

THE EFFECTS OF ONLINE LEARNING ON MENTAL HEALTH DURING A PANDEMIC

by

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ABSTRACT

This study investigated the effects of online learning on mental health. The focus included six aspects: academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons, and religion and mental health. Each aspect included advantages and disadvantages that adolescent students experienced. The study included 6th - 12th graders attending a Charter school. The eligibility requirement was that participants participated in online learning during the 2020-2021 school year. Academic performance data was obtained from the school office for students who attended the school during online learning and requested from parents if they attended other schools. Both positive and negative effects of factors were obtained using online questionnaires, which were reviewed during in-person interviews to investigate what challenges students experienced and how online learning effected mental health. Parents of student participants and current teachers were recruited and administered a short questionnaire to obtain their perspectives and observations of the six aspects. Results showed that students adapted and used alternative methods to limit negative issues to mental health. Academic performance was maintained, despite students feeling they struggled. Physical activity and food insecurity and other stressors were not a noticeable issue. Students reported both pros – flexibility, sleeping in, self-paced schedule - and cons – social isolation, technology glitches, lack of teacher connection. Students showed resiliency and self-initiative attitudes in finding alternative methods to persevere through the cons. Social isolation was reported as the most negative. Religion and mental health was not a factor in negative/positive effects.

Keywords: online learning, mental health, adolescents, questionnaires

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Dedication

This is dedicated to current and future educators, parents and students who are interested in the effects of online learning, the potential risks and benefits and recommendations for improvement for online learning programs with or without a pandemic.

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CHAPTER 1: INTRODUCTION TO THE STUDY

Introduction

The effects of online learning on mental health have been a growing concern during the COVID-19 pandemic. Whether it was due to illness, the effects of online learning, simply being home, or a combination, there was a noticeable increase in the negative effects on mental health. Studies have been conducted on various aspects of online learning that affect mental health, including: academic performance (Chung et al., 2022; Gray & DiLoreto, 2016; Hamdan & Amorri, 2022; Hong et al., 2021; Johnson et al., 2022; Mohd Basar et al., 2021; Spitzer & Musslick, 2021; Ulum, 2022; Van Wart et al., 2020; Zheng et al., 2021); physical activity (Apriyanto & S.A., 2021; Beserra et al., 2022; Chu & Li, 2022; D'Agostino et al., 2021; Killiam & Woods, 2021; Konukman et al., 2022; Laar et al., 2021; Webster et al., 2021; Yu & Jee, 2020; Zheng et al., 2021); social isolation (Banerjee & Rai, 2020; Christ & Gray, 2022; Giovenco et al., 2022; Kraut et al., 2022; Lim et al., 2022; Loades et al., 2020; Pietrabissa & Simpson, 2020; Schwartz et al., 2021; Sutcliffe & Noble, 2022; Vaillancourt et al., 2021); food insecurity and other stressors (Chavira et al., 2022; Dawes et al., 2021; Gadermann et al., 2021; Gayatri & Irawaty, 2021; Harper et al., 2022; McRell et al., 2022; Roos et al., 2021; Spinelli et al., 2020; Theberath et al., 2022; Wang et al., 2021); pros and cons of online learning (Al Rawashdeh et al., 2021; De Coninck et al., 2022; Mohd Basar et al., 2021; Panagouli et al., 2021; Senft et al., 2022; Sharma, 2020; Simm et al., 2021; Tesler, 2022; Vaillancourt et al., 2021; Widisih et al., 2022); and religion and mental health (Chen & VanderWeele, 2018; Estrada et al., 2019; Fruehwirth et al., 2019; Goeke-Morey et al., 2014; Sen et al., 2022).

Background

Academic Performance

Online learning studies found varying results in the effectiveness of learning. Ineffective learning outcomes were related to teacher and peer interaction (Gray & DiLoreto, 2016; Hong et al., 2021), teacher competence (Van Wart et al., 2020), and unpreparedness (Johnson et al., 2022; Mohd Basar et al., 2021). Effective learning was found in students who had the motivation and self-regulating skills (Chung et al., 2022), a sense of independence (Hamdan & Amorri, 2022), adapted or found positive uses in the technology used (Ulum, 2022; Zhen et al., 2021), or were driven by higher incentives by teachers to perform (Spitzer & Musslick, 2021). The use of software increased the effectiveness and quality of online learning and adaptation (Ulum, 2022), providing students with new skills and options in searching for information (Hamdan & Amorri, 2022). Students who had self-regulated learning (Chung et al., 2022) and perceived online learning as more flexible (Zheng et al., 2021) showed continuity or improvement in academic performance.

The limited experience of teachers with preparing for online teaching, technology instruction and support, and students' developmental needs and abilities are areas that require more understanding and focus (Johnson et al., 2022). Components to improve the planning and implementation of online learning for K-12 students include: 1) evidence-based design, 2) connected learners, 3) accessibility, 4) supportive learning environment, 5) individualization and differentiation, 6) active learning, and 7) real-time assessment (Johnson et al., 2022).

Physical Activity

Physical activity was a notable component that was lacking in online learning. Increased sedentary behaviors of students increased the risk of obesity and other health issues, including

mental health issues. Studies conducted in the attempt to implement a physical activity involved providing online instructions and videos to educate about physical activity (Webster et al., 2021; Yu & Jee, 2020; Zheng et al., 2021). Students participating in physical education reported positive effects when combined with online learning (Apriyanto & S.A., 2021) and benefited from improved cognitive function, better physical and mental health, positive self-image, and improved self-esteem, as well as reduced risk of depression and anxiety (Beserra et al., 2022). Gender differences and physical activity needs were found in one study where males reported requiring a higher intensity physical activity (Chu & Li, 2022).

However, issues were found, including students not taking physical education seriously online due to feeling it did not involve as much activity as a traditional physical education class (Killian & Wood, 2021; Konukman et al., 2022; Zheng et al., 2021), not having space, motor skills, embarrassment being on video, or not having appropriate devices to view videos (Beserra et al., 2022). It was noted that many students were not equipped with home equipment, including sports equipment, a computer, and internet (Konukman et al., 2022; Laar et al., 2021). Improvements in the planning and formatting of online physical education programs (Webster et al., 2021; Yu & Jee, 2020), teacher support and instruction (Killian & Woods, 2021) and access to equipment and/or facilities to assist with physical activity (Laar et al., 2021) are recommended. The importance of future studies in forming and implementing physical activity in preschool through 12th grade should also include virtual education learning tools to assist in explaining and instructing students for increased participation (D'Agostino et al., 2021).

Social Isolation

Social isolation was reported as causing increased depression, anxiety, and other mental distress among adolescents and young adults (Giovenco et al., 2022; Lim et al., 2022; Loades et

al., 2020; Pietrabissa & Simpson, 2020). Loneliness was a factor for those at increased risk for depression (Banerjee & Rai, 2020; Giovenco et al., 2022). Fear and worry about COVID-19 increased loneliness (Christ & Gray, 2022; Kraut et al., 2022) and negative effects involving sadness and feeling withdrawn among many females and older youth (Schwartz et al., 2022). Younger college students reported significant negative changes to their academic performance due to isolation and online learning (Sutcliffe & Noble, 2022). New methods in mental health intervention such as virtual therapy to increase resilience and decrease psychological stress had to be implemented (Banerjee & Rai, 2020). It has been recommended that school closures and social isolation should be prioritized by 1) the safe re-opening of schools and remaining open; 2) the safe restarting of extracurricular activities and remaining available; 3) increased clarity in decisions to justify school closures and advice from child health and mental health experts; 4) prioritizing teachers, school staff, and support workers with vaccines; and 5) support and provide funds to school so they can provide effective infection prevention protocols (Vaillancourt et al., 2021).

Food insecurity and Other Stressors

Food insecurity and other stressors increased during COVID-19, with many families, children, and adolescents facing challenges with access to food, lost jobs, financial loss, lack of child care, and increased mental health issues. Kenyan teens reported not having adequate money for food and families with both teens and adults reported food insecurity; adolescents were more likely to have only one meal (Mcrell et al., 2022). Families eligible for the SNAP food assistance program reported having a positive effect but believed changes such as making the application process easier, expanding eligibility, and increasing benefits would help families more (Harper et al., 2022).

Mental health issues increased, especially among low-income and minority groups (Chavira et al., 2022), and for those in families dealing with financial stress and lack of access to needed materials for online learning (Wang et al., 2021). Parental strain due to job loss, financial stress, and children being home caused psychological stress on parents and made it more challenging to be there for their children or assist them with online learning (Gadermann et al., 2021; Roos et al., 2021; Spinelli et al., 2020). Some adolescents living with food insecurity were responsible for shopping and cooking despite a lack of transportation or cooking skills (Harper et al., 2022) and were also at increased risk for anxiety, depression, loneliness, stress, and tension (Theberath et al., 2022).

It is crucial to have an early assessment and interventions to assist families with coping skills, conflict resolutions, and resilience (Gayatri & Irawaty, 2021; Wang et al., 2021). Challenges that affect mental health well-being include: 1) multiple responsibilities and changes at home; 2) home life disruption; 3) changes in support networks; 4) relationship changes; and 5) the use of coping strategies (Dawes et al., 2021).

Pros and Cons of Online Learning

Online learning pros: having a positive connection to life satisfaction and self-rated health when school assesses youth coping skills while participating in online learning (Tesler, 2022); provides students with the ability to find information in digital libraries and websites and provides interactive programs suited for various ages (Mohd Basar et al., 2021); better coping at home with teacher connections (Simm et al., 2021); gain digital competence and discover new interests (Senft et al., 2022); easier to communicate, develop individual skills, flexibility (Al Rawashdeh et al., 2021); and providing efficiency, no boundaries, cost-effective and time-saving,

ease in learning, meets different levels, increased research available, globalization ability, and educational games (Sharma, 2020).

Online learning cons: challenges in math and reading (Panagouli et al., 2021), lack of materials (Mohd Basar et al., 2021; Sharma, 2020; Simm et al., 2021), lack of feeling connected or mattering (Vaillancourt et al., 2021), emerged during the unpreparedness of online learning. Noise disruption, family stress (financial issues and violence) and lack of connection with friends (De Coninck et al., 2022), delayed routines, lack of care and life skills, lack of participation, being rude or being bullied, internet addiction, lack of teacher connection (Senft et al., 2022; Widiasih et al., 2022) occurred due to being isolated at home with the pressure to continue learning online.

Religion and Mental Health

1 Peter 5:7 says, “Cast all your anxiety on him because he cares for you” (New International Version, 1973/2017), which encourages the outcomes of how religious education has been found to reduce exposure to stressors connected to mental health through stress-buffering effects (Fruehwirth et al., 2019) and by helping individuals use their beliefs and practices to make meaning out of stressful moments by providing hope and faith (Sen et al., 2022). Matthew 6:13 says, “And lead us not into temptation, but deliver us from the evil one” (New International Version, 1973/2017) and shows the truth in adolescents who reported religious beliefs and a relationship with God that reported a decrease in drug use and sexual behaviors, a strong resilience to be less influenced in initiating bad habits and protective factors to maintain psychological well-being (Chen & VanderWeele, 2018) and a stronger closeness to God when there was a maternal connection (Goeke-Morey et al., 2014). Religious education can

help adolescents by helping them develop healthier reactions to stimuli, reinforcing religious coping skills, increasing religious beliefs, and promoting connectedness (Estrada et al., 2019).

