

Social media as a tool to promote mental health among adolescents: A critical review

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kept me going this entire time. Beyond this, I want to sincerely thank you for making this possible financially and mentally. We went through a few rough patches, but I know nothing is impossible when I have the two of you behind me. You might be far, but you are always near in my heart. I would not have been able to complete this study without the two of you.

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PERMISSION LETTER FROM SUPERVISOR

Permission is hereby granted for the submission by Jhené Botha of the following mini-dissertation for examination purposes towards obtaining a master's degree in Research Psychology at the North-West University: *Social media as a tool to promote mental health among adolescents: A critical review*. The article presented in Section 2 of this mini-dissertation may also be submitted to the *Journal of Adolescent Health* for possible publication.

The supervisor's role throughout this research process was as follows: Prof. Esmé van Rensburg supervised the research inquiry in totality while also acting as the second reviewer. Her involvement required her to monitor and co-analyse the research process from the beginning and throughout to ensure that this mini-dissertation adhered to quality and rigour standards before submitting it to scientific and ethical committees and for final submission for examination.

25 November 2022

Prof. Esmé van Rensburg

Date

Supervisor

DECLARATION BY AUTHOR

I, Miss Jhené Botha, hereby declare that this mini-dissertation study, *Social media as a tool to promote mental health among adolescents: A critical review*, is entirely my work. I adhered to the referencing and editorial style as established and provided by the Publication Manual (7th edition) of the American Psychological Association [APA] and the Publication Manual (10th edition) of the American Medical Association [AMA] referencing style (only Section 2) to ensure that all sources that have been used in this mini-dissertation are properly referenced and acknowledged to the best of my abilities. This work has not been submitted for examination prior to this submission and therefore serves in the fulfilment of completing a master's degree in Research Psychology at the North-West University (See Addendum E).

The co-author, Prof. Esmé van Rensburg (supervisor), agrees that this mini-dissertation accurately reflects the research regarding the subject matter. This document has been submitted to Turn-It-In to determine, establish, and provide the researchers of the North-West University with a report stating any similarities that were detected in the mini-dissertation concerning national and international databases, where it was determined that the mini-dissertation fell within the norms of acceptable similarities (12%).

25 November 2022

Jhené Botha

Date

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ABBREVIATIONS

ADHD	Attention Deficit Hyperactivity Disorder
AMA	American Medical Association
APA	American Psychological Association
COMPRES	Community Psychosocial Research
EDS	Ebscohost Discovery Service
HPCSA	Health Professions Council of South Africa
HREC	Health Research Ethics Committee
ICT	Internet Communication Technologies
SAHM	Society for Adolescent Health and Medicine
SALSA	Search, Appraisal, Synthesis, and Analysis
SNS	Social Networking Sites
TRREE	Training and Resources in Research Ethics Evaluation
WHO	World Health Organization
WWW	World Wide Web

SUMMARY

Social media as a tool to promote mental health among adolescents: A critical review

Keywords: social media, mental health, adolescents, promote, well-being, critical review.

Social media has recently become a prominent feature of adolescents' lives, and this age group is becoming increasingly aware and, in some instances, reliant on the information shared across several social networking sites (SNS) daily. SNS are platforms that allow individuals, more specifically adolescents in this instance, to share and receive different types of information resulting in a nearly constant engagement on several SNS. Adolescence is marked by challenging biological, social, psychological, and environmental changes over a short time. Since adolescents are growing up in increasingly challenging environments, it becomes imperative to explore the effect that social media can have on their mental health. Although many studies perceive social media and its use as a threat to adolescent mental health, it could be argued that it could be used to promote mental health among this age group, given the right set of circumstances. This sentiment is echoed in that this is an avenue of inquiry that has not received much attention. The negative impacts of social media on adolescent mental health are often wildly overstated, while the possible benefits are often overlooked or not considered.

A critical review was conducted to review the literature on this topic over the past ten years to provide a comprehensive account of how social media can be used to promote mental health among adolescents. Conducting a critical review study of this nature resulted in identifying gaps in existing scientific research regarding this topic. The selected sources of information allowed me to identify several ways social media could potentially be used along with the existing body of scientific research to promote mental health among adolescents. Various themes and subthemes emerged from this inquiry that allowed me to answer the research question posed at the beginning of this study: What conclusions can be drawn from

the literature on using social media to promote mental health among adolescents? More specifically: How can social media be used to promote mental health among adolescents?

The research study followed a qualitative critical review approach to appraise and synthesise literature to enable me to identify possible gaps in research that future studies could explore. Data for this critical review study were obtained from peer-reviewed studies published in English. After conducting the literature search and appraisal process, seven studies were included for further analysis and synthesis.

Thematic analysis was used as the method of data analysis, and four main themes with several subthemes were identified. The four main themes included: enhancing communication and social connection (broadening social networks and increased social support); resources for educating the self and others; enriching adolescent development (social media as a space for identifying development and experimentation, self-perception articulation, and goal attainment and personal development); and benefits related to adolescent well-being (method of distraction and relaxation, reducing stress and enhancing coping, promoting help-seeking behaviour, and positive affect enhancement).

This research provides a comprehensive synthesis of the data included for analysis and synthesis of how social media can be used to promote mental health among adolescents. Therefore, the findings of this critical review study can be used as a foundation to inform future studies regarding the beneficial properties of social media on mental health and the promotion thereof among the adolescent population nationally and internationally. In addition, it is hoped that this research study will create awareness among clinicians, including those in the mental health profession, about how social media could benefit mental health promotion. Lastly, more research related to this research topic is needed in the South African context.

PREFACE

This mini-dissertation adheres to predetermined rules and regulations set out by the A Rules of the North-West University for utilising the article model. Sections 1 and 3 of this mini-dissertation adhere to the guidelines established and provided by the 7th edition of the *American Psychological Association* (APA). In contrast, Section 2 adheres to the author guidelines provided by the journal that I identified. Regarding the latter statement, this mini-dissertation aims to potentially submit the article as presented in Section 2 for publication in the *Journal of Adolescent Health*. This accredited and peer-reviewed journal publishes work to improve adolescent and young adult health and well-being. As indicated in the table of contents, the entire mini-dissertation has been constructed to follow chronological page numbers – Section 1 starts on page 1 and continues chronologically until the attached Addendums (A to E).

Dr AD Kotze (SATI No.:1001073) edited this mini-dissertation. (See Addendum C for the letter of proof of language editing). I obtained scientific approval from the committee for Community Psychosocial Research (COMPRES) (See Addendum A) and ethical approval from the Health Research Ethics Committee (HREC) (NWU-00284-21-A1) of the Faculty of Health Sciences of the North-West University (See Addendum B). Miss Jhené Botha purposively and systematically generated the necessary data to fulfil the requirements for a master's degree in Research Psychology at the North-West University. Furthermore, this mini-dissertation was submitted to Turn-It-In (See Addendum D) to provide the North-West University with a report stating any similarities detected in this mini-dissertation, where it was determined that the mini-dissertation fell within the norms of acceptable similarities (12%). Lastly, permission to submit and a solemn declaration by Miss Jhené Botha was provided (See Addendum E).

STRUCTURE OF RESEARCH MINI-DISSERTATION

This mini-dissertation includes three distinct sections. **Section 1** includes an all-encompassing, in-depth literature overview that aims to orientate and inform the reader of all relevant information regarding the structure and components of this mini-dissertation (pages 1-49). **Section 2** is a presentation of the article written following the requirements and guidelines of the identified journal and includes the following: methods, results, themes obtained from the review, and lastly, the discussion (pages 50-85). **Section 3**, the final section of this mini-dissertation, includes a critical and personal reflection that meticulously documents what I experienced throughout this entire research process (pages 86-94).

Addendum A (COMPRES Scientific Approval Letter) and **Addendum B** (HREC Ethical Approval Letter) can be found on pages 95 and 97, respectively. **Addendum C** (Language Editing Report) can be found on page 99, and **Addendum D** (Turn-It-In Report) on page 100. Lastly, **Addendum E** (Solemn Declaration and Permission to Submit) can be found on page 101.

SECTION 1: INTRODUCTION (ORIENTATION AND PROBLEM STATEMENT)

Introduction

With a global concern about youth mental health, this study will attempt to address whether social media could potentially be used to promote mental health among adolescents. The global adolescent population is considered the world's top user of this form of communication. Although the use of social media is often frowned upon when considering the use thereof in a mental health context, evidence also points to the possibility of using this form of communication as a possible means to promote mental health across this age group (Allen et al., 2014; Berryman et al., 2018; Fergie et al., 2016; Halsall et al., 2019; Naslund et al., 2016; O'Reilly et al., 2018). Therefore, as presented in Section 1, the in-depth literature overview will put forward essential components of this research study to provide an extensive understanding of the detailed research inquiry. The essential components of this critical review study will therefore include social media, adolescent mental health, and how social media can be used as a tool to promote mental health among adolescents. These components will be discussed under various headings in this section: conceptualising social media, social media use among adolescents, social media and adolescent mental health and development, and social media's role in mental health promotion. The problem statement, aim, method of investigation, ethics, and rigour will also be presented in this section.

Problem Statement

Adolescents of today are growing up in increasingly challenging environments, and youth mental health has become a significant public health concern that needs to be researched and evaluated more extensively since the effects thereof could result in significant economic and societal burdens globally (Kelly et al., 2018; Patton & Borschmann, 2017). Adolescence is undoubtedly a critical developmental stage marked by rapid and incessant change: hormonal change, physical change, social change, and emotional change, to name

only a few (Holmes et al., 2016; Louw & Louw, 2014; Martorell et al., 2014). Adolescents are also known to desire greater autonomy, conform with their peers, and explore their sexual identities during this developmental phase (Farley, 2020). These changes are also associated with an increased vulnerability for the development of mental health conditions, therefore indicating that this age group is at higher risk of experiencing mental health issues and their associated co-morbidities from a very young age and throughout their lives (Kelly et al., 2018; Kessler et al., 2007; Wiens et al., 2020).

The gravity of addressing this public health concern was already highlighted in a study conducted by Kessler et al. (2007), where it was reported that approximately half of mental illnesses begin around 14 years of age, with some personality and anxiety disorders beginning as young as 11 years old. Some of the most prevalent mental health conditions among adolescents include emotional disorders such as depression and anxiety, behavioural disorders such as conduct disorder and attention deficit hyperactivity disorder (ADHD) and eating disorders such as anorexia and bulimia nervosa (WHO, 2021). In addition to these mental health conditions, it has been found that suicide, self-harm, and risk-taking behaviours also play an essential role in understanding adolescent mental health (WHO, 2021). The possible onset of mental health conditions during this developmental phase often results in adolescents being subjected to social exclusion, stigmatisation, discrimination, educational challenges, risky behaviours, ill physical health, and violation of their human rights (WHO, 2021). Adolescents, especially those of the 21st century, are compounded with traditional and contemporary threats to mental health (Farley, 2020; Walsh et al., 2020). Traditional threats to adolescent mental health include poor living conditions that could be attributed to low socioeconomic status, bullying, early sexual experimentation, and substance abuse (Arseneault, 2017; Walsh et al., 2020). On top of these traditional risk factors, adolescents now experience additional, more contemporary factors, such as reduced social support from

relatives and peers, and factors often associated with social media use, such as cyberbullying (Arseneault, 2017; Walsh et al., 2020).

Digital technology, including social media, has become an increasingly prominent feature in adolescents' everyday lives; however, under the right circumstances, it can be utilised to promote mental health (Nesi, 2020; WHO, 2021). However, evidence also suggests that adolescents' social media use could result in, and possibly fuel, the onset and burden of developing mental health issues (Liu et al., 2015; Verduyn et al., 2017). Mental health conditions and co-morbidities reported to develop because of social media use include depression, anxiety, psychological distress, sleep deprivation, obesity, and social isolation, to name a few (Keles et al., 2019; Paat & Markham, 2020). Nonetheless, the primary purpose of this research study is to explore whether social media can promote or be beneficial to mental health among adolescents meaning that the adverse effects thereof will receive far less consideration. It is, therefore, imperative to equip adolescents with the necessary knowledge and skills about social media use so that they can use it as a tool to promote their mental health, improve their social and emotional skills, and meaningfully connect with their communities (Naslund et al., 2016; O'Reilly, 2020). Although using social media as a tool to promote mental health among adolescents appears to be feasible at face value, it has come to light that the limited amount of research and inquiry on the finer details, such as how to use social media to promote mental health, poses a challenge thus making it difficult to reach a consensus. As a result, there has been an increasing demand for the need to examine and further explore whether social media could be used as a tool to promote mental health, especially among adolescents who are regarded as the top users of various social networking sites (SNS) (Halsall et al., 2019; Moorhead et al., 2013; Naslund et al., 2016; O'Reilly, 2020).

On this account, a critical review study was considered the most suitable method of inquiry for this research study. The primary outcome of this critical review study must allow me to explore and critically evaluate an existing body of work (Grant & Booth, 2009). The evaluation process will therefore allow me to analyse, synthesise, and ultimately interpret existing data suited to bring about a solution, contribution, or new conceptual innovations about the topic (De Klerk & Pretorius, 2019; Grant & Booth, 2009). Therefore, the following overarching research question will guide the proposed study: What conclusions can be drawn from the literature on using social media to promote adolescent mental health? More specifically: Can social media be used to promote mental health among adolescents?

Background and Orientation

The following section conceptualises social media by providing information about its history and progressive development and a broad definition, its role in society, and its impact on our daily lives. After that, an in-depth account of social media and adolescents will explore adolescence as a developmental stage, the prevalence of social media usage among this age population, and the role social media plays in adolescent mental health and development. Lastly, social media's role in mental health promotion will be put forth.

Conceptualising Social Media

The World Wide Web (WWW), invented in the late 1980s, laid down the foundations of networked communication that we know as social media today (Latha et al., 2020; Ramezankhani et al., 2019; Van Dijck, 2013). Shortly after the turn of the millennium, media technology and the use thereof underwent a significant maturation phase, and Internet Communication Technologies (ICT) progressively became part of our day-to-day lives (Jane et al., 2018; Latha et al., 2019; Van Dijck, 2013). This maturation phase was primarily fuelled by the continuous exponential expansion of technology and its various uses and the global increase in the availability of internet access (Jane et al., 2018; Kaplan & Haenlein,

2010). By 2015 every world region, including Africa, had experienced some form of growth in internet usage, and it is estimated that approximately 59.5% of the global population, equating to roughly 4.66 billion individuals, are active users of the internet (Jane et al., 2018; Statista, 2021). In addition, it is estimated that social media has approximately 4.2 billion active users, of which 4.15 billion users access social media via mobile devices, which naturally allows them to access SNS from almost anywhere (Statista, 2021). This radical growth in internet usage resulted in the emergence of some of the first SNS we know, such as Facebook, which launched in 2004 (Kaplan & Haenlein, 2010; Latha et al., 2020).

