ADDICTIVE SOCIAL MEDIA USE: EXAMINATION OF THE PSYCHOMETRIC PROPERTIES OF THE ARABIC BERGEN SOCIAL MEDIA ADDICTION SCALE AND THE MEDIATIONAL ROLE OF SENSE OF CONTROL IN THE RELATIONSHIP BETWEEN DEPRESSION AND SOCIAL MEDIA ADDICTION

Louis J. Fourie

a: $\beta = -.04$, SE=.01, 95%CI (-.06; -.02)

Sense of Control

b: $\beta = .23$, SE=.09, 95%CI (.05; .40)

c: $\beta = .61$, SE=.03, 95%CI (.55; .67)

Symptoms of Depression

c¹: $\beta = .62$, SE=.03, 95%CI (.55; .68)
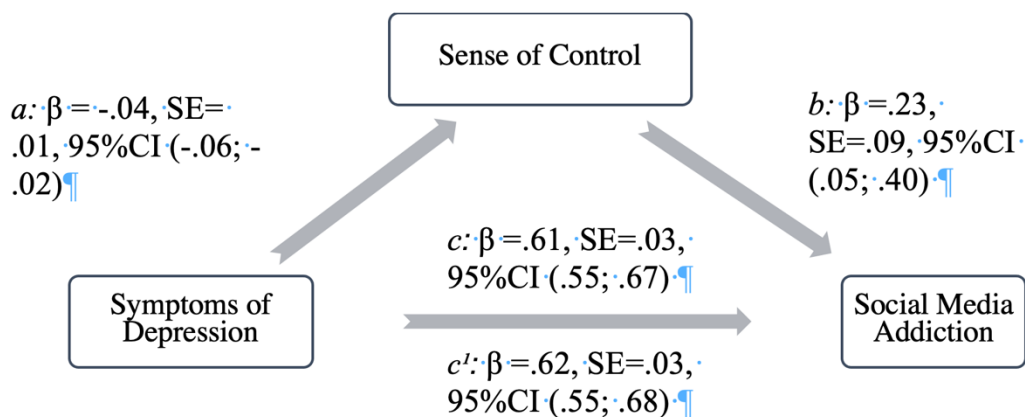
Social Media Addiction

November 2022

United Arab Emirates University

College of Medicine and Health Sciences

Department of Clinical Psychology

ADDICTIVE SOCIAL MEDIA USE: EXAMINATION OF THE PSYCHOMETRIC PROPERTIES OF THE ARABIC BERGEN SOCIAL MEDIA ADDICTION SCALE AND THE MEDIATIONAL ROLE OF SENSE OF CONTROL IN THE RELATIONSHIP BETWEEN DEPRESSION AND SOCIAL MEDIA ADDICTION

Louis J. Fourie

This thesis is submitted in partial fulfilment of the requirement for the degree of Master of Science in Clinical Psychology

November 2022

Cover: The image illustrates the results of the study which found a link between sense of control, symptoms of depression, and social media addiction. The study also found that sense of control acted as a mediation factor between social media addiction and symptoms of depression.

(Photo: By Louis J. Fourie)

Declaration of Original Work

I, Louis J. Fourie, the undersigned, a graduate student at the United Arab Emirates University (UAEU), and the author of this thesis entitled *"Addictive Social Media Use: Examination of the Psychometric Properties of the Arabic Bergen Social Media Addiction Scale and the Mediational Role of Sense of Control in the Relationship between Depression and Social Media Addiction",* hereby, solemnly declare that this thesis is my own original research work that has been done and prepared by me under the supervision of Dr. Zahir Vally, in the College of Medicine and Health Sciences at UAEU. This work has not previously been presented or published or formed the basis for the award of any academic degree, diploma or a similar title at this or any other university. Any materials borrowed from other sources (whether published or unpublished) and relied upon or included in my thesis have been properly cited and acknowledged in accordance with appropriate academic conventions. I further declare that there is no potential conflict of interest with respect to the research, data collection, authorship, presentation and/or publication of this thesis.

Student's Signature: _____

Date: <u>30/11/2022</u>

Advisory Committee

1) Advisor: Dr. Zahir Vally

Title: Associate Professor

Department of Clinical Psychology

College of Medicine and Health Sciences

2) Co-advisor: Dr. Salma Daiban

Title: Assistant Professor

Department of Clinical Psychology

College of Medicine and Health Sciences

3) Co-advisor: Prof. Maria Campo-Redondo

Title: Professor

Department of Clinical Psychology

College of Medicine and Health Sciences

Approval of the Master Thesis

This Master Thesis is approved by the following Examining Committee Members:

1) Advisor (Committee Chair): Dr. Zahir Vally

   Title: Associate Professor

   Department of Clinical Psychology

   College of Medicine and Health Sciences

   Signature _____ Date 27/11/2022

2) Member: Dr. Salma Daiban

   Title: Assistant Professor

   Department of Clinical Psychology

   College of Medicine and Health Sciences

   Signature _____ Date 28/11/2022

3) Member: Prof. Maria Campo-Redondo

   Title: Professor

   Department of Clinical Psychology
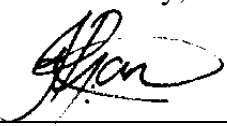
   College of Medicine and Health Sciences

   Signature _____ Date 28/11/2022

4) Member (External Examiner): Dr. Jill Ryan

   Title: Associate Professor

   Gender Equality Unit

   Stellenbosch University, South Africa

   Signature _____ Date 27/11/2022

This Master Thesis is accepted by:

Acting Dean of the College of Medicine and Health Sciences: Professor Juma Alkaabi

Signature _____

Date __30/12/2022_____

Dean of the College of Graduate Studies: Professor Ali Al-Marzouqi

Signature __Ali Hassan_____

Date _____30/12/2022_____

Abstract

The period of COVID-19 has proven to be a turbulent period where extreme psychological trends can be examined due to lockdown procedures, social isolation, and public fear. The use of technology such as social media has increased with research highlighting the harm of overuse. The purpose of the current study is to investigate the psychometric properties of an Arabic translated version of the Bergen Social Media Addiction Scale (BSMAS) to assess for addictive social media use. Secondly, the study further examines the association between depression, social media addiction, and an individual's sense of control. Specifically, the potential mediational role of control in the association between depression and social media addiction. A cross sectional study was implemented within two separate national contexts, Egypt, and the United Arab Emirates (UAE), with a sample of 1322 participants (mage = 19.50 years, SD = 1.54) university students. Participants completed a questionnaire consisting of the Arabic translated BSMAS, Depression subscale of the Depression Anxiety Stress Scales (DASS-21) as well as the Niemeyer Two Item Scale for measuring sense of control. Results found that the Arabic translated BSMAS produced a unidimensional factor structure, like its previous language versions, and satisfied various indices of reliability and validity. Results further indicated a statistically significant link between depression, social media addiction and sense of control, with contributing as a mediating factor between social media addiction and symptoms of depression. This research is unique to the region and has significant implications regarding understanding social media addiction as well as providing researchers and practitioners with a reliable and valid tool to assess for social media addiction.

Keywords: Social media, Addiction, Social media addiction, Depression, Control, mediation, COVID-19, UAE, Middle East, Abnormal Psychology

Title and Abstract (in Arabic)

فحص إدمان استخدام وسائل التواصل الاجتماعي أثناء وباء COVID-19 بين طلاب في سن الكلية من سياقين من شرق آسيا

الملخص

أثبتت فترة كورونا أنها فترة مضطربة بشكل خاص حيث يمكن ملاحظة الاتجاهات النفسية المتطرفة بسبب إجراءات الإغلاق والعزلة الاجتماعية والخوف العام. ازداد استخدام التكنولوجيا مثل وسائل التواصل الاجتماعي مع البحث الذي يسلط الضوء على الضرر الناجم عن الإفراط في استخدامها. الغرض من الدراسة الحالية هو التحقيق في خصائص القياسات النفسية للنسخة العربية من مقياس بيرغن للإدمان على وسائل التواصل الاجتماعي (BSMAS)لتقييم استخدام وسائل التواصل الاجتماعي التي تسبب الإدمان. ثانيًا، تفحص الدراسة أيضًا العلاقة بين الاكتئاب وإدمان وسائل التواصل الاجتماعي وشعور الفرد بالسيطرة. على وجه التحديد، الدور الوسيط المحتمل للإحساس بالسيطرة في الارتباط بين الاكتئاب وإدمان وسائل التواصل الاجتماعي. تم تنفيذ دراسة مقطعية ضمن سياقين وطنيين منفصلين، مصر والإمارات العربية المتحدة، مع عينة من 1322 مشاركًا (متوسط العمر= 19.50 سنة,1.54 = SD)، أكمل المشاركون استبيانًا يتكون من BSMAS المترجم إلى اللغة العربية، والمقياس الفرعي للاكتئاب لمقياس ضغط القلق والاكتئاب (DASS-21) بالإضافة إلى مقياس Niemeyer المكون من عنصرين لقياس الشعور بالسيطرة. وجدت النتائج أن الترجمة العربية لـBSMAS أعطت نتائج ذات أحادي البعد، مثل إصدارات اللغة السابقة، وقد استوفت مؤشرات مختلفة من الموثوقية والصلاحية. أشارت النتائج كذلك إلى وجود علاقة ذات دلالة إحصائية بين الاكتئاب وإدمان وسائل التواصل الاجتماعي والشعور بالسيطرة، مع الشعور بالسيطرة كعامل وسيط بين إدمان وسائل التواصل الاجتماعي وأعراض الاكتئاب. هذا البحث فريد من نوعه في المنطقة وله آثار كبيرة على فهم إدمان وسائل التواصل الاجتماعي بالإضافة إلى تزويد الباحثين والممارسين بأداة موثوقة وصالحة لتقييم إدمان وسائل التواصل الاجتماعي.

مفاهيم البحث الرئيسية: التواصل الاجتماعي، الإدمان، الاكتئاب، السيطرة، الوساطة، فيروس كورونا، الشرق الأوسط.

Acknowledgements

I want to express my sincere thanks to my advisor Dr. Zahir Vally, who assisted me to complete this project. His guidance and insight throughout this process has been invaluable and inspiring.

I want to express my gratitude to my advisory committee members, Prof. Maria Campo-Redondo and Dr. Salma Daiban for their insight and constructive feedback that helped me finish my thesis.

I must express my gratitude to the individuals who provided the data, as this thesis would not have been completed without their participation.

I further want to acknowledge and give thanks to my colleagues Mr. Jonathan Dey, Mr. Asif Mehmoud, Mr. Rajiv Jethiji and Mr. Dara Devereux for their unquestionable support.

Finally, I want to express my sincere gratitude to my wife, my family and friends, who have supported and motivated me throughout this journey and without whom it would not have been possible.

Dedication

To my beloved parents and family

Table of Contents

List of Tables

List of Figures

List of Abbreviations

AGFI	Adjusted Goodness of Fit Index
BFAS	Bergen Facebook Addiction Scale
BSMAS	Bergen Social Media Addiction Scale
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CR	Composite Reliability
DASS-21	Depression Anxiety Scale - 21
GFI	Goodness of Fit Index
PTSD	Post-Traumatic Stress Syndrome
RMSEA	Root Mean Square Error of Approximation
SMA	Social Media Addiction
SRMR	Standardized Root Mean Square Residual
TLI	Tucker-Lewis Index
UNICEF	United Nations International Children's Emergency Fund

Chapter 1: Introduction

COVID-19, A newly identified strain of the coronavirus family, was first identified in November 2019 as China reported an outbreak of undiagnosable pneumonia in the Wuhan region. The World Health Organization (2020) declared COVID-19 a global pandemic in March 2020 with concerns about the rapid spread and severity of the virus (Álvarez-Iglesias et al., 2021).

The first cases of COVID-19 in The United Arab Emirates (UAE), were first identified on the 29th of January 2020 (Duncan, 2021). On the 3rd of March 2020, the UAE had a total of 27 cases and a formal announcement to close all schools and universities for 4 weeks, starting on Sunday the March 8, was announced. As cases increased, systematic regulations and procedures were shared through media outlets and put into effect to help curb the pace at which the virus was spreading within the UAE. International border closures, travel bans, lockdowns, strict social distancing, and quarantines were all methods which were systematically put into action over this period (Duncan, 2021).

The effects of COVID-19 brought change to the lives of all with some adapting and coping better than others. Research from similar global outbreaks in the past, such as severe acute respiratory syndrome (SARS), swine flu and influenza, emphasize how these events have severe effects on the global economy, wider community as well as on individual's psycho-social health (Brailovskaia & Margraf, 2022; Saddik et al., 2021). Quarantine and social distancing initiatives also led to an increase in loneliness and influenced how people engage with each other socially. The use of technology such as social media and other digital communication platforms increased with research highlighting the harm of overuse and constant exposure to information. Researchers have highlighted their concern over social media addiction, feelings of being in control of one's life due to excessive media exposure, and the psychological burden that the pandemic has on the overall mental wellbeing of individuals (Huang, 2022).

At the time of writing (September 2022), most of the international lock down measures have been resolved, land borders have been reopened, and a large amount of

the population has been vaccinated. As the world adapts to COVID-19 it leaves researchers with a unique opportunity to expand on the literature of global traumatic events and more specifically how this period affected the mental health of all.

