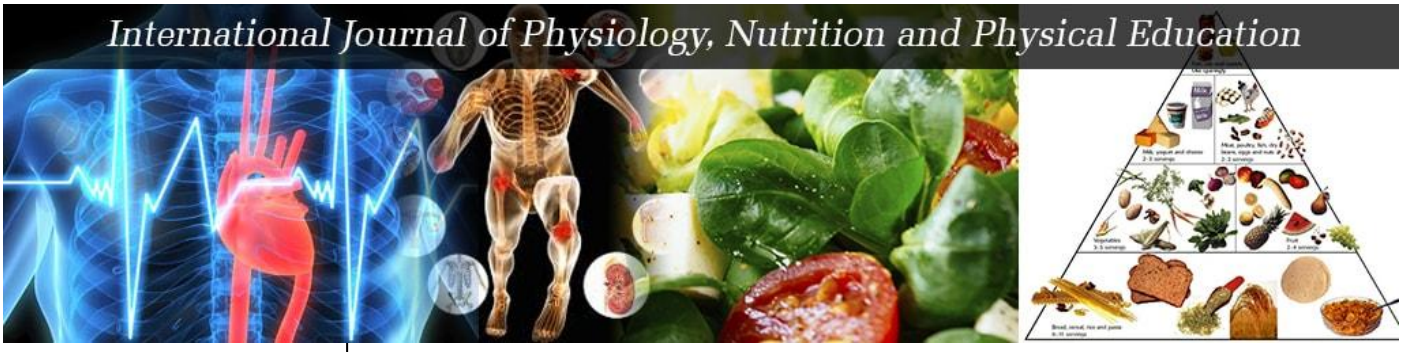

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Chandrakanta Hiremath
Junior Research Fellow,
NIMHANS, Bengaluru,
Karnataka, India

Correspondence
Chandrakanta Hiremath
Junior Research Fellow,
NIMHANS, Bengaluru,
Karnataka, India

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Impact of sports on mental health

Chandrakanta Hiremath

Abstract
Sports is an activity involving physical exertion and skills in which an individual or team competes against another or others for entertainment. Sports is losing its momentum due to rise in number of children and adolescents engaging in using gadgets. Gadgets have ill effects on children as the research show that there is delay in learning and social skills, obesity and sleep problems. Technological evolution has given rise to sedentary behavior. Research show that excessive use of technology results in social anxiety, depression, eating disorder, loneliness, Nomophobia, seflieitis, phantom ringing syndrome and other technology addicted disorders. It has a huge negative impact on not only physical health but also affecting psychological and social health. Outcome of technological evolution is that fewer number of children and adolescents are interested in engaging themselves in sports. Research evidence shows that participating in sports assists in better social skills, assertiveness, higher self-esteem, self-confidence, self-control, self-concept, and competence. Further it also helps in having fewer symptoms of depression and anxiety disorders. This implies that participating in sports has positive impact on mental health as it improves overall quality of life. Despite these benefits there are only handful of mental health professionals who recommend children and adolescents to engage in sports. Extensive research needs to be done on how sports is helpful in alleviating symptoms of various mental disorders so that the findings can help the mental health professionals to include sports as part of intervention of mental disorders.

Keywords: Depression, self-concept, self-esteem, self-control and competence.

Introduction
According to Council of Europe (2001), "Sport means all forms of physical activity which, through casual and organized participation, aim at expressing or improving physical fitness and mental well-being, forming social relationships or obtaining results in competition at all levels." It can be an individual alone participating or involving in a team. When a person engages in sports undergoes physical and psychological changes especially children and adolescents because those are the stages where all the changes occurs in an individual is optimum and as well as more susceptible to develop disorders such as conduct disorder, dissociative disorders, eating disorders, mood and anxiety disorders. The reason being is that manifestation of symptoms of most of the disorders occur during childhood and adolescence period. If prevention such as actively involving in sports is taken, then likelihood of an individual developing into normal is more.

Theoretical framework
Social learning theory
Social learning theory (Bandura, 1965). Social learning theory was put forth by Albert Bandura. According to this theory people learn by interacting with others in a social context. By observing the behavior of others, people understand and imitate that behavior, especially if their observational experiences are favorable ones or include rewards related to the observed behavior. Bandura believed that all types of learning cannot occur by reinforcement alone. For

this reason, he added a social element arguing that people acquire new information and behaviors by watching other people. According to Bandura people can learn through observation alone, their learning may not necessarily be shown in their performance (Bandura, 1965). Bandura's stated that second and third stages of social learning, imitation and behavior modeling, will occur if a person observes positive, desired outcomes in the first stage.

Gadgets and its ill effect on children and adolescents

The number of children and adolescents using gadgets has drastically increased from the past decade due to technological evolution. It has compelled them to engage in compulsive behavior. Besides this it has given rise to sedentary behavior (Nigg, 2003) [33]. As a result of this the number of children are becoming obese. It has not only affected their physical health but also their mental health has taken a toll. Therefore, advancement in technology have created an environment that promotes sedentary behavior, (David, 2008) [15]. This has negative impact on children as they spend less time in physical activities.