Social media is often described by merely referring to applications or websites such as Facebook, Twitter, Instagram, and the likes, but it is important to note that many different definitions of what exactly can be accounted for as social media exist across various disciplines (Howard & Parks, 2012; Latha et al., 2020). The core of the multitude of available definitions remains similar in that they claim that social media makes use of various forms of digital technology to generate content that is explicitly designed to allow some form of social interaction among users (Carr & Hayes, 2015, Howard & Parks, 2012; Kaplan & Haenlein, 2010). Social media can therefore be broadly defined as internet-based channels that facilitate a mode of mass-personal communication where users can interact with one another in broad or narrow audiences, ultimately allowing me to derive value from these interactions and user-generated content (Carr & Hayes, 2015; Latha et al., 2020; Ramezankhani et al., 2019; Ventola, 2014). Given this definition, social media can be conceptualised as a tool that operates via the internet to form an interconnected infrastructure that makes communication among individuals possible, and this form of communication is often referred to as social networking (Carr & Hayes, 2015; Ramezankhani et al., 2019). Within this vast infrastructure, we find various modes of communication, with the WWW and stand-alone applications being the most common (Carr & Hayes, 2015). The WWW requires users to access hyperlinks

through browsers, whereas stand-alone applications do not use the WWW to function, and users are often required to download an application to access a specific function (Carr & Hayes, 2015). This infrastructure is constantly changing, and users have smartphones and other mobile devices, such as tablets, to gain access to social media by downloading applications, thus allowing them to access social networks around the clock (Carr & Hayes, 2015; Latha et al., 2018).

It can therefore be argued that social media platforms and the act of social networking have become an integral part of society and have undoubtedly altered the nature of communication by blurring the lines of traditional social connections and reconstructing how relationships are formed (Carr & Hayes, 2015; Carviou, 2014; Van Dijck, 2013). According to Feenberg (cited by Van Dijck, 2013), it is believed that these platforms are dynamic rather than static, as they can constantly be altered in response to the needs of their users or the objectives of their owners. For this reason, social media is emerging as a powerful tool that can create awareness and educate people about various concepts relevant to our everyday social lives (Latha et al., 2020).

Since social media has such an immense impact on our daily lives, it is essential to note that clear distinctions can be made between various categories based on their specific functions and intended purposes (Ramesankhani et al., 2019). These categories of function and purpose include but are not limited to social networking, professional networking, content creation, media sharing, information aggregations, and virtual gaming environments (Ramesankhani et al., 2019; Ventola, 2014). However, since the purpose of this study is to determine if social media can be used as a tool to promote mental health among adolescents, only SNS and their role in adolescent's lives will be considered since the primary aim of these sites is to promote interpersonal contact among users (Van Dijck, 2013). Some of the most popular and widely used SNS include Facebook, Instagram, YouTube, and WhatsApp,

with Facebook having the most active monthly users estimated at 2.89 billion (Arigo et al., 2018; Ramesankhani et al., 2019; Statista, 2022). These SNS allow users to connect, interact, and engage in online content via websites or applications where they can view and engage in information sharing in both traditional and interactive formats (Arigo et al., 2018; Breland et al., 2017; Naslund et al., 2019; Ramezankhani et al., 2019; Van Dijck, 2013). Engaging on these mass-personal communication platforms has made it increasingly more accessible for users with similar interests or concerns to participate in formal and informal interactions (Arigo et al., 2018; O'Reilly, 2020; Ramezankhani et al., 2019). Over the past years, we have seen how social media and various SNS have allowed users to actively share personal messages, visual content such as photos, ideas, and advice that has been of assistance to others, and adolescents seem to be at the forefront (Berryman et al., 2018; Carr & Hayes, 2015; Halsall et al., 2019; Naslund et al., 2016; O'Reilly, 2020; Ramezankhani et al., 2019).

Social Media and Adolescents

This section will consider adolescence as a developmental stage, the prevalence of social media usage among adolescents, and the use of social media in adolescent mental health and development.

Adolescence as Developmental Stage

According to Sawyer et al. (2018), the process of defining definitive age groups has become somewhat arbitrary, especially in the case of adolescence, where one needs to consider how developmental patterns differ across time and place. Global economic development, for example, has played a significant role in the inability to pinpoint an exact age range for this developmental stage, and for this reason, it is recommended that adolescence be defined on a continuum (Benn, 2017; Patton et al., 2016). Therefore, for this study and congruent with the traditional psychological perspective, it was decided to minimise challenges associated with clearly identifying an exact age range for this

developmental stage to regard adolescents as individuals between the ages of 12–18 years (Jackson & Goossens, 2006; Jaworska & MacQueen, 2015; Martorell et al. 2014; Sawyer et al., 2012; Shaffer & Kipp, 2013; WHO, 2019). Adolescence is considered a crucial period of biological, psychological, and social change for individuals because, during this developmental stage of their lives, they are prompted to develop a coherent sense of autonomy and identity (Erikson, 1968). Moreover, identity development goes hand in hand with various life events that have been found to play an essential role in developmental outcomes, such as mental health, which is especially applicable in the context of this research study (De Moor et al., 2019; Laceulle et al., 2014).

The core objective of the adolescent developmental phase remains developing a sense of autonomy and identity to prepare individuals for adulthood. However, from a developmental perspective, it has been argued that many different developmental events can occur between ages 12–19. For this reason, developmental psychologists, such as Erikson (1968), divided adolescence into three sub-phases. Dividing adolescence into sub-phases served as guidelines since it is difficult to demarcate and define the various characteristics associated with this developmental phase (Martorell et al., 2014; Worthen, 2012). The three sub-phases include early adolescence occurring between the ages of 12–14 years; middle adolescence occurring between the ages of 15–16 years; and late adolescence occurring between the ages of 17–19 years (Erikson, 1968; Jackson & Goossens, 2006; Martorell et al. 2014; Shaffer & Kipp, 2013; Worthen, 2012).

The onset of early adolescence begins to mark the end of the “industry versus inferiority” psychosocial developmental phase synonymous with middle childhood (Erikson, 1968). Early adolescence is arguably the most challenging of the three sub-phases since it is hallmarked by the onset of rapid physical and sexual maturation (Berger, 2018; Jackson & Goossens, 2006; Martorell et al., 2014; Shaffer & Kipp, 2013). Cognitive functioning during

this sub-phase enters the formal operational stage, where adolescents develop the capacity to think abstractly and scientifically (Jackson & Goossens, 2006; Martorell et al., 2014; Shaffer & Kipp, 2013). Social role development during this phase is geared towards accomplishment, where adolescents need to learn to work with others and get along (Jackson & Goossens, 2006; Louw & Louw, 2014; Martorell et al., 2014; Shaffer & Kipp, 2013). It is also during this sub-phase where emotional conflict with parents and other authoritative figures escalates, thus shifting emphasis towards peer involvement and engagement in unisex and heterosexual group contact (Jackson & Goossens, 2006; Martorell et al., 2014; Shaffer & Kipp, 2013). These changes, and many others, make adolescents in this sub-phase particularly susceptible to mood swings, emotional turmoil, and reduced impulse control (Berger, 2018; Jackson & Goossens, 2006; Martorell et al., 2014; Shaffer & Kipp, 2013).

Middle adolescence is characterised by continual physical, sexual, social, and cognitive maturation (Jackson & Goossens, 2006; Martorell et al., 2014; Shaffer & Kipp, 2013). During this sub-phase, adolescents become more experienced and mature in their relationships with others, resulting in a substantial decline in parental relations and an intense incline in social relations (Berger, 2018). The incline in social relations coincides with Erikson's (1968) "identity versus. identity confusion" stage, where adolescents are confronted with the task of having to develop a lasting and integrated sense of themselves (Jackson & Goossens, 2006; Martorell et al. 2014; Shaffer & Kipp, 2013). This task requires adolescents to put their previous experience into action when they attempt to form relationships with their peers to gain acceptance into their peer groups and society at large (Berger, 2018; Gilmore & Meersand, 2014; Jackson & Goossens, 2006; Martorell et al., 2014; Shaffer & Kipp, 2013). A reduced ability to control their impulses increases risky behaviours in this sub-phase and increases self-consciousness, self-focusing, planning, and

decision-making abilities (Gilmore & Meersand, 2014; Jackson & Goossens, 2006; Martorell et al., 2014; Shaffer & Kipp, 2013).

Late adolescence is primarily marked by the cessation of physical development and growth, and during this sub-phase, adolescents begin to look more like adult versions of themselves (Jackson & Goossens, 2006; Martorell et al., 2014; Rathus, 2016; Shaffer & Kipp, 2013). During this sub-phase of development, adolescents ought to have greater impulse control and a better sense of engaging with risks and rewards that may arise (Jackson & Goossens, 2006; Martorell et al., 2014; Shaffer & Kipp, 2013). The next stage in their psychosocial development considers Erikson's (1968) stage, known as "intimacy versus isolation". During this time, individuals in the late adolescent sub-phase begin to consider more serious and intimate relationships primarily focused on the future, which automatically includes their hopes and ideals (Jackson & Goossens, 2006; Martorell et al., 2014; Shaffer & Kipp, 2013). This focus on the future allows them to gain autonomy over societal demands and their identities (Gilmore & Meersand, 2014; Jackson & Goossens, 2006; Martorell et al., 2014; Shaffer & Kipp, 2013). The late sub-phase of adolescence, therefore, allows individuals to gain mastery over themselves in many aspects while allowing them to cope more efficiently with stressors that are presented to them (Gilmore & Meersand, 2014; Jackson & Goossens, 2006; Martorell et al., 2014; Rathus, 2016; Shaffer & Kipp, 2013). This psychosocial developmental phase, which differs from one individual to the next, stretches far beyond the late adolescent developmental stage into middle adulthood, thus suggesting that dealing with this phase plays a significant role in the greater scheme of things (Gilmore & Meersand, 2014; Martorell et al., 2014).

The Prevalence of Social Media Use Among Adolescents

As with the global population, using social media as a form of communication has become an integrated part of adolescents' daily lives, and this integration has resulted in an

inevitable increase in the use of the internet and social media platforms among this age group in recent years (Anderson & Jiang, 2018; Bor et al., 2014; Kelly et al., 2018; Reid & Weigle, 2014). Many different sources of information report on social media usage amongst adolescents, and although the reports vary in their findings, the main premise across these sources is that there is an increase in social media usage among adolescents globally (Anderson & Jiang, 2018; Odgers & Jensen, 2020; O'Reilly, 2020; Plaisime et al., 2020; Ramezankhani et al., 2019; Reid & Weigle, 2014). In a survey conducted by the Pew Research Center in 2018, it was found that adolescents are some of the most active social media users globally (Anderson & Jiang, 2018; Odgers & Jensen, 2020). Although this percentage varies across studies, it is estimated that approximately 92-95% of adolescents in first-world countries such as the United States of America, the United Kingdom, Canada, and Japan, to mention a few, either own or have access to a device that allows them to access and utilise the internet and social media and SNS (Anderson & Jiang, 2018; Odgers & Jensen, 2020; Plaisime et al., 2020). Another study found that an estimated 76% of adolescents in the United States of America use social media, of which approximately 41% have user accounts on more than one social networking site (Reid & Weigle, 2014).

Moreover, it was estimated that adolescents with access to social media spend as much as 21 hours per week engaging on various SNS such as Instagram, Facebook, Twitter, and YouTube (O'Reilly, 2020; Ramezankhani et al., 2019). In a more recent study conducted by Plaisime et al. (2020), it was reported that 53.8% of a group of 152 adolescents made use of Instagram, while 32.0% used Twitter, and 27.4% used Facebook, totalling an approximated 94.6% usage rate. Although the latter study considered a relatively small sample size, it still emphasises the high frequency of social media use among this age population (Plaisime et al., 2020). When considering the frequency of use, it is estimated that more than half of adolescents who use social media log onto their preferred SNS at least once

a day, while 22% are believed to log in more than ten times (Latha et al., 2020). It is important to note that the percentage of use for different SNS varies according to user preferences that naturally differ globally and nationally.

Very limited research on adolescent social media use in the South African context could be found. However, in a study conducted by Ephraim (2013), it was reported that African youth, as with other global youth communities, have embraced social media technologies, and most SNS users in South Africa were found to be adolescents and young adults. South Africa is at the forefront of social networking on the African continent with an estimated 16 million Facebook users, 8 million Twitter users, and 3.8 million Instagram users, and growing, reported in 2018 (Ephraim, 2013; World Wide Worx, 2018). In a study conducted by Basson et al. (2009), it was found that 27.1% of South African adolescents spent approximately thirty minutes to one hour on an SNS daily. A further 22.3% reported spending between one and two hours on an SNS, and 16.9% reported spending more than two hours per day on SNS (Basson et al., 2009). As with global trends, South African adolescents are reported to use SNS as an interpersonal communication tool to meet new people and obtain information mostly (Basson et al., 2009; Ephraim, 2013). From the availability of resources and the year this research was conducted, it becomes clear that further research on this topic should be warranted in the South African context.

These reported high social media usage rates have resulted in nearly constant engagement in online activities internationally and nationally. Despite this strong social media presence among adolescents, it has been found that there is no clear consensus on the impact this behaviour can have on people their age, an area of inquiry that warrants further investigation (Anderson & Jiang, 2018).

The Use of Social Media in Adolescent Mental Health and Development

The World Health Organization (WHO, 2018, para. 2) defines mental health as “a state of well-being in which the individual realizes his or her abilities, can cope with the normal stressors of life, can work productively and fruitfully, and can make a contribution to his or her community”. Mental health plays a key role in every aspect of our daily lives, and it is present in each phase of our development, from infancy to old age (Latha et al., 2020). Strikingly, mental health is regarded as one of the greatest contributors to the global burden of disease, with an economic cost that is expected to double by the year 2030 to a total of US \$5.0 trillion (Conway & O’Connor, 2016; Ferrari et al., 2014; Latha et al., 2020). Whilst the burden of mental illness may last a lifetime, the onset of most mental health conditions is during adolescence and young adulthood, with almost half of lifetime onset occurring by the age of 14 (Kessler et al., 2005; Wiens et al., 2020). Moreover, between 10 and 20% of the global adolescent population has been found to experience a mental illness (Kieling et al., 2011; O’Reilly et al., 2018). For this and several other reasons, there has been an increasing focus on adolescent health promotion with an emphasis on the fact that these years are of cardinal importance in the process of developing and maintaining positive health behaviours throughout life (Kessler et al., 2005; Patalay & Gage, 2019; Patton et al., 2016).

During the adolescent developmental stage, individuals go through a continuous process of establishing behaviours and making choices that affect their health and well-being in the present and the future (Carli et al., 2014). Adolescence is characterised as a critical period for mental health disorder onset, and research has shown that the added pressures of the 21st century have presented adolescents with several social changes that have resulted in a rise in the prevalence of mental health problems among this population group (Bor et al., 2014; Kessler et al., 2005; Patalay & Gage, 2019). This rising prevalence could be attributed to various social factors that have recently come to be, such as rapid cultural changes that

result in an increase in the number of risk factors among this population group who are also marked by a strong reluctance to seek help in a professional capacity (Ciarrochi et al., 2002; Patton et al., 2016; Rickwood et al., 2007). Moreover, it has been found that underlying personal, social, and academic stressors also impose additional strain on adolescents (Acharya et al., 2018; Wiens et al., 2020). The inability to regulate such added factors could result in unhealthy behaviours such as alcohol and substance abuse, suicide ideation, and social isolation that could have dire consequences for adolescents' mental health (Acharya et al., 2018; Wiens et al., 2020). Other notable societal changes that have had an effect on adolescent mental health include economic factors such as worsening income inequality, family environment factors such as family conflict, and, most significantly, changes in how much time is spent on social media, the internet, and digital screens (Bor et al. 2014).