Problem Statement

The pandemic changed online learning due to unpreparedness with materials, technology, and general skills of online learning. It revealed a number of issues among children and adolescents, including an increase in mental health problems, including anxiety and depression. However, many studies did not reveal whether children and adolescents had a mental health diagnosis pre-pandemic or whether participating in online learning created mental health issues, which would be important information in understanding the risks of negative consequences for those with diagnosed mental health issues versus those with no former diagnosis. These issues were not based on simply being home, but the consequences that effected mental health, including problems maintaining academic performance, lack of physical activity, social isolation, food insecurity, and other stressors that online learning intensified. These issues require acknowledgement and revisions to provide necessary improvements if it occurs again, or for families who choose to continue online learning. Former studies have been done on the negative effects of online learning, such as the effects in academic performance (Chung et al., 2022; Gray et al., 2016; Hamdan & Amorri, 2022; Hong et al., 2021, Johnson et al., 2022; Mohd Basar et al., 2021; Spitzer & Musslick, 2021; Ulum, 2022; Van Wart et al., 2020; Zheng et al., 2021), lack of physical activity effects (Apriyanto & S.A., 2021; Beserra et al., 2022; Chu & Li, 2022; D'Agostino et al., 2021; Killian & Woods, 2021; Konukman et al., 2022; Laar et al., 2021; Webster et al., 2021; Yu & Jee, 2020; Zheng et al., 2021), social isolation (Banerjee & Rai, 2020; Christ & Gray, 2022; Giovenco et al., 2022; Kraut et al., 2022; Lim et al., 2022; Loades et al., 2020; Pietrabissa & Simpson, 2020; Schwartz et al., 2021; Sutcliff & Noble, 2022;

Vaillancourt et al., 2021) and family stress (Chavira et al., 2022; Dawes et al., 2021; Gadermann et al., 2021; Gayatri & Irawaty, 2021; Harper et al., 2022; Mcrell et al., 2022; Roos et al., 2021; Spinelli et al., 2020; Theberath et al., 2022; Wang et al., 2021) that all have an impact on mental health. Most studies on physical activity have not provided a study on conclusive results; rather they made attempts for ideas, options to implement and potential methods that seemed adequate in online learning formats (Apriyanto & S.A., 2021; Beserra et al., 2022; D'Agostino et al., 2021; Killian & Woods, 2021; Konukman et al., 2022; Laar et al., 2021; Webster et al., 2021; Yu & Jee, 2020; Zheng et al., 2021). Results proclaiming it would be “beneficial” or “recommended” to integrate a method are not adequate enough to show conclusive results. Not enough time has passed since the start of the pandemic closure of schools to have adequate studies completed to provide conclusive results on the negative, as well as positive effects of online learning.

This study was focused on reviewing the concerns and recommendations of former studies and finding how online learning directly affects mental health and uncovering recommendations to improve the aspects that affect mental health when participating in online learning formats. The importance of the concerns included in former studies and firsthand concerns from adolescents and reviewing, analyzing, and revising what is or is not helping needs to be a priority. Assessing both needs and desires and taking concerns and recommendations seriously provided a more enhanced outcome to increase positive mental health, which provided a domino effect in increased positive motivation and gaining coping skills and awareness of their mental health needs. This study opened the door to obtaining the most concerning issues and getting more informative feedback and perspectives from those who experienced the negative effects of online learning.

Purpose of the Study

The purpose of this qualitative phenomenological study was to explore the positive and negative effects that online learning has on physical, emotional, social, educational and psychological aspects of mental health. Adolescent students were asked to share their lived experiences of online learning in the areas of physical, emotional, social, educational, and psychological well-being and whether they experienced mental health issues – anxiety or depression - prior to, during, or after online learning.

Research Question(s) and Hypotheses

Research Questions

RQ1: How do adolescents with a diagnosed mental health condition describe their experience of online learning?

RQ2: How do adolescents with no diagnosed mental health condition describe their experience of online learning?

RQ3: How does academic performance affect mental health during online learning?

RQ4: How does the level of physical activity during online learning affect mental health?

RQ5: How does the level of social connection during online learning affect mental health?

RQ6: How do food insecurity and other family stressors during online learning affect mental health?

RQ7: How does online learning benefit mental health?

Assumptions and Limitations of the Study

Limitations

This study had limitations, just as most studies. One major limitation was the isolated sample group, which only included one local Charter school. It also included a small sample size, due to insufficient consent by parents and students. School staff required certain guidelines that did not fit what the study requires, such as obtaining information on students past and current academic records and mental health history. Another limitation involved the time constraints that students had to participate, due to being required to maintain their school schedules. School staff did not appreciate the need to have students miss class time to be interviewed.

Challenges

One of the initial challenges was trying to convince the school staff to approve having this study conducted at their school. They informed me of privacy and/or ethical reasons due to the study involving issues with mental health. School staff felt that parents and students would not want that type of information shared. Another challenge was due to the focus being on participants being under 18, therefore a minor. Even with school approval of the study, parents were less likely to consent to allow their student to participate. Therefore, another challenge was trying to obtain a big enough sample group with both parents/guardians and students consenting.

Theoretical Foundations of the Study

Chung et al. (2022), Gray and DiLoreto (2016), Hamdan and Amorri (2022), Hong et al. (2021), Johnson et al. (2022), Mohd Basar et al. (2021), Spitzer and Musslick (2021), Ulum (2022), Van Wart et al. (2020), and Zheng et al. (2021) studied the various effects of online learning on academic performance. Topics discussed include the number of online classes and the ineffectiveness vs. effectiveness (Hong et al., 2021); the types of software used that provided

a potential increase in effectiveness (Ulum, 2022); how older students reported positive experiences and had the desire to continue online (Zheng et al., 2021); how increased self-regulation were related to motivation level (Chung et al., 2022); lack of preparedness and adequate teaching techniques (Mohd Basar et al., 2021); instructor presence had a more significant impact than student interaction on student learning (Gray & DiLoreto, 2016); teacher incentives, increased parental involvement, and improvements in math were found and believed to be due to increased motivation and less anxiety (Spitzer & Musslick, 2021); increased learning independence among older students (Hamdan & Amorri, 2022); found there were specific factors that provided students with a sense of importance in online learning (Van Wart et al., 2020); and the need for teacher training in online teaching and use of technology to better support students (Johnson et al., 2022).

Physical activity during online learning was studied by Apriyanto and S.A. (2021), Beserra et al. (2022), Chu and Li (2022), D'Agostino et al. (2021), Killian and Woods (2021), Konukman et al. (2022), Laar et al. (2021), Webster et al. (2021), Yu and Jee (2020), and Zheng et al. (2021). Studies showed the potential benefits of using online physical education programs (Killian & Woods, 2021; Webster et al., 2021; Yu & Jee, 2020); streaming instruction videos to build knowledge of physical education (Zheng et al., 2021); acknowledged that providing physical activity provided positive effects in learning with online learning, improved cognition, self-image and self-esteem, improved mental health in older students and empowered older students in controlling their learned needs and guided them in self-controlled learning (Apriyanto & S.A., 2021; Beserra et al., 2022; Chu & Li, 2022; Laar et al., 2021); a noticeable difference was reported between males and females and learning independence (Konukman et

al., 2022); and future research needs to promote physical activity in secondary school students (D'Agostino et al., 2021).

Studies conducted by Banerjee and Rai (2020), Christ and Gray (2022), Giovenco et al. (2022), Kraut et al. (2022), Lim et al. (2022), Loades et al. (2020), Pietrabissa and Simpson (2020), Schwartz et al. (2021), Sutcliffe and Noble (2022), and Vaillancourt et al. (2021) found that social isolation negatively impacted mental health. Depression and loneliness were reported among all ages of students (Christ & Gray, 2022; Giovenco et al., 2022; Lim et al., 2022; Loades et al., 2020; Pietrabissa & Simpson, 2020) and loneliness had a greater impact on mental health causing increased depression and anxiety (Banerjee & Rai, 2020); initial observations found that students were not as impacted at the start of the pandemic, but as isolation continued, females reported significant negative effects of sadness (Schwartz et al., 2021); Younger college students were unable to adapt as well as older students (Sutcliff & Noble, 2022); and adults were also found to be just as impacted by the pandemic as adolescents (Kraut et al., 2022); and recommendations were made school to re-open and stay open safely (Vaillancourt et al., 2021).

Performance, physical activity, and isolation were not the only factors impacted through online learning; many families struggled with food insecurity and other family stressors. Studies were conducted by Chavira et al. (2022), Dawes et al. (2021), Gadermann et al. (2021), Gayatru and Irawaty (2021), Harper et al. (2022), McRell et al. (2022), Roos et al. (2021), Spinelli et al. (2020), Theberath et al. (2022), and Wang et al. (2021). Kenyan adolescents were found to report less insecurity than their US and Venezuelan counterparts (McRell et al., 2022); families reported that SNAP benefits provided a positive impact on food security (Harper et al., 2022); an increase in individual and family stress, tension and mental health issues include depression and anxiety was reported (Chavira et al., 2022; Theberath et al., 2022). Parental stress was reported

due to lost jobs, financial loss, lost child care, and inability to help and support their children (Gadermann et al., 2021; Toos et al., 2021; Spinelli et al., 2020); coping strategy techniques and support were found to be an important recommendation for families (Gayatri & Irawaty, 2021; Roos et al., 2021); and the changes adolescents experienced due to online learning included negative impacts on home life and environment and lack of materials increased mental health issues (Dawes et al., 2021; Wang et al., 2021).

Amidst the negative aspects of online learning, there were studies that found positive aspects. Al Rawashdeh et al. (2021), De Coninck et al. (2022), Mohd Basar et al. (2021), Panagouli et al. (2021), Senft et al. (2022), Sharma (2020), Simm et al. (2021), Tesler (2022), Vaillancourt et al. (2021), and Widiasih et al. (2022) conducted studies that looked at both the pros and cons. Specific subjects, including math and reading were found to have mixed results in online learning, with math scores decreased when compared to pre-pandemic scores (Panagouli et al., 2022); students who felt they mattered showed a positive relationship with mental health well-being and feeling connected to school, peers and teachers (Simm et al., 2021; Vaillancourt et al., 2021); online learning also had a positive connection to life satisfaction and self-rated health when schools assessed coping skills (Tesler, 2022); the use of technology helped students learn and apply skills they will use later that they would not have received in the classroom (Mohd Basar et al., 2021; Senft et al., 2022); increasing social support and having access to materials decreased stress levels, but family stressors, such as financial issues, violence and unemployment increased stress (De Coninck et al., 2022); flexibility and the use of technology to obtain more in-depth information were reported as be positive (Al Rawashdeh et al., 2021; Sharma, 2020); and internet addiction, negative influence on cognitive development and negative

effects of online learning, including isolation and not feeling connected were consequences shared (Widiasih et al., 2022).

Chen and Vanderweele (2018), Estrada et al. (2019), Freuwirth et al. (2019), Foeke-Morey et al. (2014), and Sen et al. (2022) conducted studies on the effects of religion and faith on mental health. Studies found that religious education had a significant impact on the mental health of adolescents and helped develop healthy reactions to stimuli and positive coping skills (Estrada et al., 2019; Freuhwirth et al., 2019). Adolescents were found to have less risk of mental health issues and adjustment problems when they reported a relationship to God or were religiously observant (Chen & VanderWeele, 2018; Goeke-Morey et al., 2014), and religion and spirituality was found to provide an advantage for mental health during crisis situations (Sen et al., 2022).

Definition of Terms

The following is a list of definitions of terms that are used in this study.

Academic: relating to, or associated with an academy or school especially of higher learning; relating to performance in courses of study; based on formal study especially at an institution of higher learning (Merriam-Webster, n.d.).

Adolescents: a young person who is developing into an adult; one who is in the state of adolescence; emotionally or intellectually immature (Merriam-Webster, n.d.).

Anxiety: apprehensive uneasiness or nervousness usually over an impending or anticipated ill; mentally distressing concern or interest (Merriam-Webster, n.d.).