1.1 The Effects of Covid-19

The COVID-19 pandemic had a significant impact on the lives of all individuals. On the 10th of November 2020, The World Health Organization (2021) reported that there were 250,715,502 confirmed cases of COVID-19 which included a total of 5,062,106 deaths (*WHO Coronavirus (COVID-19) Dashboard*, n.d.). Common symptoms include fever, dry cough, weakness, and fatigue with majority of individuals showing little to no symptoms (Sofian et al., 2021). Individuals who are at more risk for developing serious symptoms and needing hospitalization are the elderly and those with "preexisting health conditions such as diabetes, high blood pressure, heart & lung problems, or cancer" (Sofian et al., 2021).The youth and children are reported to present with little to no physiological symptoms even when confined in the same house as family members who are symptomatic (Manivannan et al., 2021).

The period also shook global financial markets and saw a drop in financial stability with small companies as well as larger corporations shutting down, cutting salaries, and letting go of staff members (Pierce et al., 2020). According to Álvarez-Iglesias et al. (2020) the pandemic led to between 119 and 124 million people being driven into extreme poverty with young adults, women, the low-educated and low-income workers being affected the most (Almeida et al., 2021).

Due to the technology and the ease of access to media platforms, there was also an abundance of up-to-date information and coverage about the pandemic. Individuals were informed about current lockdown/quarantine protocols, COVID-19 infection, and death statistics. The WHO (2020) also warned the public of fake news, as shared on social media platforms (Duncan, 2021). Fake information ranged from; the severity of COVID-19, false homeopathic treatment and ridiculing mask wearing practice. Conspiracy theories as to the origin of COVID-19 and rejecting the COVID-19 vaccine, among others, was also shared. All of this added to increased hysteria and an increase in an individual's psychological burden experienced by the pandemic (Brailovskaia & Margraf, 2022).

1.1.1 Psychological Burden

According to Brailovskaia and Margraf (2021), psychological burden can be explained as the feeling of being overwhelmed by a stressor. In relation to the pandemic, this could be due to isolation, restrictions, a change in routine, hysteria, false information or being overwhelmed by constant feedback of the pandemic through social media platforms. It is also further linked to the experience of a loss of control over one's life and future (Vally & Helmy, 2021). A metanalysis by Kunzler et al. (2021) examined the effect of COVID-19 on mental health and more specifically how this affected mental burden. After reviewing 104 separate studies, they found a significant increase in mental burden among the general population providing evidence that a large proportion of the population has been affected by the pandemic to some degree. Researchers have indicated a link between depression and psychological burden further highlighting that those who present with symptoms of depression may also be more likely to experience higher levels of psychological burden. According to Vally and Helmy (2021), psychological burden during the time of COVID-19 contributed significantly to poor physical health as well as mental health, finding a significant link between psychological burden, anxiety, and depression.

1.1.2 The Effects of the Pandemic on Mental Health

Further research on mental health during this period has also been gaining momentum. A study by Saddik et al. (2020) explored the mental health status of individuals across China, Spain, Italy, India as well as in the UK, throughout the period of the pandemic. They found that common presenting symptoms among the general population were worries about becoming infected, fear of dying, increase in anxiety, post-traumatic stress, depression, feelings of helplessness, guilt, panic, and a loss of control. The United Kingdom reported more severe symptoms of severe stress, generalized anxiety, insomnia and depression associated with lockdowns, social isolation, changes in daily habits, public fear, and worry compared to the other investigated countries (Saddik et al., 2021).

There has been less research focusing predominantly on the youth. This is significant as young adults aged 18-23 are known to be an at-risk group for stress, depression, and anxiety. Over the past decade there has been an alarming increase in severe

psychiatric distress that has required hospitalization with the WHO (2020) reporting that an estimated 1 in 7 young adults struggle with mental illness (Addington et al., 2021). This age group is also particularly at-risk for emerging psychiatric conditions such as psychosis and eating disorders, elevated risk-taking behavior as well as suicide (Addington et al., 2021).

One of the first systematic reviews exploring the wellbeing of children and young adults throughout the COVID-19 pandemic, was conducted by Ma et al. (2021a) and focused on the prevalence of depression, anxiety, sleep disorders and posttraumatic stress symptoms throughout the most active phase of COVID-19, from 2019 until 2020 within the region of China. Twenty-three studies were examined with a total of 57,927 participants. 28.6% of the participants experienced symptoms of depression, 25.5% experienced anxiety, 44.2% experienced sleep disorders, and 48.0% presented with symptoms of post- traumatic stress.

They found that there was an increase in the prevalence of depression and anxiety among young adults and females when compared to children and males, whereas there was an increase in sleep disorders identified among children (Ma et al., 2021a). The most common mental health problems identified among at least half of all the studied young adults were sleep disorders and posttraumatic stress symptoms. Saddik et al. (2020) reports that this is possibly due to changes in normal routines, increased exposure to screen time, decrease in physical activity, lack of social interaction and reduced level of control. In another analysis exploring young people's mental health during the period of COVID-19, Racine et al. (2021) explored 29 studies covering 80,879 participants. Results indicated that all together the prevalence of depression symptoms are 25.2% and 20.5% for anxiety. These indicate that 1 in 4 young people are presenting with clinically significant depression symptoms and 1 in 5 with symptoms of anxiety (Racine et al., 2021). These results correspond quite well with the previous study which worryingly indicates that mental illness and similar symptoms have likely doubled among young people during this period (Ma et al., 2021a).

According to Ahmed et al. (2022), another concerning area in which COVID-19 has had an effect is the increased levels of self-harm and suicide. (Suicide Statistics and

Facts, n.d.) indicates that Nearly 800,000 people die by suicide in the world each year. Manivannan et al. (2021) also highlights that there has been an increase in the number of accidental injuries, self-harm, and suicides among younger people during the period of school closures indicating the profound effect isolation and lockdown had on the wellbeing of the youth. Researchers indicate that the lack of socializing with friends, engaging in external activities, and the lack of freedom to engage with the outside world, is likely to blame as this decreased people's hope, outlook, sense of safety and feelings of control over their own lives (Manivannan et al., 2021).

1.1.3 Sense of Control

Researchers have given evidence that the COVID-19 period has had a detrimental effect on individuals' sense of control over their own lives. Quarantine enforced regulations and lockdown protocols all had a significant impact on the ability for individuals to feel a sense of autonomy and has become synonymous with feelings of imprisonment and an infringement towards a person's sense of personal liberty (Alat et al., 2021).

Some of the earliest research on sense of control refers to Julian Rotters *Locus of Control* theory, a control theory which consists of internal locus of control and external locus of control (Alat et al., 2021). Internal locus of control refers to the perception that your life outcome is based on your own actions and personal characteristics, whereas external locus control then refers to an individual's perception of how much of their life is controlled by external forces such as luck and situation (Alat et al., 2021). An individual's sense of control also influences behavior. Those who feel more in control engage in proactive behavior and have a sense of personal responsibility to make personal choices such as following COVID-19 protocols.

According to Brailovskaia and Margraf (2022), there is also a close correlation between an individual's sense of control, resilience, and overall positive mental health. The lack of control over one's own life can lead to helplessness and a drive to regain control over one's life. Individuals that find themselves in this situation often engage in reckless behavior and dysfunctional coping strategies such as substance abuse, making them an at-risk target group for addictive behaviors (Cheng et al., 2021). These individuals

also tend to engage in digital coping strategies such as gaming or excessive use of social media to escape their own reality (Alat et al., 2021; Vally & Helmy, 2021). During COVID-19, people's sense of control over one's own life was especially challenged, however, some managed to adapt and cope within this period better than others.

There has been contrasting evidence indicating that some people might have experienced the period of the pandemic as being less stressful than others. A meta-analysis was conducted by Prati and Mancini (2021), in which 25 articles were reviewed, containing studies on the *psychological effect of COVID-19 lockdowns among the general population during the initial stages of pandemic lockdowns*. The data included 13 studies from Europe, 6 from Asia, 5 from North America and one from Oceania. Prati and Mancini (2021) found that COVID-19 lockdowns had a small but significant effect on mental health symptoms among the general population. These effects included small but significant effects on symptoms of depression and anxiety; however, it failed to prove that COVID-19 lockdown procedures reduced positive psychological functioning such as life satisfaction and social support. Overall, they found that the lockdown procedures had a discerning and reserved impact on mental health. However, a limitation of this analysis is that the studies used in the meta-analysis examined the mental health effects of the pandemic too early, with researchers arguing that not enough time had passed for poor mental health symptomology to emerge. Another limitation to their study was that most of their sample was focused on adults.

According to Pierce et al. (2020), for some, especially those of high socioeconomic status, changes due to the pandemic could have reduced stress and increased mental wellbeing. It is hypothesized that these individuals most likely had more time to engage in activities that they are passionate about, spent more time with family, as well as having access to resources such as technology which aided them in keeping a work life balance as well as adding as a distraction from the stressors of the pandemic thereby reducing the effect of the psychological burden of COVID-19. However, a large proportion of the population experienced the period differently. As lockdown procedures were put into place, many individuals were confined to their homes, with some completely isolated from friends and family (Pierce et al., 2020). This is especially significant as high-quality relationships, sources of social support, affection, and sense of social connectedness are

6

predictors of good mental health. Individuals from lower socioeconomic status were at more of a disadvantage as they lacked resources such as digital devices to engage with the world around them. Social resources play an important part in people's lives in how they manage and cope with stressors, with research indicating that healthy social functioning effects physical, mental morbidity as well as mortality patterns (Taylor et al., 2020).

1.2 Social Media

Social media during this period was considered as the new normal for communication and relieved some of the stressors of isolation by connecting people, enabling continued social/emotional expression and communication (Lee et al., 2022). According to Ivie et al. (2020), 76% of adolescents are engaged on some form of social media; however, this number has significantly increased due to the pandemic. The change in online/ digital interactions saw an increase in the use of social media platforms such as Facebook, Twitter, TikTok, and Snapchat as individuals attempted to stay connected at a social level (Fitzgerald et al., 2022). According to Werling et al. (2021), some patterns observed of screen-time use prior and during the pandemic indicated that teens and young adults tend to use their devices more than children and adults.

Those with unlimited access to technology, as used for social media and communication, were also at risk of developing problematic or even addictive use of technology with the WHO and UNICEF issuing warnings about the potential adverse effects of the overuse of social media (Werling et al., 2021). Issues surrounding these concerns have been met with contrasting opinions with some professionals stating that there is no need to be concerned. In a study exploring the link between mental health and screen time, Ferguson et al. (2022) failed to prove that exposure to screen media and smartphones specifically leads to an increase in negative mental health symptoms. However, a meta-analysis by Ivie et al. (2020), explored the association between depressive symptoms and social media use across 11 different studies and found a small but significant link between social media use and depression. They further highlighting that social media use is not a predictor of depression, however, in the groups in which depressive symptoms were observed, the symptoms were significant. Another analysis by Huang (2022), explored the effects of *problematic social media use* on wellbeing and

found a strong link between psychological distress, life satisfaction, self-esteem, depression, and loneliness. Results further indicated that males score higher in online activities concerning addictive tendencies and poor self-esteem. Researchers have especially highlighted their concerns around behavioral addiction concerning online behaviors such gaming, online gambling, streaming, viewing pornography, impulsive buying, cyber-hoarding, cyberchondria as well as excessive social media use (Al-Menayes, 2015). Mental health professionals have indicated that using digital platforms to view material, create posts, receive likes and comments can be linked to characteristics of behavioral addiction as it triggers our natural reward system through the release of dopamine, conditioning users to continue engaging in the act (Hussain & Griffiths, 2018). According to Brailovskaia and Margraf (2022), *"addictive social media use can be categorized by a close emotional bond to social social media that is accompanied by permanent concerns about the online activities and a strong uncontrollable need to stay permanently online despite potential impairment of other areas of life, stress towards leaving the online world".* According to Hussain and Griffiths (2018), a reason why we can associate excessive use of social media with addiction is it has been found to include the six core components of addiction, i.e., salience, conflict, mood modification, tolerance, withdrawal, and relapse (Hussain & Griffiths, 2018). These individuals become gripped by their engagement with social media and views this as the single most important activity in their day-to-day life. Their obsession leads to the neglect of other aspects of their lives to the detriment of aspects such as their social relationships, career, and education. For these individuals' social media is also a way to regulate and enhance their mood with ever increasing tolerance, withdrawal, and a high likelihood of relapse (Hussain & Griffiths, 2018).

On the other hand, researchers have stated that professionals should not be too quick to pathologize concerning behavior towards social media due to the benefits that social media presented during lockdown to reduce feelings of isolation, overall helping individuals to cope during the stressful period. With such a divide in literature, further investigation in this field is necessary to explore and establish additional causal, contributing and mediating factors. Covid 19 has had a significant effect on the mental wellbeing of individuals with some being able to cope more than others. Common

factors identified has been the psychological burden caused by COVID-19 and the perceived sense of control over one's own life. Excessive social media use has been identified as a common link between these factors. This highlights a need to further explore the extent to how these factors interact with and towards each other.

