mental well-being and their quality of life test score. Accordingly the data will be processed and analyzed upon this logical sequence to achieve the goals of the research and prove or deny the hypothesis.

4.2 Data Analysis Approach

In order to achieve the research goals, the hypothesis must be investigated through methodological answering the research questions. Accordingly, the data gathering process was dependent on four psychometric tools; *Young Internet Addiction Test, Scale of General Well-Being, Quality of Life scale* and the scale intended to be studied, the social networks addiction scale. (Shahnawaz, 2020) The Data were obtained through an online form that was converted into an MS-Excel sheet. The lexical data were reduced into numerical data according to a certain coding system (look index 1.2). Then data were transferred into IBM SPSS 23.0 software (IBM Corp., Released 2015.) The collected data were processed and analyzed relying on the relational descriptive approach in psychological research conducting two major sets of statistical analysis;

- 1. The general descriptive statistical tests: calculating the means, medians, averages of the data demographics variables, and they explained the following:
 - a. Age distribution figures.
 - b. Gender distribution figures.
 - c. Educational level distribution figures.
 - d. Geographical location distribution figures.
 - e. Social networks of choice distribution figures.
- 2. The reliability tests: aimed to investigate wither the scale items are logically correlated and consistent with each other and can deliver a logically meaning data. To achieve this goal, the research conducted the following tests on the collected data:
 - a. Cronbach's Alpha test both total and divided values.
 - b. Spearman-Brown test.
 - c. Guttman Split-Half test.
- 3. The validity tests: aimed to investigate wither the scale is able to properly detect the intended insights within the studied sample or not and if it can deliver data consistent with the dimensional and theoretical paradigms of the scale according to literature. To achieve this goal the research conducted the following tests on the collected data:
 - a. Exploratory Factor Analysis (EFA).
 - b. Confirmatory Factor Analysis (CFA).
 - c. Construct validity correlations.
 - d. Concurrent validity correlations.

- e. Psychometric properties of the scale.
- 4. The psychometric correlation tests: These tests were conducted on the data to prove the research final hypothesis, explaining the correlations between social media addiction trends relevance to the subject's mental wellbeing.

4.3 Results

The results of studied subjects of the research (n=722) were as following:

- 4.3.1 General descriptive statistics: The general descriptive analysis of the studied sample yielded the following results:
- 4.3.1.1 Age distribution figures:



Figure 3- Age Distribution



Figure 4 Addiction relative to age group

The social networking addiction index within the study group was positively correlated to the age of students, where the addiction increased with age ranging from 30% within the 16 years age group up to more than 50% within the 20 years age group, and the statistical tests came with high degree of significance where: Chi-Square of the results equaled 0.002, Goodman & Kruskal-tau equaled 0.002, where a value less than 0.005 is statistically significant.

4.3.1.2 Geographic distribution figures



Figure 5 Geographic distribution

The Chi-Square 0.551 and symmetric correlations $(0.159)^{40}$ measurements regarding the geographic distribution with relevance to social media addiction were not significant therefore indicating a uniformity of addictive behavior with respect to district of study.

4.3.1.3 Education distribution figures



Figure 7 Addiction relative to education

The Chi-Square (0.014) and correlations measurement (0.014) indicated no statistically significance between educational levels of the study subjects.

⁴⁰ Significance is proofed when this value is below (0.05).

4.3.1.4 Gender distribution figures



Figure 8 Addiction relative to gender

The Chi-Square 0.04 and correlations of Goodman and Kruskal-Tau 0.04 indicated a significant variation between both sexes where females were more addictive to social media.

4.3.2 The SNS popularity index: The index was calculated from the direct multiple section of the studied subjects with Facebook as the most popular social platform (92.6%) and Tumbler as the lowest popular platform (4.1%).



Figure 9 SNSs popularity index

- 4.3.3 Reliability tests statistics: (Look into Chapter 3.2 Research tool)
- 4.3.4 Validity tests statistics:
- 4.3.4.1 Construct Validity: The constructional validity was calculated through the internal variance coefficient of the scale dimensional components with relevance to each other, achieving a high results for each dimension above 0.05 as shown in the following diagram:



Figure 10 Construct validity matrix

4.3.4.2 Concurrent Validity: The concurrent validity was extracted from the correlation matrix between the SNA scale and the three other scales (Young IAT, QOL, Mental Wellbeing):



Figure 11 Concurrent correlation

The correlation in this matrix is significant at the value larger than 0.001, accordingly the SNA is highly correlated with the other three scales in positive

correlation with Young IAT and in negative correlation with QOL and Mental Wellbeing scales.

