

Covid-19 Lockdown on Physical Activity of Grades 11 And 12 of Sirawan National High School

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Abstract — Public health measures introduced to combat the COVID-19 pandemic have impacted the physical activity, health, and well-being of millions of people. This qualitative study explored how the COVID-19 pandemic has affected physical activity and perceptions of health among adults in Sirawan National High School, Toril, Davao City. Twenty (20) young adults (16 to 18 years) were interviewed. Using a maximum variation strategy, participants with a range of sociodemographic characteristics, physical activity levels, and perceptions of seriousness and anxiety related to COVID-19 were selected. Semi-structured interviews captured participant perceptions of how their physical activity and perceptions of health changed during the pandemic. Using thematic analysis, four themes were identified: (1) Disruption to Daily Routines, (2) Changes in Physical Activity, (3) Balancing Health, and (4) Family Life. Participants experienced different degrees of disruption in their daily routines and physical activity based on their individual circumstances (e.g., pre-pandemic physical activity, family life, and access to resources). Although participants faced challenges in modifying their daily routines and physical activity, many adapted. Some participants reported enhanced feelings of well-being. Public health strategies that encourage physical activity and promote health should be supported as they are needed during pandemics, such as COVID-19.

Keywords — ***Pandemic; COVID-19; Coronavirus; Physical Activity; Sedentary Behavior; Health; Qualitative***

I. Introduction

Globally, 28% of those aged 18 and above were physically inactive in the year 2016 (WHO, 2020a). However, that was before the COVID-19 pandemic. Since the pandemic, several studies were conducted to find out the impact of the COVID-19 on sedentary behavior (SB) and physical activity (PA) of individuals. Furthermore, recent studies show significant decreases in PA and increases in SB, particularly among previously physically active and self-isolated or quarantined individuals (Brooks et al., 2020; Czenczek-Lewandowska et al., 2021; Luciano et al., 2021). A cross-sectional study done on 50 states of the USA, shows that after the COVID-19 pandemic, SB such as sitting time and screen time has increased and there was a significant drop in moderate and vigorous PA of adults between 18 - 24 years old (Meyer et al., 2020). One of the major risk factors for non-communicable disease mortality is physical inactivity. Insufficiently active people have a 20% to 30% greater risk of mortality than those who are sufficiently active (WHO, 2020a).

SB and physical inactivity can have a negative impact on an individual's wellness and quality of life. Physical inactivity is responsible for over 3 million deaths worldwide and it has been linked to causing coronary heart disease, diabetes, and cancers (Gichu et al., 2019). SB and physical inactivity are the most important modifiable factors in/of heart disease and all-cause mortality worldwide according to American Heart Association (Lavie et al., 2019). PA appears to be largely influenced by socio-demographic factors (Rahman et al., 2020). According to WHO (2021), adults above 18 should engage in at least 150 minutes of moderate-intensity physical activity per week, or at least 75 minutes of vigorous-intensity physical activity per week. PA regularly benefits both the body and the mind. It can lower blood pressure, aid in weight management, and lower the risk of heart disease, cerebrovascular disease, diabetes mellitus type 2, and several types of cancers (WHO, 2021).

The study was specifically designed to find out the physical activities of young people during the pandemic, to find out the causes of physical inactivity among young adults, and the insights of young people about physical activity. Furthermore, differences between physical activity and inactivity before and during the COVID-19 pandemic lockdown measures were identified as well.

The study was guided by the following questions:

1. What were the physical activities of young people during the pandemic?
2. What were the sedentary behaviors of young people during the pandemic?
3. What were the insights of young people about physical activity?

Physical Activity (PA) is defined as any bodily movement produced by skeletal muscles that require energy expenditure (World Health Organization, 2020). There are two components to physical activity that need to be considered: Aerobic fitness: this usually includes moderate to vigorous activity that makes you feel a bit warm and causes an increase in your breathing rate, breathing depth and your heart rate; and Strength and balance: This is often the forgotten component of physical activity but it is an essential part and has many benefits.