1.3 Mental Health in the Middle East

The Middle East is a region identified as being Southwest of Asia and North of Africa with roughly 444.52 million inhabitants and 90% of those considered to be Muslim (Meskher et al., 2022). Islam is considered more than a religion and seen as a way of life, giving people a common identity in many spiritual beliefs and a homogenous, community driven lifestyle. The Middle East has seen exponential growth over the last 50 years due to an increase in wealth brought on through the discovery of oil in the region. There has also been rapid transformation in infrastructure as well as multi-cultural influence. Mental health in the region has however remained largely underexplored with some experts stating that much development is still needed (Sewilam et al., 2015).

Within the UAE, around 17.7% of the population struggles with depression which according to Zakzak and Shibl (2020) is especially concerning as most of the community does not seek support, making the collected data on this subject limited. In a study exploring the prevalence of mental illness in Sharjah City, UAE, Mahmoud and Sarvavan (2019) found that 57% of individuals suffered at least from one mental disorder with higher rates recorder among women than men. Anxiety, depression, PTSD, and phobic disorder were recorded as being the most prevalent. Young people within the UAE are particularly at risk due to increased academic stress, higher rates of depression, anxiety, and cyber bullying, with 31% reporting being victims of cyber bullying. Out of the entire population 15.5% considered committing suicide and 12.6% followed through with the act.

Mental health research is especially rare within Egypt. According to Elnemais Fawsy (2017), mental health in Egypt remains understudied and unsupported due to lack of funding, awareness, and resources. A review by Elnemais Fawzy (2017) indicated that anxiety tends to be most prevalent across the nation followed by mood disorders and

substance abuse, however, trends are likely to be skewed due to underreporting. A study conducted by Elkholy (2020) indicated severe levels of anxiety, depression, insomnia, and severe stress among health care providers during the COVID-19 period. This was seen as especially alarming due to minimal mental health support for these individuals. There has been a shift in the awareness surrounding mental health in Egypt, however, much development is still needed. According to Mahmoud and Sarvavan (2019), the lack of mental health services and development within the region is largely due to public stigma.

1.4 Mental Health Stigma in the Middle East

According to Sewilam et al. (2015), public stigma can be categorized in three facets: stereotypes, prejudice, and discrimination. Due to limited knowledge and awareness about mental health in the Middle East, there are false stereotypes associated with mental illness with these individuals often being met with prejudice and discrimination (Sewilam et al., 2015). These stereotypes create public fear, high levels of avoidance, refusal to seek help as well as avoiding to help those struggling with mental illness. (Sewilam et al., 2015). A study conducted by Eapen and Ghubash (2004), found that only 30% of individuals in the UAE would seek support for mental illness if a family member had to develop any condition due to public shaming. A study from Egypt conducted by Coker (2005) found that participants associated mental illness with social rejection, social devaluation, and family shame with diminished marital prospects by association. According to Coker (2005), 85.5% of the study participants agreed that an individual with mental illness would not be effective within the workforce and 56.6% of individuals stating that they would not accept a family member with mental illness (Sewilam et al., 2015). Even though majority of these studies were conducted over a decade ago, researchers still agree that stigma has a significant influence on the perception of mental health and mental illness within the Middle East.

1.5 Social Media Use in the Middle East

The Middle East has also seen exponential growth in technology, and telecommunication infrastructure over the last 50 years. Countries such as The United Arab Emirates is currently experiencing a rapid digital transformation because of wealth

created by its oil and the government's commitment to modernization. Other Middle Eastern countries such as Egypt, Bahrain and Qatar have also seen a rapid shift in the access and use if digital devices and social media due to the normalization of these activities and the relaxation of cultural stigma (Loch, Straub & Kamel, 2017). According to Radcliffe and Lam (2018), the Middle East has been highlighted as the fastest growing area for digital growth with smartphone possession having doubled within three years. This is especially concerning as there is still a gap in research surrounding the effects of social media on mental health (Vally & Alowais, 2021).

Research on behavioral addiction and more specifically smartphone/social media addiction within the UAE and Egypt also remains limited. Some studies have indicated that these conditions may be more prevalent in the UAE than across other countries, with Vally and Alowais (2022) finding that one in three young people in the UAE meet the criteria for problematic mobile phone use (Pal Singh Balhara et al., 2019; Vally & Alowais, 2022; Vally & Helmy, 2021). Most of the population residing in the Middle East are primarily of Arab descent and practicing Muslims. Forming close bonds with someone from another gender is strongly discouraged and seen as culturally inappropriate for all individuals, especially for young people. Driven to seek social connection many of the young people tend to make use of online communication platforms such as social media to bridge the gap of cultural norms (Vally & Alowais, 2022).

Because of the rapid growth, high accessibility to telecommunications and indications of problematic mobile phone/ social media use among the population, there is a need to explore this area further to expand on literature and develop target focused supportive measures. The rapid development, use of technology, limited mental health support and public stigma associated with mental illness within the Middle East has created an environment which indicate at-risk communities for poor mental health in need of appropriate supportive structures. Within these communities' young people have also been identified as at-risk individuals in need of support. Excessive social media use has been identified as a link with depression, however, further research is required to overcome critique against the dangers of addictive social media use and possible intervention/supportive factors such as sense of control.

1.6 Bergen Social Media Addiction Scale

According to Brailovskaia & Margraf (2022), the lack of standardized psychometric measures to assess for unhealthy social media use has been identified as a contributing factor in the critique against the dangers of addictive social media use. Due to the increasing awareness about the potential dangers of social media addiction, there has been some development in psychometric measures that attempt to identify unhealthy social media behavior in individuals. Some psychometric assessment measures that are currently being investigated are the Facebook Addiction Test (Askool, 2013), Social Media Addiction Scale – Student Form (Sahin, 2018), Social Media Disorder Scale (van den Eijnden et al., 2016), Problematic Social Networking Services Use Scale (Lou et al., 2017), Social Media Addiction Test (Esgi, 2016) the Social Media Addiction Scale by Al-Menayes (2015), Bergen Facebook Addiction Scale (Andreassen et al., 2012) and the Bergen Social Media Addiction Scale (Balcerowska et al., 2022; van den Eijnden et al., 2016)

The Bergen Social Media Addiction Scale (BSMAS) was adapted from the Bergen Facebook Addiction Scale (BFAS) when researchers highlighted that the limitation of the BFAS is being limited as a measure focusing specifically on *Facebook* (Andreassen et al., 2012). Adapting the measure, it has become the preferred psychometric measure to assess for addictive social media use across all types of social media platforms such as Facebook, Instagram and Twitter (Andreassen et al., 2012; Brailovskaia & Margraf, 2022; Duradoni et al., 2020). The BSMAS has also been effectively adapted to different cultural population groups. Previous studies have found the BSMAS to be reliable, valid and have high internal consistency, as can be seen in a study done in Germany where results indicated a Cronbach α = .901 and in China where results indicated a Cronbach α of .815 (Brailovskaia & Margraf, 2022). A study conducted in Hungary by Bányai et al. (2017) aimed to identify at-risk groups for alcohol and drug use with social media addiction as an indicator. Results found a positive correlation between low self-esteem, high levels of depression and elevated social media use. Bányai et al. (2017) further stated that the BSMAS proved to be an accurate and effective psychometric measure. Another study by Alimoradi et al. (2019) attempted to investigate the mediation effect of intimacy and perceived social support on social media addiction and sexual distress

12

among married women. Through using the BSMAS they found that social media addiction had a direct and indirect effect on sexual function and sexual distress. The BSMAS assisted Alimoradi et al. (2019) to effectively make an analysis and provide insight into the need for social media use as a factor in sexual counselling. A study by Monacis et al. (2017) tested the psychometric properties of an Italian translated version of the BSMAS as well investigating the relationship between attachment styles and social networking sites addiction. By using confirmatory factor analysis and multigroup analyses they found that the translated BSMAS showed excellent construct validity and reliability. The BSMAS has also been translated and found to be an effective measure for assessing for social media addiction among heterogenous subsamples in Hong-Kong and Taiwan (Brailovskaia & Margraf, 2022; Leung et al., 2020).

The BSMAS has been effectively adapted to different cultural population groups in Hungary, Iran, Italy, Hong Kong, and Taiwan and would thus serve as an excellent tool for researchers and practitioners to explore within the Middle East.

1.7 Research Aims

According to Vally and Alowais (2022), most of the conducted studies in the region is limited by language barriers with assessment measures being limited to English and validated in Western, Anglo-Saxon contexts. It is important for researchers and practitioners in the region to identify assessment measures that are reliable and appropriately standardized for the identified population. The Bergen Social Media Addiction Scale (BSMAS) has been found to be an effective assessment measure for identifying excessive social media use associated with addiction tendencies and has been implemented across different cultural groups.

The first aim of this study was to investigate the psychometric properties of an Arabic translated version of the Bergen Social Media Addiction Scale (BSMAS) to assess for addictive social media use. A translated and standardized version of the BSMAS would be of great use for researchers, as well as mental health practitioners, to guide future research and develop effective psychological treatment methods.

There are limited and conflicting studies on the true effects of social media on the mental wellbeing of individuals, especially during the period of COVID-19 within the Arab region (Brailovskaia & Margraf, 2022). Therefore, the second aim of this study was to explore the association between depression, social media addiction, and an individual's sense of control. Specifically, the potential mediational role of sense of control in the association between depression and social media addiction.

1.8 Hypotheses

The following hypotheses were proposed:

- The Arabic translated version of the BSMAS will be psychometrically valid (1).
- Symptoms of depression will be positively associated with social media addiction (2a).
- Symptoms of depression will be negatively associated with sense of control (2b).
- Social media addiction will be negatively associated with sense of control (2c).
- Sense of control will mediate the association between social media addiction and symptoms of depression (3).

The hypothesized mediation process between sense of control, symptoms of depression and social media addiction (Figure 1). In the model, path a is the predictor and represents the relationships between symptoms of depression and sense of control, the mediator. Path b represents the relationship between sense of control and social media addiction, the outcome. Path c represents the total effect, the relationship between symptoms of depression and social media addiction with path c^1 representing the direct effect, the link between symptoms of depression and social media addiction when sense of control is included in the model.
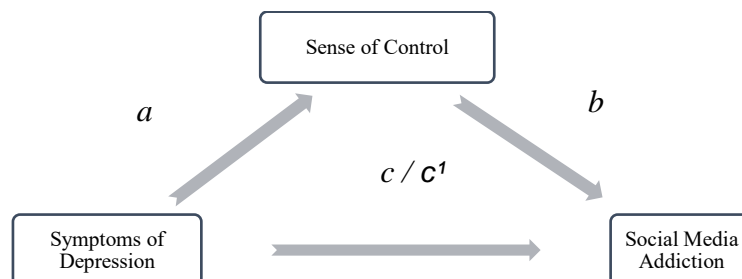
Figure 1: Hypothesized Mediational Model

Chapter 2: Method

2.1 Participants

A cross sectional study was implemented within two separate national contexts, Egypt, and the United Arab Emirates (UAE). Data was gathered from students at the United Arab Emirates University in the UAE, and the Menoufia university in Egypt during the spring semester from February to May 2021. Inclusion criteria for participation in the study included that participants were adults aged 18 and above who had and used at least one social media account.

2.2 Procedure

Participants were recruited based on convenience using announcements made during lectures. Advertisements were placed on the university's social media account to promote the study and participants were encouraged to promote the study to others through social media and word of mouth. Overall, 2000 potential participants across both locations formed part of the sampling frame. Participants engaged in the study through a shared online link. The link firstly led to a consent form which contained information detailing the study, the responsibilities of the research teams as well as their rights as participants with regards to confidentiality and the right to withdraw from the study without any consequences. By clicking 'continue with the survey', the participant gave consent to participate in the study. They would then be directed to the survey containing the identified assessment measures.

2.3 Ethics

Ethical permission for the study was granted by the Social Sciences Research Ethics Committee at the United Arab Emirates University (reference number: ERS_2020_6102) as well as the Institutional Review Board of Menoufia University.

2.4 Assessment measures

2.4.1 Bergen Social Media Addiction Scale (Abbreviated BSMAS)

The first aim of the study was to examine the psychometric properties of an Arabic-translated version of the abbreviated *Bergen Social Media Addiction Scale* (BSMAS)*,* specifically exploring elements of factor structure, reliability, and validity. Previous studies have found the BSMAS to be reliable, valid and have high internal consistency, as can be seen in a study done in Germany where results indicated a Cronbach α = .901 and in China where results indicated a Cronbach α = .815) (Brailovskaia & Margraf, 2022). The BSMAS is a six-item measure and assesses social media use over the last year using a 5-point Likert-type scale ranging from 1 (*very rarely*) to 5 (*very often*), with higher scores indicating elevated traits of addiction. Questions include "How often during the last year have you felt an urge to use social media more and more?" and "How often during the last year have you used social media in order to forget about personal problems?". These questions are aligned with the diagnostic themes of addiction which includes salience, craving, mood, loss of control, withdrawal and conflict (Hussain & Griffiths, 2018). According to Bányai et al.'s (2017), scores above 19 indicate at risk social media addiction behavior. For this study, items of the BSMAS were translated to Arabic using the back-translation method proposed by Brislin (1970). A bilingual expert, a professional with a graduate degree in translation studies, was sought who translated the measure from English to Arabic. This resulted in a forward-translated version of the BSMAS. Another professional in translation studies was recruited to translate the forward-translated version from Arabic to English resulting in back translated items. Both versions were then reviewed and compared for equivalence, such as cultural appropriateness, and discrepancies, resulting in a consensually agreed upon Arabic version of the BSMAS. In the present study, internal consistency for the measure was good (α = 0.80). (See *Appendix A* for a copy of the BSMAS).

