

How Can Mobile Phone Mindfulness-Based Counselling Be Systematically Applied and Evaluated for Stress Reduction among the Adolescents?

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ABSTRACT

Mobile Mindfulness based counselling (mMBC) is a relatively new construct in counselling which has demonstrated an effective intervention to psychological problems. The construct may be viewed as a paradigm shift from traditional western approach emphasizes on cognitive restructuring and behaviour modification for intervention in health care practices. This paper looked at how mobile phone mindfulness-based can be systematically applied and evaluated for stress reduction among the adolescents. It did that by examining some existing literatures and empirical studies on the relationship between stress and mobile phone as well as the integration of mobile phone into mindfulness-based counselling and showcased how mobile phone platforms can be utilized to achieve mental health support. The paper made incursion into the concepts of stress, mobile phone use, mindfulness-based counselling, and the theoretical underpinnings of mobile Mindfulness-Based Counselling (mMBC). In conclusion, the study acknowledged that mobile phone is a source of stress to students who stay long on phones and argued that the mobile phone is also a potential tool to access and effectively deliver mindfulness-based counselling for stress reduction. It therefore recommended among others that the students should be guided to leverage their mobile phones to access Mindfulness-bas reduce stress.

Keywords: Adolescents, Mental Health, Mindfulness-Based Counselling, Mobile Phones Use and Stress Reduction.

INTRODUCTION

Adolescence has been described by many researchers as a period of transition characterized by stress which is having its toll on the life of the adolescents (Enem, 2018 & Anjum et al, 2022). Contemporarily, they have been observed to spend hours on the mobile phones, changing the ways they access information, communicate and interact. The mindfulness-based counselling practices engages the mobile phones applications to address mental health issues. Kabat-Zinn (2003) and other researchers have argued that the use of mobile phones can be a source of stress but also offers a great opportunity for stress reduction through mindfulness-based interventions. Mindfulness, being the awareness obtained from paying attention on purpose, being present in the moment with intention and without being judgmental. The emphasis of this paper is to showcase how the mobile phone can be a valuable asset towards stress reduction rather than being just a stressor in the life of the adolescents.

Mindfulness-based counselling, has underlying mechanisms for stress reduction: through reliance on mobile phones with digital platforms, through engaging in acceptance and compassion for others, in present moment awareness, in self-awareness, in the avoidance of negative thoughts and ruminations. These present the technique as a good approach to address the issues of stress among the adolescents.

As the dependence on mobile phones continues to rise among the adolescents, there is need to shift the narrative to the positive impact instead of dwelling on the negative impact. The researchers are of the position that mindfulness-based counselling which is a new construct in counselling is an effective intervention to the myriads of psychological problems including stress, it recognizes mobile phone as a viable tool for delivering mindfulness intervention.

The paper therefore will add voice to the discussions on how mobile technology can deliver and make mindfulness-based counselling more accessible and effective towards the mental health and well-being of the adolescents who are wallowing in stress and stress related issues as evidenced from researches (Akanni et al 2016)

The paper is structured to explore the concepts of stress, the relationship between stress and mobile phone use among the adolescents, avail an overview of Mindfulness-based counselling, explain how mobile phone can advance access to MBC through apps, guided meditation and online counselling. It argued for a balance approach in the use of mobile phone, and concluded by summarizing key findings and suggesting ways of the integration of mobile Mindfulness-based counselling into the mainstream of mental Health practices and in schools for reducing stress among the adolescents.

Stress

Stress has been defined variously by different authors though there is no convergent agreement to its definition among the authors. Nevertheless, from the literature review inferences, stress could be classified as either physiological or psychological according to the nature of the stressor (Shahsavarani et al, 2013). Stress is physiological when the body makes changes in order to respond to the stress state, it is behavioural when the individual may change behaviour in order to deal with the stress and it is psychological when the state of the mind is affected by its symptoms. Silverman et al (2010) defined Stress as a physiological as well as a psychological phenomenon, stating that it is a bodily reaction to a change which needs response, regulation, and/or physical, psychological, and or emotional adaptation. This means that stress could derive from any situation, condition, thought, and/or state; just need to cause frustration, anger, nervousness, and or anxiety. APA (2014) described stress as a state of being overwhelmed, worried, destructive, exhaustive, and lethargic. Therefore, stress can influence people of every age, sex, race, and situations, and can result in both physical and psychological health issues.