Adolescents across the globe, including those living in low-, middle-, and high-income countries, have been at the forefront of experiencing how social media became integral to their education, culture, and social lives, and it goes without question that most of the adolescents' development is being influenced by their digital devices while engaging on SNS (Latha et al., 2020; O'Reilly et al., 2018; Van Dijk, 2013). Since this seems to be the new norm, it becomes important to understand how social media can contribute to adolescent development. Social media has been suggested to play a role in adolescent identity development, self-esteem enhancement, and the improvement of self-expression (Ramezankhani et al., 2019). SNS allow adolescents and young adults to significantly define their sense of identity by allowing them to explore how they think and feel about themselves and other significant role players in their lives, such as their family and friends, ultimately allowing them to cement their preferred norms and behavioural attributions in society (Blomfield Neira & Barber, 2014; Villanti et al., 2017; Wright, 2016). Moreover, online interactions on SNS and other internet-based social media applications further contribute to

identifying formation through a process of reflexivity that enables adolescents to see not only reflect on how they see themselves but also how others see them (Ramezankhani et al., 2019; Villanti et al., 2017; Wright, 2016). SNS is also reported to enhance adolescents' self-esteem by contributing to their perceptions of their physical appearance, close relationships, and romantic appeal, especially when receiving positive feedback (Ramezankhani et al., 2019; Valkenburg et al., 2006). Another skill adolescents can develop while engaging in social media is improving their self-expression (Ramezankhani et al., 2019). Social media offers adolescents an opportunity to express themselves as freely and as accurately as they wish, thus presenting them with a multitude of exciting opportunities to develop positive perceptions of themselves while leaving very little room for others to disapprove or reject their acts of self-expression (Orehek & Human, 2016; Ramezankhani et al., 2019).

Findings on social media's impact on mental health have been mixed and determining whether social media can be responsible for mental health challenges among adolescents remains an area of dispute. However, it should be noted that it has been reported that adolescents believe that social media can indeed have a positive impact on their mental health (Anderson & Jiang, 2018; Berryman et al., 2018; Fergie et al., 2016; Moorhead et al., 2013; O'Reilly et al., 2018). Some of these perceived positive impacts include but are not limited to, the notion that social media may possibly help adolescents feel less lonely while also potentially creating a space for them to express their emotions and opinions by connecting with individuals who feel the same way, ultimately encouraging them to seek help (Anderson & Jiang, 2018; Burns et al., 2009; Fergie et al., 2016; Halsall et al., 2019; Kauer et al., 2014; Naslund et al., 2016; Pretorius et al., 2019). Social networking platforms also have the potential to provide adolescents with an environment where they can learn new skills and get access to important information which can be beneficial to their well-being (Breland et al., 2017; Naslund et al., 2016; O'Reilly et al., 2018; Reid & Weigle, 2014). Recent research also

shows that many young people with mental health problems spend more time on social media networking sites to search for possible solutions for their mental health challenges (Pretorius et al., 2019).

Consequently, social media has the potential to promote help-seeking behaviour among adolescents since they are often reluctant to seek professional health or address mental health challenges with family members or mental health practitioners (Betton et al., 2015; Burns et al., 2009; Fergie et al., 2016; O'Reilly et al., 2018; Pretorius et al., 2019; Vostanis et al., 2013). This notion is further substantiated by the fact that computer-mediated technology has become a popular means of assisting adolescents in the help-seeking process by making accredited online mental health information available to them on request (Best et al., 2016; Gowen, 2013; Kauer et al., 2014; Pretorius et al., 2019). Lastly, a study conducted in 2010 found that engaging on social media platforms with peers and others could encourage adolescents to partake in the act of self-disclosure, thus resulting in enhanced feelings of social connection (Bonetti et al., 2010). Social connection to another individual plays an important role in the normative development of adolescents, and it is believed that an increased sense of belonging can result in positive psychosocial outcomes, which can, in turn, promote positive mental health behaviour (Bradley & Inglis, 2012).

Social Media's Role in Mental Health Promotion

Social media has become increasingly relevant in health research given the high rate at which adolescents and other age groups of the global population use it for daily information exchange (Arigo et al., 2018). Social media plays an indispensable role in the lives of billions of people across the globe. Hence policymakers, health organisations, and practitioners should be encouraged to not only recognise but utilise social media platforms as an effective alternative to promote mental health (Halsall et al., 2019; Latha et al., 2020; O'Reilly, 2020). The act of recognising the potential of social media in promoting mental

health should be fuelled by the fact that various studies have shown that social media offers its users some form of benefit, whether it be in their cognitive, executive, or daily-life functioning (Naslund et al., 2016; O'Reilly, 2020; Ramezankhani et al., 2019). More importantly, social media is particularly valuable to users that are facing mental health problems since it has enabled them to feel less isolated, share their personal stories, and seek much-needed support from individuals who are facing similar difficulties (Naslund et al., 2016; O'Reilly, 2020; Ramezankhani et al., 2019). Over and above that, social media has the inherent potential to encourage help-seeking behaviour among individuals who often find addressing mental health challenges difficult due to widespread stigmatisation and associated discrimination (Betton et al., 2015; Burns et al., 2009; Conway & O'Connor, 2016; Corrigan, 2004; Fergie et al., 2016; O'Reilly et al., 2018; Vostanis et al., 2013).

In a study conducted by Gulliver et al. (2010), it was reported that stigmatisation, low mental health literacy, and the need to remain self-sufficient were the greatest barriers to help-seeking behaviour among young people, with stigmatisation being the greatest deterrent. Research suggests that social media platforms have been shown to counteract many of these barriers by allowing users to try and resolve many health problems through sharing their own experiences, asking for opinions, and seeking support in an almost anonymous fashion, thus making the process of addressing and tending to their mental health concerns less challenging (Cohan et al., 2017; Naslund et al., 2016; O'Reilly et al., 2018; Ramezankhani et al., 2019). Therefore, it can be argued that social media and its various SNS have the potential to play a significant role in the promotion of mental health because they give users the chance to connect and share more beneficial health-related information in a way that is comfortable for them and may lead to positive mental health behavior (Halsall et al., 2019; Latha et al., 2020; Ramezankhani et al., 2019).

Apart from the possibility of successfully using social media and SNS as a tool to facilitate positive mental health behaviour, it could also address the challenges that come with providing mental health support to users in rural areas with limited resources and other barriers, such as illiteracy (Latha et al., 2020). However, the potential for using social media as a method to promote mental health is an avenue that has not received a great amount of attention, and the negative impacts thereof are often overstated while the potential benefit for mental health promotion is underestimated (Naslund et al., 2016; Neiger et al., 2012; O'Reilly, 2020).

Aim

The primary aim of this critical review was to analyse, synthesise, and give a comprehensive and critical account of the findings of existing literature to establish whether social media can be used as a tool to promote mental health among adolescents. The findings of this critical review could provide information on whether social media can be used to promote mental health among adolescents. Moreover, the possible findings could serve as a framework for future studies. Prospective studies on this topic could create potential awareness of how social media can promote mental health among adolescents globally and within the South African context.

Method of Investigation

This section will include the research approach and design and the research method.

Research Approach and Design

This research study was presented in the form of a qualitative critical review. The objective of a critical review is to appraise and synthesise selected literature in a manner that is critical, innovative, and appropriate to identify research gaps that prospective studies could explore or address (Carnwell & Daly, 2001; De Klerk & Pretorius, 2019; Grant & Booth, 2009; Jesson & Lacey, 2006; Snyder, 2019). Consequently, the researcher retrieved,

synthesised, and analysed literature relevant to the inquiry from diverse sources to discuss the findings critically. In critical review studies, findings often result in several strengths and weaknesses related to the topic. For this reason, the overarching research question that guided the review process will be as follows: What conclusions can be drawn from the literature on using social media as a tool to promote mental health among adolescents? More specifically: How can social media be used as a tool to promote mental health among adolescents?

Through the proses of critically appraising the selected literature, conclusions aimed at determining how social media can be used as a tool to promote mental health among adolescents were formulated. The critical review was conducted according to the six steps described by Carnwell and Daly (2001) to ensure that data was successfully retrieved, synthesised, and analysed. These steps are as follows: 1) determine the purpose of the literature review, 2) define the scope of the review, 3) identify and select relevant sources of information, 4) review the literature which has been obtained in the previous step, 5) writing up the review, and 6) critically applying the literature to the proposed study (Carnwell & Daly, 2001).

Research Method

The research method followed the six steps Carnwell and Daly (2001) proposed for conducting critical review studies. Step 4 was divided into four stages, as proposed by Puks (2016), to ensure a good quality appraisal of the literature. Stage 4 of the appraisal process, which considered the data analysis, was further subdivided into the guidelines for conducting thematic analysis as suggested by Braun and Clarke (2006).

Step 1: Determining the Purpose of the Literature Review

The primary purpose of this critical review was to critically evaluate and accurately synthesise existing knowledge to provide a comprehensive account of how social media can be used to promote mental health among adolescents. This evaluation was achieved by reviewing

what had been investigated and written about using social media to promote mental health among adolescents since 2011. By doing this, the researcher identified a lacuna in the existing literature. The findings of this critical review could be used to develop relevant programmes or interventions for using social media to promote mental health among adolescents.

Furthermore, findings could also be used to contribute to mental health care practitioners' awareness of the possible benefits of social media for mental health promotion (Carnwell & Daly, 2001).

Step 2: Defining the Scope of the Review

Existing knowledge in both theoretical and empirical literature was included in the scope of this critical review study, as suggested by Carnwell and Daly (2001). Therefore, all literature with regards to using social media to promote mental health among adolescents was included. The following types of research were used to compile the literature: PhD theses, Master's dissertations/mini-dissertations, full-text journal studies, peer-reviewed studies, quantitative and qualitative studies, mixed-method studies, review studies (see Table 1). Excluded from the search were non-peer-reviewed studies, conference proceedings, and studies published in languages other than English (see Table 1).

Considering that the effects of social media on mental health are a relatively new field of inquiry, it was decided to include sources from 2011 to date (2022) to ensure that the review remained current and up to date, as recommended by Pautasso (2013).

Table 1

Article Inclusion and Exclusion Criteria

Criteria	Include or Exclude
Full-text journal studies	Include, literature will have required scientific rigour and ethical considerations to be included in the study.

Peer-reviewed studies	Include, literature will have required scientific rigour to be included in the study.
Non-peer reviewed-studies	Exclude, studies may not adhere to required principles of rigour and acceptable ethical considerations.
Quantitative studies	Include, all methodologies may be of importance for conducting this critical review.
Qualitative studies	Include, all methodologies may be of importance for conducting this critical review.
Mixed-method studies	Include, all methodologies may be of importance for conducting this critical review.
Review studies	Include, all methodologies may be of importance for conducting this critical review.
Ph.D. theses	Include, these studies will most likely adhere to required principles of rigour and acceptable ethical considerations.
Masters' dissertations/mini dissertations	Include, these studies will most likely adhere to required principles of rigour and acceptable ethical considerations.
Conference proceedings	Exclude, studies may not adhere to required principles of rigour and acceptable ethical considerations.

Studies published in languages other than English	Exclude, the researcher is only proficient in Afrikaans and English; and only literature in these languages will be included to ensure the integrity of the study.
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Step 3: Identifying and Selecting Relevant Sources of Information

In identifying and selecting relevant sources of information, the researcher used keywords that were directly related to the study. Using keywords related to the proposed critical review study assisted the researcher in narrowing the search down and only identifying sources of information that were appropriate and relevant to the study (Carnwell & Daly, 2001). Subsequently, the researcher searched diverse databases for literature regarding whether social media can be used as a tool to promote mental health among adolescents. After consultation with Mr Nestus Venter (librarian specialist), the databases mentioned above included: APA PsycInfo, MEDLINE, Academic Search Complete, CINAHL with Full Text, OAIster, ScienceDirect, SocINDEX with Full Text, EBSCOhost, and the Library Catalogue.

Keywords included in the search were ‘adolescent*’ or ‘teen*’ or ‘youth’ or ‘young adult*’ or ‘young people’ and ‘social media’ or ‘facebook’ or ‘twitter’ or ‘instagram’ or ‘tik tok’ or ‘social network*’ and ‘mental health’ or ‘mental well-being’ or ‘psychological health’ or ‘psychological well-being’ or ‘well-being*’ and ‘promote’ or ‘promoting’ or ‘support’ or ‘supporting’ or ‘enhance’ or ‘aid’ or ‘assist’ or ‘advance’ (see Table 2). Keywords and search terms were combined or refined using Boolean search terms such as AND, NOT, *, and OR (see Table 2). Literature identified from this search provided the researcher with supplementary keywords or names of authors that are associated with the topic at hand, which allowed the researcher to extend the search where required.

Table 2*Keywords and Boolean Terms for Literature Searches*

	Keywords	Field	Brief Justification
Level One	“adolescent*” OR “teen*” OR “youth” OR “young adult*” OR “young people”	Title	The study focuses on adolescents. The phrase ‘young adult*’, and the like, were included as these terms were found to be synonymous with ‘adolescent*’.
AND			
Level Two	“social media” OR “facebook” OR “twitter” OR “instagram” OR “tik tok” OR “social network*”	Title	The study focuses on using social media as a tool to promote mental health.
AND			
Level Three	“mental health” OR “mental well- being” OR “psychological health” OR “psychological well-being” OR ‘well- being*’	Abstract	The study focuses on mental health.
AND			

Level Four	“promote” OR “promoting” OR “support” OR “supporting” OR “enhance” OR “aid” OR “assist” OR “advance”	Abstract	The study focuses on promotion of mental health.
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The search was performed independently by the current Master’s student candidate (primary reviewer), and the study supervisor (secondary reviewer) monitored the entire review process whilst also acting as a co-analyst of the extracted data. Critical reviews do not require specific methods for searching, synthesising, and analysing data (Grant & Booth, 2009). As a result, SALSA (Search, Appraisal, Synthesis, and Analysis) was utilized as a simple analytical framework to investigate how social media may be used as a tool to promote mental health among adolescents.

Step 4: Reviewing the Literature

As mentioned above, it is important to note that there is no concise manner to conduct a critical review study or evaluate publications to be used in the review (Grant & Booth, 2009; Puks, 2016). However, for this critical review study, and to ensure the integrity of the entire research process, the researcher considered four stages for the quality appraisal process in the following order: 1) finalising a list of primary studies to include, 2) considering additional criteria for final inclusion, 3) synthesising the data, and 4) analysing the data accordingly (Puks, 2016).

1) Finalising a List of Primary Studies. The researcher manually managed the articles extracted from the initial literature search in Excel. Literature identified during the initial search was then evaluated and assessed accordingly (Puks, 2016). The researcher performed the first stage of determining relevance independently. Only the titles and abstracts of the primary list of studies from the initial search were considered. The researcher

considered the keywords and the inclusion and exclusion factors, as defined during the review proposal, to serve as a guideline. Subsequently, literature that showed no significant reference to using social media as a tool to promote mental health among adolescents was excluded. Hereafter, the researcher assessed all remaining titles and abstracts for relevance. The study supervisor was consulted when the researcher was uncertain whether to include literature. In an instance where the title or abstract was vague on whether the literature complies with the purpose of the study, the entire paper was analysed to ensure that no important literature was omitted (Puks, 2016). Once the first stage of the quality appraisal process and the primary list of studies to be included in the critical review were identified, the researcher considered additional inclusion criteria for the remainder of the quality appraisal process.

2) Considering Additional Criteria for Final Inclusion. Here the internal and external validity of the primary list of studies was considered (Puks, 2016). Assessing the internal validity of the work allowed the researcher to determine whether the literature could be trusted (Puks, 2016). Additional criteria to determine internal validity included considering the credibility of the journal in which the work was published and any evidence of methodological soundness. External validity considers the applicability of individual studies and generally assists researchers in determining whether studies are relevant (Puks, 2016). Additional criteria to determine external validity included considering whether the study fitted into the recommended time range, whether the study's findings linked with the title and establishing whether the study's contribution is significant.