4.3.4.3 Sample-Scale suitability: This matrix was calculated through the statistical correlation coefficient between the scale items and its final variance among the study sample which came highly significant as the cut-off value of significance is 0.005.





4.3.4.4 Dimensional Correlations: The EFA test was performed to yield out the functional dimensional components of the SNA scale through total variance matrix. In the test, the initial Eigenvalues were calculated to give only four functional dimensions of the scale out of the original six dimensions Eigenvalues less than 1.0 were discarded.

No.	Dimension	Questions set
1	Salience	Q1,Q2,Q3,Q4
2	Mood modification	Q5,Q6,Q7
3	Tolerance	Q8,Q9,Q10
4	Withdrawal	Q11,Q12,Q13,Q14
5	Conflict	Q15,Q16,Q17
6	Relapse	Q18,Q19,Q20,Q21

Table 4.3.4.4.1 the original scale dimensional components matrix:

Table 4.3.4.4.2 The EFA test total variance ratios:

Dimensions	Total initial Eigenvalues	% of Variance	Cumulative %
One	8.882	42.8%	42.8
Two	1.839	8.76%	51.6
Three	1.672	7.96%	59.5
Four	1.156	5.51%	65.1

The EFA matrix explain the new dimensions of the scale correlation with the total percentage of the scale item numbers, as shown in table 4.3.4.4.2 ; dimension one is correlated to 42.8% of the scale items where the following three dimensions are correlated to the items with 8.8%, 7.9% and 5.5% respectively. The Eigenvalues represent the total amount of variance in the original variables of the scale and this value is assumed significant if it is above 1.0.

Then a CFA test was performed to reflect the correlations coefficient of each item in the SNA scale with the new dimensional map, were the cut-off value for the correlation coefficient for each item was larger than 0.3:



Figure 13 SNA scale dimensional correlations

Table 4.3.4.4.3 the new SNA dimensional matrix:

No.	Dimension	Questions set
1	One	1-21
2	Two	6,7,18,19,21
3	Three	2,16,18,19
4	Four	6,7

The scale items correlation to each of new dimensions was set according to the CFA test correlation statement equal to 0.4 and above as shown in table 4.3.4.4.3.

4.3.5 Psychometric correlations statistics: The psychometric properties of the SNA scale proofed high correlation with Young IAT reaching a 0.781 and were in opposite correlation with the QOL and Mental Wellbeing scales.

	Young IAT		QOL		Mental Wellbeing	
Statistical tasts	Pearson	Sig. (2-	Pearson	Sig. (2-	Pearson	Sig. (2-
Statistical tests	Corr.	tailed)	Corr.	tailed)	Corr.	tailed)
SNA Scale	0.781	0.000	-0.162	0.000	-0.315	0.000

Table 4.3.4.5.1 Concurrent tests correlations:

According to Shahnawaz and Rehman (2020) the SNA scale consists of 21 items with seven degrees likert scale response system. The scale detects addictive behavior on the threshold of 84 score where the minimum score is 21 and the maximum score is 147. The Score of the study sample came with 45.8% scored equal to or more than 84 on the scale of the total sample.



Figure 14 Addiction Level

The SNA scale achieved strong correlational results in combination with the scales that were applied in the research tool. It achieved a strong positive correlation with the Young
Internet Addiction test equals to 0.781 and negative correlational results with QOL scale - 0.162 and with the mental wellbeing scale -0.315^{41} .



Figure 15 SNA correlated to Well being

⁴¹ Correlation is significant at the (0.01) level.

Chapter Five: Discussion & Conclusions

5.1 Introduction

The research conducted a hybrid qualitative-quantitative applied study on a representative sample of the research community through an online data gathering tool that consisted of four psychometric assessment tools "IAT, SNA scale, QOL scale, SGWB". The data gathering was concluded in June22th, 2021 with a total sample of 722 students from both genders aged 16-20, from all across Palestine. The research major goals are to localize and validate the SNA scale in Arabic among Palestinian Youth and also to investigate the relationship between SNA and mental wellbeing among the Palestinian youth. The data were processed on IBM's SPSS software to convey the anticipated results from data in order to achieve the research goals and eventually proof or disproof the hypothetical set in this research.