Challenge: to arouse or stimulate especially by presenting with difficulties; to administer a physiological and especially an immunologic challenge (Merriam-Webster, n.d.).

Children: a young person especially between infancy and puberty; a person not yet of the age of majority (Merriam-Webster, n.d.).

Closure: the condition of being closed (Merriam-Webster, n.d.).

Connection: the act of connecting; the state of being connected (Merriam-Webster, n.d.).

COVID-19: a mild to severe respiratory illness that is caused by a coronavirus, is transmitted chiefly by contact with infectious material (such as respiratory droplets), and is characterized especially by fever, cough, loss of taste or smell, and shortness of breath and may progress to pneumonia and respiratory failure (Merriam-Webster, n.d.).

Depression: a state of feeling sad; low spirits (Merriam-Webster, n.d.).

Developmental: relating to development; designed to assist growth or bring about improvement (as of a skill) (Merriam-Webster, n.d.).

Educational: the action or process of educating or of being educated; the knowledge and development resulting from the process of being educated (Merriam-Webster, n.d.).

Emotional: relating to emotion; prone to emotion; appealing to or arousing emotion (Merriam-Webster, n.d.).

Family: the basic unit in society traditionally consisting of two parents rearing their children (Merriam-Webster, n.d.).

Financial: relating to finance (Merriam-Webster, n.d.).

Food insecurity: fact or instance of being unable to consistently access or afford adequate food (Merriam-Webster, n.d.).

Isolation: the action of isolation; the condition of being isolated (Merriam-Webster, n.d.).

Learning: the act or experience of one that learns; knowledge or skill acquired by instruction or study (Merriam-Webster, n.d.).

Loneliness: being without company; cut off from others (Merriam-Webster, n.d.).

Mental health: the condition of being sound mentally and emotionally that is characterized by the absence of mental illness and by adequate adjustment especially as reflected in feeling comfortable about oneself, positive feelings about others, and the ability to meet the demands of daily life; health care dealing with the promotion and improvement of mental health and the treatment of mental illness (Merriam-Webster, n.d.).

Motivation: the act of motivating; a motivating force, stimulus, or influence (Merriam-Webster, n.d.).

Pandemic: occurring over a wide geographic area (such as multiple countries or continents) and typically affecting a significant proportion of the population (Merriam-Webster, n.d.).

Parent: one that brings forth offspring (Merriam-Webster, n.d.).

Participation: the act of participating (Merriam-Webster, n.d.).

Performance: the execution of an action; fulfillment of a claim, promise, or request; ability to perform (Merriam-Webster, n.d.).

Physical activity: the act of good health and strength achieved through exercise (Merriam-Webster, n.d.).

Physical education: instruction in the development and care of the body ranging from simple calisthenic exercises to a course of study providing training in hygiene, gymnastics, and the performance and management of athletic games (Merriam-Webster, n.d.).

Prepared: subjected to a special process or treatment

Psychological: relating to psychology; directed toward the will or toward the mind specifically in its conative function (Merriam-Webster, n.d.).

Relationships: the state of being related or interrelated; the relation connecting or binding participants in a relationship (Merriam-Webster, n.d.).

Religion: a personal set or institutionalized system of religious attitudes, beliefs, and practices; the service and worship of God or the supernatural; a cause, principle, or system of beliefs held to with ardor and faith (Merriam-Webster, n.d.).

Resilience: an ability to recover from or adjust easily to misfortune or change (Merriam-Webster, n.d.).

School: an organization that provides instruction; an institution for the teaching of children (Merriam-Webster, n.d.).

Self-regulation: the act or condition or an instance of regulating oneself or itself (Merriam-Webster, n.d.).

Skills: the ability to use one's knowledge effectively and readily in execution or performance; a learned power of doing something competently (Merriam-Webster, n.d.).

Social: marked by or passed in pleasant companionship with friends or associates; relating to, or designed for sociability; tending to form cooperative and interdependent relationships with others (Merriam-Webster, n.d.).

Strategies: an adaptation or complex of adaptations (as of behavior, metabolism, or structure) that serves or appears to serve an important function in achieving evolutionary success (Merriam-Webster, n.d.).

Stress: constraining force of influence, such as: a physical, chemical, or emotional factor that causes bodily or mental tension and may be a factor in disease causation; a state resulting from a stress (Merriam-Webster, n.d.).

Students: one who attends a school; one who studies; an attentive and systematic observer (Merriam-Webster, n.d.).

Teachers: one that teaches (Merriam-Webster, n.d.).

Teaching: the act, practice, or profession of a teacher (Merriam-Webster, n.d.).

Technology: a manner of accomplishing a task especially using technical processes, methods, or knowledge (Merriam-Webster, n.d.).

Unprepared: not prepared (Merriam-Webster, n.d.).

Well-being: the state of being happy, healthy, or prosperous (Merriam-Webster, n.d.).

Worry: to afflict with mental distress or agitation; make anxious (Merriam-Webster, n.d.).

Significance of the Study

This study was a significant part of research literature by adding more data and potential benefits in pursuing improvements in the general effects of online learning. It provided additional and updated results in what the main problems were and ways that can improve some areas. Due to the majority of studies only obtaining data from the various effects of online learning, this study added more results in the area of practiced actions, such as the proactive actions participants took to help certain aspects of negative effects. For example, when data are collected in the area of physical activity and it is found that students took an active role in pursuing physical activity during online learning, the results provided important information on how it actually benefited or not. Or if active participation in areas such as private tutoring to maintain academic performance or social activities were pursued to minimize or eliminate the negative effects were documented and additional recommendations were included.

Despite the isolated focus on one school and small sample population this study carried, the results potentially added beneficial information to past research with more focus on the

personal experiences of students who actively participated in online learning. A more direct and detailed approach in obtaining data in the variety of issues connected between the effects of online learning on mental health provide a sufficient and clear outlook on how each component is connected and can have a domino effect. For example, the lack of physical activity during online learning, can have a negative impact on socialization, academic performance and mental health and students who lack necessary skills to participate online, then struggle with academic performance and have their mental health negatively affected. Each of these components is connected and each has as much importance as the other. A number of studies have only focused on one, maybe two at a time. This study had the potential to provide not only research literature, but future needs in the world to be better prepared with improved options.

Summary

The effects of online learning have been increasingly observed during the pandemic, but the current studies and research connected to online learning during the pandemic do not provide sufficient results to provide the means for recommended changes. A number of studies have provided a start in understanding the more concerning areas, including a lack of access to technology and other materials; lack of technology skills by both students and teachers; the negative outcomes in participating in online learning in a home environment (which involves increased noise, people and other disruptions); struggling with learning disabilities, health issues, including pre-diagnosed mental health challenges; experiencing feelings of depression, anxiety or loneliness due to little or no social connections; and the lack of physical activity. These areas have a direct impact on overall mental health well-being that has increased to new levels during the pandemic.

It is important to avoid being too focused on the disadvantages that have emerged between online learning and mental health. Obtaining an understanding between of how online learning caused an increase in mental health issues should be the main focus. Gaining an understanding in the connection will best help to make revisions to minimize the negative effects that online learning has on mental health. It also helps to keep in mind that during a pandemic, there is the increased fear and worry about getting sick or spreading illness to others. This study helped in providing helpful information to the former studies by obtaining and reviewing additional personal experiences from those that have been directly impacted.

CHAPTER 2: LITERATURE REVIEW

Overview

Former and current research have studied and hypothesized a variety of effects of online learning on children, adolescents, and young adults. Some studies were conducted prior to COVID-19 but found similar results in the general effects of online learning and/or mental health (Chen & VanderWeele, 2018; Estrada, et al., 2019; Fruehwirth, et al., 2019; Goeke-Morey, et al., 2014; Gray & DiLoreto, 2016), especially studies pertaining to the effects of religion on mental health. Overall, the majority of studies do not have conclusive results that can be interpreted as valid and continued studies are required that involve using techniques that have been found to be significant in studies or are predicted to assist in improving the effects online learning has on the aforementioned criteria affecting mental health.

The general effects of online learning on mental health among children and adolescents have been an increasing concern during the COVID-19 pandemic. Whether it was due to illness, the fear of getting sick, direct effects of online learning, simply being home, or a combination of factors, the experience has shown to cause negative effects. The observations and effects that have emerged require continued studies to provide improvement or revisions in the areas that need it. Online learning can eventually be a positive experience if the appropriate changes are implemented and help is provided in obtaining materials, technology skills, learning abilities, connectedness, as well as meeting other needs. Potential changes include meeting physical needs (Apriyanto & S.A., 2021; Beserra et al., 2022; Chu & Li, 2022; D;Agostino et al., 2021; Killian & Woods, 2021; Konukman et al., 2022; Laar et al., 2021; Webster et al., 2021; Yu & Jee, 2020; Zheng et al., 2021); improving food access (Harper et al., 2022; McRell et al., 2022); and teaching general coping skills (Dawes et al., 2021; Estrada et al., 2019; Gayatri & Irawaty,

2021;Goeke-More et al., 2014; Lim et al., 2022; Sen et al., 2022; Simm et al., 2021; Spinelli et al., 2020; Tesler, 2022; Theberath et al., 2022; Wang et al., 2021). Online learning can provide access to a vast amount of information and activities (Al Rawashdeh et al., 2021; Mohd Basar et al., 2021; Sharma, 2020; Widiasih et al., 2022). The following will discuss the different factors that online learning can affect mental health: positive and negative effects on academic performance (Chung et al., 2022; Gray & DiLoreto, 2016; Hamdan & Amorri, 2022; Hong et al., 2021; Johnson et al., 2022; Mohd Basar et al., 2021; Spitzer & Musslick, 2021; Ulum, 2022; Van Wart et al., 2020; Zheng et al., 2021); the impact of a lack of physical activity (Apriyanto & S.A., 2021; Beserra et al., 2022; Chu & Li, 2022; D'Agostino et al., 2021; Killian & Woods, 2021; Konukman et al., 2022; Laar et al., 2021; Webster et al., 2021; Yu & Jee, 2020; Zheng et al., 2021); social isolation (Banerjee & Rai, 2020; Christ & Gray, 2022; Giovenco et al., 2022; Kraut et al., 2022; Lim et al., 2022; Loades et al., 2020; Schwartz et al., 2021; Sutcliffe & Noble, 2022; Vaillancourt et al., 2021); food insecurity and other family stressors (Chavira et al., 2022; Dawes et al., 2021; Gadermann et al., 2021; Gayatri & Irawaty, 2021; Harper et al., 2022; McRell et al., 2022; Roos et al., 2021; Spinelli et al., 2020; Theberath et al., 2022; Wang et al., 2021); pros and cons to online learning (Al Rawashdeh et al., 2021; De Coninck et al., 2022; Mohd Basar et al., 2021; Panagouli et al., 2021; Senft et al., 2022; Sharma, 2020; Simm et al., 2021; Tesler, 2022; Vaillancourt et al., 2021; Widiasih et al., 2022); and connections between religion and mental health (Chen & VanderWeele, 2018; Estrada et al., 2019; Fruehwirth et al., 2019; Goeke-Morey et al., 2014; Sen et al., 2022).

These factors have a direct effect on mental health well-being and due to the negative experiences online learning has had on students, the need to research and discover what the main issues of each area is causing the most issues and make the appropriate revisions would be

beneficial in providing a new and improved method of online learning in the future. A fully adequate online learning experience would consider the various needs of all learning levels and styles and make all attempts to accommodate these varieties. All students should be able to participate in online learning, even if it is simply to access the vast amount of information and opportunities to learn about the world. The pandemic simply opened the door to the need to make these changes and acknowledge the broader requirements of online learning to meet the needs and interests of students. The other important need is to provide teachers with the skills and materials to improve their ability to teach online and have the same confidence and comfort in doing so.