Physical activity may include (World Health Organization, 2020): Active recreation; Sports participation; Cycling; Walking; Play; Dance; Gardening; House cleaning; and Carrying heavy shopping. During the COVID-19 pandemic it is even more important for all people to be physically active. Even if it is only a short break from sitting at your desk and doing some walking or stretching. Doing something as simple as this will (World Health Organisation, 2020) ease muscle strain; relief mental tension; improve blood circulation; improve muscle activity; and create some routine to your day in these unprecedented times.

There are many benefits of physical activity. These include Strengthening and maintaining your immune system strength - being less susceptible to infections (Nieman, Henson, Austin,

2019); reduces high [blood pressure](#); Weight management; Reduces the risk of [heart disease](#); Reduces the risk of [diabetes](#); Reduces the risk of [stroke](#); Reduces the risk of certain cancers; Improves bone and muscle strength; Improves [balance](#); Improves flexibility; Improves fitness; Improves [mental health](#); Reduces the risk of [depression](#); Reduces the risk of cognitive decline; Delays the onset of [dementia](#); Improves overall feeling of well-being.

In children physical activity may support healthy growth and development; reduce the risk of disease in later life; and help in development of fundamental movement skills.

A study conducted in 2020 found a significant reduction in the likelihood of developing severe COVID-19 among infected patients who had consistently met the recommended physical activity guidelines in the preceding couple of years.

Furthermore, COVID-19 patients who had engaged in less physical activity than recommended had lesser risks of developing severe disease outcomes or dying, than COVID-19 patients who were consistently inactive (Sallis, Young, Tartof, Sallis, Sall, Li Q, Smith, Cohen, 2021).

During the COVID-19 pandemic, being physically active will be a challenge for all of us but it is critical that we find and plan ways to be active and reduce our sedentary time. Although our movement around our neighborhoods, town, city, country and the world might be restricted, it remains critical that we all move more and sit less.

In light of the current situation worldwide, certain benefits of physical activity may be specifically pertinent to the COVID-19 Pandemic. These benefits are (Sallis, 2020): physical activity enhances immune function and reduces inflammation therefore it could reduce the severity of infections; Physical activity improves [common chronic conditions](#) that increase the risk for severe COVID-19 (i.e. [Cardiovascular Disease](#), [Diabetes](#)); Physical activity is a great stress management tool by reducing symptoms of [anxiety](#) and [depression](#); Physical activity helps bring cortisol levels in balance. [Stress](#) and distress (such as during a pandemic) creates an imbalance in cortisol levels and this negatively influences immune function and inflammation.

As already iterated, we are living in unprecedented times and we are learning as we go about the effects and impact of this pandemic. With regards to physical activity and periods of lockdown or restricted and regulated movement, there is some evidence emerging but it is still in the early stages of this pandemic and we won't fully understand the impact of "lock down" for many months (Lowe, 2020).

Many countries in the world are currently in some or other form of lockdown or restricted movement policy and practicing [social distancing](#). Some countries have stricter measures in place with regards to exercise and only allow people to exercise outside/away from their homes once a day or only allow people to exercise outside/away from their homes within a specific time frame

or even not allowing any exercise outside/away from home. These restrictions and constraints are specific to each country and the extent of the COVID-19 outbreak in that specific country.

Sedentary behavior prevalence varies according to assessment tools; nevertheless, it is predicted that adults spend 6 to 8 hours per day in sedentary behavior, which includes sitting, TV viewing, screen time, and computer use (Young et al., 2019). A study done by Rahman et al. (2020) shows that during the COVID-19 pandemic, which coincided with lockdown measures, a considerable number of Bangladeshis were physically inactive and identified sedentary behaviors 8 hours per day. A study done by Romero-Blanco et al. (2020) showed that university students spent more time sitting. Another study by Gallè et al. (2020) shows that all sedentary behaviors increased significantly, while all PA components decreased significantly. The highest level among sedentary components was recorded for electronic device activities, while walking was the PA element with the greatest decrease. According to Young et al. (2019) TV viewing, is a common leisure SB, which is a subset of sitting time; thus, time spent watching TV is less than total sedentary time.

There are numerous reasons why adults do not exercise, ranging from a busy schedule to a lack of results. Some adults do not enjoy exercise and keep on quitting, some are unable to afford a gym membership, some are unsure of how to exercise, some have childcare responsibilities and some are too stressed and tired (Waehner, 2019). Due to the COVID-19 pandemic, sedentary behavior and physical activity are common, mainly due to quarantine and home isolation rules advised to be followed by the authorities.