The acquired results must be correlated with the theoretical and realistic frameworks of this research to achieve the desired epistemological outcomes that may provide a significant contribution to the scientific research regarding digital media and cyberpsychology in Palestine.

5.2 Results Interpretation

The research initial results yielded very high SNSs usability trends among the studied community, where 92.6% of the subjects have an active Facebook account, 92% have a WhatsApp account and 89.1% have an active Instagram account. In comparison with the Data-portal report of Palestine in 2021, which indicated that of a total population 5.2 million, 60.1% have active accounts on SNSs (Hootsuite, 2021), and the active unique users of Facebook is 2.8 million 53.8% and active Instagram users are 1.5 million 28.8%, the figures indicate a normal distribution of Facebook usage among the population while Instagram was much more popular among the studied community aged 16-20. What is applied to Facebook as the most popular SNS in the results is almost applicable to the LinkedIn where 6.7% of the studied sample was using this platform, when compared to the Data-portal report, LinkedIn figures were 9.7% of the population above 13 years old. The figures indicated a high popularity for Instagram platform among the youth while supposedly popular TikTok is used only by 22.2% of the sample, this could be a result of that some SNSs target a lower or higher age groups other than the one studied in this research.

The demographic characteristics of the sample indicated a normally distributed number of the students regarding the age group, while the gender distribution was in favor of females and this is due to the higher number of females compared to males in the universities and community colleges in Palestine, 62% of their students are females according to the ministry of education (MoE, 2021). The study sample was divided across the map of Palestinian districts but with higher presence for the central districts of "Jerusalem, Hebron, Ramallah, Bethlehem and Nablus", this concentration of the sample is due to the presence of the largest universities and community colleges within these districts.

The SNA scale is the main research tool and before adopting its results, the scale was tested for internal consistency through Cronbach's Alpha test, which yielded a high score of 0.932, the scale also was tested on the two parts Cronbach's Alpha test and delivered high scores too above 0.87 also the scale achieved high score in Spearman-Brown coefficient test 0.839 and the Guttman Split-Half coefficient test 0.838. Considering the literature addressing the appropriate internal consistency test result in humanitarian research to be above 0.6 (Shannon, 1993), he figures indicated highly consistent items

within the scale with respect to the studied sample which supports the argument of scale functionality in Arabic Language and in Palestinian culture.

The SNA Scale was also submitted to construct validity tests, which indicated a high relevance between the scale items from one side and the scale dimensions from the other side. The internal variance correlation coefficient between the scale items and the dimensions ranged from 0.357 to 0.614 while the cut-off value of significance is above 0.005. Another construct validity test was applied to the scale through measuring the scale items correlation coefficient with the scale's final variance in a CFA test, where the items hit a score above 0.5 while the significance cut-off value for this measurement is above 0.005. These results indicate a high constructional stability of the scale with relevance to the studied sample, another indicator of scale validity in the research context.

The SNA scale was submitted also to the concurrent validity test, where its results were compared with the other three tests "IAT, QOL, Wellbeing" statistically and the correlation between the SNA scale and the IAT was very high 0.781, also with the QOL scale -0.162 and the mental wellbeing scale -0.315. Considering the statistical significance threshold of 0.001, these correlations are very high indicating a very strong functionality of the scale with other tested scales in Palestine (Berte at al, 2021).

To further assess the suitability of the scale with the Palestinian society, an EFA and CFA tests were carried out on the scale to inspect the dimensional results with respect to Arabic language and Palestinian culture. Instead of the original six addressed dimensions in the literature of the scale "*salience, mood modification, tolerance, withdrawal, conflict and relapse*" the EFA yielded only four dimensions that explained 65% of the scale items. This result revealed that the original scale doesn't fit the Palestinian society in Arabic as it was expected to be; instead it functioned through four dimensions rather than six. Upon this outcome, a CFA test was performed to clarify the internal items correlation coefficient with the new component dimensions to categorize the scale's items which achieved a score above 0.4 in the CFA matrix, as the following:

A. Dimension one: This dimension covered the whole range of the scale and unless the EFA detected another three dimensions, the research would have considered the SNA scale a uni-dimensional scale with respect to the Palestinian context. Accordingly the research considered this dimension as the "Unified" dimension of the scale covering the whole range of items.