2.4.2 Depression Anxiety Stress Scales 21 (DASS-21)

The DASS-21 is a summarized version of the original DASS-21 which included 42 items measuring three dimensions of negative emotional states namely depression

16

(e.g., loss of self-esteem / incentives and low mood), anxiety (e.g., fear and anticipation of negative events) and stress (e.g., ongoing state emotional overarousal and low frustration tolerance) (Oei et al., 2013). The shorter version, DASS-21, developed by Lovibond and Lovibond (1995), has been found to be psychometrically sound with good reliability and validity across different population groups including a Saudi study group and college aged young adults.

The present study specifically utilized the depression subscale of the validated Arabic Depression Anxiety Stress Scale (DASS-21). The Arabic version of the DASS-21 has been found to possess high construct, convergent, and discriminant validity (Vally & Alowais, 2021). Internal consistency for the Arabic version has ranged from 0.88 to 0.93. In the present study, internal consistency was also found to be good ($\alpha = 0.81$). Questions included "I couldn't seem to experience any positive feelings at all", and I found it hard to wind down. Participants rated their symptoms using a 4-point Likert-type scale that ranges from 0 (*did not apply to me at all*) to 3 (*applies to me very much or most of the time*). A higher total score, >12, following the combination of the ratings across the seven items, is indicative of elevated levels of depression. (See *Appendix 3* for a copy of the Depression Anxiety Stress Scales 21 - DASS-21).

2.4.3 Sense of Control

The two-item Niemeyer scale was used to assess for sense of control (Niemeyer et al., 2019). The scale assesses sense of control using two items "Do you experience important areas of your life (i.e., work, free time, family, etc.) to be controllable, meaning that you cannot, or barely can, influence them?" and "Do you experience these important areas of your life as unpredictable or inscrutable?" (Niemeyer et al., 2019). The items were generated by the last author based on clinical and scientific expertise and are rated on a scale from 0 (not at all) to 4 (very strong) with higher scores indicating lower sense of control as measured alongside other variables. The scale's internal consistency typically ranges between.790 (Poland) and .912 (Spain). (See *Appendix 2* for a copy of the two-item Niemeyer scale).

2.5 Data analysis

2.5.1 Descriptive and Correlational Analyses

Descriptive analyses were conducted, and the results of these analyses are reported using means and standard deviations for continuous variables or counts and percentages for categorical variables. The association between sense of control, symptoms of depression, and social media addiction was observed by computing bivariate correlations, expressed as Pearson's correlation coefficients.

2.5.2 Psychometric investigation

Then, each of the six items encompassing the BSMAS were examined for normal data distributions by generating skewness and kurtosis values. Descriptive statistics are numerically presented through counts and percentages for categorical variables, whereas means and standard deviations were used to discuss continuous variables. Internal consistency for each measure is reported using Cronbach's alpha coefficients (α), inter-item correlations, and corrected item-total correlations. Internal consistency was determined acceptable at α≥0.70, as recommended by DeVellis and Thorpe (2016), whereas >0.3 was used in interpreting the corrected item-total correlations, as recommended by Nunnaly and Bernstein (1994). The convergent validity of the BSMAS was assessed by computing a Pearson's correlation between the BSMAS and the depression subscale of the DASS-21. As a further measure of reliability, composite reliability (CR) was also computed with a CR value ≥ 0.7 considered acceptable (Hair et al. 2014). A confirmatory factor analysis (CFA) was conducted on the BSMAS data using LISREL Version 10.20 to investigate the proposed theoretical domain structure (Jöreskog & Sörbom, 2001). Model fit was assessed using the maximum likelihood estimation and a number of additional indices accompanied by Hu and Bentler's (1999) recommendations for the minimum criteria for acceptable model fit (Hu & Bentler, 1999; Vally & Alowais, 2022).

2.5.3 Mediation analysis

The second part of this study was to examine the association between depression, social media addiction, and individuals' sense of control, further observing the

mediational role of sense of control in the association between depression and social media addiction. A pre-specified mediation model was then examined that contained depressive symptoms as the predictor variable, sense of control as the potential mediator, and social media addiction as the outcome variable. This mediational relationship was assessed using the bootstrapping procedure (10,000 samples) that results in bootstrapped confidence intervals (95%). All of the preceding analyses were conducted using SPSS 26 and the mediation analyses were conducted using the PROCESS macro version 3.5 (www.processmacro.org/index.html). Statistical significance was set at $p < 0.05$ for all analyses.

Chapter 3: Results

3.1 Sample descriptive statistics

As illustrated in Table 1, a total of 1322 participants (m_{age} = 19.50 years, SD = 1.54) responded to the advertisements and volunteered to participate in the study. The total sample consisted of 1036 Egyptian participants and 286 participants from the UAE. A total of 96.4% of participants were fulltime students with a smaller portion being employed acquaintances and the rest being unemployed. 75.4% of the sample was female and 90.6% of the sample stated not to be engaged in a romantic relationship at the time of the study.

Table 1: Descriptive statistics for demographic variables for the sample (total and individually by country).

	Total *n* = 1322	Egypt *n* = 1036	UAE *n* = 286
Age M (SD)	19.50 (1.54)	19.45 (1.43)	19.69 (1.88)
Gender (Female%)	75.4	74.1	80.1
Marital status			
Married	2.4%	2.4%	2.4%
In a relationship	7.0%	6.6%	8.4%
Single	90.6%	91.0%	89.2%
Occupation			
Student	96.4%	96.7%	95.1%
Employed	2.6%	2.2%	4.2%
Recently graduated and unemployed	1.0%	1.1%	0.7%

3.2 Psychometric investigation of the Arabic Translated BSMAS

3.2.1 Internal consistency

The Cronbach's alpha coefficient for the BSMAS was high (α = .80) indicating good internal consistency between items in the scale. Moreover, inter-item correlations were all highly significant, the coefficient values ranged from .477 to .639 ($p < .001$). A reliability analysis also indicated that the overall internal consistency could not be significantly improved by deleting any single item from the scale, in fact removing an

item from the scale would lower its reliability (all α values were between .743 to .780). The distribution scores indicated that all assessed scales were close to a normal distribution, with item skewness falling within the acceptable limits of -1 and +1, and kurtosis falling within the normal range of -2 and + 2.

3.2.2 Factorial Validity

A CFA with maximum likelihood estimation was conducted to investigate the unidimensionality of the Arabic translated BSMAS. Several indices of fit were examined, and thresholds were adopted to interpret the resulting output. As can be seen in Table 2, thresholds were adopted to interpret the resulting output: a nonsignificant χ^2 value (p > 0.05); χ^2/df value < 3.0; root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) values of < 0.08; comparative fit index (CFI) and Tucker-Lewis index (TLI) of > 0.95; and a goodness of fit index (GFI) and an adjusted goodness of fit index (AGFI) of > 0.90. Due to less-than-optimal model fit; an adapted model was also computed using a suggested error covariance from the initial output. Both these models are analyzed and discussed. Model 1 (Appendix Figure 1) and Model 2 (Appendix Figure 2) can be viewed in appendix D.

Table 2: Confirmatory factor analysis fit indices of the BSMAS

Psychometric test	Initial model	Adapted model	Suggested cutoff score
χ^2 (df)	236.00	78.40	Nonsignificant
χ^2/df	26.22	9.8	<3.0
Comparative fit index	0.912	0.973	>0.95
Tucker-Lewis index	0.854	0.949	>0.95
Goodness of fit index	0.939	0.980	>0.90
Adjusted goodness of fit index	0.858	0.947	>0.90
Root mean square error of approximation	0.138	0.081	<0.08
Standardized root mean square residual	0.0544	0.032	<0.08

The estimation of the overall unidimensional model produced poor model fit (χ^2 was significant [$p < .05$]; χ^2/df = 26.22; CFI = .912; TLI = .0.854; GFI = .939; AGFI = .858; RMSEA = .138; SRMR = .054). The initial output suggested that the χ^2 value could be decreased by applying the following modification. The modification indices suggested to add an error covariance between items 2 and 1. The recomputed model produced an improved model fit (χ^2 was significant [$p < .05$]; χ^2/df = 9.8; CFI = .973; TLI = .949; GFI = .980; AGFI = .947; RMSEA = .081; SRMR = .032).

3.2.3 Convergent validity

According to Fornell and Larcker (1981), an instrument's convergent validity can be determined by examining two variables, the average variance extracted (AVE) of the latent variable and the measure's composite reliability (CR). Convergent validity can be considered adequate when the AVE value is ≥ .5 and the CR value is ≥ .7. The computed AVE value was below the desired threshold (.46); however, the CR value (.83) was satisfactory. This indicates that the measure possesses a degree of convergent validity, but results should be interpreted with caution. To further test the convergent validity of the Arabic BSMAS, a Pearson correlation was computed with the depression subscale of the DASS-21. The magnitude of the correlational value was large and highly significant ($r = .47$, $p < .001$) indicating an association between these two instruments as measures of psychopathology. The results of these statistical tests support the convergent validity of the newly translated Arabic BSMAS.

3.3 Mediation results

3.3.1 Descriptive and correlational results

Table 3: Descriptive statistics for the three primary study variables

	Social media addiction			Depression			Sense of Control		
	Mean	SD	Min-Max	Mean	SD	Min-Max	Mean	SD	Min-Max
Total Sample	11.81	5.07	0-30	7.23	3.88	0-21	3.65	1.36	0-4
Egypt	11.86	5.02	0-30	7.18	3.91	0-21	3.66	1.37	0-4
UAE	11.61	5.27	0-30	7.38	3.79	0-21	3.63	1.33	0-4
t-value	.754 (ns)			-.749 (ns)			.398 (ns)		

Note. ns = non-significant t-test result.

Results for the BSMAS, as illustrated in Table 3, indicate that overall, the sample does not present with concerning social media addiction traits (M = 11.81, SD = 5.07). This is based on Bányai et al.'s (2017) suggestion that scores above 19 indicate at risk social media addiction behavior. The overall sample presented with moderate levels of depression (M = 7.23, SD = 3.88) according to the DASS-21 depression subscale. Results from the Niemeyer (2019) sense of control scale indicated that the sample felt in control of their own lives. Moreover, between-country comparisons of the three study variables revealed that mean scores did not significant differ when the UAE was compared to Egypt (all p > .05).

Table 4: Correlation matrix between sense of control, depression and social media addiction (SMA)

Variables	Control	Depression	SMA
Control	1		
Depression	-.113**	1	
SMA	.007	.465**	1

Note. Correlation is significant at the 0.01 level (2-tailed); SMA = social media addiction.

As indicated by Table 4, Pearson's correlation analyses indicated statistically significant associations between depression and sense of control (r = -.113, p < .01); and between social media addiction and depression (r = .465, p < .001), however, there was not a significant relationship between social media addiction and sense of control (r = .007, p > .05).

3.3.2 Results of the mediation process
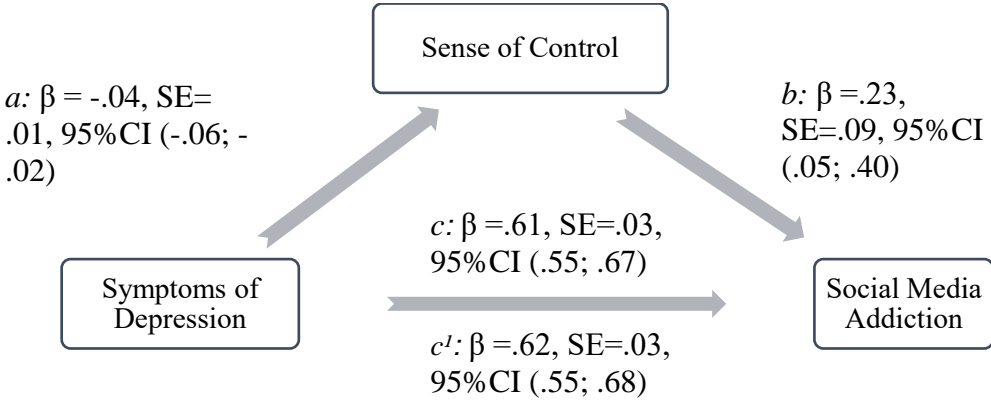
Figure 2: Results of the mediation model

Analyses of the pre-specified mediation model, as illustrated in Figure 2, indicated that symptoms of depression were significantly related to sense of control reflective of path a of the model (β = -.04, SE = .01, t = -4.13, p < .001). Path b was similarly significant - sense of control was found to be significantly related to social media addiction (β = .23, SE = .09, t = 2.47, p < .05). Results further indicated that the total effect of symptoms of depression on social media addiction, path c, was significant (β = .61, SE = .03, 95%CI .55-.67). Finally, the direct effect of depression on SMA was also significant indicating that sense of control significantly mediated the relationship between the predictor and outcome variables (β = .62, SE = .03, 95%CI .55-.68). These results are depicted in Table 5 below.