This indicates that stress is active in everyone irrespective of age and as long as one is alive, causing distress and affecting one's productivity negatively. It is on this note that Briefenbergen et al (2008) considered stress as an active and progressive process which includes causal antecedents, intervening processes, and influences. Shahsavarani, et al. (2013) saw it as any effect of change in surrounding environment on living being which results in disruption of homeostasis (internal balance) of that living being.

Stress outcome as noted by many authors can be very disruptive to both mental and physical health especial if it goes beyond the optimum level. Sallis (2013) explained that stress could lead to muscle contraction, which in turn can result to other physical reactions and stress-related diseases like; Migraine headache, tension-type headache and musculoskeletal disorders. Chronic stress can result to heart and vein problems, high blood pressure and high levels of stress hormones (McGill et al, 2008). Maton et al (2010) in their study is of the view that chronic stress cause respiratory difficulties, as it increases frequency and speed of breathing- a situation known as hyperpnea, they also posited that the acute stress can result to shock and asthma. Stress affects adolescents' daily lives by disrupting their working/studying capacity and begets comorbidity. The

adolescents at their prime stage, experiencing emotional maturity quest for stimulation are vulnerable and predisposed to mental health, psycho-social and physical consequences.

Prevalence of stress and stress related problems among the adolescence has been decried by researchers. A study carried out by Al-amer et al (2024), evinced a high prevalence of stress among the in-school adolescents aged 14 to 18; 22.8% of the adolescents suffer from moderate stress, 43.0% of them were on severe stress while 16.8% rated extremely severe. Given the situation, the researchers posited that such situation might lead to maladaptive coping. In a cross-sectional study carried out by Anjum et al (2022) to estimate the prevalence of stress symptoms and factors associated with the symptoms among the secondary school going adolescents in Bangladesh, the researchers found that the 65% of the adolescents experience moderate stress symptoms while 35% experienced high-stress symptoms. They also noted that 58.7% of the female suffered more stress than the male (41.3%). They concluded that stress symptoms are highly prevalent among the secondary school adolescents in Bangladesh.

In Nigeria, Akanni et al (2016) also found a high psychological distress of 30.9% among the secondary school adolescents of ages 16-19 years. In the same vein, Opakunle et al (2022) in their study, "Psychological correlates of stress among Nigerian high school adolescents during the third wave of COVID-19 Pandemic", discovered a high prevalence of stress among the adolescents at 61.6%. They also observed that stress correlates with anxiety, depression, insomnia, substance abuse, suicidal behaviours, and reduction of quality of life among the adolescents.

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Stress theory was developed by Hans Selye 1936, the General Adaptation Syndrome (GAS) (Selye, 1976 in Enem, 1998), GAS is a term he used to describe the body's short-and long-term reactions and adaptations to stress in order to restore homeostasis, the reaction may be short-and long-term which depends on the nature of the stress, have quite uniform pattern. The fact that man is hedonistic in nature, makes him to strive to return to normalcy whenever he experiences stress. Selye remarked that there are numerous types of stressors to the human body and the body reacts to them in three-stage process

The Alarm Reaction: The first reaction to stress is the alarm (the immediate response) to the different organs of the body; the brain, liver, lungs hearts. When the sympathetic nervous system, which regulates the functioning of the heart, stomach, bladder, the intestines and the muscles is activated by the sudden release of hormones, it stimulates the adrenal glands. The adrenal glands in turn triggers the release of adrenaline and noradrenaline causing physical symptoms such as increased heart rate, breathing rate, and blood pressure. (Gordon et al, 2015)

The activities of the organs of the body stir up strong emotions such as anger, fear, anxiety or lust depending on the nature of the stress. The emotions in turn prepare the body to flee or fight. When the crisis is over, all the organs relax and continue normal life functioning. According to Selye, most of the symptoms of the alarm response stage disappear or are reversed in the next stage (resistance), then reappear in the final stage of exhaustion.