- B. Dimension two: This dimension covered five items of the scale (mood modification dimension and relapse dimension). Accordingly the research considered this dimension as "*Mood-Relapse*" dimension.
- C. Dimension three: This dimension covered four items of the scale (salience, conflict and relapse) and it is considered as "Salience-Conflict-Relapse" dimension.
- D. Dimension four: This dimension covered three items of the scale (mood modification and conflict) and it is considered by the research as the "Mood-Conflict" dimension.

The new dimensional structure that has resulted from the implementation of the scale in Arabic within the Palestinian community can be explained due to a set of cultural traits rather than digitally mediated psychological effects.

Upon inspecting the factorial and psychometric properties of the SNA scale, the research analyzed the addictive behavior trends among the study sample and there were 331 subjects out from 722 students in the total sample who scored 84 and above in the SNA scale out of a total score 147. According to Shahnawaz and Rehman (2020) those who score equal to or above 84 on the scale are considered addictive on social media. A 45.8% of the total sample were addicted to social media and in comparison to international SNA rates, this level is considered too high compared to the global rate where in many countries the level of addiction varies from 5-10% (Hilliard, 2021).

The elevated SNA addiction rate in Palestine is greatly relevant to a variety of factors that revolve around the high vulnerability and critical age stage of the study sample, the restricted sample age "under 30 years old" and the experience of living in an occupied zone like Palestine in addition to the fact that the majority of the sample students are unmarried and unemployed makes the sample have high levels of leisure time, high accessibility to the internet and great desire of expanding their social spheres with minimal personal responsibility. This mixture of environmental factors explains the increased above average SNA levels in the study sample.

The final step regarding the data analysis process with the research was the statistical data inspection for relevance between the SNA addiction and the mental health of the studied sample. When comparing the between the percentage of the students who showed addictive behavior to social media and their score in the Wellbeing scale, the research has

found that 44.7% of the addicted students scored less than 56 in the wellbeing scale while only 4.7% of the none addicted students scored less than 56. These findings greatly support the results of scales comparisons where the correlation coefficient between the SNA scale and the wellbeing scale was a negative correlation with a value equal to 0.315 with high statistical significance, also the correlation coefficient between the SNA and the QOL scale was a negative relationship that equaled 0.162 with high statistical significance. The data extracted from the statistical analysis of the studied sample, support the research claim that the social media addiction has a strong negative effect on the student's lives quality and their mental health and general wellbeing, and these findings meet the findings of Longo (2018) and Mahamaid (2018).



Figure 16 Well-being compared to SNA

5.3 Conclusions on Research Problem

The research logic was fundamentally built over the arguments of digitally mediated communicative mode effect on human beings and their behavior in particular. Based on the fact that the enormous changes taking place regarding humanity and its culture, such changes and their effects need to be regulated through moral consideration that provide balance between the protection of humanism and the preservation of digital rights of access and penetration. The high risk youth category in Palestine is greatly affected by the digital addiction especially the social networks addiction, as the SNSs addiction among this generation is five to ten times the global average of social media addiction. This should alert the scientific community and local policy makers to develop diagnostic, treatment and above all, preventive measures that can help the young generation to adapt safely with the post-digital age challenges, with special regard to the fact that the Palestinian SNA rate is five to ten times more than global rate.

Accordingly, the research goal to localize and validate a stable, credible and usable diagnostic tool of social media addictive trends among the Palestinian students was achievable through the data analysis and findings. Upon this validation, the psychometric properties of the SNA scale were employed to detect SNA among the students. The results revealed a high addiction rate among the youth especially among the universities students. Furthermore, the research compared the results of the SNA and the combined psychological tests that were applied in the research tool to find out that the internet addiction and the social media addiction in particular have a strong negative effect on the student's quality of life and mental health, which proof the research hypothesis and totally achieve the research goals. Which might undermine the students' abilities educational wise and this argument is outside the scope of this research.