Description of Research Strategy

The literature review search involved research on the effects of online learning on mental health during a pandemic. The main search engine database used was Google Search Engine, accessed in the spring 2023. The following search phrases were used: “Effects of online learning on academic performance” AND “Effects of online learning on physical activity” AND “Effects of online learning on social isolation” AND “Effects of online learning on food insecurity” AND “Effects of online learning on family stressors” AND “Pros and cons to online learning” AND “Effects of religion on mental health.”

Articles were then reviewed, and specific studies that included: 1) “pandemic” OR “COVID-19” were isolated and reviewed; 2) studies dated within the last five years. Each of the studies that met the final review included at least one of the following criteria about the effects of online learning on mental health: 1) academic performance; 2) physical activity; 3) social isolation; 4) food insecurity and other family stressors; 5) pros and cons to online learning; or 6) religion and mental health.

Review of Literature

The five topics that will be discussed about the effects of online learning on mental health will include academic performance, physical activity, social isolation, food insecurity, and other financial stress and the pros and cons of online learning. The review of literature will provide information on studies already completed or in at least one study that is in the works. This general topic is still somewhat new, and many studies do not show long-term results, but they provide information to conduct additional studies for more conclusive results in the future.

Academic Performance

Academic performance was one of the main concerns when the pandemic first closed schools. The lack of preparedness in many school districts caused a loss of school days for days to weeks. Students were not the only ones impacted by this, though, teachers lacked the skills to teach online. Teacher and peer interaction (Gray & DiLoreto, 2016; Hong et al., 2021), teacher competence (Van Wart et al., 2020), and unpreparedness (Johnson et al., 2022; Mohd Basar et al., 2021) led to ineffective learning outcomes. Little to no interaction between student-teacher caused a negative effect on the continued ability to learn for students. Many of the most affected students already had learning disabilities or trouble understanding lessons. Despite that, studies did not focus on students with learning disabilities; it is mentioned when they report students who were already struggling in school pre-pandemic. Motivation and self-regulating skills were key characteristics in influencing a more positive outlook (Chung et al., 2020). In fact, these characteristics promoted a more effective learning environment (Chung et al., 2020). A student who possesses self-motivation is more likely to persevere despite obstacles or uncertainty. They will have the initiative to ask questions that enable them to learn and move forward. Self-regulation skills can be a struggle for younger children and adolescents. Still, if they are assisted

in practicing techniques to acquire these skills, it can enable them to have a more positive perception of such things as online learning. Effective learning was found in students who possessed a sense of independence (Hamdan & Amorri, 2022), adapted or found positive uses in the technology used (Ulum, 2022; Zhen et al., 2021), or were driven by higher incentives by teachers to perform (Spitzer & Musslick, 2021). A study found that online learning can promote and maximize independence in learning and participation in older students and provide future experience for students to transition to college and employment (Hamdan & Amorri, 2022).

Students who were comfortable and found online learning to be positive also no longer perceived teachers as the only source of information but as facilitators in learning and utilized different internet sources as their main source of information (Hamdan & Amorri, 2022). They realized the internet carries a vast amount of information, which includes things they would not have learned or discussed in a classroom environment. This increased curiosity and interest in what else they could discover on the internet. Students who received increased tutoring and had parental involvement were most likely utilizing online learning software that encouraged their attitude towards learning (Spitzer & Musslick, 2021). Parental involvement itself is a crucial aspect of online learning. During online learning, a parent takes on the added role of school advisor, teacher, and mentor to assist their child with their continued learning. The use of different types of software during online learning showed effects on students' abilities to adapt to technological developments and provided new learning resources on the internet to access a variety of information and allows them to become accustomed to performing inquiry and active learning (Ulum (2022). Some students who showed improvements in performance might have been due to increased use of similar educational online platforms that encouraged and motivated learning (Spitzer & Musslick, 2021). Online learning does not just involve the use of the internet

alone, various software supplements the learning potential and can encourage additional interest when it includes something of interest to the student. The software can also assist in improving specific skills like typing, math, spelling, and reading.

Online learning also increased responsibility, encouraged students to contribute to course design assessments and learning processes, and helped overcome time and space constraints (Hamdon & Amorri, 2022). Independent learners are given the opportunity to search and discover alternative learning techniques, enabling them to obtain various learning skills that can be used in the future. Students who had self-regulated learning (Chung et al., 2022) and perceived online learning as more flexible (Zheng et al., 2021) showed more continuity or improvements in their academic performance. Those who struggled to learn, especially with mathematics, or being distracted during in-person class, might have improved in mathematics due to a decrease in math anxiety, general anxiety issues, and being less distracted by other students, the teacher, and a stressful classroom setting (Spitzer & Musslick, 2021). Mental health was a topic of discussion among young people prior to the pandemic and escalated during and after the pandemic. Therefore, it is not unusual to find students who report they found online learning to be more acceptable for them because they struggled with feelings of anxiety, stress, or distraction during in-person classes. Students reported seven factors they perceive in an overall sense of importance in online learning, including Basic Online Modality, Instructional Support, Teaching Presence, Cognitive Presence, Online Social Comfort, Interactive Online Modality, and Social Presence (Van War et al., 2020). Despite school closures' intent on supporting and maintaining the general health of students it had detrimental effects on conventional learning due to lack of preparedness and adequate online teaching and learning techniques (Mohd Basar et al., 2021). Maintaining health is an essential requirement for all ages,

so it might have been best to do so during an uncertain pandemic. Still, in the future, schools need to collaborate with local communities, parents, and school administration to provide support and advisement as needed (Mohd Basar et al., 2021).

One of the noticeable issues of online learning is the limited experience of teachers with preparing for online teaching, technology instruction and support, and students' developmental needs and abilities, which require more understanding and focus (Johnson et al., 2022). Students reported they were most concerned with the basics of a course, including the technological aspects and teacher competence (Van Wart et al., 2020). A study found that specific components can improve the planning and implementation of online learning for K-12 students, which include: 1) evidence-based design, 2) connected learners, 3) accessibility, 4) supportive learning environment, 5) individualization and differentiation, 6) active learning, and 7) real-time assessment (Johnson et al., 2022).

Key takeaways in understanding what is needed to improve academic performance during online learning are focused on 1) providing teachers with the skills and experience of the potential of using the internet to teach, as well as additional software that can be used to provide visual, audio and other potentially helpful tools to teach. Teachers can have a fulfilling experience teaching online if they are given the proper skills and the confidence to use what is available as teaching tools. 2) providing students with appropriate materials and clear instructions on how to access online classrooms, as well as providing them access to necessary software that will assist in their learning. Students can learn new skills if given a chance, but they still require adequate instructions and time to learn. 3) provide parents with information on their student's learning requirements and any materials they could use to adequately assist their child. Parents are not always prepared to teach their children, they may not have the proper skills in a

certain subject, or they may not have significant time to help. Online learning has been shown to be both positive and negative regarding academic performance. Still, as current studies have shown, more needs to be researched and assessed to prove more conclusive techniques that will make it more favorable for students, teachers, and parents in the future.

Physical Activity

Physical activity was another notable component that was found to be lacking in online learning. Increased sedentary behaviors increase the risk of obesity and other health issues among students, including mental health issues. Childhood obesity was a concern prior to the pandemic, so the added lack of activity increased the risks of general weight gain and other health consequences. Studies were conducted on potential physical activity programs providing online instructions and videos to educate about physical activity (Webster et al., 2021; Yu & Jee, 2020; Zheng et al., 2021).

Various types of online physical education programs can be utilized to study the long-term effects of improving physical activity during online learning. Online physical education, or OLPE, would be a viable alternative for P-12 to access at the student, family, school, and community levels through digital technologies (Webster et al., 2021). ADDIE is another physical education model which includes analysis, design, development, implementation, and evaluation to create training programs (Yu & Jee, 2020). The ADDIE model is composed of three phases: 1) the *analysis phase* is composed of two levels: Needs assessment and front-end analysis and allows educators to discover the needs of the learners and determine performance problems; 2) the *design phase* is where appropriate media and instructional strategies are selected for the objectives identified in the analysis phase; and 3) the *development phase*, which consists of the creation of course materials and instructor guides (Yu & Jee, 2020). The validity of these

programs is still debated due to not having long-term results, but the intention and organization they carry provide a positive start to implementing a physical education requirement to online learning.

Students reported that having a physical education program during online learning provided positive effects in the following ways: 1) they were more interested in the combination of online and face-to-face learning; 2) they showed interest in online learning media, most notably using WhatsApp group; 3) they showed interest in online learning methods that included teachers speakers; and 4) many students rated the effectiveness of online learning overall as mediocre (40.2%) or effective (37%), which are adequate ratings for a new protocol (Apriyanto & S.A., 2021). A study using a geometry-based dance routine online showed it helped students improve cognitive function, better physical and mental health, positive self-image, and improved self-esteem, as well as reduced risk of depression and anxiety (Beserra et al., 2022). This study also found that parents and teachers reported that students developed improved knowledge of mathematics, positive feelings during the activity, and increased the amount of physical activity done during class (Beserra et al., 2022). The study showed that providing a fun approach to physical activity online can help motivate and encourage students to have more desire to participate, and teachers had increased interest due to how it promotes both learning and physical activity (Beserra et al., 2022). One study conducted with university students showed that providing physical activity for both male and female students showed better mental health during school closure, especially among males who require a higher intensity physical activity, and showed a decrease in psychological distress and life stress among these students (Chu & Li, 2022).

Studies found that online physical activity was not always taken seriously by students because it involved less activity than a traditional physical education class (Killian & Wood, 2021; Konukman et al., 2022; Zheng et al., 2021). One study implemented a curriculum called Interactive PE, or iPE, in which students reported their participation was determined by student preference, their limited available free time, and other obligations and reported completing modules alone due to their perception of lack of teacher support (Killian & Woods, 2021). Teachers reported that online physical education allowed them to learn new technology. Still, they observed how students perceived online physical education as a typical class and lacking participation and social-emotional development (Konukman et al., 2022).

Students and teachers experienced certain problems with online physical education, including: 1) physical education courses face a shortage of resources; 2) PE teachers lack information literacy; and 3) regular teaching plans are difficult to implement online, and students exercise conditions at home are limited (Zheng et al., 2021). The potential for online physical education has been found in studies, yet more review and assessment is advised to improve in the areas of teaching educators, providing adequate materials and equipment for students, and a more well-rounded physical activity program that offers a combination of learning, physical education, and enjoyment. One study noted that problems that students encountered involved a lack of space for physical activity, little to no motor skills, and embarrassment in being on video or not having appropriate devices to view videos (Beserra et al., 2022). This shows that students also need encouragement and motivation to learn the skills to participate and an option not to be required to be on camera for every activity by providing another way to verify they are participating.

Online physical education requires access to athletic equipment, which may not be accessible to all students who do not own home equipment, or even a computer and internet to access the class (Konukman et al., 2022; Laar et al., 2021). Due to the closure of businesses, also meant that recreational centers were most likely closed, so students were unable to utilize them for access to equipment (Laar et al., 2021). Improvements in the planning and formatting of online physical education programs, with positive relations with the community to make activity space and programs available, accessible, and affordable (Webster et al., 2021) and more technical support, training for educators, and encouragement for students to be more involved need to be required (Yu & Jee, 2020). The importance of future studies in forming and implementing physical activity in Preschool through 12th grade should also include virtual education learning tools to assist in explaining and instructing students for increased participation (D'Agostino et al., 2021).