This process was repeated until studies that correlated with the additional inclusion criteria were included and those which did not excluded (Puks, 2016). Once the first two stages were finalised, the researcher proceeded with the final two stages of the process: synthesis and analysis. Here the researcher synthesised and analysed the data in a manner that

allowed them to draw conclusions from and categorise data collected from the literature accordingly (Puks, 2016).

3) Synthesising the Data. Once all relevant literature was identified, their full text was read, and all applicable information was extracted and included on an Excel datasheet. This information included author(s), publication date, title, mode of publication (journal/book/university dissertation/thesis), abstract, findings and conclusions, and themes and codes that could potentially answer the research question. According to Noyes et al. (2018), contextual and methodological data are recommended to be extracted from identified literature for presentation in the data extraction table. Moreover, it is important to bear in mind the context of the primary studies to avoid misinterpretation during the analysis and synthesis stages of the research (Noyes et al., 2018). Consequently, the researcher kept the research question in mind throughout the process to ensure that all data relevant to the research question was extracted to determine if social media can be used to promote mental health among adolescents. Furthermore, the data was reviewed iteratively, whereby the researcher and the study supervisor engaged in regular meetings to discuss the evidence to ensure that key findings were formulated correctly and with consensus (Noyes et al., 2018). The researcher, with the guidance of the study supervisor, then implemented the six steps of thematic analysis as originally prescribed by Braun and Clarke (2006) to comprehensively analyse and synthesise the data that was identified and retrieved for the study (Braun & Clarke, 2019; Terry et al., 2017).

4) Analysing the Data Accordingly. Analysing the data through thematic analysis allowed the researcher and study supervisor to identify gaps and themes in the literature that ultimately provided this critical review study with the necessary structure. Thematic analysis is the process wherein researchers look for patterns or themes to analyse, describe and report on the data (Braun & Clarke, 2006; Braun & Clarke, 2019; Terry et al., 2017). To ensure that

the process of thematic analysis is conducted successfully, and that data is clarified and understood adequately, Braun and Clarke (2006) suggested six flexible guidelines. The guidelines include familiarising oneself with the data, generating initial codes, searching for meaningful and coherent themes, reviewing identified themes, refining and defining themes, and writing up the findings (Braun & Clarke, 2006; Braun & Clarke, 2019).

Guideline 1: Becoming Familiar with the Data. Becoming familiar with the data is considered the entry point for successful analysis, where researchers immerse themselves into the data that has been identified (Braun & Clarke, 2019; Terry et al., 2017) by reading, re-reading, and engaging with the data, all while being attentive and noting any patterns that catch your attention (Braun & Clarke, 2019; Terry et al., 2017). The researcher actively read and re-read the identified literature while making notes electronically on Excel. The notes comprised important aspects or patterns the researcher identified while engaging with the literature. These important aspects and patterns were directly related to the aim of this critical review, which ultimately assisted the researcher in the following step.

Guideline 2: Generating Initial Codes. Coding is a systematic process whereby labels related to the study with the potential to answer the research question are created (Braun & Clarke, 2019; Terry et al., 2017). Coding is done by generating a preliminary list of codes from the data, which are open and inclusive, thus resulting in an inductive approach (Braun and Clarke, 2006). The researcher once more engaged with the literature, and coding was done electronically by highlighting possible codes in different colours and making comments in each highlighted section.

Guideline 3: Searching for Meaningful and Coherent Themes. Related codes can be grouped into overarching preliminary themes directly related to answering the research question (Braun & Clarke, 2006). This step requires examining the codes generated in the previous step to combine or cluster into bigger patterns that will become possible themes

(Braun & Clarke, 2019; Terry et al., 2017). Here the researcher classified and clustered the initial codes generated in the second step into possible themes and sub-themes. The researcher used tables and mind maps to aid in successfully collating the information. Once the researcher identified the possible themes, the secondary reviewer was consulted.

Guideline 4: Reviewing Identified Themes. Here, the researcher reviewed and critically examined the preliminarily identified themes whilst also making any necessary modifications to ensure accuracy and distinctiveness (Braun & Clarke, 2006). During this phase, new themes may surface while others may be discarded (Braun & Clarke, 2019; Terry et al., 2017). It is important to ensure that themes are conducive to the research question (Braun & Clarke, 2019; Terry et al., 2017). After consulting the study supervisor after the completion of the third step, the researcher reviewed, refined, and discarded themes where necessary.

Furthermore, the researcher ensured the distinctiveness and accuracy of each theme by compiling informal summaries. These informal summaries were then compared to ensure that there was no overlap. This step was repeated and revised until the researcher and study supervisor was satisfied with the themes.

Guideline 5: Refinement and Defining of Themes. Refinement ensures that the data support each identified theme, and sub-themes may also be identified during this phase (Braun & Clarke, 2006). A thematic map can be drawn to ensure a strong relationship between the various themes (Braun & Clarke, 2019; Terry et al., 2017). Short summaries capture the core idea of each theme and related subthemes (Braun & Clarke, 2019; Terry et al., 2017). The final list of themes and subthemes identified in the fourth step was then clearly defined, and formal summaries of the themes, sub-themes, and how the themes were related to one another were generated. Hereafter, the researcher consulted with the study supervisor. The researcher then conducted a detailed analysis of each theme and sub-theme.

Guideline 6: Writing up the Findings. A written account is the endpoint of the data analysis, and findings are presented as a report, journal article, or dissertation while ensuring that the research question is answered successfully (Braun & Clarke, 2006). A good quality report will require me to refine, focus, analyse, connect, and put the data together so that it successfully answers the research question (Braun & Clarke, 2019; Terry et al., 2017). Once the themes were fully established, the researcher conducted a review study, as suggested by Carnwell and Daly (2001), by analysing the themes and compiling the report.

Step 5: Writing the Review

In staying with the research aims, the findings of each piece of literature selected for review were presented concisely, consistently, logically, interestingly, and non-repetitively (Puks, 2016). As described above, the researcher had to read through the full texts of the primary studies to ensure a comprehensive overview (Puks, 2016). While reading the identified literature, the researcher was mindful of the objective to gain clarity about the identified studies and their results (Puks, 2016). Moreover, the researcher also questioned the methodology of the literature to ensure that all identified studies were reliable and fit for use (Puks, 2016). The researcher used these strategies as guidelines throughout the entire review process. The final report is the literature analysis where the study's findings were interpreted and the significance in possible future research in this field explored. The final report was concluded with a summarising paragraph outlining the findings of this critical review study and the limitations that the researcher encountered while conducting this study (Puks, 2016).

Step 6: Critically Applying the Literature to the Study

The literature was critically applied to the research study by writing a final report. This final report included an extensive discussion in which the researcher discussed the findings and addressed the significance of the research. The final report presented in Section

2 of this study consisted of a summarising paragraph. This summative paragraph included critical information on the research findings, the gaps, and the limitations identified (Puks, 2016).

Ethics

This research (a critical review) did not involve human participants or implement intervention; it merely used existing or ancillary data from primary literature sources. Therefore, ethical considerations about participants were not applicable. Moreover, the central focus of this research was to search for, select, analyse, synthesise, and present findings in a manner that is ethically responsible and correct to ensure that the final product is of high rigorous standards (see rigour). Ethical approval (See Addendum B) was obtained from the Health Research Ethics Committee (HREC) of the North-West University (NWU-00284-21-A1). As Wager and Wiffen (2011) proposed, ethical guidelines were incorporated throughout the research to ensure that all possible risks and precautions were observed.

The critical review was done exclusively by the authors, who have been acknowledged to increase the transparency of the study (Wager & Wiffen, 2011). This research's authors included two reviewers: the current student researcher (Miss Jhené Botha, primary reviewer) and a study supervisor (secondary reviewer, Prof Esmé van Rensburg). The current student researcher is registered as a Master's student within the MHS Research Psychology Programme at the North-West University and has undergone the necessary ethical training as requested by the North-West University. The study supervisor who will also be the secondary reviewer of this research, assisted with monitoring the entire research process and acted as a co-analyst of the data. The final report was not submitted for publication in various journals to avoid both redundancy and an unnecessary surplus of availability (Wager & Wiffen, 2011).

The primary reviewer was aware of the risk of plagiarism from the onset and throughout the study and attempted to avert it by ensuring that no one else's work was claimed as their own. Turn-It-In, an internet-based plagiarism detection service, was used to further assist the researcher in assuring that plagiarism was minimised. The researcher used the APA 7th edition referencing manual when referencing the work of authors of literature used in the critical review study (Wager & Wiffen, 2011). In addition, no competing interests or reimbursements allowed the researcher to remain completely neutral (Wager & Wiffen, 2011). Lastly, the researcher ensured that this critical review study complied with a high standard of rigour to ensure that all data was extracted, understood, and interpreted transparently and honestly (Wager & Wiffen, 2011).

Rigour

Qualitative research requires the data to be trustworthy and the research process to be conducted rigorously. Rigour in qualitative research is especially important since it builds a strong foundation for similar future research inquiries. It also attempts to intercept false findings and conclusions, which could negatively impact the path of future research, and it expedites the publication process, thus allowing for more accurate research to be published in top-rated journals (Gnyawali & Song, 2016). A rigorous study should therefore give the reader a clear understanding of the author's chosen theory, method of investigation, analysis, and interpretation of the findings (Gnyawali & Song, 2016). Several criteria must be considered in qualitative research to establish trustworthiness: credibility, transferability, and confirmability (Krefting, 1991; Shenton, 2004). These criteria will ensure accuracy and thoroughness in developing theory, designing, and executing the proposed study, writing the results, and drawing unambiguous conclusions (Gnyawali & Song, 2016).

Credibility

Credibility addresses the study's internal validity to determine whether the proposed study confidently and successfully measures what it intends to measure through seeking and identifying patterns in a data set (Anney, 2014; Krefting, 1991; Shenton, 2004). To ensure the credibility of this study, the researcher adopted several strategies. Firstly, as proposed by Krefting (1991), the researcher extensively engaged with the literature to ensure that their understanding was insightful and comprehensive to relate it to the context of the study. Secondly, the researcher provided a thick description of the study to ensure there was no ambiguity around what was being investigated. Thirdly, to avoid becoming embedded in the data and finding it difficult to formulate objective conclusions, the researcher took detailed notes throughout the entire process to ensure reflexivity. Reflexivity allowed the researcher to gauge their subjective insights and interests in the study (Krefting, 1991). Lastly, the researcher discussed, explored, and examined their findings with the aid of the secondary reviewer to ensure consistent structural authority (Anney, 2014; Krefting, 1991; Shenton, 2004).

Confirmability

According to Baxter and Eyles (as cited by Anney, 2014), confirmability considers the extent to which the findings of an inquiry can be verified by other researchers and is usually achieved through creating a detailed audit trail. A detailed audit trail should enable an external reviewer to understand the researcher's steps from the beginning and throughout. An audit trail will validate the researchers' report on the entire research process. Moreover, this critical review study followed the steps by Carnwell and Daly (2001), meaning that it was meticulously planned (see methodological approach), thus enabling the researcher to confidently collect data from various search engines following the stipulated inclusion criteria. Literature that met the inclusion criteria, considered the context of the study, and had

the potential to contribute towards answering the research question was included. Thematic analysis was then conducted on literature included in the data pool to be analysed.

Transferability

Anney (2014) considers transferability as the degree to which the results of a study can be applied to other contexts that are similar. Transferability aims to create and make new knowledge available about a certain area of inquiry, thus emphasising the importance of the context in which the study is taking place. One way to maintain the context of the study is to allow multiple persons to be involved in the data selection (Krefting, 1991). The researcher ensured transferability by requesting the assistance of the secondary reviewer to select data and thoroughly and consistently follow the processes outlined by Carnwell and Daly (2001) and Clarke and Braun (2013). This procedure will allow readers to determine whether the study's findings can be used to 1) determine if social media can be used as a tool to promote mental health among adolescents, 2) apply it to their situations, and 3) conduct further research.

Conclusion

In Section 1 of this mini-dissertation, the researcher provided an all-inclusive summary of the relevant literature available on the research topic since 2011 to create a comprehensive awareness of the essential parts of this research study. The core components of this research study included social media, adolescents, mental health, and mental health promotion. Exploring the existing literature enabled the researcher to formulate a clear problem statement and a thoroughly formulated research question. The research question allowed the researcher to explore the literature empirically and methodologically, as suggested for critical review studies. Thematic analysis was used to analyse, synthesise, and generate themes from the literature identified and extracted for this critical review study. Since the study obtained ethical clearance from North-West University, this section also

provides detailed information on how the researcher ensured the research study adhered to ethical considerations. In addition, how the researcher ensured the rigorous standard of this critical review research study was also set out. The findings of this mini-dissertation will be presented in Section 2.

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SECTION 2: ARTICLE

Social media as a tool to promote mental health among adolescents: A critical review

Guidelines for authors: *Journal of Adolescent Health*

The following article will be submitted to the *Journal of Adolescent Health* for possible publication. A summary of the guidelines for publication and other relevant information as per the journal will be provided, followed by the article following these guidelines.

Guidelines to Authors

Aims and Scope of the *Journal of Adolescent Health*

The *Journal of Adolescent Health* is an official publication of the Society for Adolescent Health and Medicine (SAHM). The *Journal of Adolescent Health* is a multidisciplinary scientific journal dedicated to improving adolescent health and well-being, thus publishing research in the field of adolescent and young adult health and medicine. The journal considers, among many others, reviewing articles from academics in various disciplines committed to advancing adolescents' health and well-being through deepening insights into the lived experiences of this age group to elevate peer-reviewed scientific research in this area to greater heights.

Submission

Submission to this journal proceeds online, and manuscript documents must comply with layout and length requirements as stated below. Manuscripts which are accepted may be subject to revision and editing by editors, and authors should therefore take care to avoid redundancy within the text. A submission will only be complete if it includes a cover letter, the manuscript, a title page with relevant acknowledgements, and at least one author statement.

Title Page

The title page must include a concise, informative title limited to 140 characters. Full names of authors, their highest academic degrees (excluding bachelor-level degrees), and departmental and/or institutional affiliates of each should be included. The details of the corresponding author should also be clearly stated and kept up to date. The title page should also include an acknowledgement section which lists any sources of support and mentions any persons who have made a substantive contribution to the study.

Manuscript Format

The *Journal of Adolescent Health* prefers systematic reviews and meta-analyses. However, strong, evidence-based integrative reviews will also be considered for publication. Review articles should provide a high-quality summary of existing scientific literature in a specific area of inquiry. All review articles that wish to be submitted will be subject to a rigorous peer-review process. The format of a review article for the *Journal of Adolescent Health* should include an introduction, review of relevant literature, discussion, summary, and implications and contributions section of no more than 50 words that should describe the significance of the findings and the contribution to literature. Each review article must have a summary abstract of 200 words. Review articles for this journal are limited to 4500 words, five tables/figures, and an unlimited number of references. The text should be single format and follow a layout that is as simple as possible. It is recommended that boldface, italics, subscripts, etcetera, be used in the paper's formatting. All tables should be prepared on a single grid. Tables must be numbered consecutively and have a brief title, with explanatory matter placed in a footnote below the table body in superscript lowercase letters.