The research has proven that social media excessive use has certain and confirmed effects on the youth mental health, this result when compared to the most popular SNSs among the Palestinian youth presents Facebook and Instagram as the most popular social media platforms and eventually as the most addictive SNSs among the Palestinians. This conclusion requires further investigation to clarify differences if present, among the SNSs when related to the pattern and platform of choice related to digital addiction.

5.4 Theoretical & Realistic Correlations

Considering the research results which were consistent with previously discussed theoretical framework, it is clear they were aligned with McLuhan's claims regarding the power of the medium above the message itself. Social media act like a hybrid medium between reality and cyber-reality where users are the content creators rather than strictly consumers. The Digital medium AI and digital reasoning abilities of the algorithm give

such platforms the ability to predict and then offer users what is hugely interesting to them, by performing a sort of information operation through logical de-railing agents in a semiotic highly designed approach that promote addictive behavior upon excessive usage. Adding to this, the ubiquitous and highly immersive nature of such medium, SNSs now are acting as a virtual ecological system where humans interact with digital media especially SNS as if they were interacting with other human beings (McLuhan M. , 1967; Piaget, 1970; Bandura, 1978; Rotter, 1982; Bronfenbrenner, 1994; Debray R. , 1999; Young K. &., 2011; Velasquez, 2012; Terras, 2013; Chandler, 2017)

This approach is consistent with the arguments of Regis Debray regarding the abilities of mediating technologies and their powerful irresistible influence over human's behavior in a contextual setting, but with a huge load on their consciousness which has to treat an enormous amount of audio-visual data that diminish their ability to properly comprehend and judge over things.

The research results also came aligned with the social learning theories of Rotter and Bandura's as they suggested the impact of surrounding socio-behavioral model that surrounds those young students pushing them towards more deeper and time consuming digital socialization that drives them into addictive behavior. This addictive behavior's negative effects on mental health and wellbeing as presented by many scholars (Young, 2011; Kuss & Griffiths, 2017; Shek D.T.L, 2016) and others, were obvious in the research results as the majority (Above 90%) of the students who showed signs of SNSs addiction were suffering from lowered index of mental well-being, and also with relatively low index of life quality that affected their lives.

Humans with digital addiction typically present diminished self-control, urge to go online and generally suffer from withdrawal effects such as depression, lowered labor and learning functionality, anxiety, lowered physical activity and lowered self-esteem, almost showing very similar symptoms to alcohol or drug abuse. (Enrique Echeburúa, 2010; Wegmann, Stodt, & Brand, 2015; Seabrook, Kern, & Rickard, 2016)

Such effects may lead to disastrous outcomes for the Palestinian students suffering from this kind of addiction and although the research is focused on developing a proper and reliable diagnostic tool of social media addiction among the youth, the research recommends that the focus should be on the preventive approach rather than the diagnosis and treatment approach. Preventive and educational approaches are of essential importance to endorse the proper use of SNSs among the young generation. The incorporation of post-digital age technologies into society today is a critical process for sustainability. This can facilitate developing smarter and more efficient citizens and communities with very advanced level of organizations and infrastructure, yet such advancements should not compromise the general well-being of humans neither physically nor mentally.

The aftermath of COVID19 pandemic left the world with suffering economy and stumbled educational system, which encouraged many educational establishments to immigrate to digital online education throughout a diverse set of tools and strategies. The employment of such strategies and tools has certainly a positive side but also has a negative one too, as the digitally mediated communicative process takes place in a social and leisure context that can easily lead to an uncontrolled consumption and eventually addiction (José, 2020).

The research has treated a major concern wither the university and high school students suffer from this addictive trends in Palestine and how to properly diagnose this kind of addiction which effectively contribute to the improvement of educational polices and sustainability through developing addiction preventive policies and measures that contribute ensuring the ICTs development in Palestine along with the students and general population mental and physical health and wellbeing.

The research has taken in consideration the unique Palestinian context in two aspects; firstly the COVID19 pandemic aftermath where the disastrous effects of such catastrophe is still emerging until this moment regarding the economy, education and human lives in general. Where students were held captive in their houses closed vicinity during a full year which made the ICTs in general and the SNSs in particular to become their major focus of interest. Secondly is the Israeli occupation on the Palestinian land where parents prefer to keep their children within home vicinity instead of going out for recreational activities because of safety concerns of Israeli army violations. These both factors may establish a basis for the very increased level of SNS addiction among the Palestinian students compared to the global ratios.