24

Table 5: Estimated coefficients of the tested mediation model (model 2), overall sample and for each country (outcome: social media addiction)

	Total Effect			Direct Effect			Indirect Effect		
	c	SE	95%CI	c'	SE	95%CI	ab	SE	95%CI
Overall Sample									
SMA	.608	.032	.55-.67	.617	.032	.55-.68	-.009	.005	(-.019) – (-.001)

Note. SMA = social media addiction, SE = standard error, 95%CI = confidence interval computed bootstrapping at 10,000 samples, c = relationship between social media addiction and depression, c' = relationship between social media addiction and depression with the inclusion of sense of control in the model, ab = combined effect of paths a and b.

Chapter 4: Discussion

4.1 Discussion of Results

The Middle East is a rapid developing region with accelerated advancement in infrastructure, technology, digital devices, and social media services, however, there is still a need for further development in the sphere of mental health with researchers indicating a need for further research, resources and qualified practitioners (Radcliffe & Lam, 2018). The period of COVID-19 has been an especially turbulent period where extreme psychological trends can be expected and examined due to the economic effect on individuals, lockdown procedures, social isolation, changes in daily habits, public fear, and psychological burden (Saddik et al., 2021). Researchers have raised their concerns regarding the effects of these factors on the overall mental health of individuals with research indicating that there has been a significant increase in worries about the future, anxiety, Post-traumatic stress disorder, depression, feelings of helplessness, guilt, panic and the feeling of loss of control over one's own life (Saddik et al., 2021). Zakzak and Shibl (2020) found that 17.7% of the population in the UAE struggle with depression and limited research in Egypt make it difficult to estimate accurate trends. This is especially concerning as medical practitioners have stated that figures surrounding mental illness are likely skewed and could be alarming due to public stigma and underreporting (Elnemais Fawzy, 2017; Radcliffe & Lam, 2018; Zakzak & Shibl, 2020).

Researchers are especially concerned about the mental health of young adults as at-risk groups, and a target group in need of safeguarding (Saddik et al., 2021). Young people within the UAE are particularly at risk due to increased academic stress, high rates of depression, anxiety, cyber bullying, and suicidal ideation with research indicating that 1 in 7 young adults within the region struggle with depression and anxiety which has likely doubled due to the COVID-19 period (Ma et al., 2021b; Mahmoud & Saravanan, 2019).

The use of social media during the period of COVID-19 has also significantly increased with individuals using such services to relieve the stressors of isolation by

connecting with others, enabling continued social/emotional support and communication (Lee et al., 2022). According to Ivie et al. (2020), 76% of adolescents are engaged in some form of social media; however, this number has likely also significantly increased due to the pandemic indicating a need to explore the possible effects of social media on the mental health of young people. Researchers have especially highlighted their concerns around the excessive use of social media and addiction with researchers indicating a need for further research in this field, specifically regarding being able to identify trends which is achievable through validated psychometric measures (Al-Menayes, 2015; Hussain & Griffiths, 2018).

This study investigated addictive social media use among college-aged students within the Middle East, during the COVID-19 pandemic. Firstly, this study aimed to explore the psychometric properties of the Arabic translated version of the Bergen Media Addiction Scale (BSMAS) as an attempt to evaluate its reliability and validity for assessing addictive social media use within the Arab region. Results indicated that the measure presents with acceptable levels of internal consistency between items in the scale. The convergent validity of the Arabic translated BSMAS was also explored and found to be adequate, however, it is advised that results be interpreted with caution. A Pearson correlation coefficient was also computed between the depression subscale of the DASS-21 and the BSMAS to further explore the measure's convergent validity. Results found a significant link between the two instruments, indicating that the Arabic translated BSMAS has the potential to support psychopathological screenings. The results of these statistical tests support the convergent validity of the newly translated Arabic BSMAS. The BSMAS has become a much-used measure to assess for addictive social media use and has been adapted for different cultural populations. Overall, results indicated that the Arabic translated BSMAS produced satisfactory results with regard to validity and reliability suggesting a level of appropriateness, however, results also point to caution when interpreting results. These findings are indicative of a potential measure to assist with the identification of mental health concerns surrounding social media addiction among Arabic speaking individuals within the Middle East and can greatly support practitioners with intervention and preventative strategies thereby supporting *Hypothesis 1*.

Due to the need for more research on the psychological effects of social media use, the second aim of the study was to explore the association between depression, social media addiction and sense of control. Specifically, sense of control was examined as a potential mediator between social media addiction and depression. Correlation results from the Arabic translated BSMAS indicated that overall, students at the specific universities do not present with significant social media addiction traits. Individuals were also found to feel in control of their own lives. When considering the correlation between these variables, a strong association was found between depression and sense of control as well as between social media addiction and depression, however, there was not a significant relationship between social media addiction and sense of control. The results indicate that there is a strong relationship between variables with a degree of discrepancy between social media addiction and control. Seeing that sense of control is a factor associated with addiction, results indicate that there are additional factors worth exploring that could possibly be influencing the relationship between these variables.

Further to this, a pre-specified mediation model was examined that contained depressive symptoms as the predictor variable, sense of control as the potential mediator, and social media addiction as the outcome variable. The model outcome concluded that sense of control influenced social media addiction (supporting *hypothesis 2c*), symptoms of depression influenced sense of control (supporting *hypothesis 2b*), and symptoms of depression significantly influenced social media addiction (supporting *hypothesis 2a*). Finally, the direct effect of depression on social media addiction was also significant indicating that sense of control significantly mediated the relationship between the predictor (depression) and the outcome variable (social media addiction) thereby supporting *hypothesis 3*. Contrasting to the correlation results, the mediation model found a link between variables as well as proved that sense of control mediates the relationship between social media addiction and depression. This can be understood as the relationship between sense of control and social media addiction may not be largely significant, however, there is a linked/mediating effect.

4.2 Implications

The Middle East remains largely an under researched region within the mental health profession (Elnemais Fawzy, 2017; Mahmoud & Saravanan, 2019, 2019). This study aimed to add to the body of work that is currently slowly developing. Some research has been gaining momentum in the UAE, however, research from Egypt remains scarce. This study has provided the psychology community with valuable, culturally appropriate insight for the Middle East by exploring trends within mental health. Due to public stigma and other cultural factors, mental health remains taboo with many individuals not reaching out or gaining psychological support (Coker, 2005; Elkholy et al., 2021; Elnemais Fawzy, 2017). By exploring and adding to existing research, the mental health community potentially have additional resources to support individual as well as public development as well as adjusting psychotherapeutic interventions accordingly.

This study has achieved in developing a potentially psychometrically valid measure to assist practitioners with the identification of mental health concerns surrounding social media addiction among Arabic speaking individuals within the Middle East and can greatly support intervention and preventative strategies.

The developed measure also facilitates further exploration into addiction, specifically social media addiction. Social media addiction remains understudied and debated among researchers (Cheng et al., 2021). It is relevant as individuals still and will continue to use social media and depression is an area of great concern within the field of mental health. This study found a link between depression and social media addiction, further supporting the argument that social media addiction is a cause of concern and should be explored further. Largely, this study indicates a possible risk which should not be overlooked by mental health professionals when supporting clients as well as providing evidence for creating awareness specifically among the identified target group.

Young adults have been identified as an at-risk target group for social media addiction due to most of them having easy access to social media devices as well as with most of them being active on various platforms (Lee et al., 2022; Pal Singh Balhara et al., 2019). The study found a link between depression and social media addiction within

this target group which is alarming as professionals have highlighted their concern regarding mental illness among young adults (Zakzak & Shibl, 2020). By creating awareness about the potential link between depression and social media/ social media addiction, practitioners can support these individuals by reducing excessive exposure, developing adequate skills, and further exploring underlying contributing factors.

Sense of control has also been found to be associated with depression and social media addiction, acting as a mediator between these variables. According to Hussain and Griffiths (2018), addiction and sense of control, are strongly correlated with addiction being based on a lack of control of using substances or engaging in activities that are harmful to self or others. This study has provided mental health practitioners with valuable insight into providing and developing effective intervention strategies for individuals associated with social media addiction. The study supports the contention that fostering a sense of control among individuals, especially among young people can potentially ameliorate symptoms of depression and the underlying drives that manifest as social media addiction.

The significance of this study at a community level is that it highlights the danger of excessive social media use, the potential of social media addiction and the associated risk of poor mental health, specifically depression. The insight presented by this study can support leaders within areas of influence to support positive mental health by raising concerns about the potential dangers of excessive social media use, especially among young adults in areas such as schools and university campuses. Awareness campaigns, mental health services on campuses and parent information sessions among this target group could be of great benefit to minimize risk and promote mental health.

4.3 Limitations & Recommendations

The study found that students within the region did not present with clinically significant symptoms of depression during this period. This is positively aligned with some studies which failed to associate mental illness with the COVID-19 period (Alat et al., 2021). These results are most likely due to the socioeconomic status of the study group (Leung et al., 2020). The UAE is ranked as having the 21st highest GDP in the World Economics Global Wealth rankings and 1st for the Middle East (Barbato et al.,

2021). University students also represents a minority of individuals within this region who can afford tertiary education and have access to medical care. Being of a higher socioeconomic status, these individuals have access to "more health knowledge, better housing, and better health care", which overall promotes holistic wellbeing and minimizes the risk of poor mental health (Adler & Snibbe, 2003). The implication of this study is limited by a narrow sample which is mainly due to the convenience sampling method used. For further research it would be worth exploring the same concept among a broader range of socioeconomic groups. This would include individuals from different career pathways, cultural backgrounds, age groups as well as varying household incomes. Increasing the diversity of the sample as well as the sample size would greatly aid a holistic understanding of the effects of social media on the larger population. It would also be worthwhile to conduct the same study within different countries within the Middle East, thereby broadening the sample even more as well as expanding on the body of research which currently exists in the region. Limitations to this study also includes limited comprehensive research on psychological trends within Egypt. Research on mental health in Egypt remains scarce and as a large portion of this study's sample it is worth noting that additional trends relating to addiction and depression could be significant in the overall results and interpretation of this study (Elnemais Fawzy, 2017).

The psychological effects of social media on individuals also remain understudied (Al-Menayes, 2015; Duradoni et al., 2020; Lee et al., 2022). This study attempted to expand on the research surrounding excessive social media use by exploring the link between social media addiction, depression, and sense of control. The link between social media addiction and sense of control indicated a non-significant link within the correlation results and a significant link within the mediation study. A limitation was that no clear alternative variables could indicate as to why this occurred.

A reliable and valid psychometric measure is needed to further support the research surrounding social media addiction within the Middle Eastern region. The Arabic translated version of the BSMAS proved to be useful within this study, however, there were discrepancies in some of its validity and reliability results highlighting a need to further explore this measure as a valid assessment measure that accurately assesses for social media addiction. One method that can be applied is to do a Pearson correlation

with a variety of additional measures that specifically assesses addictive tendencies or excessive technology use, thereby providing additional support for the measure as a valid test of psychopathology.

Chapter 5: Conclusion

The psychological effects of social media on individuals remain understudied. This study attempted to expand on the research surrounding excessive social media use by focusing on social media addiction which currently does not exist as a clinical diagnosis. This is done in the hopes of raising awareness around this topic among researchers and mental health practitioners. This study aimed to explore this concept within the Middle East, specifically Egypt and the United Arab Emirates. This population group remains largely under researched within the field of psychology. Rapid growth in the region has brought much change, however, mental health services and support remain limited. Due to their at-risk status, young people, specifically university students, were identified as a target group due to their high risk of poor mental health.

Social media has proven to be a positive tool for connecting people with friends and family, sharing/accessing news, furthering education, and for economic purposes among others. However, researchers also warn of the possible negative effects of social media on individuals such as poor body image, anxiety; and as found in this study, depression, and social media addiction (Al-Menayes, 2015). Social media addiction is informally viewed by some as a behavioral addiction; however, it has not been widely accepted and included within any diagnostic manuals. With similar traits in technology, Internet Gaming Disorder (IGD), was introduced within the Diagnostic Statistical Manual of Mental Disorders (DSM-5) in May 2013, and represents an individual engaged in the obsessive and compulsive overuse of internet and video games. It is worth noting that similarly to IGD, social media has been effectively linked to unhealthy behaviors including addiction traits such as sense of control which has been included in this study and found to be positively linked to depression and social media addictive tendencies (Hussain & Griffiths, 2018). It is thus important that professionals expand on the existing research and promote healthy social media behavior.

The study found a statistically significant link between social media addiction, depression, and an individual's sense of control. It further proved that sense of control had a mediating effect on the relationship between social media addiction and depression. Overall results provide evidence of an association between these factors

highlighting a reason to be concerned about excessive social media use as well as providing practitioners with insight into providing support to those at-risk groups through developing skills that improve an individual's sense of control.

In conclusion, mental health research within the Middle East that is culturally relevant and useful remain limited. Further research is needed for researchers and practitioners to understand this region and to be able to provide adequate support where needed. With the rapid development of technology globally as well as within the Middle East, up to date research on this area is vitally important for the promotion of mental health among all individuals.