The next stage is the Resistance: at this second stage of the adaptation, the adrenal glands produce more cortisol which helps to maintain energy and focus, the fight or flight response continues, though at lower intensity and the body adapts to stressors by introducing physiological changes which help the body to cope with stress. However, if the stressful situation is not resolved, the body will not receive a clear signal to return to normal functioning levels implying that the stress hormones will continue to secrete and the blood pressure will stay high. The prolonged levels of high stress can cause disturbances in the immune, digestive, cardiovascular, sleep, and reproductive systems and other symptoms such as: Feelings of fear, anger, sadness, worry, numbness, or frustration, Irritability, Changes in appetite, energy, desires, and interests (Centers for Disease Control and Prevention, 2023)

The Exhaustion. The third is the (depletion of resources) exhaustion. If the stress is prolonged in the body, the body's resources will be depleted and the individual will experience exhaustion. Enduring stressors without relief drains the physical, emotional, and mental resources to the point where the body is no longer able to cope with stress. At this point, signs such as fatigue, burnout and decreased stress tolerance will be noticed. Other symptoms of the general adaptation syndrome of exhaustion may include drain in physical, emotional, and mental resources to the point where the body is no longer able to cope with stress. It can also weaken the immune system, increase the risk of heart disease, high blood pressure, diabetes, and other chronic health conditions, which may include mental health disorders such as depression or anxiety (Adamson et al, 2018)

The implication of the three-stage process by Hans Selye is that a prolonged stress on the body will result to consequences such as weak immune system, mental health impairment, depletion of adrenal hormones, exhaustion of energy reserve, and physiological decline- a culmination of the inability of the body to function. Confirming this, Hammen (2009) decried that Chronic stress is detrimental to adolescents' mental health which could result to anxiety, depression and general decrease of well-being. Hammen also pointed out that adolescents who experience depression are at the risk of more stress which can trigger the onset of a new depressive cases. That is to say that the mental health issue could be a continuum if not treated. The in-school adolescents whose adaptation syndrome may reach the exhaustion stage may lose focus of their academic activities and experience other symptoms if the issue of stress is not addressed.

Relationship between Stress and mobile phone

Using mobile phones all the time can lead to stressful situations among the users. It is stressful when the adolescents use their phones regularly because they may visit sites where they will engage in or respond to cyberbullying/cyber grooming, constant digital interaction, constant online gaming etc. Such behaviour can shift their focus from real life activities and increase anxiety. According to De Choudhury et al 2021, cyber grooming has long-term negative effects on the adolescents, such as anxiety, depression, and disordered eating. Late night exposure to the screen could affect the quality of sleep and lead to restlessness, fatigue, decision fatigue, emotional problems and other attitudinal problems (Fattah, 2018)

Thomée et al (2011) also found in their study that high dependent on phone is associated with increased stress, sleep disturbances, and symptoms of depression among young adults. After six years of their study, Twenge (2017), pointed out that excessive mobile phone use, particularly social media, contributes to increased anxiety, stress, and depression among adolescents. The same year, Elhai et al (2017) found a link between regular smart phone use to increased stress and anxiety, particularly among individuals with difficulty regulating emotions. Enem et al, (2024), also found social media reliance, through phone device as one of the stressors the adolescents face in their life stage.

The review is an indication that mobile phone dependent could result to stress and if such stress is prolonged the adolescents who are constantly on their phones may experience the third stage of the general adaptation syndrome which may exacerbate their mental health, leading to numerous symptoms as posited by Adamson et al (2018).

Given the situation, mobile phones should be used mindfully to access mental health intervention, through mindfulness-based counselling. Mobile phone applications such as calm and headspace are very useful in this regard. Headspace denotes a person's mindset or state of the mind towards himself and others. Hacon (2017) described it as the ability to understand how to control one's thoughts and feelings to affect their impact on either themselves or others. Calm on the other hand refers to a state of mental tranquility which could be achieved by practicing paying attention in the present moment. Both of them are popular meditation and mindfulness app that offer guided sessions towards stress reduction and improvement of overall well-being. They provide resources such as videos, articles and professional support on social media platforms (Twitter, Facebook, Instagram) for mental health. Accessing them will help students maintain calmness, control their thoughts and feelings and navigate stress issues, regulate emotions and build resilience. This definitely makes the mobile phone device and social media visits in the face of mindfulness-based counselling asset for stress management. It is on this premise of mindful and strategic use of the mobile technology that the present authors adjudged the use of mobile phones in support to mental health.