According to Park et al. (2020), sedentary lifestyles are becoming more common around the world due to a lack of accessible exercise spaces, increased sedentary behavior such as office work, and increased demand for screen-based devices. Several studies looked at the associations between physical inactivity and other sources. According to a survey by Tan (2019) shows physical inactivity is associated with age, education level, and income level while a survey by Gichu et al. (2019) shows a strong association between physical inactivity and age, gender, marital status, current behavior towards physical activity, and working hours.

One-third of the world's population aged 15 and up engage in inadequate physical activity, which has a negative impact on health (Park et al., 2020). There is epidemiological evidence that physical inactivity tends to cause risk factors that can increase morbidity and mortality. According to Booth et al. (2019), physical inactivity is a major contributor to at least 35 health problems, including the majority of the top ten causes of death in the United States. Increased physical activity lowers the risk of heart disease, diabetes mellitus, and stroke, as well as improves psychological health. Even without any other risk factors, not getting enough physical activity can lead to heart disease. It could also increase the risk of developing other cardiovascular disease risk factors such as obesity, hypertension, hyperlipidemia, and type 2 diabetes. According to the Center for Chronic Disease Prevention (CDC), physical activity promotes normal growth and development, lowers the risk of several chronic diseases, and improves day-to-day functioning and

sleep quality. Even relatively short bursts of physical activity can benefit one's health and well-being (CDC, 2019).

People are becoming more mentally and physically susceptible during this period of social distancing, which impacts individuals their ability to combat fight COVID-19 infection (Puccinelli et al., 2021). According to Spraul (2020), physical activity improves the function of the immune system, which will lead to fewer common illnesses as well as a lower risk of more serious illnesses. Previously active individuals are becoming inactive as a result of the COVID-19 pandemic and quarantine rules. According to Narici et al. (2020), muscle wasting occurs quickly and can be detected within two days of inactivity. This loss of muscle mass is connected with fiber denervation, neuromuscular junction injury, and an increase in the breakdown of proteins, and it is primarily explained by a reduction in muscle protein synthesis. Furthermore, Newtonraj et al. (2019) state that, inactivity also has an impact on glucose homeostasis because even a few days of reduced activity reduces insulin sensitivity, particularly in muscle.

Sedentary behavior is not equated with a lack of physical activity. Even if an individual gets enough exercise, sitting for more than 7 to 10 hours a day is bad for their health. SB is associated with cardiovascular morbidity and mortality in adults, as per epidemiological evidence, and some countries have issued broad guidelines recommending sedentary behavior reduction (Young et al., 2019). Confinement-induced reductions in physical activity levels and increases in sedentary behavior may result in a rapid worsening of cardiovascular health and mortality in high-risk populations. Even brief periods of inactivity (1 - 4 weeks) have been associated with deterioration in cardiovascular function, as well as an increase in heart disease risk (Peçanha et al., 2020). Increased sedentary behavior results not only in risk for heart diseases but lead to other conditions as well. Several studies have shown that sedentary behaviors were linked to an increased risk of developing type 2 diabetes mellitus (Davies et al., 2019; Miravet-Jiménez et al., 2020). A study by Vainshelboim et al. (2019) shows that female students who sat for 7.5 hours per day had a roughly 10-fold increased risk of becoming obese.

The COVID-19 pandemic has created plenty of challenges for people's health and well-being. According to Petersen et al. (2021), understanding ways to support positive adaptation processes during the changing public health restrictions is vital. Lockdowns and mobility restrictions have hampered the ability to engage in physical activity as a natural part of daily life. Active transportation, such as walking and cycling, as well as opportunities for sport and exercise, have been temporarily restricted or eliminated in most countries. Fitness institutes have been shut down for many months, and physical distance frequently limits opportunities for physical activity (WHO, 2020b). Kaur et al. (2020) also stated that the applied lockdown, which ended up in the closure of economic activities, public areas, fitness and activity facilities, and general social life, has hindered so several aspects of people's lives, including regularly scheduled fitness activities of fitness freaks, resulting in a variety of psychological issues as well as serious fitness and health

concerns. Furthermore, this research showed that Individuals began to consider their normal routines and attempted to find ways to replace their daily activities.