References

Abdulah, D. M., Abdulla, B. M. O., & Liamputtong, P. (2021). Psychological response of children to home confinement during COVID-19: A qualitative arts-based research. *International Journal of Social Psychiatry*, *67*(6), 761–769. https://doi.org/10.1177/0020764020972439

Addington, J., Liu, L., Farris, M. S., Goldstein, B. I., Wang, J. L., Kennedy, S. H., Bray, S., Lebel, C., & MacQueen, G. (2021). Clinical staging for youth at-risk for serious mental illness: A longitudinal perspective. *Early Intervention in Psychiatry*, *15*(5), 1188–1196. https://doi.org/10.1111/eip.13062

Adler, N. E., & Snibbe, A. C. (2003). The Role of Psychosocial Processes in Explaining the Gradient Between Socioeconomic Status and Health. *Current Directions in Psychological Science*, *12*(4), 119–123. https://doi.org/10.1111/1467-8721.01245

Ahmed, F., Balachandran, T., & Immanuel Azaad Moonesar Ph.D., R. D. (2022). Mental health intervention policy report: advancing mental health in the UAE – the next 50 years. https://doi.org/10.13140/RG.2.2.16619.05927. Retrieved 4 October 2022, from https://www.researchgate.net/publication/357884546_MENTAL_HEALTH_INTERVE NTION_POLICY_REPORT_ADVANCING_MENTAL_HEALTH_in_the_UAE_- _the_next_50_years?channel=doi&linkId=61e578f35779d35951b545f3&showFulltext=t rue

Ajzen, I. (2002). Perceived Behavioral Control, Self-Efficacy, Locus of Control, and the Theory of Planned Behavior [1]. *Journal of Applied Social Psychology*, *32*(4), 665–683. https://doi.org/10.1111/j.1559-1816.2002.tb00236.x

Alat, P., Das, S. S., Arora, A., & Jha, A. K. (2021). Mental health during COVID-19 lockdown in India: Role of psychological capital and internal locus of control. *Current Psychology*. https://doi.org/10.1007/s12144-021-01516-x Retrieved 4 October 2022, from https://link.springer.com/content/pdf/10.1007/s12144-021-01516-x.pdf?pdf=button

Ali, A. M., Alkhamees, A. A., Hori, H., Kim, Y., & Kunugi, H. (2021). The Depression Anxiety Stress Scale 21: Development and Validation of the Depression Anxiety Stress Scale 8- Item in Psychiatric Patients and the General Public for Easier Mental Health Measurement in a Post COVID-19 World. *International Journal of Environmental Research and Public Health*, *18*(19), 10142. https://doi.org/10.3390/ijerph181910142

Alimoradi, Z., Lin, C.-Y., Imani, V., Griffiths, M. D., & Pakpour, A. H. (2019). Social media addiction and sexual dysfunction among Iranian women: The mediating role of intimacy and social support. *Journal of Behavioral Addictions*, *8*(2), 318–325. https://doi.org/10.1556/2006.8.2019.24

Alkaabi, J. (2020). Perception of students on provisions provided to cycle three students with mental illnesses (anxiety disorder and depression (in public schools in the United Arab Emirates: An expletory study. *The British University in Dubai*. Retrieved on 4 October

2022, from
https://bspace.buid.ac.ae/bitstream/handle/1234/2052/20000475.pdf?sequence=3&isAllo
wed=y

Almeida, V., Barrios, S., Christl, M., De Poli, S., Tumino, A., & van der Wielen, W. (2021).
The impact of COVID-19 on households´ income in the EU. *The Journal of Economic
Inequality*, *19*(3), 413–431. https://doi.org/10.1007/s10888-021-09485-8

Al-Menayes, J. J. (2015). Social Media Use, Engagement and Addiction as Predictors of
Academic Performance. *International Journal of Psychological Studies*, *7*(4), 86.
https://doi.org/10.5539/ijps.v7n4p86

Álvarez-Iglesias, A., Garman, E., & Lund, C. (2021). Effects of COVID-19 on the economy and
mental health of young people in South Africa: Opportunities for strengthening social
protection programmes by integrating mental health. *South African Journal of
Psychology*, *51*(2), 199–204. https://doi.org/10.1177/00812463211015348

Andreassen, C. S., Torsheim, T., Brunborg, G. S., & Pallesen, S. (2012). Development of a
Facebook Addiction Scale. *Psychological Reports*, *110*(2), 501–517.
https://doi.org/10.2466/02.09.18.PR0.110.2.501-517

Archived: WHO Timeline - COVID-19. (n.d.). Retrieved 4 October 2022, from
https://www.who.int/news/item/27-04-2020-who-timeline---covid-19

Askool, S. S. (2013). The Use of Social Media in Arab Countries: A Case of Saudi Arabia. In J.
Cordeiro & K.-H. Krempels (Eds.), *Web Information Systems and Technologies* (Vol.
140, pp. 201–219). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-
36608-6_13

Balcerowska, J. M., Bereznowski, P., Biernatowska, A., Atroszko, P. A., Pallesen, S., &
Andreassen, C. S. (2022). Is it meaningful to distinguish between Facebook addiction
and social networking sites addiction? Psychometric analysis of Facebook addiction and
social networking sites addiction scales. *Current Psychology*, *41*(2), 949–962.
https://doi.org/10.1007/s12144-020-00625-3

Bányai, F., Zsila, Á., Király, O., Maraz, A., Elekes, Z., Griffiths, M. D., Andreassen, C. S., &
Demetrovics, Z. (2017). Problematic Social Media Use: Results from a Large-Scale
Nationally Representative Adolescent Sample. *PLOS ONE*, *12*(1), e0169839.
https://doi.org/10.1371/journal.pone.0169839

Barbato, M., Al Hemeiri, S., Nafie, S., Dhuhair, B. A., & Dabbagh, N. T. (2021). Characterizing
individuals accessing mental health services in the UAE: A focus on youth living in
Dubai. *International Journal of Mental Health Systems*, *15*(1), 29.
https://doi.org/10.1186/s13033-021-00452-4

Brailovskaia, J., & Margraf, J. (2022). Addictive social media use during Covid-19 outbreak: Validation of the Bergen Social Media Addiction Scale (BSMAS) and investigation of protective factors in nine countries. *Current Psychology*. https://doi.org/10.1007/s12144-022-03182-z. Retrieved 4 October 2022, from https://link.springer.com/content/pdf/10.1007/s12144-022-03182-z.pdf?pdf=button

Brailovskaia, J., Margraf, J., & Schneider, S. (2021). Social Media as Source of Information, Stress Symptoms, and Burden Caused by Coronavirus (COVID-19): A Cross-National Investigation of Predictors. *European Psychologist*, *26*(4), 373–386. https://doi.org/10.1027/1016-9040/a000452

Brislin, R. W. (1970). Back-Translation for Cross-Cultural Research. *Journal of Cross-Cultural Psychology*, *1*(3), 185–216. https://doi.org/10.1177/135910457000100301

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, *395*(10227), 912–920. https://doi.org/10.1016/S0140-6736(20)30460-8

Burkauskas, J., Gecaite-Stonciene, J., Demetrovics, Z., Griffiths, M. D., & Király, O. (2022). Prevalence of problematic Internet use during the coronavirus disease 2019 pandemic. *Current Opinion in Behavioral Sciences*, *46*, 101179. https://doi.org/10.1016/j.cobeha.2022.101179

Cheng, C., Lau, Y., Chan, L., & Luk, J. W. (2021). Prevalence of social media addiction across 32 nations: Meta-analysis with subgroup analysis of classification schemes and cultural values. *Addictive Behaviors*, *117*, 106845. https://doi.org/10.1016/j.addbeh.2021.106845

Coker, E. M. (2005). Selfhood and social distance: Toward a cultural understanding of psychiatric stigma in Egypt. *Social Science & Medicine*, *61*(5), 920–930. https://doi.org/10.1016/j.socscimed.2005.01.009

Dantlgraber, M., Wetzel, E., Schützenberger, P., Stieger, S., & Reips, U.-D. (2016). Simple construct evaluation with latent class analysis: An investigation of Facebook addiction and the development of a short form of the Facebook Addiction Test (F-AT). *Behavior Research Methods*, *48*(3), 869–879. https://doi.org/10.3758/s13428-016-0716-2

DeVellis, R. F., & Thorpe, C. T. (2022). *Scale development: Theory and applications* (Fifth edition). SAGE Publications, Inc. *DOI:10.5539/ijps.v7n4p86*. (n.d.).

Duncan, G. (2021, November). *The National—Latest UAE news, sport & opinion—WHO Timeline COVID-19*. Retrieved 4 October 2022 from https://www.thenationalnews.com/

Duradoni, M., Innocenti, F., & Guazzini, A. (2020a). Well-Being and Social Media: A Systematic Review of Bergen Addiction Scales. *Future Internet*, *12*(2), 24. https://doi.org/10.3390/fi12020024

Duradoni, M., Innocenti, F., & Guazzini, A. (2020b). Well-Being and Social Media: A Systematic Review of Bergen Addiction Scales. *Future Internet*, *12*(2), 24. https://doi.org/10.3390/fi12020024

Durbin, R. P. (1975a). Letter: Acid secretion by gastric mucous membrane. *The American Journal of Physiology*, *229*(6), 1726. https://doi.org/10.1152/ajplegacy.1975.229.6.1726

Durbin, R. P. (1975b). Letter: Acid secretion by gastric mucous membrane. *The American Journal of Physiology*, *229*(6), 1726. https://doi.org/10.1152/ajplegacy.1975.229.6.1726

Eapen, V., & Ghubash, R. (2004). Help-Seeking for Mental Health Problems of Children: Preferences and Attitudes in the United Arab Emirates. *Psychological Reports*, *94*(2), 663–667. https://doi.org/10.2466/pr0.94.2.663-667

Elkholy, H., Tawfik, F., Ibrahim, I., Salah El-din, W., Sabry, M., Mohammed, S., Hamza, M., Alaa, M., Fawzy, A. Z., Ashmawy, R., Sayed, M., & Omar, A. N. (2021). Mental health of frontline healthcare workers exposed to COVID-19 in Egypt: A call for action. *International Journal of Social Psychiatry*, *67*(5), 522–531. https://doi.org/10.1177/0020764020960192

Elnemais Fawzy, M. (2017). Mental health care in Egypt: Review of current state, policy, and needs. *International Journal of Mental Health*, *46*(4), 339–345. https://doi.org/10.1080/00207411.2017.1367447

Esgi, N. (2016). Development of Social Media Addiction Test (SMAT17). *Journal of Education and Training Studies*, *4*(10), 174–181. https://doi.org/10.11114/jets.v4i10.1803

Ferguson, C. J., Kaye, L. K., Branley-Bell, D., Markey, P., Ivory, J. D., Klisanin, D., Elson, M., Smyth, M., Hogg, J. L., McDonnell, D., Nichols, D., Siddiqui, S., Gregerson, M., & Wilson, J. (2022). Like this meta-analysis: Screen media and mental health. *Professional Psychology: Research and Practice*, *53*(2), 205–214. https://doi.org/10.1037/pro0000426

Fitzgerald, K., Yue, Z., Wong, J. C. S., & Green, M. C. (2022). Entertainment and social media use during social distancing: Examining trait differences in transportability and need for social assurance. *Psychology of Popular Media*, *11*(3), 305–310. https://doi.org/10.1037/ppm0000365

Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, *18*(3), 382. https://doi.org/10.2307/3150980

Galvin, B. M., Randel, A. E., Collins, B. J., & Johnson, R. E. (2018). Changing the focus of locus (of control): A targeted review of the locus of control literature and agenda for future research. *Journal of Organizational Behavior*, *39*(7), 820–833. https://doi.org/10.1002/job.2275

Gardos, G., & Cole, J. O. (1976). Maintenance antipsychotic therapy: Is the cure worse than the disease? *The American Journal of Psychiatry*, *133*(1), 32–36. https://doi.org/10.1176/ajp.133.1.32

Godchaux-Berezhnova, I. (n.d.). *Post-COVID19 Well-Being and Happiness Policy Implications in the UAE*. Mohammed Bin Rashid School of Governance. Retrieved 4 October 2022, from http://www.mbrsg.ae/home/re-

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55. https://doi.org/10.1080/10705519909540118

Huang, C. (2022). A meta-analysis of the problematic social media use and mental health. *International Journal of Social Psychiatry*, *68*(1), 12–33. https://doi.org/10.1177/0020764020978434

Hussain, Z., & Griffiths, M. D. (2018). Problematic Social Networking Site Use and Comorbid Psychiatric Disorders: A Systematic Review of Recent Large-Scale Studies. *Frontiers in Psychiatry*, *9*, 686. https://doi.org/10.3389/fpsyt.2018.00686

Ivie, E. J., Pettitt, A., Moses, L. J., & Allen, N. B. (2020). A meta-analysis of the association between adolescent social media use and depressive symptoms. *Journal of Affective Disorders*, *275*, 165–174. https://doi.org/10.1016/j.jad.2020.06.014

Jennings, N. A., & Caplovitz, A. G. (2022). Parenting and tweens' media use during the COVID-19 pandemic. *Psychology of Popular Media*, *11*(3), 311–315. https://doi.org/10.1037/ppm0000376