Electronic devices usage makes it tedious to fall asleep, interrupts sleep during the night, and causes poorer quality sleep in general (Lemola 2015) [28]. It can also create difficulties with staying asleep. Notifications, ringtones, and other sounds coming from devices during the night can wake children and interfere with sleep (Cain & Gradisar, 2010) [7]. Therefore, excessive usage of electronic devices disrupts sleep-wake cycle. Further, Kanyinga & Lewis (2015) [36] reported that teens who use electronic devices for less than two hours per day report significantly less mental health symptoms, decreased psychological distress, and less suicidal ideation.

Children usually seek for support or validation on social media in the form of likes, clicks, or comments (Frison & Eggermont, 2015). When they do not get expected favorable feedback, there is rise in their stress levels and the risk of depression escalates, Feel insecure if they miss out on others opinion and doing online increases stress and anxiety levels (Beyens, Frison, &Eggermont, 2016) [3]. Many feel a need to be persistently responsive to messages on social media, texts, and chats, which rises anxiety levels and also interrupts sleep-which further worsens anxiety symptoms (Woods & Scott, 2015) [45]. The type of information that is available online can also lead to mental health problems in children if they are exposed (Livingstone *et al*., 2011) [30]. There are also sites about body image that can hamper the self-esteem and body perceptions of girls in particular (Meier & Gray, 2013) [32]. The less the time spent is on Internet games the less likely that it can lead to depression, aggression, impulsivity, substance use, and physical brain changes (liu *et al*., 2011) [31]. Internet addiction has been developed in the past decade, with even young children demonstrating symptoms of addiction (Kuss & Lopez-Fernandez, 2016) [27]. Children who have access to violent videos games, TV shows, and movies have the tendency to show more aggressive behaviors, poorer perspective-taking abilities, and reduced moral development (Wilson, 2008) [47].

Technology usage has resulted in poor understanding of others in children as they do not know how to interact with others, (You, Kim, & No, 2015). Research showed that just one week of engagement in normal overnight camp activities, with no screen time, improved children's ability to read non-verbal emotional cues (Uhls, *et al*., 2014) [43]. More the time spent on screen, the more likely to have reduction in quality family time, and rise in serious parent-child conflicts can result from continuous use of cell phones and social media (Subrahmanyam & Greenfield, 2008) [39]. Further, it takes away from time spent socializing with friends, working on learning activities, and engaging with the world around them (Subrahmanyam & Greenfield, 2008) [39]. This reduction in the amount of time spent engaging in face-to-face interactions with adults and peers can result in poorer social skills, increased social anxiety, and lower quality relationships overall. Physical inactivity and sedentary activity appear to be significantly related to symptoms of depression and anxiety (Marc-André *et al*., 2018).

Cyberbullying is another important social issue. Children are not aware of with whom they are interacting with, may make use of less self-control and behave in ways they would not offline (Subrahmanyam. & Greenfield, 2008) [39]. Many children and teens report being bullied in some way online. The awareness that parents have about their child being the victim of cyberbullying is less, and this is unfortunate as it leads to significant long-lasting negative effects such as anxiety, depression, increased stress, and suicidality (Cassidy, Faucher, & Jackson, 2013) [8]. Parents can protect their children from cyberbullying by cutting down on internet use and monitor on the content accessed (Khurana, *et al*., 2015) [26].

Language and cognitive development can be impaired if children of age 2 are exposed to electronic devices (Khurana, *et al*., 2015) [26]. When children have background exposure to TV, can hamper the development, as the child must choose in paying attention between playing with toys and interacting with others and the background exposure to TV. Therefore, it can create attention problems. (Courage *et al*., 2010) [12]. More the time spent on watching TV and playing video games, including online games, is linked with greater levels of attention problems (Swing *et al*., 2010) [40] and playing these games for over an hour each day sets children up for more issues with focus and attention (Chan & Rabinowitz, 2006) [10]. With the increase in usage of electronic devices young adult students report that they are likely to be less focused and behave in more impulsive and hyperactive ways (Ilaria, Guichard & Kurth, 2016) [23].

King, *et al*. (2014) argues that certain users feel lonely when they do not have mobile phone in their hand. He also added that the feeling of not being unaccompanied has contributed to the issue of Nomophobia. Some academic studies have linked that increase in screen time (television, computers, video games and mobile devices) to physical inactivity in children. For example, Maher *et al*. (2012) conducted a study with 2,200 Australian 9-to16-year-olds and found that probability of a child being overweight or obese was often associated with higher screen time. Certain unhealthy behaviors may occur alongside screen time, such as continuous snacking, not engaging in any activity and disturbances in sleep.

Technological evolution may have made lives easier but it is has negative impact because the time spent in face to face interaction has been declining which can result in loneliness. Further it causes depression and anxiety. Socialization gets affected. One form their whole of 'self' by interacting, modeling and observing others. This is in agreement with Albert Bandura's social learning theory. Therefore, the self-concept is influenced by the way people interact with others. Better self-concept can be formed by less exposure to electronic devices.