Social Isolation

Social isolation concerns were probably the second most concerning aspect of the pandemic after academic performance. When COVID-19 began, social distancing was a mandatory regulation at stores that were able to remain open and continued even after schools and other businesses opened. Social distancing itself caused increased stress and agitation, but complete social isolation had a much higher effect. Regardless of whether a pandemic is in effect or not, online learning is an isolating activity. Social isolation was reported as causing increased depression, anxiety, and other mental distress among adolescents and young adults (Giovenco et al., 2022; Lim et al., 2022; Loades et al., 2020; Pietrabissa & Simpson, 2020).

A study involving college students found that 64% reported clinically significant depressive symptoms, 65% reported feeling lonely, and 64% reported self-isolating (Giovenco et

al., 2022). Students who reported self-isolating some of the time were 1.78 times likely to report clinically significant depressive symptoms compared to those who self-isolated most or all the time, who were 2.12 and 2.27 times likely, respectively to report clinically significant depressive symptoms (Giovenco et al., 2022). Self-isolation was a notable cause for an increase in depression for these students. Children and adolescents were found to have a noticeably higher risk for depression and anxiety during and after forced isolation ends. The longer the isolation continues, the higher the risk (Loades et al., 2020). One specific study that has not had results plans to determine the risk factors for depression, anxiety, and stress among college students that occurred during the pandemic and online learning and hopes to evaluate the effects social media use has on depression, anxiety, stress, and coping strategies among college students (Lim et al., 2022). Social isolation increased feelings of loneliness which was a factor in those at increased risk for depression (Banerjee & Raj, 2020; Giovenco et al., 2022). Feelings of loneliness can increase the risk for mental health issues if experienced long-term.

The pandemic brought increased levels of fear and worry about COVID-19 and getting sick or having a loved one get sick, which encouraged many to self-isolate and be at increased risk for loneliness (Christ & Gray, 2022; Kraut et al., 2022). Mental health professionals reported noticing children and adolescents doing as expected when schools first closed; however, as social isolation continued, reactions changed among females and older youth (Schwartz et al., 2021). The changes involved higher scores in negative effects involving sadness and feeling withdrawn, cognition, and attention, and older youth reported less conduct behavior than their younger counterparts (Schwartz et al., 2021). Younger college students who did not have the opportunity to adjust to college life before the pandemic reported significant negative changes to their academic performance due to isolation and online learning (Sutcliffe & Noble, 2022). The lack

of time they had to acclimate to the milestone transition from high school to college life was insufficient for them to obtain a structured plan and approach to their academic performance. The impact of loneliness during social isolation had a more significant influence on mental health, causing an increase in depression, anxiety, adjustment disorders, chronic stress, insomnia, and even late-life dementia; it was also connected to increasing the risk for sensory loss, connective tissue and autoimmune disorders, cardiovascular disorders, and obesity (Banerjee & Rai, 2020).

Socially isolated children and youth were found to have poorer physical and mental health and lower academic achievement when compared to children and youth who are more socially integrated (Vaillancourt et al., 2021). Recommendations that school closures and social isolation be prioritized by 1) the safe re-opening of schools and remaining open; 2) the safe restarting of extracurricular activities and remaining available; 3) increased clarity in decisions to justify school closures and advice from child health and mental health experts; 4) prioritizing teachers, school staff, and support workers with vaccines; 5) support and provide funds to school so they can provide effective infection prevention protocols (Vaillancourt et al., 2021).

Food insecurity and Other Stressors

The effects of online learning during a pandemic on academic performance, physical activity, and social isolation would be enough to increase the risk of mental health issues. Still, unfortunately, they are not the only issues that emerged during the pandemic. Families as a whole were affected by food insecurity and other family-based stressors, including job loss, financial loss, and lack of childcare that added to the stress on children and adolescents. Lack of sufficient food can cause negative reactions in young people, from feeling hunger they are

unable to focus on classes to increased risk for health issues due to malnutrition and nutritional deficiencies.

A study of food insecurity among Kenyan families obtained reports from adolescents who stated their homes did not have enough money for food, but when compared to US and Venezuelan adolescents, they reported less rather than more frequent insecurity than adults reported (McCrell et al., 2022). When both adolescents and adults reported similar levels of food insecurity, it was more likely that those adolescents only had access to one meal (McCrell et al., 2022). A study on SNAP food assistance found that the program had a positive impact on food security by helping to provide adequate food to families (Harper et al., 2022). Families eligible for the SNAP food assistance program reported having a positive effect but felt that changes such as making the application process easier, expanding eligibility, and increasing benefits would help families' more (Harper et al., 2022). The USDA SEBTC pilot program temporarily increased benefits for households. It was associated with lower child food insecurity and higher consumption of fruits and vegetables, whole grains, and dairy, and a lower consumption of added sugar and sugar-sweetened beverages compared to households who did not receive the benefit (Harper et al., 2022).

Adolescents in certain groups, such as low-income and racial/ethnic minority groups, have been disproportionately affected by increased mental health issues during the pandemic (Chavira et al., 2022). Those in families dealing with financial strain and/or a lack of access to the needed materials for online learning, such as a computer and internet connections, were also more likely to experience an increase in mental health issues from forced online learning (Wang et al., 2021). Certain factors have contributed to the risk of mental health issues among youth: 1) individual factors, such as age, gender, and disability; 2) familial, such as parent-child conflict

and domestic violence; 3) community, such as access to peers and teachers and learning environment; and 4) social, such as racism and economic status (Chavira et al., 2022). It was found that parents who experienced job loss exhibited an increase in parent-child conflict and a decrease in child-positive affect.

Still, a parent working from home predicted an increase in parental warmth, which predicted an increase in a child's positive affect (Wang et al., 2021). These studies showed the strain on families during the effects of a pandemic closing schools and businesses and causing job and financial loss. Protective factors included: 1) structured routine; 2) less passive screen time; 3) lower exposure to news media about the pandemic; 4) more time in nature; and 5) getting adequate sleep were connected to reduced psychopathology, as well as social support and closeness to parents (Chavira et al., 2022). It was recommended that early assessment with screening for mental health issues and providing the needed interventions to decrease the adverse effects is crucial to assist the whole family in gaining coping skills and conflict resolutions (Wang et al., 2021).

Parental strain due to job loss, financial stress, and children being home caused psychological stress among parents and made it challenging to be there for their children or assist them with online learning (Gadernann et al., 2021; Roos et al., 2021; Spinelli et al., 2020). The sudden stress of job and financial loss and a lack of skills to assist their children caused parents to experience negative consequences on their mental health, putting more pressure and stress on children and their mental health (Gadernann et al., 2021). Parents reported an increase in depression, relationship stress, and lower-quality parenting, which was influenced even more by trying to manage the psychological stress with limited social support and increased unstructured time (Roos et al., 2021). Studies recommended more focus on acknowledging parent/caregiver

mental health needs to protect the mental health and well-being of the children in the home as well (Roos et al., 2021) and consider supportive interventions for families to gain coping skills to be more prepared during times of stress (Spinelli et al., 2020; Theberath et al., 2022).

Adolescents living with food insecurity were put into adult roles and responsible for shopping and cooking tasks, despite lacking transportation or cooking skills (Harper et al., 2022). The acknowledgment of an increase in mental health issues, such as stress, anxiety, and depression has made it clear that helping families learn coping skills and becoming more resilient despite the hardships they are facing can provide a positive perspective and allow a family to come together with positive activities, build trust, cohesion, happiness, and a sense of togetherness. At the same time, they have the chance (Gayatri & Irawaty, 2021). Challenges that affect mental health well-being include: 1) multiple responsibilities and changes at home; 2) home life disruption; 3) changes in support networks; 4) relationship changes; and 5) the use of coping strategies (Dawes et al., 2021). Positive coping strategies that include family and social support may be an effective method for prevention (Theberath et al., 2022).

Pros and Cons of Online Learning

So far, the studies reviewed show specific effects of online learning on mental health, including academic performance, physical activity, social isolation and food insecurity, and other stressors. It has been acknowledged that there are both positive and negative aspects to online learning and the importance of significant revisions in each area to improve the negative issues. In this section, we review studies that have focused on the specific pros and cons of online learning; albeit there have been no conclusive results in what revisions are being constructed and whether they will be significant, the acknowledgment of both pros and cons about online learning is a start to begin the process.

One of the first notable disadvantages for students and teachers was a lack of materials, whether it was due to not having a computer or not having access or the ability to pay for the internet students experienced increased stress and pressure when they were unable to access online classes (Mohd Basar et al., 2021; Sharma, 2020; Simm et al., 2021). Home and family stress, including noise disruptions and family issues, such as financial issues and domestic violence, emerged due to having to do online learning in the home environment (De Coninck et al., 2022). Online learning was found to negatively influence behaviors and attitudes by increasing the risk of reduced motivation, loss of performance, social withdrawal, and increased risk of mental health issues (Senft et al., 2022).

Other issues that emerged included delayed routines due to unstructured home life, lack of self-care and life skills, lack of class participation increased rudeness and bullying, increased risk of internet addiction and a lack of teacher connection to stay focused and motivated in class (Senft et al., 2022; Widiasih et al., 2022) occurred due to being isolated at with the pressure to continue online learning. The lack of feeling connected to friends increased stress, and it was reported that having the ability to maintain contact with friends, whether through online options or face-to-face, helped decrease stress (De Coninck et al., 2022).

Other disadvantages that were mentioned included a disruption of cognitive development because of limited access to learning and schools programs and lacking understanding of online learning theories; a monotonous learning situation that caused discouragement and boredom among students; and deficient connections between teacher-student and peer-peer relationships (Widiasih et al., 2022). Feeling connected to school, teachers, and friends was an essential and concerning aspect of online learning. Social isolation caused a disruption in the continuity of everyday social interactions and affected mental health well-being (Vaillancourt et al., 2021).

Specific subject areas showed noticeable changes in performance, such as in mathematics, where most students showed a decrease in math scores compared to pre-pandemic (Panagouli et al., 2021). Younger students showed the most challenges with online learning despite having more interest in the learning materials, and parents reported that their child lacked discipline and the ability to self-regulate to participate in online classes and had no skills to assist their child (Panagouli et al., 2021).

Fortunately, even with all the negative aspects and disadvantages of online learning, positive aspects also emerged. A small group, which included low-achieving students, showed an increase in their math scores, high-achieving students maintained or gained reading skills, and some low-achieving students acquired improvement changes as well (Panagouli et al., 2021). For younger students, it was found that interactive and interesting materials were a favorable component for increased interest, along with good communication between teacher-parents that can provide adequate learning activities and skills (Panagouli et al., 2021). Students who were already considered “loners” transitioned easier to social isolation and were more likely to be content with online learning. Some students reported they experienced less bullying, peer pressure and social anxiety were a favorable part of online learning and valued the ability to stay home (Vaillancourt et al., 2021).

Further, students reported improved coping abilities with online learning when they had a connection to their teacher to help stay motivated and connected to their peers (Simm et al., 2021). Students reported having a positive connection to life satisfaction and self-rated health when a school assesses youth coping skills while participating in online learning and providing positive activities, mindfulness and relaxation skills, and cognitive coping can be favorable components in taking a proactive approach to psychosomatic symptoms during online learning

(Tesler, 2022). The use of technology in online learning can help students learn and apply skills they will need in the future (Mohd Basar et al., 2021). The digital competence gained during online learning allows students to discover new interests due to self-management (Senft et al., 2022). Access to digital libraries and websites can provide interactive programs suited for various ages (Mohd Basar et al., 2021). Other advantages that were reported included being able to communicate easier, ability to develop individual skills, flexibility, facilitating study and communication with teachers in comfort (Al Rawashdeh et al., 2021), efficiency, having no boundaries, cost-effective and time-saving, ease of learning, reaches different levels, increased research available, globalization ability, and educational games (Sharma, 2020).