Jöreskog, K. G., & Sörbom, D. (2001). *LISREL 8: User's reference guide* (2. ed., updated to LISREL 8). SSI Scientific Software Internat, *3*(1), 40–41

Joshua C. Watson, Elizabeth A. Prosek, Amanda L. Giordano. (n.d.). *Investigating Psychometric Properties of Social Media Addiction Measures Among Adolescents*. Retrieved 4 October from https://onlinelibrary.wiley.com/doi/abs/10.1002/jcad.12347

Kunzler, A. M., Röthke, N., Günthner, L., Stoffers-Winterling, J., Tüscher, O., Coenen, M., Rehfuess, E., Schwarzer, G., Binder, H., Schmucker, C., Meerpohl, J. J., & Lieb, K. (2021). Mental burden and its risk and protective factors during the early phase of the SARS-CoV-2 pandemic: Systematic review and meta-analyses. *Globalization and Health*, *17*(1), 34. https://doi.org/10.1186/s12992-021-00670-y

Lee, Y., Jeon, Y. J., Kang, S., Shin, J. I., Jung, Y.-C., & Jung, S. J. (2022). Social media use and mental health during the COVID-19 pandemic in young adults: A meta-analysis of 14 cross-sectional studies. *BMC Public Health*, *22*(1), 995. https://doi.org/10.1186/s12889-022-13409-0

Leidner, D. E., & Kayworth, T. R. (2017a). *Global information systems: The implications of culture of IS management*. Routledge. Retrieved 4 October from https://doi.org/10.4324/9780080942742

Leung, H., Pakpour, A. H., Strong, C., Lin, Y.-C., Tsai, M.-C., Griffiths, M. D., Lin, C.-Y., & Chen, I.-H. (2020). Measurement invariance across young adults from Hong Kong and Taiwan among three internet-related addiction scales: Bergen Social Media Addiction Scale (BSMAS), Smartphone Application-Based Addiction Scale (SABAS), and Internet Gaming Disorder Scale-Short Form (IGDS-SF9) (Study Part A). *Addictive Behaviors*, *101*, 105969. https://doi.org/10.1016/j.addbeh.2019.04.027

Loch, K. D., Straub, D. W., & Kamel, S. (2003). Diffusing the internet in the arab world: The role of social norms and technological culturation. *IEEE Transactions on Engineering Management*, *50*(1), 45–63. https://doi.org/10.1109/TEM.2002.808257

Lopes, B. C. da S., & Jaspal, R. (2020a). Understanding the mental health burden of COVID-19 in the United Kingdom. *Psychological Trauma: Theory, Research, Practice, and Policy*, *12*(5), 465–467. https://doi.org/10.1037/tra0000632

Lopes, B. C. da S., & Jaspal, R. (2020b). Understanding the mental health burden of COVID-19 in the United Kingdom. *Psychological Trauma: Theory, Research, Practice, and Policy*, *12*(5), 465–467. https://doi.org/10.1037/tra0000632

Lou, J., Liu, H., & Liu, X. (2017). Development of the Problematic Social Networking Services Use Scale with college students. *Social Behavior and Personality: An International Journal*, *45*(11), 1889–1903. https://doi.org/10.2224/sbp.6179

Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, *33*(3), 335–343. https://doi.org/10.1016/0005-7967(94)00075-U

Ma, L., Mazidi, M., Li, K., Li, Y., Chen, S., Kirwan, R., Zhou, H., Yan, N., Rahman, A., Wang, W., & Wang, Y. (2021). Prevalence of mental health problems among children and adolescents during the COVID-19 pandemic: A systematic review and meta-analysis. *Journal of Affective Disorders*, *293*, 78–89. https://doi.org/10.1016/j.jad.2021.06.021

Mahmoud, I., & Saravanan, C. (2019). Prevalence of Mental Disorders and the Use of Mental Health Services among the Adult Population in United Arab Emirates. *Asian Journal of Epidemiology*, *13*(1), 12–19. https://doi.org/10.3923/aje.2020.12.19

Manivannan, M., Jogalekar, M. P., Kavitha, M. S., Maran, B. A. V., & Gangadaran, P. (2021). A mini-review on the effects of COVID-19 on younger individuals. *Experimental Biology and Medicine*, *246*(3), 293–297. https://doi.org/10.1177/1535370220975118

McArthur, L., Sakthivel, D., Ataide, R., Chan, F., Richards, J. S., & Narh, C. A. (2020). Review of Burden, Clinical Definitions, and Management of COVID-19 Cases. *The American Journal of Tropical Medicine and Hygiene*, *103*(2), 625–638. https://doi.org/10.4269/ajtmh.20-0564

Meskher, H., Belhaouari, S. B., Thakur, A. K., Sathyamurthy, R., Singh, P., Khelfaoui, I., & Saidur, R. (2022). A review about COVID-19 in the MENA region: Environmental concerns and machine learning applications. *Environmental Science and Pollution Research*, *29*(55), 82709–82728. https://doi.org/10.1007/s11356-022-23392-z

Monacis, L., de Palo, V., Griffiths, M. D., & Sinatra, M. (2017). Social networking addiction, attachment style, and validation of the Italian version of the Bergen Social Media Addiction Scale. *Journal of Behavioral Addictions*, *6*(2), 178–186. https://doi.org/10.1556/2006.6.2017.023

Moussa, N. M., & Ali, W. F. (2022). Exploring the Relationship Between Students' Academic Success and Happiness Levels in the Higher Education Settings During the Lockdown Period of COVID-19. *Psychological Reports*, *125*(2), 986–1010. https://doi.org/10.1177/0033294121994568

Mudiriza, G., & De Lannoy, A. (n.d.). Youth emotional well-being during the COVID-19-related lockdown in South Africa. *SALDRU*, *268*. Retrieved 4 October 2022, from https://www.opensaldru.uct.ac.za/bitstream/handle/11090/991/2020_268_Saldruwp.pdf?sequence=1

Niemeyer, H., Bieda, A., Michalak, J., Schneider, S., & Margraf, J. (2019). Education and mental health: Do psychosocial resources matter? *SSM - Population Health*, *7*, 100392. https://doi.org/10.1016/j.ssmph.2019.100392

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed). McGraw-Hill. 2(2), 31

Oei, T. P. S., Sawang, S., Goh, Y. W., & Mukhtar, F. (2013). Using the Depression Anxiety Stress Scale 21 (DASS-21) across cultures. *International Journal of Psychology*, *48*(6), 1018–1029. https://doi.org/10.1080/00207594.2012.755535

Pal Singh Balhara, Y., Doric, A., Stevanovic, D., Knez, R., Singh, S., Roy Chowdhury, M. R., Kafali, H. Y., Sharma, P., Vally, Z., Vi Vu, T., Arya, S., Mahendru, A., Ransing, R., Erzin, G., & Le Thi Cam Hong Le, H. (2019). Correlates of Problematic Internet Use among college and university students in eight countries: An international cross-sectional study. *Asian Journal of Psychiatry*, *45*, 113–120. https://doi.org/10.1016/j.ajp.2019.09.004

Pierce, M., Hope, H., Ford, T., Hatch, S., Hotopf, M., John, A., Kontopantelis, E., Webb, R., Wessely, S., McManus, S., & Abel, K. M. (2020). Mental health before and during the COVID-19 pandemic: A longitudinal probability sample survey of the UK population. *The Lancet Psychiatry*, *7*(10), 883–892. https://doi.org/10.1016/S2215-0366(20)30308-4

Prati, G., & Mancini, A. D. (2021). The psychological impact of COVID-19 pandemic lockdowns: A review and meta-analysis of longitudinal studies and natural experiments. *Psychological Medicine*, *51*(2), 201–211. https://doi.org/10.1017/S0033291721000015

Price, M., Legrand, A. C., Brier, Z. M. F., van Stolk-Cooke, K., Peck, K., Dodds, P. S., Danforth, C. M., & Adams, Z. W. (2022). Doomscrolling during COVID-19: The negative association between daily social and traditional media consumption and mental health symptoms during the COVID-19 pandemic. *Psychological Trauma: Theory, Research, Practice, and Policy*. *14*(8), 1338–1346. https://doi.org/10.1037/tra0001202

Racine, N., McArthur, B. A., Cooke, J. E., Eirich, R., Zhu, J., & Madigan, S. (2021). Global Prevalence of Depressive and Anxiety Symptoms in Children and Adolescents During COVID-19: A Meta-analysis. *JAMA Pediatrics*, *175*(11), 1142. https://doi.org/10.1001/jamapediatrics.2021.2482

Radcliffe, D., & Lam, A. (2018). Social Media in the Middle East: The Story of 2017. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3124077. Retrieved 4 October 2022, on https://damianradcliffe.files.wordpress.com/2018/02/social-media-in-the-middle-east-2017-1.pdf

Roazzi, A., Attili, G., Di Pentima, L., & Toni, A. (2016). Locus of control in maltreated children: The impact of attachment and cumulative trauma. *Psicologia: Reflexão e Crítica*, *29*(1), 8. https://doi.org/10.1186/s41155-016-0025-9

Saddik, B., Hussein, A., Albanna, A., Elbarazi, I., Al-Shujairi, A., Temsah, M.-H., Saheb Sharif-Askari, F., Stip, E., Hamid, Q., & Halwani, R. (2021). The psychological impact of the COVID-19 pandemic on adults and children in the United Arab Emirates: A nationwide cross-sectional study. *BMC Psychiatry*, *21*(1), 224. https://doi.org/10.1186/s12888-021-03213-2

Sahin, C. (2018). Social Media Addiction Scale—Student Form: The Reliability and Validity Study. *The Turkish Online Journal of Educational Technology*, *17*(1), 14. Retrieved on 4 October 2022, from http://www.tojet.net/articles/v17i1/17117.pdf

Saltzman, L. Y., Hansel, T. C., & Bordnick, P. S. (2020). Loneliness, isolation, and social support factors in post-COVID-19 mental health. *Psychological Trauma: Theory, Research, Practice, and Policy*, *12*(S1), S55–S57. https://doi.org/10.1037/tra0000703

Sewilam, A. M., Watson, A. M., Kassem, A. M., Clifton, S., McDonald, M. C., Lipski, R., Deshpande, S., Mansour, H., & Nimgaonkar, V. L. (2015). Suggested avenues to reduce the stigma of mental illness in the Middle East. *International Journal of Social Psychiatry*, *61*(2), 111–120. https://doi.org/10.1177/0020764014537234

Sofian, M., Velayati, A. A., Banifazl, M., Fotouhi, F., Sadat Larijani, M., Afzali, N., & Ramezani, A. (2021). SARS-CoV-2, a virus with many faces: A series of cases with prolonged persistence of COVID-19 symptoms. *Wiener Medizinische Wochenschrift*, *171*(1–2), 3–6. https://doi.org/10.1007/s10354-020-00793-8

Suicide Statistics and Facts. (n.d.). SAVE. Retrieved 4 October 2022, from https://save.org/about-suicide/suicide-statistics/

Taylor, R. J., Taylor, H. O., Nguyen, A. W., & Chatters, L. M. (2020). Social isolation from family and friends and mental health among African Americans and Black Caribbeans. *American Journal of Orthopsychiatry*, *90*(4), 468–478. https://doi.org/10.1037/ort0000448

Torres-Pagán, L., Terepka, A., Zhen-Duan, J., & Piombo, M. (2022). Multiphasic process model of interventions: Revisiting school-based mental health provider responses to student's mental health in the wake of COVID-19. *Psychological Services*, *19*(Suppl 2), 46–57. https://doi.org/10.1037/ser0000545

Tutgun-Ünal, A. (2020). Social Media Addiction of New Media and Journalism Students. *The Turkish Online Journal of Educational Technology*, *19*(2), 2. Retrieved 4 October 2022, from https://eric.ed.gov/?id=EJ1251117

Tutgun-Ünal, A., & Deniz, L. (2015). Development of the Social Media Addiction Scale. *AJIT-e Online Academic Journal of Information Technology*, 51–70. https://doi.org/10.5824/1309-1581.2015.4.004.x

United Arab Emirates: The latest coronavirus counts, charts and maps. (n.d.). Retrieved 4 October 2022, from https://graphics.reuters.com/world-coronavirus-tracker-and-maps/countries-and-territories/united-arab-emirates/

Vally, Z., & Alowais, A. (2021). Measuring anxiety related to COVID-19: Factor analysis and psychometric properties of the Arabic Coronavirus Anxiety Scale. *PLOS ONE*, *16*(11), e0260355. https://doi.org/10.1371/journal.pone.0260355

Vally, Z., & Alowais, A. (2022). Assessing Risk for Smartphone Addiction: Validation of an Arabic Version of the Smartphone Application-Based Addiction Scale. *International Journal of Mental Health and Addiction*, *20*(2), 691–703. https://doi.org/10.1007/s11469-020-00395-w

Vally, Z., & Helmy, M. (2021). The Association Between Depressive Symptomology, Psychological Burden Related to COVID-19, and Engagement in Physical Exercise Among College Students. *Frontiers in Psychiatry*, *12*, 741964. https://doi.org/10.3389/fpsyt.2021.741964

Vally, Z., & Helmy, M. (2022). The association between psychological burden related to COVID-19 and addictive social media use: Testing the mediational role of anxious affect. *PLOS ONE*, *17*(7), e0271332. https://doi.org/10.1371/journal.pone.0271332

van den Eijnden, R. J. J. M., Lemmens, J. S., & Valkenburg, P. M. (2016a). The Social Media Disorder Scale. *Computers in Human Behavior*, *61*, 478–487. https://doi.org/10.1016/j.chb.2016.03.038

van den Eijnden, R. J. J. M., Lemmens, J. S., & Valkenburg, P. M. (2016b). The Social Media Disorder Scale. *Computers in Human Behavior*, *61*, 478–487. https://doi.org/10.1016/j.chb.2016.03.038

Watson, J. C., Prosek, E. A., & Giordano, A. L. (2020). Investigating Psychometric Properties of Social Media Addiction Measures Among Adolescents. *Journal of Counseling & Development*, *98*(4), 458–466. https://doi.org/10.1002/jcad.12347

Werling, A. M., Walitza, S., Grünblatt, E., & Drechsler, R. (2021). Media use before, during and after COVID-19 lockdown according to parents in a clinically referred sample in child and adolescent psychiatry: Results of an online survey in Switzerland. *Comprehensive Psychiatry*, *109*, 152260. https://doi.org/10.1016/j.comppsych.2021.152260

WHO Coronavirus (COVID-19) Dashboard. (n.d.). Coronavirus Disease (COVID-19) Outbreak 2020. Retrieved 4 October 2022, from https://covid19.who.int

Zakzak, L., & Shibl, E. (2020). *The impact on covid-19 pandemic on uae children's mental health - policy analysis*. Mohamed Bin Rashid School of Government. Retrieved 4 October 2022, from https://mbrsgcdn.azureedge.net/cmsstorage/mbrsg/files/24/24bf4a6e-c84c-42e4-b770-2a39a9d39d6a.pdf

Appendix

Bergen Social Media Addiction Scale

Here are six statements to consider. For each, answer: (1) very rarely, (2) rarely, (3) sometimes, (4) often, or (5) very often.