Henceforth information age has given rise to sedentary

behavior that has resulted in fall in number of children and adolescent engaging in sports. It has huge negative impact on mental health as excessive use of electronic devices results in disruption sleep wake cycle, Nomophobia, eating disorder, depression and anxiety disorders. Since excessive use of technology has negative impact on mental health, forum has been opened in the American Psychiatric association to include disorders such as Nomophobia, seflieitis, Facebook depression, Facebook addiction disorder in the diagnostic and statistical manual of mental disorders (DSM).

Psychological benefits of sports

Sports not only improves physical health but also plays a significant role in improving mental health as there are many psychological benefits of sports. Youth who actively involved themselves in sports both middle & high school showed more positive attitude towards life when compared to non-sport participants which means that less of suicidal ideation among sports participants. (Taliaferro *et al*., 2011) [42]. Self-control, confidence, social skills and forming new relationship was positively related among children taking part in sport. This was reported by parents and children who took part in sports. (Holt *et al*., 2011) [20]. Children who engaged in team sports reported that there was reduction in their social anxiety (Dimech & Seiler, 2011) [13]. Athletes (school or club sports) reported higher social functioning, mental health & happiness when compared with non-athletes (Synder *et al*., 2010) [41]. Children who engaged in sports & clubs had greater social competence during middle childhood compared with non-participants in any sports or clubs apart from school activities (Howie *et al*., 2010) [22].

Youth participating primarily in sports & youth development programs had highest positive youth development scores (competence, confidence, connection, character, caring) (Zarrett *et al*., 2009) [49]. Those who participate in sports had positive outcomes (such as no lack of confidence, connections & social well-being) compared with those with little or no involvement in sport but less compared with those who participated in sport plus other activities (Linver, Roth & Brooks, 2009) [29]. Sport protects against hopelessness & suicide.

Children who played sports involving a team was associated with better emotional self-efficacy (Valois *et al*., 2008). Sport participation was not negatively related to social skills and self-esteem. Shy children who took part in sport reported a drastic decrease in anxiety. Advantages of sport participation for children include higher positive affect and well-being and social skills (Findlay & Coplan, 2008) [17]. Most active adolescents reported greater well-being than their inactive peers. Sport participants had higher perceived health and life satisfaction (Wiersma & Fifer, 2008). Participation in team sports partially mediated the risks for depressive symptoms (Boone & Leadbetaer, 2006) [4]. Sports participation positively associated with self-concept. Greater participation in sports was related to enhance emotional & behavioral wellbeing. Athletic competency was related to reduce emotional & behavioral problems (Donaldson & Ronan, 2006) [14]. Sports participation is related to self-esteem. Physical self-esteem mediates the relationship between sports participation and general self-esteem (Bowker, 2006) [5]. Sports achievement experiences in early adolescence positively associated with self-esteem in middle adolescence (Pederson & Siedeman, 2004). Playing on team sports associated with greater life satisfaction (Valois, Zuligg & Nheubner, 2004) [44]. Students involved in sport had higher self-image & less emotional distress than students not involved in sport (Harrison, 2004). Youths in sport activities reported higher rates of managing emotions compared to youth in academic & leadership activities. Competitive sports participation associated with a lower frequency of mental ill-health (Pyle *et al*., 2003).

Youths highly involved in sports were more 'psychologically resilient" or able to bounce back from problems (Bartko & Eccles, 2003) [2]. Team sport involvement associated with reduced depressed mood (Gore, Farrell & Gordan, 2001) [18] Sport participation protects student athletes against social isolation (Barber, Eccles & Stone, 2001) [1]. Moderate sports involvement group had lower depression scores than low sports involvement group (Sanders *et al*., 2000) [37]. Sport participation associated with mental health benefits (Steiner *et al*., (2000) [38]. Cerrillo-Urbina *et al*. (2015) [9] concluded that short term aerobic exercise might have a more significant effect on attention, hyperactivity and impulsivity, and they also noted a positive on anxiety.

Therefore children and adolescents who participate in sports are more confident, assertive, have better social skills, self-esteem, self-efficacy, self-control, self-concept and competent.

Limitations

This study focused more on negative aspects of technological evolution. Positive aspects has been completely neglected such as children and adolescents may make use of electronic devices for getting access to social networking site for social compensation where in if they have fewer friends in real life they compensate by being more active in social networking sites and also even if even though if they have more friends they would like to more popular by connecting with many people. Thus they may use it for social compensation and social enhancement.

Most of the studies that are chosen for deriving the concept are cross sectional and the sample size is less. Hence the ecological validity may be poor. There is dearth of longitudinal research made as there are fewer number of research available on how sports can impact mental health of the individual.

Conclusion

Sports has positive impact on mental health of children and adolescents. Despite the psychological and social benefits of sports there are only handful of mental health professional who use sports as intervention for treating various disorders. Extensive research needs to be done on how sports is helpful in alleviating symptoms of various mental disorders so that the findings can help the mental health professionals to include sports as part of intervention of mental disorders.

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