Replacing sedentary time with physical activity of any intensity promotes health benefits, and all adults should target to do more than the required guidelines of moderate-to vigorous-intensity physical activity to significantly minimize the harmful effects of increased levels of SB on health (WHO, 2020b). According to Chastin and Diaz (2021) 30 minutes of daily exercise reduced the chance of an early death by up to 80% for the individuals who also spent fewer than seven hours a day sitting. Hence, it is important to implement public health strategies to promote physical activity and guide on decreasing sedentary behavior during a lockdown (Stockwell et al., 2021). According to Gallè et al. (2020) promoting healthier lifestyles during the non-pandemic period may have had a positive effect in the event of a lockdown. Reducing sedentary behavior among young adults could be a public health measure for health promotion and prevention of chronic disease (Vainshelboim et al., 2019).

Several activities can be performed during the pandemic. For instance, small amounts of physical activity add up to the weekly guidelines. Ways to stay active at home include dancing, playing with children, and doing housework such as cleanup and gardening. Also, to participate in an online exercise class and taking the advantage of the numerous online exercise classes available. Walking in the place can help to stay active even in small spaces. Even if going for a walk or exercise outside, keep at least a 1-meter distance from other people (WHO, 2020b). A study done by Kaur et al. (2020), showed that regular fitness workouts at home during the lockdown greatly aided in overcoming psychological issues and fitness concerns. To increase physical activity, some equipment free aerobics such as free fitness apps can be installed to phone or yoga class video can be watched and perform a variety of exercises can be performed at home. To decrease SB, can take breaks while sitting for long hours. Stockwell et al. (2021) recommends implementing public health strategies to promote physical activity and guide on decreasing sedentary behavior during a lockdown.

Daily exercise is critical for reversing the effects of inactivity; low to medium intensity, high-volume resistive exercise appears to be ideal for preventing neuromuscular degeneration, increasing protein synthesis, and combating muscle atrophy (Narici et al., 2020). Adults need a variety of activities to stay healthy, according to the Physical Activity Guidelines, which include at least; 150 minutes per week of moderate-intensity aerobic activity or two days per week of muscle-strengthening activity (ODPHP, 2020). However, WHO (2020) recommends 18 and above adults engage in at least 150 - 300 minutes of moderate-intensity aerobic exercise or at least 75 - 150 minutes of vigorous-intensity aerobic exercise or a weekly approximately equal combination of moderate and vigorous-intensity exercise. Moreover, WHO suggests that individuals should reduce sedentary time. Even if total daily sedentary time cannot be reduced due to unavoidable causes, it is suggested to participate in adequate activity equivalent per week, as research has

shown that physical exercise can reduce the negative impacts of a sedentary lifestyle (Park et al., 2020).

To conclude, the COVID-19 spread in the community is being controlled primarily through measures including hand hygiene, using facemasks, maintaining social distance, isolation, and quarantine. However, due to some of these measures and due to the pandemic, most countries' opportunities for sport and exercise have been temporarily restricted, limiting people's ability to engage in physical activity and increasing sedentary time. Inadequate behavior physical activity and increased sedentary behavior are linked to morbidity and mortality in adults, as well as a variety of health issues. Therefore, it is essential to implement public health strategies to promote physical activity and provide guidance on how to reduce sedentary behavior. As research has shown that physical exercise can mitigate the negative effects of a sedentary lifestyle, it is recommended to engage in an adequate amount of activity equivalent per week.

Teens grow quickly in height and weight as they move toward physical maturity. They enjoy playing competitive and non-competitive games with friends but want to spend less time with parents. Getting involved in community groups and teams can help teens feel more independent and important by giving them a sense of belonging and purpose.

Physical activity may be hardest to incorporate into adolescents' lives at this stage, as teens tend to have busy schedules and social lives. Physical fitness affects teenage health in various ways, and not remaining physically active can have negative consequences, so teens should make exercise a priority in their daily lives to stay fit and healthy.