1.	You spend a lot of time thinking about social media or planning how to use it.	1	2	3	4	5
2.	You feel an urge to use social media more and more.	1	2	3	4	5
3.	You use social media in order to forget about personal problems.	1	2	3	4	5
4.	You have tried to cut down on the use of social media without success.	1	2	3	4	5
5.	You become restless or troubled if you are prohibited from using social media.	1	2	3	4	5
6.	You use social media so much that it has had a negative impact on your job/studies.	1	2	3	4	5

Niemeyer Sense of Control Scale

Here are two statements to consider. Rate intensity for each question from (0) not at all - (4) very strong.

Do you experience important areas of your life (i.e., work, free-time, family, etc.) to be uncontrollable, meaning that you cannot, or barely can, influence them?	**0**	**1**	**2**	**3**	**4**
Do you experience these important areas of your life as unpredictable or inscrutable?	**0**	**1**	**2**	**3**	**4**

Depression Anxiety subscale (DAS-21)
By Black Dog Institute

Scoring the DASS

The scale to which each item belongs is indicated by the letters D (Depression), A (Anxiety) and S (Stress). For each scale (D, A & S) sum the scores for identified items. Because the DASS 21 is a short form version of the DASS (the Long Form has 42 items), the final score of each item groups (Depression, Anxiety and Stress) needs to be multiplied by two (x2).

Interpreting the DASS

Once multiplied by 2, each score can now be transferred to the DASS profile sheet, enabling comparisons to be made between the three scales and also giving percentile rankings and severity labels.

DASS Severity Ratings
(Don't forget to multiply summed scores by x 2)

Severity	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	34+

As previously mentioned, the DASS should not be used on its own to assess the presence or absence of Depression or Anxiety. High scores on the DASS would certainly alert the clinician to a high level of distress in the patient and this would need to be explored further within the interview process. Similarly, low scores on the DASS should not be a substitute for a comprehensive clinical interview.

High DASS scores which are not changing, may prompt the clinician to look for explanations and perhaps augment dosages or change medication. Here again, the DASS should be interpreted along side the clinical interview.

Changes in scores in one scale (EG: Depression), with consistently high and unchanging scores in another scale (Anxiety) may alert the clinician to pay particular attention to the presence of a co-existing anxiety disorder which may need specific treatment in its own right. Similarly, decreasing Depression scores alongside unchanging Stress scores may alert the clinician to the presence of some life event or problem, which may need to be addressed directly.

DASS 21 NAME _____ DATE _____

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you <u>over the past week</u>. There are no right or wrong answers. Do not spend too much time on any statement.
The rating scale is as follows:

0 Did not apply to me at all - NEVER
1 Applied to me to some degree, or some of the time - SOMETIMES
2 Applied to me to a considerable degree, or a good part of time - OFTEN
3 Applied to me very much, or most of the time - ALMOST ALWAYS

FOR OFFICE USE

		N	S	O	AA	D	A	S
1	I found it hard to wind down	0	1	2	3	▓	▓	
2	I was aware of dryness of my mouth	0	1	2	3	▓		▓
3	I couldn't seem to experience any positive feeling at all	0	1	2	3		▓	▓
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3	▓		▓
5	I found it difficult to work up the initiative to do things	0	1	2	3		▓	▓
6	I tended to over-react to situations	0	1	2	3	▓	▓	
7	I experienced trembling (eg, in the hands)	0	1	2	3	▓		▓
8	I felt that I was using a lot of nervous energy	0	1	2	3	▓	▓	
9	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3		▓	▓
10	I felt that I had nothing to look forward to	0	1	2	3		▓	▓
11	I found myself getting agitated	0	1	2	3	▓		▓
12	I found it difficult to relax	0	1	2	3	▓	▓	
13	I felt down-hearted and blue	0	1	2	3		▓	▓
14	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3	▓	▓	
15	I felt I was close to panic	0	1	2	3	▓		▓
16	I was unable to become enthusiastic about anything	0	1	2	3		▓	▓
17	I felt I wasn't worth much as a person	0	1	2	3		▓	▓
18	I felt that I was rather touchy	0	1	2	3	▓	▓	
19	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3	▓		▓
20	I felt scared without any good reason	0	1	2	3	▓		▓
21	I felt that life was meaningless	0	1	2	3		▓	▓
					TOTALS			

48

Mediation Model
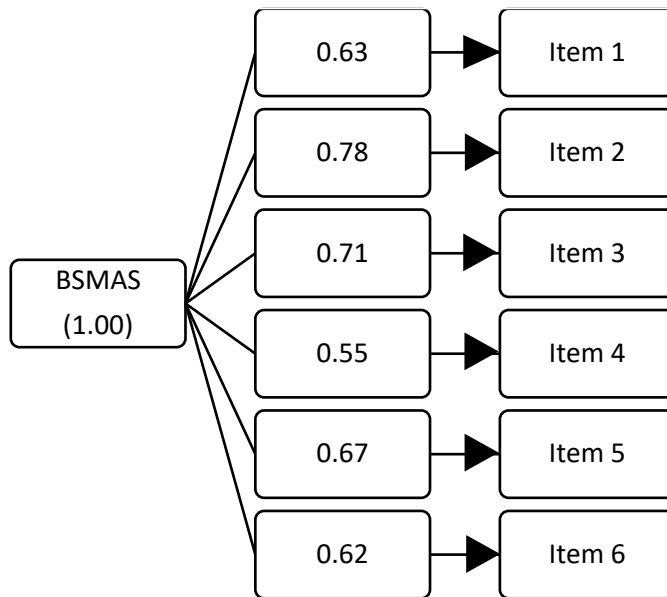
Appendix Figure 1: CFA Model 1

** BMAS (Arabic translated Bergen Social Media Addiction Scale), values: standardized beta coefficients, Item 1-6 (Items as measured within assessment measure).
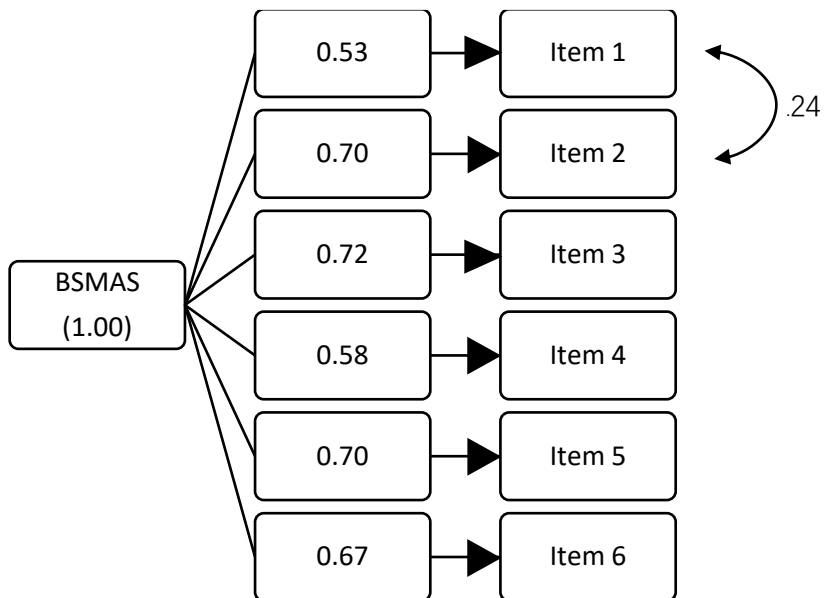
Appendix Figure 2: CFA Model 2

** BMAS (Arabic translated Bergen Social Media Addiction Scale), values: standardized beta coefficients, Item 1-6 (Items as measured within assessment measure).

Mediation Matrix (Exported from SPSS)

Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.0 *****************

      Written by Andrew F. Hayes, Ph.D.   www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****
Model : 4
  Y : MEDTOT
  X : DEPRTOT
  M : CONTOT

Sample
Size: 1322

****
OUTCOME VARIABLE:
 CONTOT

Model Summary
      R   R-sq   MSE   F   df1   df2   p
    .1130   .0128   1.8361   17.0775   1.0000 1320.0000   .0000

Model
          coeff   se   t   p   LLCI   ULCI
constant 3.9411   .0788   50.0313   .0000   3.7866   4.0956
DEPRTOT   -.0397   .0096   -4.1325   .0000   -.0585   -.0208

****
OUTCOME VARIABLE:
 MEDTOT

Model Summary
      R   R-sq   MSE   F   df1   df2   p
    .4691   .2201 20.1131 186.0817   2.0000 1319.0000   .0000

Model
          coeff   se   t   p   LLCI   ULCI
constant 6.5262   .4437   14.7086   .0000   5.6558   7.3966
DEPRTOT   .6171   .0320   19.2893   .0000   .5544   .6799
CONTOT   .2253   .0911   2.4730   .0135   .0466   .4040

************************ TOTAL EFFECT MODEL ************************
OUTCOME VARIABLE:
 MEDTOT

Model Summary
      R   R-sq   MSE   F   df1   df2   p
    .4652   .2164 20.1911 364.6343   1.0000 1320.0000   .0000

Model
          coeff   se   t   p   LLCI   ULCI
constant 7.4141   .2612   28.3825   .0000   6.9016   7.9265
DEPRTOT   .6082   .0319   19.0954   .0000   .5457   .6707

************* TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *************

Total effect of X on Y
    Effect   se   t   p   LLCI   ULCI
    .6082   .0319   19.0954   .0000   .5457   .6707

Direct effect of X on Y

50

```
        Effect      se       t       p     LLCI     ULCI
         .6171    .0320  19.2893   .0000    .5544    .6799


Indirect effect(s) of X on Y:
          Effect   BootSE  BootLLCI  BootULCI
CONTOT    -.0089    .0045    -.0189    -.0012


********************* ANALYSIS NOTES AND ERRORS **********************


Level of confidence for all confidence intervals in output:
  95.0000


Number of bootstrap samples for percentile bootstrap confidence intervals:
  10000


------ END MATRIX -----
```

Inter-item Correlation Matrix

Note. Alpha if item deleted, and corrected item-total correlations

BSMAS Items	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Alpha if item deleted	Corrected Item-total correlations	Skewness	Kurtosis
Item 1	1						.777	.493	.002	-.910
Item 2	.557	1					.743	.639	-.207	-.723
Item 3	.372	.494	1				.755	.584	-.177	-.911
Item 4	.239	.371	.336	1			.780	.477	-.028	-.814
Item 5	.351	.422	.463	.357	1		.760	.566	.120	-.930
Item 6	.269	.391	.407	.441	.427	1	.767	.536	-.030	-.889
Mean	1.97	2.19	2.09	1.87	1.76	1.90				
SD	1.24	1.18	1.23	1.13	1.23	1.17				

UAE UNIVERSITY MASTER THESIS NO. 2022:75

This study investigates the psychometric properties of an Arabic translated version of the Bergen Social Media Addiction Scale (BSMAS) to assess for addictive social media use. The study further examines the association between depression, social media addiction, and an individual's sense of control. Specifically, the potential mediational role of control in the association between depression and social media addiction.

Louis Fourie received his Master of Science in Clinical Psychology from the Department of Clinical Psychology, College of Medicine & Health Sciences at UAE University, UAE. He received his BSc in Counselling Psychology from Nelson Mandela University, South Africa.

www.uaeu.ac.ae