The abstract must be provided in a structured table format and state the study's purpose, methods, results, and conclusions. The implications and contributions are a summary describing the significance of the study's findings and its contributions to the

literature. The introduction should only include pertinent features and must state the study's purpose and rationale. A heading for this section should not be included, just text. The methods section must include all procedures used to reproduce the results. Not well-known methods must be described in detail with appropriate referencing. Results must be reported logically, and only critical data from tables and/or illustrations must be repeated in the text. The discussion section must emphasise new and important aspects from which conclusions must be drawn. This section must include both the implications and limitations of the study.

Referencing Style

The *Journal of Adolescent Health* utilises the 10th edition of the American Medical Association (AMA) Manual of Style. References should be consecutively numbered in Arabic numerals (in brackets) in the order in which they first appear in the text. The use of DOIs is highly encouraged. Below are examples according to the Author Information Pack as made available by the journal,

Journal Articles

References should list all authors when four or fewer; when more than four, only the first three should be listed, followed by "et al".

- Aalsma MA, Tong Y, Wiehe SE, et al. The impact of delinquency on young adult sexual risk behaviors and sexually transmitted infections. *J Adolesc Health* 2010;46:17-24. DOI: 10.1016/j.jadohealth.2009.05.018.
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Ethics in Publishing

The *Journal of Adolescent Health* provides authors with a myriad of guidelines to ensure that a study is conducted ethically and to ensure the research's integrity. The journal clearly states that fraudulent information and knowingly incorrect conclusions or statements constitute unethical behaviour and are unacceptable.

Some of these guidelines include but are not limited to requesting that authors always present an accurate and authentic account of their work and an objective discussion of its significance and contribution to their work. Acknowledgement of the work of others must always be given and should be appropriately cited or quoted. Plagiarism, in all forms, is unacceptable. All data should be represented accurately, and a paper should contain sufficient references and details that permit others to replicate the work. Authors should not attempt to publish manuscripts of the same research in more than one journal. The author must ensure co-authors are included in the paper and have approved and agreed to the submission of the final paper. The author should disclose all sources of financial support and potential conflicts

of interest as early as possible. When the author discovers an error in their work, it is their responsibility to notify and collaborate with the journal editor or publisher to retract or correct the paper if necessary.

Conflict of Interest

Authors must disclose any potential, perceived, or real conflict of interest on the manuscript's title page. The accepted manuscripts will be published with a footnote stating the conflict of interest, if any, on the article's first page. The role of the study sponsor(s) in the a) design of the study; b) collection, analysis, synthesis, and interpretation of data; c) the writing of the final report; and d) the decision to submit the manuscript for publication in a journal must be clearly described by the author. If no conflict of interest is reported, the author is still expected to comment on the sponsor's involvement in the abovementioned matters. The disclosure statements will be published once the article is accepted for publication in the journal.

Submission Declaration

Submission of an article in this journal implies that the work has not been previously formally published in another journal, that it is not pending publication elsewhere, that all relevant persons have approved the work for publication, and that the article will not be published elsewhere or in a different format or language without the written consent of the holder of the copyright of the article.

The authors are encouraged to report fully on the findings of their studies when submitting for publication while ensuring that they notify the editors of all manuscripts that could result in the publication from the same study or set of data, especially in longitudinal studies. Failure to disclose multiple or duplicate manuscripts will result in written notifications to the authors' academic institutions.

MANUSCRIPT

Social media as a tool to promote mental health among adolescents: A critical review

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Conflict of interest: The authors have no conflict of interest to disclose.

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Implications and Contribution

This article provides a review of the use of social media as a tool to promote mental health among adolescents who are growing up in a technological era. As a critical review, it could contribute to practitioners' awareness of the benefits of using social media in mental health care among this age group.

Abstract

Purpose: Adolescent mental health has become a global health concern. This population group are growing up in a digital era where social media has become an integral part of their daily functioning resulting in a nearly constant engagement on various social networking sites (SNS). This paper aims to review whether social media can be used as a tool to promote mental health among adolescents.

Methods: Studies published in English between 2011 until present were searched on several databases. Data were selected, appraised, and extracted by the two authors. The primary outcome was that social media could potentially be used as a tool to promote mental health among adolescents given the right circumstances.

Results: Seven studies were identified and thematically analysed, and four themes and nine sub-themes were identified. The four themes included: enhancing communication and social connection; resource for educating the self and others; enriching adolescent development; and benefits related to adolescent well-being.

Conclusions: This review study substantiates the fact that future research should focus on the possible benefits that using social media can have on adolescent mental health promotion.

Keywords: Social media, Mental health, Adolescents, Promote, Well-being, Critical review

Adolescence is an immense biological, psychological, and social change that occurs between 12 and 18 years [1,2]. This challenging time could result in the onset of mental health problems, with an almost 50%-onset occurring before age 18 [3-5]. Adolescents living in the 21st century are growing up in increasingly challenging and ever-changing environments, resulting in youth mental health becoming a major public health concern [6,7]. It has been estimated that 10% to 20% of adolescents worldwide suffer from some sort of mental disease, with depression, anxiety, attention deficit hyperactivity disorder (ADHD), and anorexia and bulimia nervosa being the most common [8-10]. The onset of a mental health condition during this development phase often results in stigmatisation, discrimination, social exclusion, educational challenges, risky behaviour, and poor physical health among this age group [10].

A more contemporary risk factor that has become an increasingly prominent feature in the everyday lives of adolescents is digital technology, more specifically, social networking sites (SNS) which includes social media [11-14]. It is estimated that 92% to 95% of adolescents in most first-world countries have access to devices that enable them to use social media [12,14]. In addition, adolescents are thought to spend as much as 21 hours per week on various SNS, including Facebook, Twitter, YouTube, and Instagram [13]. Research also indicates that adolescents on the African continent seem to be following suit with global trends, and most SNS users in South Africa were of this age group [15]. Adolescents living in low-, middle-, and high-income parts of the world are growing up in an era where most of their development is happening while engaging on SNS on digital devices [9,16,17]. Nonetheless, the prominence of social media in adolescents' lives has been said to be coupled with the onset of mental health conditions [18,19].

The exact impact that social media usage can have on adolescent mental health remains an area of dispute, and a consensus is yet to be reached [9,12,13,20]. The non-

consensus on this matter could be attributed to the fact that negative impacts associated with social media usage have become overemphasised. In contrast, potential benefits and positive outcomes have been greatly underestimated and underreported [21,22]. This underestimation of the potential positive impacts that social media could have on adolescent mental health has consequently resulted in an unequal balance between risk factors and protective factors, thus prompting the assumption that social media use among this age group has mostly negative mental health outcomes [5,21,22]. Shifting this unequal balance will allow a better understanding of social media's influence on adolescent mental health, thus giving adolescents the necessary knowledge and skills to use social media to maintain positive physical and mental health behaviours throughout their lives [5,21,23].

The current critical review aims to extensively explore and critically evaluate the existing body of knowledge to comment on whether social media can be used to promote mental health among the adolescent population. To ensure the integrity of this study both an overarching and more specific research question guided this research process: What conclusions can be drawn from the literature on using social media as a tool to promote mental health among adolescents, but more specifically: Can social media be used as a tool to promote mental health among adolescents?

Methods

Research method

This critical review followed a six-step process for conducting critical review studies, namely: 1) determining the purpose of the review; 2) defining the scope thereof; 3) identifying and selecting sources of information that are relevant to the study; 4) reviewing the literature; 5) writing a review; and 6) critical application of the literature [24]. Step 4 of the process mentioned above was divided into four additional stages to ensure soundness of the appraisal procedure, of which the fourth stage considered the process of analysing the

data [25]. This stage was once again divided into the six guidelines for thematic analysis, namely: becoming familiar with the data, generating initial codes, searching for themes in the initial codes, reviewing themes that have been identified, defining, and summarising the themes, and writing up of the findings (Figure 1)[26].

Data sources

A literature search was conducted using diverse databases, which included APA PsycInfo, MEDLINE, Academic Search Complete, CINAHL with Full Text, OAIster, ScienceDirect, SocINDEX with Full Text, and EBSCOhost, on the EBSCO Discovery Service (EDS) of the Library Catalogue of the North-West University (South Africa). Articles were limited to those published in English from 2011 until the present (2022) to ensure that the review remains up-to-date, concise, and impactful (Pautasso, 2013). We considered three guidelines to identify as many papers as possible. Firstly, the titles and abstracts of papers were considered to determine their initial relevance. Secondly, the following keywords were used: ‘adolescent*’ or ‘teen*’ or ‘youth’ or ‘young adult*’ or ‘young people’ AND ‘social media’ or ‘facebook’ or ‘twitter’ or ‘instagram’ or ‘tik tok’ or ‘social network*’ AND ‘mental health’ or ‘mental well-being’ or ‘psychological health’ or ‘psychological well-being’ or ‘well-being*’ AND ‘promote’ or ‘promoting’ or ‘support’ or ‘supporting’ or ‘enhance’ or ‘aid’ or ‘assist’ or ‘advance’. Lastly, the inclusion and exclusion criteria also served as a guideline for determining relevance. The full text of papers that adhered to the above guidelines was then read, and all applicable information was extracted for further analysis by the authors. The authors agreed on the final list of manuscripts to be included.

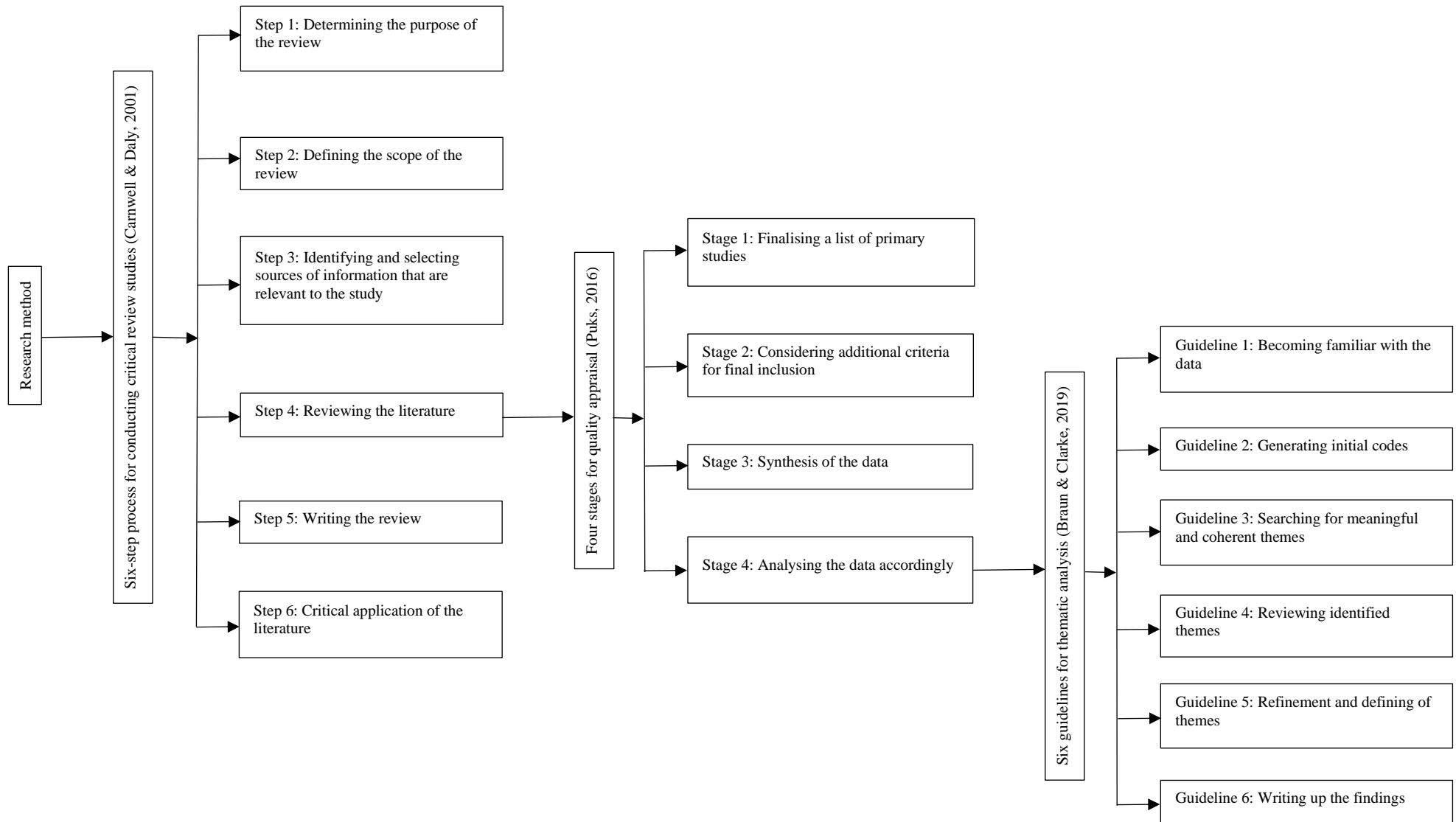


Figure 1. Flow diagram of research method

Inclusion/exclusion criteria

The inclusion criteria were: (1) quantitative, qualitative, mixed-method, and review studies, and peer-reviewed studies, PhD theses, and Master's dissertations; (2) literature where it was evident that it considered the use of social media as a tool to promote mental health among adolescents aged between 12 and 18 years; (3) and additional inclusion criteria such as (a) whether the study falls within the recommended time range (2011– present), (b) whether the findings link with the title, and (c) whether the contribution of the study was significant.

Exclusion criteria were: (1) grey literature, including conference papers, and non-peer-reviewed studies; (2) studies published in languages other than English; and (3) literature that showed no significant reference to using social media as a tool to promote mental health among adolescents aged between 12 and 18 (years).

Data extraction and synthesis

The authors extracted data for inclusion on an Excel spreadsheet according to predetermined categories, including the author(s), date of publication, title, abstract, findings, conclusion, sample, and themes and codes that answer the research question of this critical review. Data determined to have a possible contribution to answering the research question was then included in the thematic analysis process.

Method of quality appraisal

Since there are no formal guidelines for quality appraisals in critical review studies, an analytical structure known as SALSA was used wherein the authors searched for, appraised, synthesised, and analysed the data to determine if social media can be used as a tool to promote mental health among adolescents [25]. This process closely coincided with the additional inclusion criteria mentioned above.

Results

Description of studies

A total of 277 articles were presented from the initial database search on the North-West University library's EBSCO Discovery Service (EDS) search. EDS automatically removed 155 exact duplicate articles resulting in a total of 122 articles. A further 32 duplicate articles were manually excluded by the authors resulting in 90 articles for consideration. All 90 articles were screened, and their relevance was determined according to the inclusion and exclusion criteria.

Preconditions of keywords and Boolean configurations requiring level 1 and level 2 keywords in the titles and level 3 and level 4 keywords in the abstract were also considered. The titles of the remaining 90 articles were screened according to the criteria stated above, and a further 53 were excluded due to not meeting requirements. Of the remaining 37 articles, a further 24 were excluded since the abstracts did not fulfil the inclusion criteria and mostly emphasised the negative impacts of social media, giving little to no consideration to the potential of using it as a tool to promote mental health among adolescents. Following a full-text evaluation of the remaining 13 papers to determine if they met the inclusion criteria, seven articles were eventually included in this review (Figure 2).

Among the seven selected studies, two used systematic narrative review and narrative synthesis to analyse the data [28,29]. Three studies used focus groups and thematically analysed the data generated from the focus groups [30-32]. Another study used in-depth interviews and thematic analysis to analyse the data generated from the interviews [33]. Another study used an interpretive epistemological approach with inductive thematic analysis [34]. Table 1 shows the key elements and findings of the reviewed articles.