There are supporting empirical evidences that highlight the valuable use of mobile technology in mindfulness-based counselling to address mental health issues. Huberty et al (2019) carried out a study on Calm mobile and found that mindfulness apps can significantly reduce stress and improve sleep quality. After two years, Hubert and other researchers found that mindfulness and meditation mobile app is effective in reducing stress, improving sleep and enhancing emotional well-being (Hubert et al, 2021). Mani et al (2022) in their research also highlighted the efficacy of mobile apps in helping users manage stress effectively when mindfulness and cognitive behavioural therapy are incorporated.

Mindfulness-Based Counselling

Mindfulness-based counselling is a contextual as well as an experiential approach that gears towards helping individuals to develop psychological flexibility which entails being present, open and aware of the moment without judgement or avoidance (Hayes et al, 1999). Brach (2003) similarly, saw it as a therapeutic approach which endows an individual with self-awareness, self-compassion and self-acceptance through the inculcation of principles of mindfulness meditation. William et al (2007) described mindfulness-based counselling as a helping profession where people are enabled to achieve great awareness in their thought, feelings, bodily sensation and approach the experiences with a sense of openness and kindness.

Mindfulness-based counselling is a process that assists individuals to be aware of physical, mental and emotional conditions without any form of judgement (Chiesa & Malinowski, 2011). Kabat-Zinn (1990, p. 4) simply described mindfulness-based counselling as "paying attention in a particular way: on purpose, in the present moment, and non-judgmentally."

The trajectory of mindfulness-based counselling intervention is a new valuable approach in mental health practices, many authors are confirming its effectiveness and popularity in addressing mental health issues. For instance, Madeson (2022) pointed out that there is a growing interest in the practice among health care professionals, schools, businesses and in the military. Mindfulness-based counselling integrates mindfulness practices into the counselling processes, providing and promoting resilience, great self-awareness and emotional regulation on the individuals having challenges of mental health, such as; stress, anxiety, trauma or depression. Greeson (2009) carried out a study and confirmed the success of mindfulness-based counselling in facilitating changes in emotional and mental health of individuals. Caldwell, (2011) also noted that mindfulness-based counselling increases self-focused attention and changes the characteristics of attention, making it less biased, more flexible and nonreactive which are positive outcomes for the mental health

Researchers like Van der Velden et al., (2015), have shown that mindfulness-based counselling changes neural pathways in the brain related to rumination, worry, self-regulation, compassion, attention, emotional reactivity, and affect. This is why mindfulness-based counselling is regarded as a mental discipline that promotes cognition and de-emphasizes reactivity which can lead to relaxation. Relaxation which is also a practice in mindfulness-based counselling has been found to be helpful for stress-related disorders and the physiological responses they initiate (Baer, 2003).

From this review, mindfulness-based counselling can increase individuals' psychological flexibility to remain focused, relaxed and develop suitable coping strategies and adapt in the face of stressful situations. This intervention if adopted for the adolescents will reduce the prevalence of stress among them.

The Theoretical underpinning of mobile Mindfulness-Based Counselling

Many authors have provided a framework for the understanding of mobile Mindfulness-Based Intervention (mMBI) and its application in counselling and other fields. For instance, Deci and Ryan (2000) proposed Self-Determination Theory (SDT). The theory explains that human behaviour is motivated by three innate psychological needs; autonomy, competence and relatedness. The theory suggests that fostering the three needs are very significant for mental and physical well-being and the needs can be enhanced by mobile Mindfulness-based counselling. Shogren and Singh (2022) observed a synergistic relationship between self-determination and mindfulness-based intervention, arguing that since the mindfulness practices is capable of promoting self-awareness and emotional regulations basically, can also provide the foundation to build self-determination skills specifics. This implies that mobile Mindfulness-based counselling can promotes these three needs (autonomy, competence and relatedness) through engaging students in self-awareness, self-regulation and other therapies.