Biblical Foundations of the Study

The Bible provides the foundation of how to be encouraged to live our life. It shares advice and encouragement about how to face day-to-day life and stressors, such as how we learn, take care of our bodies and minds, understand the effects of negative issues such as isolation and lack of food and/or other life necessities.

Academic performance and learning are important to God. He provides us with the importance of learning to gain the needed knowledge and skills to follow His path for us. He guides us with steps to pursue what and how to learn through our personal endeavors and goals that follow His Word. Philippians 4:13 says, “I can do all this through him who gives me strength” (New International Version, 1973/2017). This verse provides the comfort and encouragement that one can achieve anything with God’s strength and support, including academic success. Colossians 3:23-24, it says, “Whatever you do, work at it with all your heart, as working for the Lord, not for human masters, since you know that you will receive an inheritance from the Lord as a reward. It is the Lord Christ you are serving” (New International

Version, 1973/2017). This encourages one to approach their studies with purpose and dedication. Proverbs 3:5-6, it says, Trust in the Lord with all your heart and lean not on your own understanding; in all your ways submit to him, and he will make your paths straight.” This verse inspires one to put trust in God rather than in our own abilities or understanding. The temptation to rely on personal knowledge and skills may be easier, but God knows us and is better equipped in guiding and directing our paths.

God’s desire and expectations for us to learn and follow his guidance in learning includes learning how to maintain the body He graciously formed for you. 1 Corinthians 6:19 says, “Do you not know that your bodies are temples of the Holy Spirit, who is in you, whom you have received from God? You are not your own” (New International Version, 1973/2017). He has trusted us with this body and expects us to treat it as the temple he designed. Being physically active and maintaining a fit and healthy body provides the strength and energy to follow an active, fulfilling, Godly life. As important as maintaining an active life, 1 Timothy 4:8 also states: “For physical training is of some value, but godliness has value for all things, holding promise for both the present life and the life to come” (New International Version, 1973/2017). This emphasizes that physical activity and training your body is of great value, but not to the expense that it sacrifices your peace, patience, kindness, and self-control. Physical activity should not be forced but involve movement that flows with the spirit and helps to achieve a healthy and fit body while also fulfilling God’s purposes.

When a positive foundation of learning and regular physical activity becomes routine, it has the risk of being sidelined when negative consequences occur. Social isolation can disrupt a healthy lifestyle and cause a person to think negatively. In John 16:32, says, “A time is coming and has come when you will be scattered, each to your own home. You will leave me all alone.

Yet I am not alone, for my Father is with me” (New International Version, 1973/2017). We must be reminded that Jesus knows the need for comfort amid abandonment or isolation. We are encouraged to run our focus away from what we do not have, which is physical connections to others, and focus on what we do have, which is the understanding, comfort, and encouragement of God and supportive family and friends. Matthew 4:1-11 discusses Jesus’ experience of isolation in the desert for forty days. Isolation is perceived as a positive experience by providing courage and endurance and is associated with obedience that helps conquer things that can be harmful and destructive.

Another disruption to a positive routine includes food insecurity and other stressors. Luke 6:21 says, “Blessed are you who hunger now, for you will be satisfied. Blessed are you who weep now, for you will laugh” (New International Version, 1973/2017). Experiences in struggles, such as food insecurity, can provide us with the knowledge of empathy for others in the future. It is an experience that can help us be humble and accepting. Matthew 6:25 says, “Therefore I tell you, do not worry about your life, what you will eat or drink; or about your body, what you will wear. Is not life more than food, and the body more than clothes?” (New International Version, 1973/2017). Faith in God and His assurance that He will provide us with what we need can ease the worry and allow us to take the steps in our control. Stressing over what we may be lacking will only increase the risk of health complications, making it even harder to keep moving forward. Just as John 8:32 says: “Then you will know the truth, and the truth will set you free” (New International Version, 1973/2017). Faith and trust in God and His promise to meet our needs will free us from stress, pain, and worry.

As humans, we are made to feel and experience emotions that can be overwhelming. When we lack knowledge, do not care for our bodies, and lack basic necessities, it can put us in a

dark, depressing state. When we experience a worldwide crisis, such as a pandemic that shuts down jobs and schools, everyone is affected in many ways. Acknowledging that these stressors can cause general loneliness and health consequences we need to be reminded that God understands and is always beside us. Hebrews 11:1 says, “Now faith is confidence in what we hope for and assurance about what we do not see” (New International Version, 1973/2017). Online learning can increase the risk of loneliness and feelings of isolation, but we are reminded that God is consistent with us and working in our life, even when we cannot see Him.

Therefore, faith is crucial in maintaining this belief. God has also never promised that we will never experience hard times and trouble. John 16:33 says, “I have told you these things, so that in me you may have peace. In this world you will have trouble. But take heart! I have overcome the world” (New International Version, 1973/2017). We are not immune to struggle and trouble, but we can be assured that Jesus overcame the world and sacrificed his life and has conquered the strain for us.

Religion is a positive aspect of mental health. The biblical scriptures we are provided with share the understanding, comfort, and promise that God gives us with to maintain a positive outlook in life. 1 Peter 5:7 says, “Cast all your anxiety on him because he cares for you” (New International Version, 1973/2017). Religious education has been found to reduce the effects of exposure to stressors connected to mental health through stress-buffering reactions (Fruehwirth et al., 2019) and by encouraging individuals to use their beliefs and practices to build meaning out of stressful experiences through hope and faith (Sen et al., 2022). Matthew 6:13 says, “And lead us not into temptation, but deliver us from the evil one” (New International Version, 1973/2017). Adolescents who reported religious beliefs and a connection to God also reported a lower risk of drug use and sexual behaviors and a strong resilience to be influenced in starting

bad habits, and protective factors to maintain psychological well-being (Chen & VanderWeele, 2018) and a stronger closeness to God when there was a maternal connection (Goeke-Morey et al., 2014). Religious education can also help adolescents by helping them develop healthier reactions to stimuli, reinforcing religious coping skills, increasing religious beliefs, and promoting connectedness (Estrada et al., 2019).

Summary

This chapter discussed specific issues pertaining to the effects of online learning during a pandemic, including academic performance, physical activity, social isolation, food insecurity, and other stressors, and the pros and cons of online learning. Each of these factors directly impacts mental health that emerged during the forced online learning that occurred during the COVID-19 pandemic. The studies that have been conducted have discussed some of the ways each area affected students, teachers, and parents and, in some cases, made recommendations as to what steps should be taken. Due to the infancy of this subject, most studies have been conducted since the pandemic started in 2020 and have not had time to provide conclusive results for any suggestions provided. However, each study provided precise results in what was intended in their study and recommended that further study and research is still needed. Some results, such as the effects online learning had on general mental health, are quite clear, it is clear that there was a negative impact on mental health, especially among adolescents. Academic performance, physical activity, and social isolation are three of the area that adolescents were most affected. An interesting observation in a few studies reported that some students found online learning an easier transition than others. In most of these cases, the student was either already isolated, or they struggled with the noise and/or people (teachers and other students) around them in the classroom.

Each of these five factors discussed shows an interconnection from one to the other, in that when one is negatively (or positively) affected, another area can have a domino effect. For example, when a student struggles with social isolation, they will experience loneliness and symptoms of depression or anxiety and, in turn, will have a decrease in motivation and academic performance. There may not be an immediate effect between lack of physical activity and an impact on academic performance, but eventually, health issues will be a concern that increases the disruption.

The importance of ongoing research in this area has been repeated by many, if not all, the researchers included in the studies discussed. This future study will investigate the five factors and incorporate the effects of religion and spirituality. The Bible gave us warnings that something similar to a pandemic would occur: John 16:32, says, “A time is coming and has come when you will be scattered, each to your own home. You will leave me all alone. Yet I am not alone, for my Father is with me” (New International Version, 1973/2017). He encourages us to be prepared, and we merely need to listen.

Moving on in this study, Colossians 3:23-24 tells us, “Whatever you do, work at it with all your heart, as working for the Lord, not for human masters, since you know that you will receive an inheritance from the Lord as a reward. It is the Lord Christ you are serving” (New International Version, 1973/2017). We approach this study with some apprehension about the outcome, but with a greater sense of motivation and dedication to meet the purpose and results the analysis can provide for others.

CHAPTER 3: RESEARCH METHOD

Overview

This chapter will discuss the method of the study, including the research questions, design, participants, procedures, measurements, and materials used, analysis, and the limitations and challenges. The study focused on middle and high school students attending a Charter school and includes a new questionnaire to specifically obtain individual data on academic performance, physical activity, social isolation, food insecurity, and other stressors and the pros and cons of online learning. The data were focused on how these areas affected mental health during online learning during a pandemic.

Research Questions

Research Questions

RQ1: How do adolescents with a diagnosed mental health condition describe their experience of online learning?

RQ2: How do adolescents with no diagnosed mental health condition describe their experience of online learning?

RQ3: How does academic performance affect mental health during online learning?

RQ4: How does the level of physical activity during online learning affect mental health?

RQ5: How does the level of social connection during online learning affect mental health?

RQ6: How do food insecurity and other family stressors during online learning affect mental health?

RQ7: How does online learning benefit mental health?

Research Design

A qualitative research design was used for this study. It focused on a phenomenological method to obtain students' lived experiences during online learning. Due to the participants being minors, data was collected using questionnaires, individual interviews, and focus groups to collect information in a variety of formats for a higher degree of consistency and verifications. The study investigated the positive and negative effects that online learning has on educational, physical, social, emotional, and psychological aspects of mental health. Adolescents were asked to share their lived experiences of online learning in the areas of their academic performance, physical activity, social isolation, food insecurity, and other stressors and the perspectives of the pros and cons of online learning. They were also asked whether they experienced mental health issues, specifically anxiety or depression, prior to, during, or after online learning. This design for this particular study allowed the ability to obtain individual responses based on actual experiences that can be analyzed and compared to others in the study to find any similarities that provided important information to make necessary changes that best help in the future.

Participants

Participants included middle and high school students in grades 6 through 12, who were recruited at a local Charter school. Eligible participants were students who participated in online learning during the 2020-2021 school year. Information on the study was provided to the school administration and parents, for their review and approval. After the approval by the school administration to conduct this study, then parents were provided with a consent form to allow their students to participate. Eligible students were sent the PHQ-9 and the GAD-7 questionnaires to obtain general current status for depression and anxiety. Then individual interviews were scheduled, and a newly created questionnaire called Mental Health-COVID-

APSFP (academic performance, physical activity, social isolation, food insecurity, and other stressors and pros and cons to online learning) was administered during the interview. Focus groups were conducted for students willing to participate for further information.

The sample size for this study was best justified with a minimum of 50 students within the school population. The reason for this is that the individual data obtained from each participant provided the study with new responses that was compared to both former studies (if applicable) or to the other respondents in the study to reach similar responses and experiences. An empirically-based study of sample sizes for saturation in qualitative research established that saturation can be met with a relatively small sample size (Hennink & Kaiser, 2022). It was found that nine to 17 interviews or four to eight focus groups gained saturation (Hennink & Kaiser, 2022). Due to the age range of the participants in the study, there was a risk of a number of them providing unclear or lack of information for comparison. Therefore, a minimum of 50 students allowed the researcher to obtain adequate data for analyzes and comparison with a better chance of saturation, compared to a sample size of under 25.