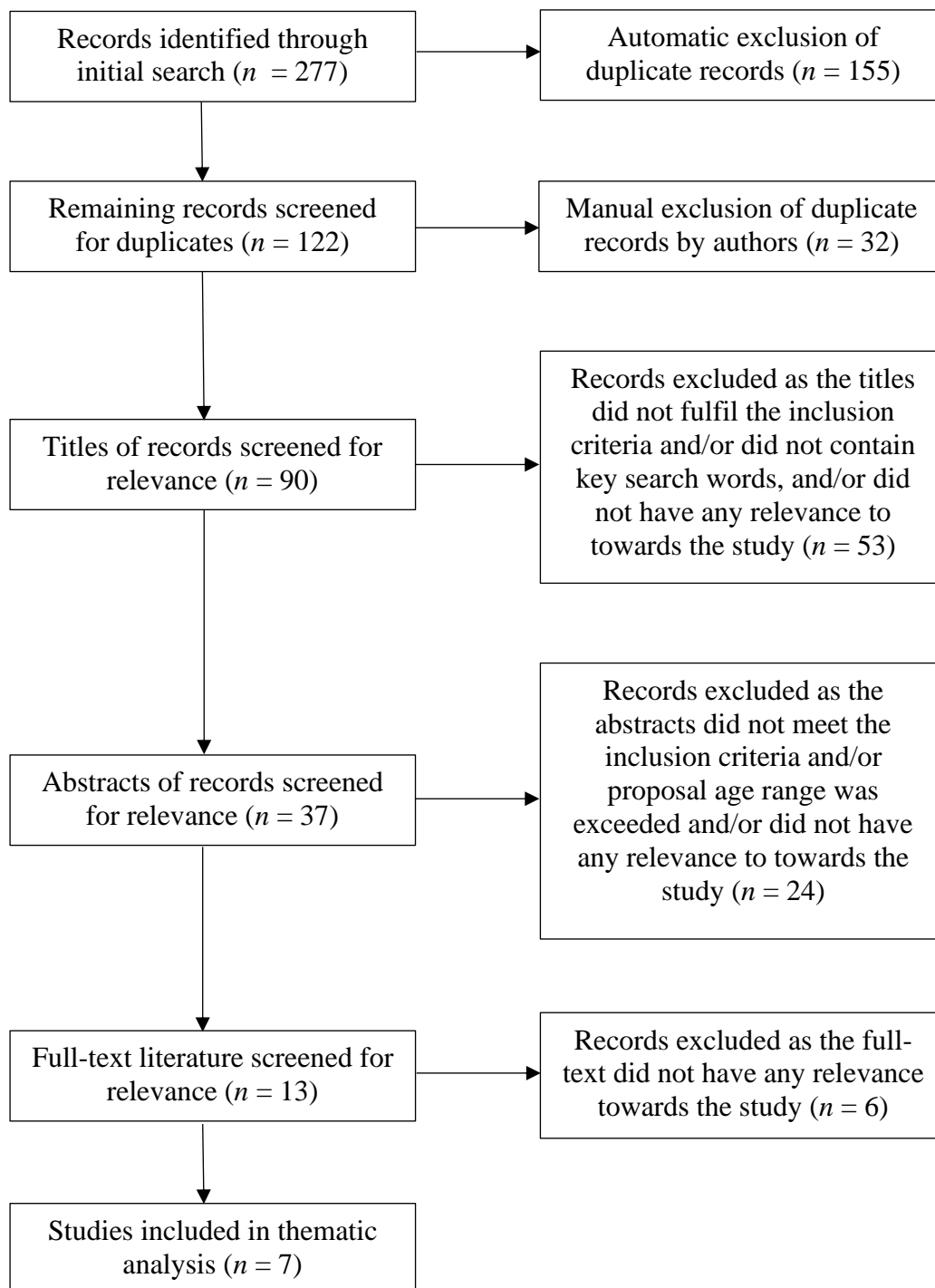


Figure 2. Stages of review regarding the use of social media to promote mental health among adolescents

Table 1. Key Elements and Findings of the Reviewed Articles

Authors (Year)	Title	Sample	Abstract	Findings	Conclusion
Best P, Manktelow R, and Taylor B (2014)	Online communication, social media, and adolescent well-being: A systematic narrative review	Studies included adolescents no older than 19 or where the mean age was 19 or below.	Polarisation exists about the impact social technologies have on the mental well- being of younger people. Beneficial and harmful effects that online social media technology has amongst young people through reviewing research published between 2003 and 2013. Benefits included increased self-esteem, increased social capital, better social support, safe identity experimentation, and	A growing body of knowledge examining the potential supportive role of virtual environments is emerging. Teens are becoming more willing to disclose sensitive information online while displaying more empathic online communication. There is a positive effect between online communication and well-being. Possible mental health promotion benefits that online communication could have.	The perception of social media's effects on adolescent mental well-being remains mixed, but there are potential benefits. Benefits such as higher self- esteem and a sense of belongingness. Social media could play a role in help-seeking behaviour among this age group. Using social media for communication purposes.

increased opportunities for acts of self-disclosure.

<p>Hjetland G.J, Schonning V, Hella R.T, et al. (2021)</p>	<p>How do Norwegian adolescents experience the role of social media concerning mental health and well-being: A qualitative study</p>	<p>Adolescents aged between 15 and 18 years (n = 27)</p>	<p>Adolescents are the most active social media users, resulting in possible mental health issues among this age group.</p> <p>Lived experiences of adolescent social media use to understand the negative and positive effects thereof.</p> <p>Two of the three identified themes considered positive outcomes of the use of social media on the well-being of adolescents.</p>	<p>Three main themes related to adolescents' experiences with using social media. Social media plays an important role in adolescents' everyday lives.</p> <p>How they use it is very important since this is often a determining factor of the outcome it will have on their mental health.</p> <p>One positive attribute is that of connectedness which is crucial to well-being and positively contributes to mental health, especially during this developmental stage.</p>	<p>Adolescents should consider how they want to engage with others since negative engagement could result in poor mental health outcomes.</p> <p>Social media is a powerful tool that has the potential to result in positive mental health outcomes among adolescents.</p>
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O'Reilly M, Dogra N, Hughes J, et al. (2018)	Potential of social media in promoting mental health in adolescents	Adolescents aged between 11 and 18 (n = 54)	Adolescent mental health challenges healthcare systems globally. This study explored how social media could be used to promote mental health among this age group. Three themes were identified during this process.	Social media could promote mental health, and adolescents increasingly rely on social media as a form of information. Adolescents want information that is quickly available, easily accessible, and anonymous. Adolescents are reluctant to seek help in other places due to stigma, mistrust, and lack of awareness. The challenges of using social media to promote mental health must be addressed for successful utilisation. Three key themes were identified: social media's role in promoting mental health, social media usage among	Social media can play an important role in mental health promotion regardless of the associated negative implications and the need for caution. It is a fast, efficient, and cost-effective way to reach large adolescent populations globally. Social media integrated into mental health promotion initiatives in cooperation with organisations within the scope of health and education.
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				adolescents, and the benefits and challenges of using social media for mental health promotion.	
O'Reilly M, Levine D, Donoso V, et al. (2022)	Exploring the potentially positive interaction between social media and mental health; the perspectives of adolescents	Adolescents aged between 11 and 18 (n = 54)	<p>Concerns are being raised about the negative impact that spending so much time online can have on adolescents' mental health.</p> <p>This study aimed to understand the potential positive effects it might have.</p> <p>Focus groups showed that social media could play a role in mental health promotion among adolescents by reducing stress, increasing social connectivity, providing</p>	<p>Adolescents could identify various factors, such as online safety on social media platforms, suggesting that they are competent in recognising potential risks and mitigating strategies to protect their mental health.</p> <p>It became evident that social media can be used to protect adolescent mental health by serving as learning platforms which they can use to create peer support structures to ensure social connectedness.</p>	<p>Adolescents are not a homogenous group and how they use/engage with social media differs greatly.</p> <p>Considering adolescents as vulnerable while using social media results in underestimating their digital competencies, making it more challenging to see social media's potential mental health benefits.</p> <p>Authority figures closely involved to ensure that adolescents are sufficiently supported and empowered,</p>

important mental health information, and creating a supportive environment for peers.

Four themes were presented as domains, namely: the valuable role that social media plays in social connection, which ought to maintain well-being, recognise that social media can protect mental health, using social media as a source of information and psychoeducation about mental well-being, and social media's potential in providing a supportive platform.

thus allowing them to navigate the online world safely.

Popat A and Tarrant C (2022) Exploring adolescents' perspectives on social media and mental health and well-being – A qualitative

Adolescents aged between 13 and 17

Studies of this nature have placed very little importance on adolescents' perspectives about the possible impacts of social media on their mental health and general well-being.

Five themes were identified. Only one of the five themes considered a positive outcome related to social engagement and peer support. Online interaction with peers was found to correlate

Social media equips adolescents with tools to learn from others. The themes highlight the complexity of the various factors that play a role in determining whether the outcome on adolescent

literature
review

This study considered the positive impact of social media on adolescent well-being through connection, discussion, and support.

positively with well-being and promote positive mental health.

Social media can be used as a platform to discuss mental health issues with other adolescents who are facing similar mental health conditions.

Online spaces also play an immense role in encouraging adolescents to overcome their hesitation to seek professional help.

Adolescents need better guidance to ensure their online interactions are positive and beneficial to themselves and those around them.

mental health is positive, negative, or both.

Adolescents have varying digital literacy skills, which are almost synonymous with online safety.

Many adolescents have a negative connotation to mental health, which could result in under-reporting of the possible benefits and positive impacts of social media.

<p>Vaingankar J.A, van Dam R.M, Samari E, et al. (2022)</p>	<p>Social media–driven routes to positive mental health among youth: Qualitative enquiry and concept mapping study</p>	<p>Adolescents aged between 15 and 19 years and young adults aged between 20 to 24 years</p>	<p>Social media is a space for adolescents to communicate and express themselves. The study found many avenues for building positive mental health and identified five positive mental health components: social capital and positive relationships, self-concept, coping, happiness, and other mental health aspects such as positivity and personal growth.</p>	<p>Three features of social media that influence positive mental health were identified: connection, content, and expression outlet. Social media can be used to build positive relationships and social capital on a 24/7 basis. Social media plays a role in enriching self-concepts, thus allowing for positive appraisal. Social media improves coping processes by exposing adolescents to a sense of normality and familiarity to create a sense of shared reality. Access to content that is beneficial to adolescent mental health and overall well-being.</p>	<p>Social media plays an important role in the everyday lives of adolescents and young adults, with a special emphasis on how the use of social media can result in positive influence, thus contributing to positive mental health. Digital mental health promotion is an avenue that needs more exploration. Social media is a powerful tool that can be used to facilitate the promotion of mental health.</p>
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Weinstein E, Kleiman E.M, Franz P.J, et al. (2021)	Positive and negative uses of social media among adolescents hospitalized for suicidal behaviour	Adolescents aged between 13 and 18 years (n=30)	Public concern exists about the potential harm social media can cause to adolescent mental health. The study explored positive and negative experiences that suicidal adolescents had when using social media during inpatient hospitalisation. The data reported both positive and negative effects of social media, with most participants reporting mixed experiences.	Assessing the effect social media use can have on adolescent mental health is essential. Positive effects found in this study included social connection, exposure to positive content, access to social support structures, mental health and coping resources and information, and a sense of shared interest.	Risks are often modifiable if adolescents are provided with more effective guidance on using social media. Intervention programs aimed at teaching adolescents how to navigate social media is an avenue that needs further exploration. This study reported several benefits, concluding that social media, if used effectively, can contribute towards mental health promotion even in a clinical sample of adolescents exhibiting suicidal behaviour.
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Themes Obtained from the Review

Four main themes emerged from the data analysis process: (i) Enhancing communication and social connection; (ii) Resource for educating the self and others; (iii) Enriching adolescent development, and (iv) Benefits related to adolescent well-being. Table 2 is a visual representation of the four main themes and several subthemes that were identified.

Table 2. Visual representation of themes and subthemes

Theme	Subtheme
Theme 1: Enhancing communication and social connection	<ul style="list-style-type: none"> • <i>Broadening social networks</i> • <i>Increased social support</i>
Theme 2: Resource for educating the self and others	<ul style="list-style-type: none"> • <i>None</i>
Theme 3: Enriching adolescent development	<ul style="list-style-type: none"> • <i>Social media as a space for identity development and experimentation</i> • <i>Self-perception articulation</i> • <i>Goal attainment and personal development</i>
Theme 4: Benefits related to adolescent well-being	<ul style="list-style-type: none"> • <i>Method of distraction and relaxation</i> • <i>Reducing stress and enhancing coping</i> • <i>Promoting help-seeking behaviour</i> • <i>Positive affect enhancement</i>

Theme 1: Enhancing communication and social connection

Two subthemes, broadening social networks and increased social support, are derived from Theme 1. It became evident from the literature that through broadening their social networks, adolescents are likely to develop pro-social communication skills that could result in increased social support, which has been shown to play an integral role in positive social functioning and well-being [28,29,32].

Broadening social networks. Through broadening their social networks, adolescents could potentially develop pro-social communication skills that could result in increased social support, which has been shown to play an integral role in positive social functioning and well-being [28,29,31]. All but one of the included studies highlighted the importance of broadening social networks during adolescence. Broadening their social networks enables adolescents to create and maintain relationships that often result in a sense of connectedness and belongingness [31]. This sense of connectedness to a wider community is thought to have the potential to positively contribute to adolescent mental health [28,31,32]. It was found that there is value in using social technologies to keep adolescents socially connected, thus providing them with the opportunity to improve their social skills [33]. Continuous improvement of social skills facilitates positive social functioning that may be especially beneficial when adolescents are in a position where they need to seek social support from their families, peer groups, or the communities they are part of [29,32].

Increased social support. The literature indicated a strong link between social support and well-being since it is thought to mitigate against negative life events, and this sentiment is echoed by six of the seven studies included. Social media has the potential to create a supportive virtual environment between groups of adolescents that share similar experiences, be they positive or negative [32]. Connections formed among adolescents via social media networking sites could therefore be argued to result in multiple interconnected support networks that have been correlated with promoting positive mental health among this age group [29,34]. Peer groups are often adolescents' primary source of social support [28]. The use of social media allows adolescents to connect with their peer groups not only for social support but also to express themselves to get social validation which indirectly plays a role in mental health promotion [29,31].

Theme 2: Resource for educating the self and others

The vast amount of information available across various social media platforms is especially beneficial from a mental health promotion perspective [28,30,34]. Social media is considered a greatly under-used and inexpensive way to impart mental health information [30]. Mental health information that is available on social media networks empowers adolescents to not only be better informed but also to be agents of their mental health [30,32,34]. There has been a rapid growth of accessible mental health information on various social media platforms, resulting in a simple yet effective space for adolescents to engage with and discuss mental health issues [28-30]. The sheer speed of information flow and the availability thereof on social media platforms has enabled mental health promotion information to spread quickly across vast geographical areas, thus making such information available to adolescents whenever they need it [30,34].

Five of the seven included studies consider the availability of mental health information on social media platforms and the immense value thereof. Adolescents are already using social media platforms to gain access to mental health information. Furthermore, it was reported that social media had become adolescents' go-to source for gathering mental health information [30,32]. Therefore, the availability of mental health information on social media platforms can educate adolescents about issues that might negatively impact their mental health and how to protect it [30]. Adolescents could therefore use the knowledge they obtain from these platforms to seek further guidance from other sources if necessary, especially when they might need advice regarding mental health issues such as how to resist self-harm urges or to regulate anxiety, for example [30,33].