Applying the self-determination theory to mobile Mindfulness-Based Counselling (mMBC) therefore;

Autonomy: This is the need to feel a sense of control over one's life, A student can leverage his mobile phone to take control of mindfulness practices ensuring flexibility, accessibility and self-directed mindfulness practices devoid of stress

Competence: Competence building will equip the students with the skills to achieve desired outcomes. Through the mobile Mindfulness-based Counselling (mMBC) they will learn the mindfulness skills and strategies to manage stress and regulate their emotions.

Relatedness: this is the need to feel connected and relate well with others. The mobile Mindfulness-Based Counselling can be a tool for relatedness, students will relate with others in virtual therapeutic interventions, in online support groups and mobile-based communities which will definitely enhance their intrinsic motivation and promote well-being.

Integration of mobile phone into Mindfulness-Based Counselling

Mobile phone (through smartphones and mobile applications) can provide access to mindfulness-based counselling that integrate mindfulness practices with counselling techniques and support self-determination theory. The interventions have been reported to have benefit to the individual users. In Britain, a 2018 survey estimated that 15% of adults (roughly 8 million) had learnt to practice mindfulness meditation, most commonly through smartphone applications and others (Simonsson et al., 2020b). One of the most financially viable mindfulness smartphone applications, Headspace, reports 54 million users across 190 countries (Garrahan, 2019). Instances and methods through which smartphone can be of benefit to mindfulness-based interventions are reported in four ways

1. **Access to Mindfulness Resources:** through the smartphones, individuals are provided with information and tools they require to stay on the mindfulness practices and maximize the full benefits of mobile Mindfulness

-based counselling. Holzel et al (2011) carried out study to observe the changes in the brain structure using neuroimaging associated with mindfulness resources such as articles, books and guided meditation. The results showed that regular mindfulness practices were associated with increased gray matter density in areas of the brain involved in attention, emotional regulation, learning, memory and as well, reduce stress. The study implied that mindfulness resources have positive impacts on emotional well-being as it alters brain structure. Other mindfulness resources include Audio and video recordings, written or video instruction, such as body scan meditation or mindful breathing exercise, articles and blog posts on mindfulness topics which may include mindfulness in daily life, benefits of mindfulness and mindful movements, video recordings of mindfulness lectures, workshops, tracking features to support mindfulness practices. Students can also lay hands on online courses that teach mindfulness practices or podcasts that conduct interviews with mindfulness experts. Many authors have attested to the efficacy of mindfulness resources, Goyal et al (2019) in their systematic review and meta-analysis studied the effects of meditation programs on psychological stress and well-being and found that meditation programmes were associated with reduced anxiety and depression and stress, they also found emotional stability and improved sleep quality. Harrison et al (2020) have explored the use of virtual reality technology to provide access to mindfulness resources and observed that the participants showed increased relaxation and reduced stress. All these mindfulness resources will not only alleviate stress but empower the adolescents gain autonomy support towards self-determinism. It will provide them a sense of control, opportunity for self-direction, take ownership of their thoughts, feelings and actions. It will also enable them explore their own goals, values and motivation.

2. Guided Meditation and mindfulness Exercises: As the name implies, guided meditation is a practice recording or an instructor provides a meditation sessions for the individuals through the use of mobile phone applications. The mindful moments application which is found on the iOS and Android devices facilitates guided meditations, breathing exercise and relaxation techniques. The application offers chains of guided meditation that ranges from 5-30 minutes and covers topics on stress reduction, focus enhancement, emotional well-being and sleep improvement. It also provides personalized and intuitive experiences through mood track features which help users to maintain focus, mental clarity, concentration, manage emotions, gain greater self-awareness, break negative thinking patterns and allow the understanding of users' thoughts, emotions and behaviours. Chen et al (2023) queued into the benefits of the use of Mindful Moment Application to gain guided Meditation and Mindfulness exercises. They carried out a systematic review and meta-analysis on the "Effect of Mobile mindfulness meditation on the mental health of university students. The outcome showed that the mobile mindfulness meditation (MMM) group were more effective in reducing stress than the control group. On mindfulness exercise, Yin et al (2023) in their systematic review and meta-analysis on "the effects of mindfulness-based exercise on anxiety and depression in adults found that mindful exercises (Tai Chi) are effective

In line with the self-determination theory, guided meditation and mindfulness exercise will acquaint the adolescents with sense of mastery, skills acquisition, and positive self-reflection which will help them set and achieve realistic goals and foster a sense of competence and accomplishment.