Study Procedures

The researcher began the study by sending an official permission request letter (see Appendix A) to the principal at the location of choice, which in this study was Coeur d'Alene Charter Academy. After receiving a response letter of approval (see Appendix A), the researcher submitted the appropriate documents to the Institutional Review Board (IRB) at Liberty University. These documents included permission request and response letters (see Appendix A); recruitment letters/e-mails (see Appendix B); parental and teacher consent forms and child assent forms (see Appendix C); and all instruments used, which included the Patient Health Questionnaire (PHQ-9); Generalized Anxiety Disorder (GAD-7); Mental Health-COVID-

APSFPR student questionnaire; parent questionnaire; and teacher questionnaire (see Appendix D). After obtaining approval from the Institutional Review Board (IRB) at Liberty University, the researcher verified that the staff at Coeur d'Alene Charter Academy was still willing and prepared to go through with the study. The researcher needed to provide the school administrator with an initial recruitment letter to begin recruiting participants through the school e-mail portal to families, because school e-mail accounts do not allow outside e-mail. This recruitment letter included consent forms for both parents and student (parental consent and child assent, see Appendix C), as well as the researcher's contact information for potential participations to contact with any questions prior to consenting (or during the study). After a time period of two weeks, a follow-up recruitment letter was sent out to provide a reminder and attempt to recruit any additional participants that have not responded. After a sufficient number of participants was obtained (an estimated of 50 is the goal), the researcher provided additional information on the study. After official consent was received, the researcher provided a list of all students who had parental and self-consent submitted to school staff with the links to the surveys, including: Patient Health Questionnaire – PHQ-9, Generalized Anxiety Disorder – GAD-7, and the newly created Mental Health-COVID-APSFPR for students and the parent and teacher questionnaires (see Appendix D). As these links were being shared, the researcher began contacting students to schedule individual interviews with the help of counseling staff and/or office administrators. A private room or area was designated to conduct these interviews during study lab.

During these individual interviews, estimated to take 45 minutes, the researcher reviewed the responses on the questionnaires with the student and verified clarity and obtained additional information that the participant might not have included. Participants were reassured that their information and responses will be kept confidential on the researchers password protected

computer that is only used by the researcher and that any identifying information will not be included in the final results. They were also told that they do not need to talk about anything that might cause distress. At the conclusion of the interview, participants were asked if the researcher can contact them for additional information if needed and if they would be interested in participating in a focus group. Focus groups will be formed as participants show interest.

Focus groups included at least 8 members and were at least 30 minutes, depending on member interest time constraints, but be no longer than one hour. Students were able to share detailed information during their individual interviews and verify any responses on the questionnaire, and focus groups focused on the group's main topic of interest, such as social isolation or physical activity, etc. Group members were informed that anything shared during the group should be kept confidential, unless a member permits their comments, ideas or opinions be shared outside the group.

Parents who were interested in participating had a short survey to share their perspective and observations about their child(ren), and their own thoughts about online learning and the pandemic. Teachers had a survey to share their perspective and observation about their students, and their own thoughts about online learning and the pandemic. Parent and teacher participants were not required to have an interview, but were informed that if additional information or clarification would be needed, the researcher would contact them.

Instrumentation and Measurement

PHQ-9

The PHQ-9 was administered to assess the current risk of depression (see Appendix D). The PHQ-9 consists of 9 items that focus on assessing major depressive disorder, or MDD (Sun et al., 2020). Subscale scores on the PHQ-9 are based on a zero to three-point scale: 0 = not at

all; 1 = several days; 2 = more than a half the days; 3 = nearly every day (Sun et al., 2020). The composite scores are calculated as: a score less than five indicates an absence to minimal risk of a depressive disorder; scores between five and nine indicate mild depression; scores between 10 and 14 indicate moderate depression; scores between 15 and 19 indicate moderately severe depression; and scores between 20 and 27 indicate severe depression (Sun et al., 2020). The PHQ-9 has been found to be a reliable and effective measure with positive validity in assessing the level of severity of depression (Sun et al., 2020). This questionnaire was used to primarily assess depression.

A link was provided for participants to complete this form online. Pfizer has provided free public access to the PHQ-9, with no copyright restrictions or verbal or written permission (Neese, 2010). Their press release with this information can be found at this link:

https://www.pfizer.com/news/press-release/press-release-detail/pfizer_to_offer_free_public_access_to_mental_health_assessment_tools_to_improve_diagnosis_and_patient_care

GAD-7

The GAD-7 was administered to assess the current risk of generalized anxiety disorder (see Appendix D). The GAD-7 consists of items that assess for generalized anxiety disorder (Dhira et al., 2021). Subscale scores on the GAD-7 are based on a zero to three point Likert-scale: 0 = not at all; 1 = several days; 2 = more than half the days; 3 = nearly every day (Dhira et al., 2021). The composite scores are calculated as: a score between zero and four indicates minimal to no risk of anxiety; scores between five and nine indicate mild anxiety; scores between 10 and 14 indicate moderate anxiety and scores greater than 15 indicate severe anxiety (Dhira et al., 2021). The GAD-7 has been found to exhibit high reliability and validity and is

very dependable in assessing anxiety disorder (Dhira et al., 2021). This questionnaire was used to primarily assess generalized anxiety disorder.

A link was provided for participants to complete this form online. Pfizer has provided free public access to the GAD-7, with no copyright restrictions or verbal or written permission (Neese, 2010). Their press release with this information can be found at this link:

https://www.pfizer.com/news/press-release/press-release-detail/pfizer_to_offer_free_public_access_to_mental_health_assessment_tools_to_improve_diagnosis_and_patient_care

Mental Health-COVID-APSFPR

The Mental Health-COVID-APSFPR (academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons to online learning and religion and mental health) is a newly created questionnaire that includes questions focused on each specific criteria and how they were affected during online learning during a pandemic (see Appendix D). The questionnaire has two parts; Part 1, obtained basic information, including name, age, grade, gender, where they attended school during 2020-2021, etc. Part 2, included specific open-ended questions based on the areas of focus, such as: 1) were you diagnosed with a mental health condition prior to the pandemic? If so, what? (This question is asked to get a baseline on whether an individual was already experiencing mental health issues or not; 2) how did you feel when transitioning from a regular classroom to online learning? (This question will assess the early feelings of transitioning); 3) what negative experiences did you have during online learning? (General information on negative experiences); 4) what positive experiences did you have during online learning? (General information on positive experiences); 5) what did you do for physical

activity; 6) what was your online learning environment like; and 7) did your family experience any job loss/financial issues/conflicts? If so, how did you handle it?

Responses to the questions were reviewed, and similarities and differences were noted. The questionnaire was administered prior to an in-person interview. Since this is a new questionnaire, created by the researcher, it was not been tested for reliability or validity. It will be reviewed for the ability to obtain influential and substantial information to better understand students' experiences during online learning during a pandemic. The reliability and validity was assessed at the conclusion of the study. Since the researcher conducting the study created this questionnaire there are no copyright or required permission of use needed for this study. If future use of this questionnaire is considered, permission from the researcher is required.

Parent Questionnaire

The parent questionnaire included a total of eight questions pertaining to each of the six criteria, including academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons to online learning and religion and mental health, and a question on general observation and perspective of online learning (see Appendix D). The questions focused on how the parent observed or perceived their student's reactions and their personal perspective of online learning. A link was provided for participants to complete this questionnaire online. Since the researcher conducting the study created this questionnaire there are no copyright or required permission of use needed for this study. If future use of this questionnaire is considered, permission from the researcher is required.

Teacher Questionnaire

The teacher questionnaire included a total of eight questions pertaining to each of the six criteria, including academic performance, physical activity, social isolation, food insecurity and

other stressors, pros and cons to online learning, and religion and mental health, and a question on general observation and perspective of online learning (see Appendix D). The questions focused on how the teacher observed or perceived their students' reactions and their personal perspective of online learning. A link was provided for participants to complete this questionnaire online. Since the researcher conducting the study created this questionnaire there are no copyright or required permission of use needed for this study. If future use of this questionnaire is considered, permission from the researcher is required.

Data Analysis

In this qualitative study, the process of transcription was conducted through individual interviews. Participants completed questionnaires online first; then an individual interview involved reviewing the Mental Health-COVID-APSFPR questionnaire in-person to obtain clarification and allow the researcher to observe actual behaviors and attitudes while discussing the topics. The ability of the researcher to observe the participant while going over the questionnaire provides added information to assist in the reliability of responses.

The type of coding that was used was selective. Each of the criteria, including academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons of online learning, and religion and mental health, are all related or connected to the main category of "online learning" and the general effects it has on the five specific criteria.

The focus of data collection in the study is questionnaires for baseline information and individual interviews to obtain clarity and reliability. Therefore, a focus on narrative analysis and the personal stories and experiences of participants was at the forefront of the study. The researchers' goal was to better understand how each individual experienced online learning and how it affected them in the five areas listed. All individual responses were compared for

similarities and differences to formulate results on the positive and negative aspects from the participants' perspectives pertaining to the five criteria effects of online learning on mental health.

Delimitations, Assumptions, and Limitations

Delimitations

The delimitations in this study included the sample size and geographical location isolated to participants in 6th through 12th grade at one Charter school. The reason for this, is the study was primarily focused on the experiences of this age group during online learning during a pandemic and the sample size is to provide the ability to interview participants with less issues in time-constraints for a one-person researcher.

Assumptions

The researcher's assumptions in this study include:

Assumption 1: Adolescents with a diagnosed mental health condition are more likely to describe a negative experience.

Assumption 2: Adolescents with no diagnosed mental health condition are more likely to describe a positive experience.

Assumption 3: Academic performance has an increased risk of being negatively impacted during online learning.

Assumption 4: The level of physical activity declines during online learning.

Assumption 5: The level of social connection during online learning is negatively decreased.

Assumption 6: Food insecurity and other family stressors are negatively impacted during online learning.

Assumption 7: Online learning can be beneficial to mental health by providing an alternative learning technique in certain situations.

Limitations

One major limitation was the isolated sample group, which only included one local Charter school. It also carried the risk of a small sample size due to insufficient consent by parents and students. School staff required certain guidelines that carried the risk of not meeting what the study required, such as obtaining information on students' past and current academic records and mental health history. Another limitation involved the time constraints that students had to participate, due to being required to maintain their school schedules. School staff were more likely to not appreciate the need to have students miss class time to be interviewed.

One of the initial challenges was trying to convince the school staff to approve having this study conducted at their school. They informed me of privacy and/or ethical reasons due to the study involving issues with mental health. School staff felt that parents and students would not want that type of information shared. Another challenge was due to the focus being on participants being under 18, therefore a minor. Even with school approval of the study, parents were more likely not consent to allow their students to participate. Therefore, another challenge was trying to obtain a big enough sample group with both parents/guardians and students consenting.

Summary

This chapter discussed the research methods that were conducted in this study. It is a qualitative study with a narrative focus on questionnaires and individual interviews. Participants first required parental consent, with a child's assent to allow them a chance to make a personal decision to participate. Those who decide to participate then completed two basic assessment

questionnaires, which included the Patient Health Questionnaire (PHQ-9) and the Generalized Anxiety Disorder (GAD-7), to assess for depression and anxiety, respectively. Then, a newly created questionnaire called the Mental Health-COVID-APSFPR questionnaire, which included 28 questions that obtained responses in the five areas of focus: academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons of online learning and religion and mental health. The questions were designed in ways to investigate a connection between online learning and how it affected mental health and general well-being.

The results of this study assist students, teachers, parents and future researchers in improving in the areas that are shown to require revisions to accommodate more individuals and assist them in experiencing a more positive outcome with online learning, whether in the midst of pandemic or not. This study can provide added verification to other former studies that found similar issues, as well as provide future studies with issues that require additional research.

CHAPTER 4: RESULTS

Overview

The purpose of this study involved a qualitative phenomenological-based approach to explore the positive and negative effects that online learning had on physical, emotional, social, educational and psychological aspects of mental health. Data collection included administering parent and teacher participants an 8-question survey and student participants were administered the Patient Health Questionnaire (PHQ-9), Generalized Anxiety Disorder (GAD-7) and the Mental Health-COVID-APSFPR main student questionnaire, which consisted of 28-questions and was newly created by the researcher. This main questionnaire was followed by individual student interviews that were conducted in the teacher's lounge at the school site and prior to the end of the study, a focus group, which included available student participants was completed.