Shifts towards alternative forms of physical activity during the COVID-19 pandemic might be necessary for adults to maintain benefits of their regular routines (Kaur, Singh, Arya, Mittal, 2020; Chtourou, Trabelsi, H'mida, Boukhris, Glenn, Brach, Bentlage, Bott, Shephard, Ammar, 2020). Life events such as marriage, pregnancy, and retirement are known to impact physical activity routines. However, these transitions are often planned (Gropper, John, Sudeck & Thiel, 2020). Few studies have explored how people have adapted their behavior, including the facilitators and/or barriers to physical activity and sedentary behavior, during the COVID-19 pandemic (Kaur, et. al 2020; Goethals, L.; Barth, N.; Guyot, J.; Hupin, D.; Celarier, Bongue, 2020). Several theories exist to predict changes in health behavior (Hilliard, Riekert, Ockene, Pbert, 2018), although these theories were not created within the context of pandemic conditions. Individual behavior change theories such as the Health Belief Model (Rosenstock, 1974), Transtheoretical Model of Change (Prochaska & DiClemente, 2019), and Theory of Planned Behavior (Ajzen, 1991) suggest that beliefs, attitudes, expectations, self-efficacy, and intentions are important factors within health behavior change processes (Janevic, Connell, 2019). In contrast, socioecological models posit that there are reciprocating factors at multiple levels (e.g., cultural, policy, legislative, environmental, interpersonal, and intra-personal) that influence health behaviors, such as physical activity (Sallis, Bauman & Pratt, 2019; Spence, Lee, 2020). An individual's environment should be considered in the development of effective intervention

strategies (Fitzgibbon, Buscemi, Cory, Jagpal, Brush, Kong, Tussing-Humphreys, 2019), especially during crises (Myer, Moore, 2019). The pandemic has created a unique opportunity to explore how people adapt their physical activity and health behaviors during unforeseen circumstances in which individuals are facing challenging restrictions to their movement.

II. Methodology

This study is designed qualitatively, aimed to determine the experiences, differences, and insights of young people, specifically Grades 11 and 12, on physical activity during the COVID-19 pandemic lockdown, and causes of physical inactivity during the lockdown period. The philosophical leanings of qualitative studies use interpretivism, intending to assist those involved in understanding the meaning of their social interactions of phenomenon (Gray et al., 2016). The goal of this study focuses on finding values, which is why the interpretative approach was used in this study.

The study sample includes 20 young adults. To obtain data from the participant, one of the non-probability sampling methods known as convenience sampling was used as a technique. This method was used to get data conveniently from a larger population. The interviews were easily accessible from different schedules of the students.

A self-administered interview questionnaire was used to collect data quickly from the target population in this study. The interview questionnaires collected the young people's physical activity during the COVID-19 pandemic and to find out the causes of physical inactivity.

In such circumstances the use of interviews would be the most convenient method for conducting the research. According to Geldsetzer et al. (2020), interviews are a promising way to assess knowledge and perceptions during fast-expanding disease outbreaks such as COVID-19. It was low in cost, flexible and participants' answers were stored automatically making it much easier to analyze the data. To check reliability, a validation was conducted among the faculty members of the graduate school. According to the results, the necessary changes were made to the interview questionnaire after analysis.

Data were collected and compiled. The pilot study or pre-test questionnaire was also analyzed. However, the interview questionnaires that did not pass the validators were omitted from the actual study. Descriptive statistics were used to find the answers to the research questions. Descriptive statistics were performed to give a full picture of the data and it was organized in themes. The interpretations of these themes were explained in detail. This method was used as it is intended to provide an accurate summary of all the details. The themes were analyzed and categorized by the researcher.