Finally, the research has concluded that digital media addiction and especially social media platforms addiction among students of universities and high schools is a prevalent and

established problem. Also the research has proven that the digitally addictive behavior among the youth, certainly leads to negative mental, emotional and even physical impairment due to substance like addictive trends. These conclusions and correlation were established upon the localization and validation of the social networks addiction scale that was inspected in this research. Accordingly, the research was able to fully proof the hypothetical paradigm with the claim that the social media addiction scale is functional and valid in Arabic and within Palestinian context. This approval has been articulated in a different way other than the original scale; the new scale was able to detect the addiction trends among the study sample efficiently to determine the level and dimensions of such trends with respect to the most popular social media platforms among the Palestinian youth.

5.5 Recommendations

The field of Cyber-psychology and ICTs addiction diagnostics and intervention is relatively new and interesting field especially in countries with young population like Palestine, as most of the residents of the social infosphere are the youth. The research recommends the official level of institution in the county to attend to this highly risky issue, and that a further academic investigation regarding the addictive trends among those youth and also the structural societal circumstances of the unique context of Israeli occupation brutal practices against the Palestinian youth.

In addition an advancement of academic research investigating the preventive counteraddiction measures and procedures in a sustainable and larger scale research with a more controlled research environment can lead to a significant breakthrough in the field to protect the upcoming generations by means of therapeutic policies and tool.

Index 1.1	: Targeted	schools	list:
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				Student
District	School Name	Gender	Туре	No.
Jenin	Jenin Secondary Girls Sch.	Females	Gov	510
Jenin	Industrial Jenin make Sch.	Males	Gov	289
Jenin	Al-Eeman Secondary	Mixed	Private	500
Tubas	Tubas Boys High	Males	Gov	424
Tubas	Tubas Girls High	Females	Gov	551
Jericho	Ali-Ibn-Abotaleb Boys High	Males	Gov	325
Jericho	Jericho Girls High	Females	Gov	563
Hebron	Yatta Girls High	Females	Gov	487
Hebron	Yatta Boys High	Males	Gov	406
Hebron	Widad girls High	Females	Gov	787
Hebron	Alhussain Boys High	Males	Gov	865
Bethlehem	Bethlehem Boys High	Males	Gov	478
Bethlehem	BietJala Girls High	Females	Gov	439
Hebron	Dura Girls High	Females	Gov	221
Hebron	Thahriya Boys High	Males	Gov	460
Nablus	Awarta Boys High	Males	Gov	537
Nablus	Booreen Girls High	Females	Gov	357
Ramallah	Ramallah Girls High	Females	Gov	535
Ramallah	Ramallah Boys High	Males	Gov	488
Salfit	Salfit Boys High	Males	Gov	315
Salfit	Salfit Girls High	Females	Gov	326
Hebron	Biet Ummar Boys High	Males	Gov	437
Hebron	Halhul Girls High	Females	Gov	462
Jerusalem	Abu Dees Girls High	Females	Gov	795
Jerusalem	Bier Nbalah Boys High	Males	Gov	300
Tulkarm	Adwiya Girls High	Females	Gov	474
Tulkarm	Samara Boys High	Males	Gov	361
Jenin	Izzat Abu Rub Boys High	Males	Gov	462
Jenin	Qabatiya Girls High	Females	Gov	508
Qalqiliya	Abu Ali Eyad Girls High	Females	Gov	688
Qalqiliya	Sadiya Boys High	Males	Gov	391
Nablus	Aiysha Girls High	Females	Gov	510
Nablus	Tuqan Boys High	Males	Gov	605

Item	Code
Male	1
Female	2
University	1
College	2
School	3
Jerusalem	1
Ramallah	2
Jericho	3
Bethlehem	4
Hebron	5
Gaza	6
Salfit	7
Nablus	8
Tulkarm	9
Qalqiliya	10
Tubas	11
Jenin	12
The 48 regions	13

Index 1.2 Methodological coding system that has been entered to SPSS software:

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