Theme 3: Enriching adolescent development

Adolescence is characterised by an immense period of developmental changes, and in today's day and age, social media platforms and other online spaces influence this

developmental phase [30]. Subsequently, three subthemes related to how social media can enrich adolescent development were identified. These subthemes consider how social media can be a space for identity development and experimentation, self-perception articulation, goal attainment and personal development. Adolescents have found innovative ways to use social media to express themselves, share their aspirations, explore their identities, and become resilient through their development journeys [28,29,34].

Social media as a space for identity development and experimentation. Social media networks have enabled adolescents to become active agents in constructing their identities [28]. This sense of agency allows adolescents to develop a deeper sense of self and advance their interpersonal communication skills to translate their strong sense of personal identity to their audience to avoid potential negativity that may arise, which indirectly buffers against threats to their mental health [28,29,34].

Self-perception articulation. Five of the seven articles highlighted the role social media could play in assisting adolescents to articulate their self-perception. Social media encourages self-expression related to other facets of the self [29]. Adolescents could use social media to reinforce self-esteem by expressing themselves online [34]. Strengthening their self-esteem is often facilitated through positive affirmation [34]. Positive affirmation often results in confidence and a higher regard for oneself which is especially important during the adolescent developmental phase [34]. An association exists between positive self-esteem among adolescents and how they communicate and interact with one another and others in online spaces [28].

Goal attainment and personal development. Clarity of the self plays an important role in enabling adolescents to reach their personal development goals and pursue their aspirations [29,34]. From the literature, it was clear that social media allows adolescents to explore their personal development, which could encourage positive mental health behaviour [29]. It was

also found that social media may be utilised as a platform for retrospective reflection on personal achievements and reviewing previously shared content gives adolescents insights into where they were on their developmental paths [34]. A strong sense of self and an inclination to what the future may hold plays an essential role in adolescents' well-being, informing their mental health [29,34].

Theme 4: Benefits related to adolescent well-being

The seven studies included significant elements of how social media can benefit adolescent well-being. Four subthemes that correlate with benefits related to adolescent well-being were identified, namely: a method of distraction and relaxation, reducing stress and enhancing coping, promoting help-seeking behaviour, and positive affect enhancement.

Method of distraction and relaxation. Five of the seven studies report how adolescents use social media to relax and distract themselves from negative thoughts and feelings that could influence their mental health. It was reported that adolescents increasingly rely on social media as a tool of relaxation since it has been reported to allow them to escape everyday pressures such as exams and school stress, for example [30,32]. Using social media as a distraction method could minimise any factors detrimental to adolescent well-being that will naturally influence their mental health [30,32]. Therefore, engaging on social media platforms can assist adolescents in developing coping mechanisms that could benefit their mental health and day-to-day functioning [34].

Reducing stress and enhancing coping. From the previous sub-theme, it becomes evident that social media has the potential to reduce stress and enhance coping mechanisms among adolescents [30,33,34]. It was reported that social media is an easy tool adolescents can use to destress, cope, rest, and recharge [33,34]. Furthermore, it was also reported that engaging on social media platforms after experiencing acutely stressful events, such as writing an exam, could reduce several biological responses to stress, such as heart rate and the production of

cortisol [34]. Good coping mechanisms often enable adolescents to handle stress more effectively, and social media has been reported to help adolescents cope with stress, strengthening their coping abilities [30,32]. Social media platforms were found to have valuable advice on enhancing coping strategies to reduce various negative aspects of adolescents' lives that may arise due to constant exposure to stressful life situations [33-34], encouraging adolescents to utilise social media when seeking help.

Promoting help-seeking behaviour. Four of the seven studies reported that social media could be a powerful catalyst in encouraging adolescents to engage in help-seeking behaviour related to mental health. It appears adolescents find it easier to address difficult topics in an online space where there is a certain extent of anonymity and non-judgement, which simultaneously has the potential to reduce mental health stigmatisation [30,32]. This sense of anonymity and non-judgements encourages adolescents to overcome their fear of seeking professional help for mental health-related challenges [29,32]. Social media could therefore be considered a safe space where adolescents can have conversations about mental health issues through the open expression of their personal experiences with mental health [29,34].

Positive affect enhancement. Happiness is often associated with positive emotions, hope, and a positive outlook on life [33,34]. Social media has been described as a source of happiness in adolescents' daily lives since it allows them to have access to positive content that has been shown to motivate them to achieve more and to experience upliftment [29,34]. Uplifting social media content was reported to be a small yet reliable source of positive affect enhancement among adolescents [33]. The experience of positive affect enhancement resulted in adolescents intentionally interacting with social media platforms that focus on spreading positivity [33,34]. Adolescents were reported to experience a sense of achievement when accessing positive content that allowed them to appraise themselves more positively, thus enhancing their mental health [33,34].

Discussion

The current review reported the findings from research studies to determine whether social media could be used to promote mental health among adolescents. In the seven studies included, it became clear that social media could potentially be used to promote mental health among adolescents, substantiated by four main themes and several subthemes identified during data analysis. Adolescents are reported to be at higher risk for developing mental health issues [6,35,36]. It is, therefore, imperative to explore various ways to protect and promote mental health among this age group. Adolescence is a critical developmental phase marked by hormonal, physical, social, and emotional changes [37]. During this stage of their development, adolescents also have an inherent desire to seek autonomy, conform with peer groups, and explore their identities [38,39]. Social media has become entrenched in adolescents' daily lives, resulting in a global increase in adolescent social media usage [11-14].

Although the content of the seven studies that were included was not exclusively positive regarding whether social media can be used as a tool to promote mental health among this age group, this critical review revealed enough evidence to substantiate why and how social media could be utilised to play a positive role in adolescent mental health. Social media is here to stay, and several studies report the negative effects that the use thereof could have on adolescent mental health. Despite this, mental health promotion content has become increasingly prevalent on social media. It has been reported that adolescents often use social media platforms and the information available online as their first point of entry when enquiring about their mental well-being. The information they obtain online often motivates them to expand their support systems or seek professional help. Another added benefit of using social media to acquire mental health information is its anonymity and protection since individuals with mental illness must often deal with stigmatisation. Social media, therefore,

creates a safe space where adolescents can share, ask for, and offer help to others regarding mental health and the promotion and protection thereof.

Enhancing communication and social connection was one of the most prominent themes, making it clear that social media plays an important role in strengthening adolescents' social networks and communication skills. Strong social support networks and good communication skills are essential to adolescent development since it often results in a sense of belonging and social connectedness that could potentially bring about positive psychosocial outcomes related to positive mental health [28-30,31,33,34,40]. A sub-theme of Theme 3 that considered developmental enrichment among this age group reported that social media could play an important role in identity formulation, experimentation, and articulating self-perceptions, including factors such as self-esteem, self-worth, and self-expression [28,29,31,33,41,42]. Furthermore, in line with Theme 4, which considers benefits related to adolescent well-being, five of the seven studies that were included alluded that social media platforms and various SNS have encouraged adolescents to engage in help-seeking behaviour, whether it be through consulting accredited online mental health information or seeking help from professionals [20,43-45].

Limitations

The authors only selected articles using the guidelines described in the methods section. Using only these guidelines may have resulted in some articles not being integrated into the findings of this review study. Moreover, this review only considers the possible positive outcomes that social media could have on adolescent well-being while completely disregarding the negative aspects of the use thereof that seemed to be more prevalent while searching for relevant literature. In addition, it is also very difficult to have clear age demarcations for the different stages of adolescent development. A wider age range, possibly

stretching into early adulthood, for example, could have included additional articles for review.

Conclusion and Implications

The results of this critical review will contribute to the existing literature by providing adequate evidence that social media could promote mental health among adolescents by focusing on the positive contributions and not overemphasising their negative effects on mental health. The results of this review study should encourage future research on social media and mental health to take on a more constructive and positive direction, especially since social media is now part of adolescents' daily lives. Furthermore, the findings of this review study could potentially assist researchers and the like in developing programmes or interventions aimed at using social media to promote mental health among adolescents since it is an excellent source of educating the self and others about mental health. Lastly, the findings of this study could be utilised to augment mental health care practitioners' awareness of the potential benefits of using social media to promote mental health in practice.

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SECTION 3: CRITICAL REFLECTION

As a registered MSc Research Psychology student (2021–2022), I will critically reflect on the research process. In Section 3, I will therefore discuss the overall research process followed by reflections regarding data collection, the analysis and interpretation thereof, and the findings and conclusion of this study.

Research Process

The principal purpose of conducting critical review studies is to determine whether the work conducted and/or published on a specific topic or field of interest has been critically evaluated (Carnwell & Daly, 2001; De Klerk & Pretorius, 2019; Grant & Booth, 2009). I was aware that considerable research had already been conducted on this topic. However, this research study aimed to determine whether the existing literature has been critically evaluated. Conducting this critical review required innovation in conceptualising the findings, meaning there had to be a certain degree of analysis and in-depth interpretation.

This critical review study aimed to evaluate the use of social media as a tool to promote mental health among adolescents. For the review, the six steps for conducting critical review studies (Carnwell and Daly, 2001) had to be followed. These steps are essential to determine the purpose of the review study; provide a clear scope; search for; identify and select literature relevant to the study; critically review the selected literature; write up the review, and critically apply the literature to the study.

I also ensured that I followed and maintained all ethical guidelines set out by several entities, including the North-West University, to ensure that the research process delivered rigorous findings of a high standard. Following ethical guidelines is especially important since a qualitative research method can often be very subjective. It should also be noted that this research was of minimal risk since it did not require the participation of any participants. Therefore, ethical guidelines for dealing with participants were not considered while

conducting this study. The data that were produced for this study purely originated from the findings or results of existing literature identified to fulfil the purpose of this review study. The purpose of this critical review research study was to search for, select, analyse, and interpret existing literature in a manner that was ethically correct and aligned with the proposed guidelines as stated above.

I therefore rigorously followed both ethical and methodological guidelines to subsequently produce a report that would be able to add to the already existing body of knowledge in the broader field of psychology but more specifically to the field of social media and the influence it exerts on adolescent mental health (Wager & Wiffen, 2011). Rigour in qualitative research is especially important since researchers should take extra precautions to ensure that they remain as objective as possible throughout the research process. Therefore, I used clearly defined criteria while selecting literature to ensure the accuracy and thoroughness of the study's results (Gnyawali & Song, 2016).

By paying attention to detail and engaging in several feedback sessions with the study supervisor, I ensured the study's dependability, credibility, confirmability, and transferability. Moreover, I managed to balance being fully immersed in the research process and ensuring that they remained unbiased by portraying the true findings of the study. In addition to the research guidelines for North-West University research, I followed ethical guidelines set out by the Health Professions Council of South Africa (HPCSA) and Wager and Wiffen (2011). As the primary researcher and registered MHSc Research Psychology student at North-West University, I ensured ethical training throughout my academic career. I completed the online Training and Resources in Research Ethics Evaluation (TRREE) course and the Basics of Research Integrity and Health Research Ethics Online Course as presented by the HREC entity of the North-West University. The study supervisor, Prof Esmé van Rensburg (second

reviewer), assisted in monitoring the entire process and the data analysis since she has prolific experience in critical review studies and thematic analysis.

The final report will be exclusively submitted for possible publication in the *Journal of Adolescent Health* and will, therefore, not be submitted to multiple journals for publication. I avoided plagiarism by correctly citing and referencing the work of other authors both in-text and in the reference list by strictly following the guidelines as set out by the APA (7th edition) and the guidelines as set out by the AMA (11th edition) for Section 2 as required by the *Journal of Adolescent Health*. No financial support or funding was provided for this critical review study which meant that I remained entirely neutral without any conflict of interest, nor were they influenced by any other competing or interested parties. I followed the methodological and ethical guidelines discussed above with care and therefore did not attempt to skew the data or findings of this crucial review study in any way, form, or manner to suit my subjective perspective of the matter. Conducting this study with high rigorous standards allowed me to present scientifically correct and as objective as possible findings.

Data Collection

Before beginning with data collection, I had to articulate keywords that would be most appropriate to answer the research question and that would enable me to search for articles objectively and scientifically. During the initial search, it became clear that the keywords would need to be as concise as possible due to the abundance of literature on both social media and adolescents and these two concepts combined. In addition, it was also important for me to become familiar with the databases

The librarian specialist at North-West University, Mr Nestus Venter, assisted and guided me in navigating and managing searches on the electronic database platforms. After several consultations and back-and-forth communication, I identified the following keywords

to be included in the search: ‘adolescent*’ or ‘teen*’ or ‘youth’ or ‘young adult*’ or ‘young people’ and ‘social media’ or ‘facebook’ or ‘twitter’ or ‘instagram’ or ‘tik tok’ or ‘social network*’ and ‘mental health’ or ‘mental well-being’ or ‘psychological health’ or ‘psychological well-being’ or ‘well-being*’ and ‘promote’ or ‘promoting’ or ‘support’ or ‘supporting’ or ‘enhance’ or ‘aid’ or ‘assist’ or ‘advance’. I used these keywords to search for and identify literature that would be relevant, and that would assist me in answering the research question.

Although these keywords generated many results, only a select few applied to this study. A trend I noticed while conducting these searches was that there seemed to be a poor connotation between social media and adolescents, with most of the articles focussing on the negative aspects of social media and its role in adolescents’ lives. Narrowing down the articles became quite challenging since some of the literature shared both sentiments of social media’s negative effect on adolescent mental health and the potential positive effect it could have on adolescent mental health. With the assistance and insight of the study supervisor, I could select relevant articles, narrowing them down to seven articles to include in the study. I meticulously selected these articles by applying the inclusion and exclusion criteria, thus ensuring that only relevant articles would be included in the analysis and synthesis phases of the study. The study supervisor, Prof Esmé van Rensburg, monitored, guided, co-analysed and gave me feedback throughout this process.

Data Analysis and Interpretation

Before commencing with the data analysis, I had to appraise the primary list of studies generated during the initial literature search with the keywords mentioned above. The appraisal process was quite time-consuming since all the literature from the primary list of studies had to comply with the inclusion-exclusion criteria defined during the review proposal stage of the research process. Although strict, these inclusion-exclusion criteria

played a critical role in assisting me with determining which studies to include in the critical review. The titles and abstracts immediately excluded most of the studies from the primary list. However, there were a few instances where the full text of some studies had to be considered since the titles or abstracts did not provide sufficient detail. Another thing that I found during this stage was that some studies included both the negative and positive attributes of social media on adolescent mental health, which meant that the relevance of including studies that considered the flipside of the topic had to be carefully considered. After this initial appraisal process was completed and excluding studies based on their titles, abstracts, and additional inclusion-exclusion criteria, I was left with thirteen research studies.

It was of utmost importance for me to ensure that the thirteen research studies identified were of high quality so that they could make meaningful. I assessed the quality of the thirteen studies to be included by considering their internal validity and applicability by reading the full text of the studies (Puks, 2016). After reading through and considering the contribution of each of the thirteen studies, an additional six were excluded from the data pool, thus leaving me with seven studies that would be included in the critical review.

I continuously consulted with the study supervisor throughout this stage until the study supervisor, and I was satisfied with the possible contributions each identified study would make towards answering the research question. I then proceeded with the final two stages, namely analysis and synthesis, where they thematically analysed and categorised the most relevant data, ultimately allowing me to write up a report of the findings (Carnwell & Daly, 2001; Puks, 2016).