III. Results and Discussion

Physical activities of young people during the pandemic

All codes were organized into broad categories before identifying four main themes associated with physical activities during and after the COVID-19 pandemic: *Disruption to Daily Routines; Changes in Physical Activity; Balancing Health; and Family Life.*

Insights of young people about physical activity

Finding the balance between protecting oneself from COVID-19 and complying with pandemic restrictions while maintaining mental health was a significant challenge for many participants. Fears, worries and anxieties towards the pandemic were expressed. There were many comments of young people about physical activity. Six (6) themes were categorized about these insights: *psychological health issues, lack of motivation for fitness, change of perception, shifting focus on physical activity, social media dependence, and favorable attitude toward music as a tool.*

Analysis

The COVID-19 pandemic has brought major upheaval in the life of every individual across the globe. It has hampered the day-to-day activities of almost all individuals including those who depend on gyms for their physical fitness routine. The present study was conducted with secondary students for whom going to the gym was a routine activity so as to explore their experiences in terms of their perceptions of the pandemic situation and their ways of coping with COVID-19-induced uncertainties and health issues.

The findings of this study not only are consistent with a range of studies that have reported psychological health issues due to the COVID-19 pandemic and subsequent lockdown ([Hawryluck et al., 2004](#); [Ammar et al., 2020a,b,c,d](#); [Chtourou et al., 2020](#); [de Oliveira Neto et al., 2020](#); [Shigemura et al., 2020](#); [Varshney et al., 2020](#)) but also go beyond those to suggest that, with time, individuals learn to adopt to situations in healthy and positive ways. Participants reported experiencing a significant change in their sleeping pattern, unexplained laziness, and mental fatigue, and having a general feeling of fear, anxiety, stress, and frustration due to home confinement, which impacted their motivation to find alternate ways to continue fitness exercises.

Other factors found responsible for the lack of fitness motivation were the absence of exercise partners and the lack of exercise environment, which were also considered as potential sources of motivation in earlier studies ([Sonstroem & Morgan, 2019](#); [Sonstroem & Harlow, 2020](#); [McAuley et al., 2020](#); [Fox, 2021](#); [Tamur, 2019](#)). It is important to note that, being a social entity, people like the company of others and feel connected to each other. This feeling of connectedness is found to be associated with various psychological constructs such as persistence, motivation, self-esteem, self-efficacy, and physical as well as psychological health ([Scully et al., 2019](#); [Proctor et al., 2019](#); [Haslam et al., 2019](#); [Begun et al., 2019](#)). The absence of this feeling of

connectedness that people were used to experiencing in an exercise environment probably was one of the reasons for the lack of motivation for home exercise.

The findings of the study also indicated that although the participants' perception of the pandemic situation was negative initially, their self-perception gradually improved toward a positive one, as they realized that they had enough time to look after themselves. [Rauthmann et al. \(2019\)](#) reported that environment and behavior, if different from the usual, lead to a negative situational perception. However, with an increase in time available to devote to oneself, perceptions change in a positive direction ([Karagiannidis et al., 2019](#)). Such a change in perception is likely to promote the process of self-approval and find effective ways to deal with the current situation.

In the present study, a shift from the exercise workout and fitness equipment toward substitutes is clearly visible during the latter part of the lockdown. After the initial confusion and passive wait for things to normalize, participants accepted the reality and started thinking about alternatives to exercises related to heavy equipment. Some of the alternatives listed by them included switching to meditation ([National Center for Complementary and Integrative Health, 2020](#)), high-intensity workout at home, and lifting heavy buckets, big water bottles, and skipping. All these alternative arrangements not only helped individuals maintain their daily exercise routine but also contributed to their physical and mental health ([Jiménez-Pavón et al., 2020](#); [Nicol et al., 2020](#)). In fact, the American College of Sports Medicine had recommended 150–300 min of aerobic exercise per week and two sessions per week of moderate-intensity muscle strength exercises for people to be physically active during the COVID-19 pandemic ([Joy, 2020](#)).

The mixed impact of social media usage and listening to music during exercise was also observed in this study. Results clearly indicate that participants found social media to be an effective medium to keep themselves up to date about the pandemic situation and to overcome the monotony of home confinement. Apart from this, participants also experienced a lack of emotional attachment, as face-to-face interaction during the said period was missing. This encouraged participants to use social media to get connected to people as well as to witness their regular activities, which they were missing otherwise. Several studies in the past have argued that social support boosts motivation for training and can increase up to 35% more adherence to a physical exercise program ([Rhodes et al., 2020](#)) and that it can be an additional strategy to make exercise events more interactive and less dissociated from afferent body responses (heart rate, breathing), which in turn results in more positive training experience ([Kravitz & Furst, 2019](#); [Pridgeon & Grogan, 2019](#)).

