



Online Educating System and Musculoskeletal Issues in Students: A Concern

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Abstract

Sudden change in education system from offline to online educating system due to pandemic (Covid 19) had a drastically impact on way of teaching methodologies in school and colleges. Black board teaching is replaced by an online teaching by using of various app or software program like- blackboard, Google meet and zoom etc. It was a new experience for teachers and as well as for student. Instant transformation of in-person teaching to e-learning has increased the academic demand of school student's entails rigorous work (assignments, tests and writing examinations). These academic tasks involve the constant use of the computers; as such students spend most of their times in computer laboratories. Several reasons could be advanced to explain the prevalence of musculoskeletal problems among the school students

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Introduction

On January 30th, 2020 Corona virus (COVID-19) was announced as a global pandemic by the World Health Organization (WHO). [1] Corona virus has imposed quarantine on over 3 billion people around the world, as a major strategy to decrease the incidence of Corona virus infection among the majority of countries. This quarantine is associated with changes on the daily activity routine among all sectors of population in general, where less physical activity has become a habit, and more use of social media for different purposes has exceeded all previous limits, since the majority of people are under home quarantine and out of work, or working from home, for those whom their professions allowed that, the same with students, mainly school students who continued their education remotely online. [2]

The Covid-19 pandemic outbreak forced many schools and colleges to remain closed temporarily. Several areas are affected worldwide and there is a fear of losing this whole

ongoing semester or even more in the coming future. Various schools, colleges, and universities have discontinued in-person teaching. As per the assessment of the researchers, it is uncertain to get back to normal teaching anytime soon. As social distancing is preeminent at this stage, this will have negative effects on learning opportunities. Educational units are struggling to find options to deal with this challenging situation. These circumstances make us realize that scenario planning is an urgent need for academic institutions. [3] This is a situation that demands humanity and unity. There is an urgent need to protect and save our students, faculty, academic staff, communities, societies, and the nation as a whole. It is said that e-learning is easily accessible and can even reach to rural and remote areas. It is considered to be a relatively cheaper mode of education in terms of the lower cost of transportation, accommodation, and the overall cost of institution-based learning. Flexibility is another interesting aspect of e-learning; a learner can schedule or plan their

1291

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time for completion of courses available online. Combining face-to-face lectures with technology gives rise to blended learning and flipped classrooms; this type of learning environment can increase the learning potential of the students. Students can learn anytime and anywhere, thereby developing new skills in the process leading to life-long learning. The government also recognizes the increasing importance of online learning in this dynamic world.

Social media is an “internet-based technology that facilitates the sharing of ideas, thoughts, and information through the building of virtual networks and communities, it gives users quick electronic communication of content, which includes personal information, documents, videos, and photos”.^[4] According to Global Web Index (Worldwide), there are more than 3.5 billion social media users around the world. In the last 10 years, social media applications and their usage have been increasing quickly among students, and the effect on student’s academic performance varies.^{[5],[6]} In addition, it’s found that males are more addicted to social media usage than females.^[7] Nowadays, social media has become increasingly associated with daily living.^[8] Since social media represents a source of information, leisure time, and communication method, people are expected to have more time spent on social media. The extent of increase of social media use in quarantine time has not been studied before and there is a lack of information about impact of this increase on musculoskeletal problems among the population.

Information and communication technology (ICT) has become an important part of the lives of adolescents, the majority of whom regularly use computers for surfing the Internet, chatting, and playing games. At the same time, the prevalence of neck-shoulder and low back pain has increased among adolescents.^[9] Studies among adolescents confirm a connection between musculoskeletal symptoms and the use of ICT, especially computers. Headache, ^[10-12] neck-shoulder pain and low back pain ^[12-15] are more common among computer users than non-users. The risk of developing musculoskeletal pain increases with an increase in the amount of time spent on the computer. ^[13] Moreover, computer users’ agree that computer use causes these symptoms. The findings of several studies

indicate that computer use induces pain and discomfort not only in the neck-shoulder and back regions, but also in the hands, fingers, wrists, eyes, and head. ^[16-19]

Computer usage has become increasingly important in people’s daily lives, and students are no exception.^[20] Computers have made work to be accomplished faster, easier, neater and less frustrating to the users.^[21] However, its use has some side effects. Several studies ^[22-27] have found association between computer use and musculoskeletal disorders among university students. Instant transformation of in-person teaching to e-learning has increased the academic demand of school student’s entails rigorous work (assignments, tests and writing examinations). These academic tasks involve the constant use of the computers; as such students spend most of their times in computer laboratories. Several reasons could be advanced to explain the prevalence of musculoskeletal problems among the school students. These included the lifting of heavy load, prolonged sitting, improper posture, stress, high academic demand/workload and lack of regular exercise. Students subject themselves to hours of prolonged reading ^[28-29] writing and computer work ^[30] which make them high-risk group for various musculoskeletal problems. From the health, economic and educational standpoint, recurrent musculoskeletal pain symptoms in students may likely result to negative health outcomes to students and their society. Pain is usually link to discomfort, and may limit students ‘daily and leisure time, increase psychological stress and financial costs because of the repetitive use of the rehabilitative therapeutic health care services. Fundamentally, recurrent pain symptoms may affect the academic performance of the students as well as their future working capacity and health in their transition from school to working life. Viewed in this context, it is important for school authorities to identify the possible modifiable musculoskeletal problems risk factors and plan early supportive and preventative measures for a better quality of life for students, who are future leaders.

Availability of Data and Material

Not Applicable



Abbreviation

ICT- information and Communication technology
WHO- World Health Organization

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