3. Mindfulness Reminders and Notifications: The mindful Moments Application in the smartphone sends prompts that ensures users focus on the present moment. It sends notifications for meditations, reminds users to engage in physical activities like exercises, it also reminds the users to share inspirational quotes for instance; 'this is the only moment we have, be kind to yourself and others', these prompts help the users to be focused. According to David & Thompson (2015), mindfulness reminders help to increase adherence to mindfulness and promote stress reduction. In confirmation to the efficacy of mindfulness mobile phone reminders in increasing mindfulness practices, Kiken et al (2017) conducted a randomized controlled trial. The study involved comprised participants who received mobile phone reminder and those who received neutral reminders on their phones, it was found that the former increased mindfulness practices and reduced mind-wandering. Gouveia et al (2019) and Harrison et al 2020 also found that the participants who received notifications on their mobile phones practiced mindfulness more frequently than those who did not, those who

did, reduced mind wandering, stress and improved in their well-being, suggesting the usefulness of mobile phones notifications in promoting mindfulness practices and improving mental health outcomes

Mindfulness reminders/notifications will help the adolescents to be autonomous through voluntary engagement and self-directed practices. They will build competence by establishing regular mindfulness practices and skills development. They can also gain relatedness as they connect to supportive resources and community features on some platforms.

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4. **Virtual Mindfulness Communities:** This is another online platform that ensures connectivity. It provides space where users who have similar needs or interest in mindfulness and meditation can connect. Kabat-Zinn (2005) stressed that connecting with others who have similar interest can enhance motivation and ensure constant practices. It can also provide a sense of belonging and support for users who are unable to access the physical groups of mindfulness, making the practices more accessible and flexible (Goyal et al, 2019).

The space may include guided meditation where mindfulness-based counselling can take place. Counsellors may provide live or recorded experiences to drill and coach the users. The space may be discussion group forums. In the forum, users can share their experiences, ask and answer questions, and support themselves, it can also be a Live event such as workshops or webinar that will afford opportunity for the users to learn from experts and connect in real-time with others. Group fora are beneficial to the adolescents who realize that their challenges are common. From experiences in counselling sessions, they look forward for such group interactions.

A student who is connected to the virtue mindfulness communities is exhibiting relatedness, he/she is relating to people online. People who may assist them advance in life and as well provide with psychological well-being.

Process of Mobile phone Mindfulness- Based Counselling (mMBC).

The process involves the following steps: Registration and onboarding, Assessment and goal setting.

Registration and onboarding

The registration process entails downloading the app on the social media and signing up an account. Such account will require the individuals’ basic information such as the emails, names, addresses, usernames and passwords. They are also meant to consent and agree to the terms of services, privacy policy and informed consent.

Assessment: The onboarding takes the form of assessment. Assessment is very important because it helps the students to identify their unique needs and goals. According to Kabat-Zinn (2005), a mindfulness consultant interviews the individuals involved and gathers data about their goals, motivations and challenges for the mindfulness practices. Such mindfulness practice to be assessed includes; frequency, duration, and type of practices. The data can be sought with psychological tests such as Mindful Attention Awareness Scale (MAAS) to assess mindfulness skills and identify areas for improvement (Baer et al., 2008). MAAS is a widely used psychological assessment tool that measures individual's level of mindfulness. It measures the ability to maintain attention and awareness in life. MAAS consists of 15 statements on a 6-point scale. In this regard, the adolescents will be required to indicate how frequently and how long they experience each statement. A score of 1 and 2 indicates less mindfulness, probably due to distractions, while a score of 3 and 4 is moderate mindfulness, showing some awareness, though a little distraction. The third rating is 5 and 6 which indicates high mindfulness, a strong presence of mindfulness and demonstrating the ability to remain in the present moment. The assessment could be conducted regularly (like weekly, bi weekly or monthly) to track progress over time. The data so gathered will inform the mindfulness consultant about the individual's tendency to be mindful. This be the case, employing the assessment tools will assist the therapist to create personalized mindfulness plans tailored to an individual's unique needs and goals.