Social media was also used as a platform to know about virtual fitness and opportunities for online training for physical exercise. [Ammar et al. \(2020d\)](#) demonstrated 15% higher use of Information and Communications Technology (ICT) during the COVID-19 confinement duration, which indicates higher use of social media and app use for home-based fitness activities ([Tate et al., 2019](#); [Ammar et al., 2020a](#)).

Furthermore, participants also found that listening to music was an effective aid to keep themselves engaged as they exercised. This also supports the finding that music helps people to continue their fitness workout for a significantly longer period of time ([Thakare et al., 2019](#)). A series of studies have shown that music creates an effect during physical and cognitive performance and is linked to heightened motivation and engagement and lower levels of stress, anxiety, and depression ([Chtourou et al., 2019](#)). In their recent meta-analytic review [Terry et al. \(2020\)](#) have concluded that listening to music during physical activity boosts positive affective valence and results in improved physical engagement and enhanced physiological responses. It is therefore clearly evident that listening to music while doing physical exercise during the current pandemic has enabled people to focus on the exercise without any distraction from the home setting and has enabled them to create their own world, where there is no COVID-19.

To conclude, the findings of the study indicate that the perceptions and social media habits of fitness freaks, who were hitting gyms for a regular workout before the lockdown, were greatly impacted by the COVID-19 pandemic. They also experienced psychological health issues during the initial phase of the pandemic. However, they gradually changed their dependence on gym-based workout and switched to alternative exercises that helped them greatly to restore their mental and physical health.

IV. Conclusion

The present study shows that despite the initial experience of anxiety and fear and the lack of motivation to engage in physical exercise at home, secondary learners were able to shift to home exercises and were greatly supported by social media uses and listening to music. One could argue that this study only included secondary learners who find it difficult to detach themselves from physical activities for a long time, and this was probably the reason for their shift to home-based exercises. However, there is no doubt that the findings of this study have demonstrated that if performed regularly, physical exercise has the potential to mitigate the ill physical as well as psychological effects of the COVID-19 pandemic.

The findings of this study, therefore, could be extended to the common public to also persuade them to engage in physical fitness exercises, which would result not only in a better physical health but also in an enhanced psychological health and well-being.

The findings of this study strengthen the recommendations made by researchers and organizations ([Chtourou et al., 2020](#); [World Health Organization \[WHO\], 2020](#)) to engage in home-based exercises (including, but not limited to, aerobic activities, balance and flexibility exercises, and muscular strength and endurance training) for about 150–180 min per week; to use social media, music, and/or similar techniques to increase adherence to physical exercises; and to practice dancing and yoga to reduce stress, anxiety, and depression, and even improve the quality of sleep ([Chennaoui et al., 2019](#); [Chtourou et al., 2019](#)). It is also noted that one should start

physical exercise and its alternatives in a progressive manner and must adhere to his/her fitness levels for choosing the amount and intensity of these exercises.

The guidelines on how to be physically active during COVID-19 by visiting parks, pools, or recreation facilities are given. Although the number of empirical studies on COVID-19 that consider the roles of built environments is small, many leading organizations/initiatives and professional design groups have published design guidelines with implementable environmental strategies to cope with the “new normal” following the coronavirus pandemic. These publications address the design conflicts, dilemmas faced, and the potential solutions to provide better outdoor spaces for everyone to stay healthy and engaged, while ensuring safety from infection. For example, the government released a resource that includes detailed strategies to redesign and adapt streets for new uses amid COVID-19. DOH published design briefs responding to the impact of COVID-19 on commercial areas, informing local leaders to make their communities more livable and protect their residents from COVID-19. Their design briefs include programs to encourage walking and bicycling to dining and retail areas.

Longitudinal studies utilizing more vigorous sampling strategies and objective measures of physical activity can help increase the study generalizability. More work is needed to investigate the long-term effect of COVID-19 on physical activity and health-related outcomes to further explore how people are recovering from COVID-19. Moreover, further research is needed to investigate the impact of COVID-19 on vulnerable populations (eg, older adults and children) and identify potential social and environmental strategies for promoting active living of everyone after COVID-19.

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