I used the six guidelines for thematic analysis as proposed by Braun and Clarke (2019). These guidelines required me to identify patterns and possible themes by reading through each of the seven articles to produce initial codes. These codes were then used to formulate and inform the content of each of the themes and subthemes I identified (Braun &

Clarke, 2019). This process was quite challenging since I was afraid of omitting important information that might have been valuable for the findings section of this study. I tried to make this process easier by allowing the preliminary codes and themes to rest for several days after initial identification. I then looked at the preliminary codes and possible themes from a fresh perspective, allowing me to refine and clearly define the final themes and subthemes presented in the findings.

Findings

Once I had completed the final two phases, I could write up the findings. Whilst writing up the findings, I ensured that they applied the relevant literature to the study to ensure that the report successfully answered the research question of this study. Writing this study's final report was challenging since several themes and subthemes were identified during the data analysis phase. Nonetheless, I could present the findings in a logical, non-repetitive, coherent, and concise manner that aligned with the study's aim to determine if social media can promote mental health among adolescents. As presented in Section 2 of this mini-dissertation, the data extraction table played an important role in allowing me, the study supervisor, and the reader to become familiar with the most important aspects of each of the seven studies. I identified and presented a total of four themes with nine subthemes.

The findings from this critical review study were rewarding because they allowed me to explore a topic that contained two aspects: social media and mental health, which are generally in opposition to one another. During the initial literature search phase, it became quite apparent that the narrative around these two aspects was mostly negative in that social media is perceived to have a mostly negative effect on mental health. I was pleasantly surprised when they were able to identify literature that not only allowed them to answer my research question but to gain insight into the complexities of using something as powerful as social media to promote mental health in today's day and age.

Conclusion

At the beginning of my journey as a Master's research psychology student, I felt quite overwhelmed since I was unsure what the entire mini-dissertation process would entail. I spent quite a lot of time considering what I would like to research and consulted with the study supervisor several times to ensure that the research topic identified would not only accommodate my interests but also allow me to make a substantial contribution to the existing body of knowledge. Taking on this study required me to conduct an in-depth search for literature that would assist me in answering the research question, which taught me a great deal about the research process. I quickly realised that I would need to work hard from the beginning and throughout to ensure that I delivered work that met the requirements and standards of the study supervisor and me. Throughout this entire journey, I learnt that the ability to conduct good research is not something that can be acquired overnight. Instead, it is a continuous learning process, expanding your horizons and challenging yourself.

I am very passionate about positive psychology and the daily, more current-day challenges individuals face. Therefore, I felt that this study was the perfect opportunity to combine these two concepts to find a tentative solution or answer to how something such as social media, which has become part of our everyday lives, can be used to bring about or elicit a positive outcome such as promoting mental health. After reading article after article about the negative effects social media has on mental health, I felt as if I was looking for a needle in a haystack. Although this was somewhat discouraging, it encouraged me to continue searching for the good, which I also tend to do in my personal life. My persistence in this pursuit allowed me to see just how big the gap was for research, especially within the adolescent age group.

Some of my top strengths in life include creativity, love of learning, humility, bravery, and perspective. Throughout this journey, I allowed myself to be creative and to think outside

the box, especially when it came to the conceptualisation of this study. My love of learning became evident while conducting this study, and I constantly challenged myself to master existing and new research skills to systematically add to what I already knew. Conducting this study also reminded me of how important good quality research is no matter on what scale it is done. I do not know how significant the contribution of the study's findings will be, but I can rest assured knowing that I took the utmost responsibility to ensure that this study was conducted to the best of my abilities. This journey humbled me and allowed me to look at things differently. Heraclitus, the Greek philosopher, once said: "Change is the only constant in life." As with this quote, it is all about changing the narrative and learning to adapt to a constantly changing world.

This study allowed me to do just that.

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Addendum A (COMPRES Scientific Approval Letter)



Recommendation of the Scientific Committee to the NWU-HREC for a *No Risk Study*

Scientific Committee Information			
Name of the scientific committee	COMPRES	Discipline(s)	MAMSc Research Psychology
Research Entity	COMPRES	Contact Person for the committee	Chanté Klopper
Faculty	Health Sciences	E-mail of the committee contact person	Chante.klopper@nwu.ac.za

Study & Scientific Review Information			
Title of the study:	The use of social media as a tool to promote mental health among adolescents: A critical review.		
Researcher/Study Supervisor Initials, Name and Surname:	Prof Esmé van Rensburg	NWU Number:	10194118
Student Initials, Name & Surname:	Jhené Botha	NWU Number:	26105276
Other Researchers involved in the study (Initials, Names and Surnames):	None indicated.		
Executive summary of the research: <i>Note: Please attach the proposal to the template and send to the NWU-HREC</i>	<p>Concerns pertaining to the effect that social media has on the mental health of adolescents is an area of study that has been receiving a great amount of attention seeing that social media usage among adolescents has skyrocketed in recent years. Although there might be several reasons for concern, it has been shown that the potential to use social media as a tool to promote mental health does exist. Formulating and exploring different ways in which to make this a possibility has resulted in a lacuna in research to be attended to as we live in an age where social media platforms play an important role in our livelihoods. Through the process of reviewing literature, it became eminent that research pertaining to using social media as a tool to promote mental health was few and far between both internationally and nationally. On this account, it has become clear that although research on this topic exists, there is a need for further research to be implemented within various other contexts to determine if social media can be used as a tool to promote mental health in adolescents. Therefore, the overarching aim of this proposed critical review study is to give an all-inclusive account of research that has been conducted during the last decade on this matter internationally seeing that social media use has become immensely popular during this time. Hereafter, this proposed critical review study has the potential to sanction additional research studies to be implemented in the South African context. To conduct the proposed critical review research study, the six steps as endorsed by Carnwell and Daly (2001) will be applied by the researchers (Ms</p>		

	Jhené Botha [primary reviewer] and Prof. Esmé van Rensburg [secondary reviewer]). The steps are as follow – Step 1: determining the exact purpose of the literature review, Step 2: defining the scope of the review, Step 3: identifying and selecting relevant sources of information, Step 4: reviewing the literature which has been obtained in the previous step, Step 5: writing up the review, and Step 6: critically applying the literature to the proposed study. For this proposed study steps one through four will be reported throughout the proposal and steps five through six will be set in motion once this proposed critical review study has been approved.	
Potential risk level:	No risk	<input checked="" type="checkbox"/> Motivate: Proposed study is a critical review which would not directly impact on human participants.
Recommendation for the REC:	Exempted from review	<input checked="" type="checkbox"/> Motivate (e.g. systematic review not impacting on human participants, laboratory work with human cell lines etc.): Proposed study is a critical review which would not directly impact on human participants.
Any additional comments	Motivate: Click here to enter text.	
Chairperson of the committee	Prof CHM Bloem	
Committee members present during the review	Prof Ansie Fouché, Mr Curwyn Mapaling, Prof Herman Grobler	
	<i>Note: Ensure no conflict of interest</i>	
Date of review	2021/08/11	

Interim Scientific
Committee
COMPRES

Digitally signed by
Interim Scientific
Committee COMPRES
Date: 2021.08.13
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Signature of Chairperson

Date: 2021/08/13

Prof CHM
Bloem

Digitally signed by
Prof CHM Bloem
Date: 2021.08.13
14:09:08 +02'00'

Signature of Research Director

Date: 2021/08/13

*Form developed by Prof Minrie Greeff, 1 March 2017
Form updated by Prof Minrie Greeff, 31 January 2019
Form updated by Prof Minrie Greeff, 8 May 2019
Form updated by Prof Minrie Greeff, 23 July 2019
Form updated by Prof Minrie Greeff, 10 August 2019*

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10 August 2019

File Reference: 9.1.5.6

Addendum B (HREC Ethical Approval Letter)



Private Bag X1290, Potchefstroom
South Africa 2520

Tel: 086 016 9698
Web: <http://www.nwu.ac.za/>

North-West University Health Research Ethics
Committee (NWU-HREC)

Tel: 018 299-1206
Email: Ethics-HRECApply@nwu.ac.za (for human
studies)

19 April 2022

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the North-West University Health Research Ethics Committee (NWU-HREC) on 19/04/2022, the NWU-HREC hereby approves your study as indicated below. This implies that the NWU-HREC grants its permission that, provided the general conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: The use of social media as a tool to promote mental health among adolescents: A critical review																															
Principal Investigator/Study Supervisor/Researcher: Prof E van Rensburg																															
Student: J Botha - 26105276																															
Ethics number:	<table border="1"><tr><td>N</td><td>W</td><td>U</td><td>-</td><td>0</td><td>0</td><td>2</td><td>8</td><td>4</td><td>-</td><td>2</td><td>1</td><td>-</td><td>A</td><td>1</td></tr><tr><td colspan="3">Institution</td><td colspan="5">Study Number</td><td colspan="2">Year</td><td colspan="5">Status</td></tr></table>	N	W	U	-	0	0	2	8	4	-	2	1	-	A	1	Institution			Study Number					Year		Status				
N	W	U	-	0	0	2	8	4	-	2	1	-	A	1																	
Institution			Study Number					Year		Status																					
Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation																															
Application Type: Single study	Risk: <table border="1"><tr><td>Minimal</td></tr></table>	Minimal																													
Minimal																															
Commencement date: 19/04/2022																															
Expiry date: 30/04/2023																															
Approval of the study is provided for a year, after which continuation of the study is dependent on receipt and review of an annual monitoring report and the concomitant issuing of a letter of continuation. A monitoring report is due at the end of April annually until completion of the study.																															

General conditions:
<i>While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:</i>
<ul style="list-style-type: none">• The principal investigator/study supervisor/researcher must report in the prescribed format to the NWU-HREC:<ul style="list-style-type: none">- annually on the monitoring of the study, whereby a letter of continuation will be provided annually, and upon completion of the study; and- without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study.• The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the principal investigator/study supervisor/researcher must apply for approval of these amendments at the NWU-HREC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited.• Annually a number of studies may be randomly selected for active monitoring.• The date of approval indicates the first date that the study may be started.• In the interest of ethical responsibility, the NWU-HREC reserves the right to:<ul style="list-style-type: none">- request access to any information or data at any time during the course or after completion of the study;- to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;

- *withdraw or postpone approval if:*
 - *any unethical principles or practices of the study are revealed or suspected;*
 - *it becomes apparent that any relevant information was withheld from the NWU-HREC or that information has been false or misrepresented;*
 - *submission of the annual monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and/or*
 - *new institutional rules, national legislation or international conventions deem it necessary.*
- *NWU-HREC can be contacted for further information via Ethics-HRECApply@nwu.ac.za or 018 299 1206*

Special conditions of the research approval due to the COVID-19 pandemic:

Please note: Due to the nature of the study i.e. (critical review of previously published manuscripts), this study will be able to proceed during the current alert level, following receipt of the approval letter. No additional COVID-19 restrictions have been placed on the study except that the researcher must ensure that before proceeding with the study that all research team members have reviewed the North-West University COVID-19 Occupational Health and Safety Standard Operating Procedure.

The NWU-HREC would like to remain at your service and wishes you well with your study. Please do not hesitate to contact the NWU-HREC for any further enquiries or requests for assistance.

Yours sincerely,



Digitally signed by
Prof Petra Bester
Date: 2022.04.19
13:13:12 +02'00'

Chairperson NWU-HREC

Current details: (23239522) G:\My Drive\Research and Postgraduate Education\9.1.5.4 Templates\9.1.5.4.2_NWU-HREC_EAL.docm
20 August 2019
File Reference: 9.1.5.4.2

Addendum C (Language Editing Report)

LANGUAGE PRACTITIONER DECLARATION

Dr Althéa Kotze

Independent, qualified language practitioner

Language editing (English & Afrikaans)

Translation (English–Afrikaans–English)

althea.erasmus@gmail.com
4 Ixia Close
Yzerfontein
7351
South Africa

To whom it may concern

This document confirms that Dr Althéa Kotze edited this mini-dissertation by J Botha for appropriate English language use: correct grammar, spelling, punctuation, conventions; clarity: conciseness; engagement: fluency; delivery: formality; and style.

DISSERTATION TITLE: Social media as a tool to promote mental health among adolescents: A critical review

AUTHOR: J Botha [orcid.org / 0000-0003-2792-3588](https://orcid.org/0000-0003-2792-3588)

Mini-dissertation submitted in fulfilment of the requirements for the degree Master of Health Sciences in Research Psychology at the North-West University

DATE ISSUED: 18 November 2022

Dr Althéa Kotze

Dr Althéa Kotze • PhD Afrikaans and Dutch • MA Afrikaans and Dutch • MA Applied Linguistics • BA Hons • BA • PGCE • APed (SAT1 1001073) • 4 Ixia Close • Yzerfontein • 7351 • South Africa • +27 (0) 823518509 •••

Addendum D (Turn-It-In Report)

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4	"Social Media: The Good, the Bad, and the Ugly", Springer Science and Business Media LLC, 2016 Publication	1%
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Addendum E (Solemn Declaration and Permission to Submit)



NWU Higher Degrees Administration

SOLEMN DECLARATION AND PERMISSION TO SUBMIT

1. Solemn declaration by student

I, **Ms. Jhené Botha**

declare herewith that the thesis/dissertation/mini-dissertation entitled (**exact registered/approved title**),

Social media as a tool to promote mental health among adolescents: A critical review

which I herewith submit to the North-West University is in compliance/partial compliance with the requirements set for the degree:

Master of Health Sciences in Research Psychology at the North-West University

is my own work, has been text-edited in accordance with the requirements and has not already been submitted to any other university.

LATE SUBMISSION: If a thesis/dissertation/mini-dissertation of a student is submitted after the deadline for submission, the period available for examination is limited. No guarantee can therefore be given (should the examiner reports be positive) that the degree will be conferred at the next applicable graduation ceremony. It may also imply that the student would have to re-register for the following academic year.

Ethics number: **NWU-00284-21-A1** ORCID: **0 0 0 0 - 0 0 0 3 - 2 7 9 2 - 3 5 8 8**

Signature of Student: **Jhené Botha** Digitally signed by Jhené Botha Date: 2022.11.18 10:17:00 +02'00' University Number: **2 6 1 0 5 2 7 6**

Signed on this **25** day of **November** of 20 **22**

2. Permission to submit and solemn declaration by supervisor/promoter

The undersigned declares that the thesis/dissertation/mini-dissertation:

- Complies with the A-rules and the technical requirements provided for in the Manual for Higher Degree studies and in faculty rules;
- Has been checked by me for plagiarism (by making use of TurnItIn software for example) and a satisfactory report has been obtained, and;
- That the work was language edited before submission for examination.

Faculty specific requirements as per A-rules: 1.3.2, 4.3.2, 4.3.3, 4.4.2, 4.10.4, 5.3.2, 5.4.2, 5.10.2

- Complies with regards to faculty rules on submission or acceptance by an accredited scientific journal;
- Complies with regards to faculty rules on peer reviewed conference proceedings;
- The student is hereby granted permission to submit his/her mini-dissertation/ dissertation/thesis for examination.

Signatures of supervisor(s) and Promoter(s): (only compulsory in cases where there are co- or assistant- supervisor(s)/promoters)

Esmé van Rensburg Digitally signed by Esmé van Rensburg Date: 2022.11.18 10:19:20 +02'00'

Co-Supervisor/Co-Promoter

Assistant-Supervisor
Assistant-Promoter