Goal setting: Goal setting is very essential in mobile Mindfulness-based Counselling (mMBC). The platform can help students to develop great self-awareness of their thoughts and feeling, it will motivate them in the therapeutic process and assist them stay on track with their objectives. The process ensures collaborative goalsetting; where the counsellor and the students work together to engage in establishing specific, measurable, achievable, relevant, and time-bound (SMART) objectives for mindfulness practice (Goyal et al., 2019).

For instance, the adolescents can practice

S: Specific, practice mindfulness exercises like breathing exercises, body scan for a number of times. This will help improve concentration

M: Measurable, the adolescents can track practice sessions and rate the level from 1- 5 before they start the practice and after the practice.

A: Achievable, the adolescents should be committed to practicing the mindfulness exercises on their phones at regular intervals in a day and at least 4 weeks. This will enhance the achievement of their goals.

R: Relevant, practicing mindfulness will definitely help them to improve concentration and focus in their academic activities.

T: Time-bound, specific time should be maintained for the practice of mindfulness. As stated earlier, it could be for a period of 4 weeks.

Setting SMART goal on mobile phone mindfulness-based counselling practices will enhance the students' skills of building autonomy, competence and relatedness towards reducing stress.

The digital divide

Access to and utilization of mobile phones among the in-school adolescents can pose difficulty in realizing the potentials of mobile phone mindfulness-based counselling. Some students cannot afford mobile phones, due to poor socio-economic background, while some students over depend on the use of mobile phones. The internet connectivity in areas with poor infrastructural internet, dearth of technical skills, cultural irrelevance where the practice may not be sensitive to the needs of the people, and the cost of data plan to log into the internet space could limit access to smart phone and hinder the mobile phone mindfulness-based counselling.

Addressing the digital divide in the mMBC can offer opportunity to the individuals affected. For the students who may not have access to smartphones or internet, the counsellors can provide alternative formats. For instance, audios and video recordings of the apps can be utilized for the access of the practice. The students who depend on the phones and visit different non-educative sites could be restricted to only social media platforms app to access the mMBC. To ensure the increase of the digital literacy, the adolescents should receive training on digital know-how and be provided with mobile phones, especially those who are from poor background. Nigeria government can upgrade the infrastructures such as WiFi networks, fiber-optic cables and expand broadband access to the rural or remote communities, this will assist in alleviating the poor internet infrastructure.

CONCLUSION

The foregoing elucidated some literatures and empirical studies on mobile mindfulness-based counselling/interventions and as a tool to alleviate stress among the adolescents. The mobile Mindfulness-based Counselling (mMBC) encourages a balanced approach to technology use through navigating the relationship between stress and mobile phone use among the adolescents. While excessive screen time can contribute to heightened stress levels, mobile technology can also be harnessed as a tool for promoting mindfulness-based stress reduction. researchers have evaluated its efficacy, feasibility and usability to help reduce stress among the adolescents by encouraging the students to;

1. Gain increased autonomy, competence and self-efficacy to manage their mental health with the use of the mobile phone.
2. Improve mindfulness skills, such as Self-awareness, social skills and emotional regulations
3. Testify to the positive experiences with the mMBC such as accessibility and flexibility.
4. Encounter the positive use of the mobile phones especially in the practices of mindfulness-Based Counselling towards averting the menace of the ravagng symptoms of stress.

RECOMMENDATIONS

Based on the findings from the review, the researchers recommend that;

The policy makers in both healthcare services and Schools should advance plans to formally integrate mobile phone Mindfulness-based counselling into the existing practices in the both sectors. Students should be empowered with smart phone to achieve the goal. This situation will help the adolescents to use their phones purposefully devoid of stress.

Government should encourage Mobile phone use in mindfulness-based counselling practices among the adolescents especially those in rural and remote areas for the accessibility of mental health services. They should ensure that the network services providers maintain internet connectivity, mobile services and security for uninterrupted operations of the mobile phones.

School counsellors should be exposed to training that could enhance their skills and competences in availing the mobile Mindfulness-Based Counselling to students and the significant others in the school system.

Finally, future researchers on this area of Mobile Mindfulness-Based Counselling should engage on quantitative studies to investigate more on its effectiveness, the ethical considerations, potential applications and the users' experiences.

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