The questionnaire and interviews obtained responses to answer the research questions from students that included whether they had a pre-diagnosed mental health condition or experienced mental health effects during online learning and how it affected their academic performance, physical activity, social connections, whether they experienced food insecurity and other family involved stress and if they found any benefits to their mental health during online learning.

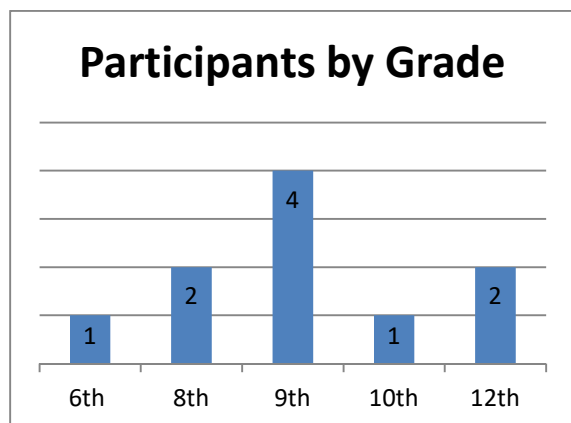
This chapter will analyze the responses from parent and teacher questionnaires and student questionnaires and interviews, which will include a review of recorded data obtained from individual student interviews and a focus group. Additionally, a comparison of academic grade reports between before, during and after online learning during a pandemic will be reviewed to explore any positive or negative effects on students' academic performance.

Descriptive Results

Participants of this study included students attending a local Charter school that accepts 6th through 12th grade students; parents of student participants; and teachers currently teaching at the school. Recruitment began on October 19, 2023, with the initial recruiting letter sent out by e-mail with the help of the school office. A follow up letter was e-mailed on October 31st, with a deadline to respond by November 14th. The initial total of respondents included: 15 students, nine parents and 13 teachers. After reviewing participant information, including submitted consent, continued interest and contact information, 11 total participants were excluded, due to: not having contact info for one student and one parent; lost contact with three students and one parent; too busy to proceed with participating for one student, one parent, and three teachers. After attempts to obtain required consent forms and continued interest, the total participants, included: ten students, six parents and ten teachers.

Participant demographics: STUDENT participants: Gender - Nine females and 1 male; Grade – one sixth grader (male); two eighth graders (female); four ninth graders (female); one tenth grader (female); and two 12th graders (female). [See Figure 1]. PARENT participants: Gender - six females. TEACHER participants: Gender – six females; 4 males. The classes the teacher participants taught included: two sixth grade teachers; three language teachers (including Spanish, Latin and French); two social studies/history teachers (one History and one Civics); two math teachers; two English teachers; and one Science teacher. Two of the teachers taught two different classes: one taught science and math and one taught English and French.

Figure 1: Participants by Grade



Questionnaires

Students

Students were administered three questionnaires:

PHQ-9: The PHQ-9 was used to assess the current risk of depression (see Appendix D).

The results assisted with the findings of any ongoing symptoms of depression in reviewing the responses to the Mental Health-COVID-APSFPR questionnaire.

GAD-7: The GAD-7 was used to assess the current risk of generalized anxiety disorder (see Appendix D). The results assisted with the findings of any ongoing symptoms of anxiety in reviewing the responses to the Mental Health-COVID-APSFPR questionnaire.

Mental Health-COVID-APSFPR: The Mental Health-COVID-APSFPR questionnaire was a newly created questionnaire that included questions pertaining to the following areas: academic performance; physical activity; social isolation; food insecurity and other stressors; pros and cons to online learning; and religion and mental health. The responses obtained information and personal perspectives of the effects of each area during online learning during a pandemic.

Parents

Parents were administered one questionnaire that included a total of eight questions pertaining to each of the six areas including, academic performance; physical activity; social isolation; food insecurity and other stressors; pros and cons to online learning; and religion and mental health and a two additional questions about general observation and perspectives of online learning during a pandemic (see Appendix D). The parent responses focused on how they observed and perceived their child(ren)'s reactions and performance during online learning.

Teachers

Teachers were administered one questionnaire that included a total of eight questions pertaining to each of the six areas, including, academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons to online learning, and religion and mental health and two additional questions about general observation and perspectives of online learning during a pandemic (see Appendix D). The teacher responses focused on how they observed and perceived their students' reactions and performance during online learning.

Descriptive Results

The responses to the PHQ-9 and GAD-7 were utilized to gain responses for current (and ongoing) symptoms of depression and generalized anxiety disorder. These questionnaires were not used to make a new diagnosis but rather to compare and contrast with how a student participant responded to the Mental-Health-COVID-APSFPR questionnaire. Negative effect responses were compared to the general score of these two questionnaires and whether the symptoms and/or risk of ongoing complications were possible.

The Mental Health-COVID-APSFPR, as well as individual interviews were analyzed to find any similarities among the student participants positive or negative experiences and perspectives. Parent questionnaires were analyzed to obtain the parent's perspective, as well as

compare with their student's perspective to find any similarities in the parent/child experiences. Teacher questionnaires were analyzed to obtain the teacher's perspectives on their personal experiences, as well as their observations of their student's positive or negative effects during online learning.

Study Findings

In this qualitative study, the process of transcription was conducted through individual interviews. Participants completed questionnaires online first; then, an individual interview involved reviewing the Mental Health-COVID-APSFPR questionnaire in person to obtain clarification and allow the researcher to observe actual behaviors and attitudes while discussing the topics. The ability of the researcher to observe the participant while going over the questionnaire provides added information to assist in the reliability of responses.

The type of coding that was used was selective. Each of the criteria, including academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons of online learning and religion and mental health, are all related or connected to the main category of 'online learning' and the general effects it has on the five specific criteria.

The focus of data collection in the study is questionnaires for baseline information and individual interviews to obtain clarity and reliability. Therefore, a focus on narrative analysis and the personal stories and experiences of participants was at the forefront of the study. The researchers' goal was to better understand how each individual experienced online learning and how it affected them in the five areas listed.

All individual responses were compared for similarities and differences to formulate results on the positive and negative aspects from the participants' perspectives pertaining to the five criteria effects of online learning on mental health.

Results

STUDENTS

Mental Health Assessments (RQ1/RQ2)

The PHQ-9 and GAD-7 were used to obtain and review current symptoms of depression and generalized anxiety disorder.

Student scores on the PHQ-9 ranged between zero and 12 (between minimal depression and moderate depression): 40% minimal depression; 40% mild depression; 20% moderate depression. The symptoms that were reported to occur nearly every day included: “Trouble falling or staying asleep or sleeping too much” and “Feeling tired or having little energy.” The responses that 50% or more of the participants reported as occurring several days included: “Little interest or pleasure in doing things.” “Trouble concentrating on things, such as reading the newspaper or watching television.” [see figure 2]. The level of difficulty for overall responses was 50/50 between “not difficult at all” and “somewhat difficult.” [see figure 3]

FIGURE 2: RESPONSES TO PHQ-9

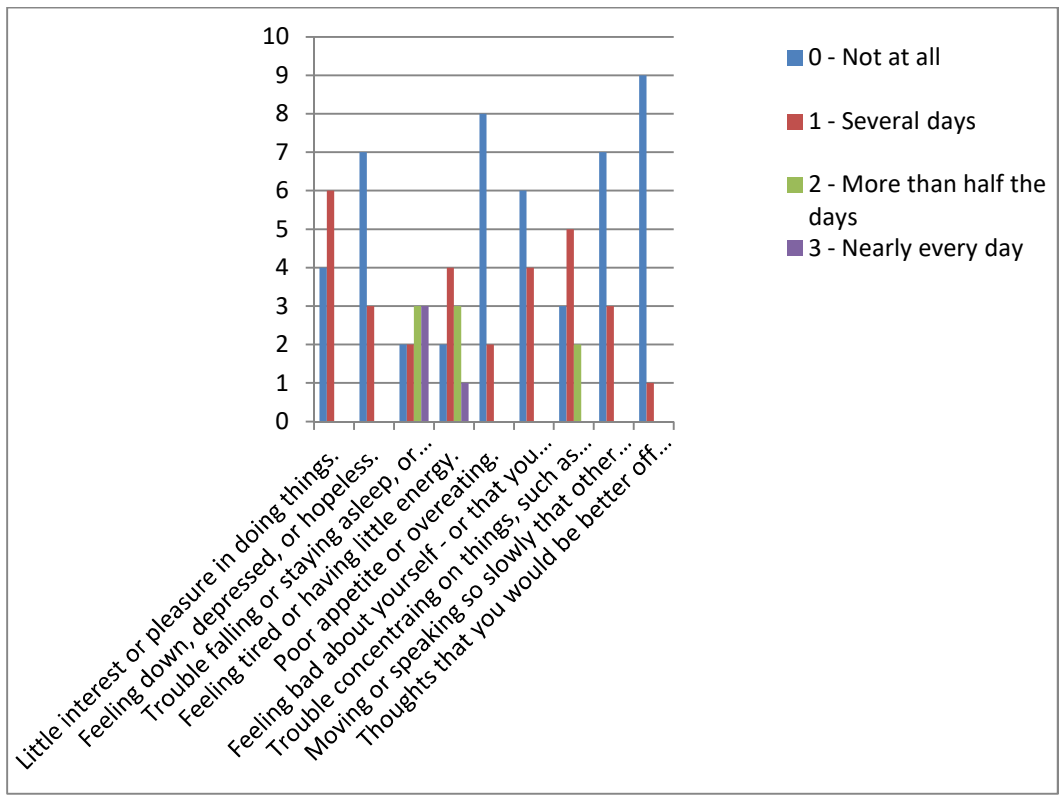
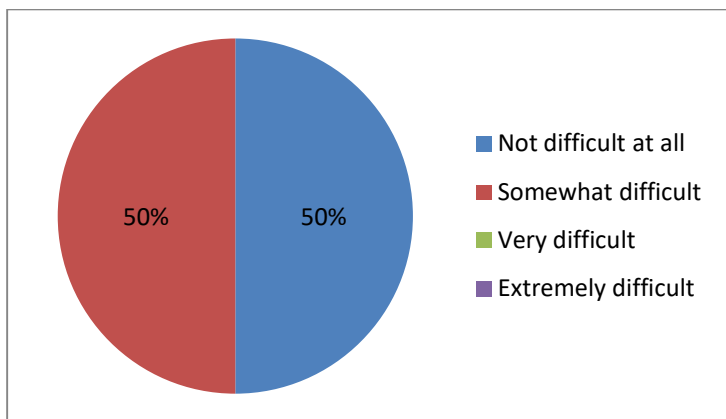


FIGURE 3: PHQ-9 – LEVEL OF DIFFICULTY



Student scores on the GAD-7 ranged between one and 13 (between minimal anxiety to moderate anxiety): 20% minimal anxiety; 40% mild anxiety; 20% moderate anxiety. The

symptoms that were reported to occur nearly every day included: “Feeling nervous, anxious, or on edge.” “Being so restless that it’s hard to sit still.” “Becoming easily annoyed or irritable.” “Feeling afraid as if something awful might happen.” The responses that 50% or more of the participants reported as occurring several days to more than half the days included: “Feeling nervous, anxious, or on edge.” “Worrying too much about different things.” “Becoming easily annoyed or irritable.” [see figure 4]. The level of difficulty for overall responses was: 22.2% not difficult at all; 55.6% somewhat difficult; 22.2% very difficult [see figure 5].

FIGURE 4: RESPONSES TO GAD-7

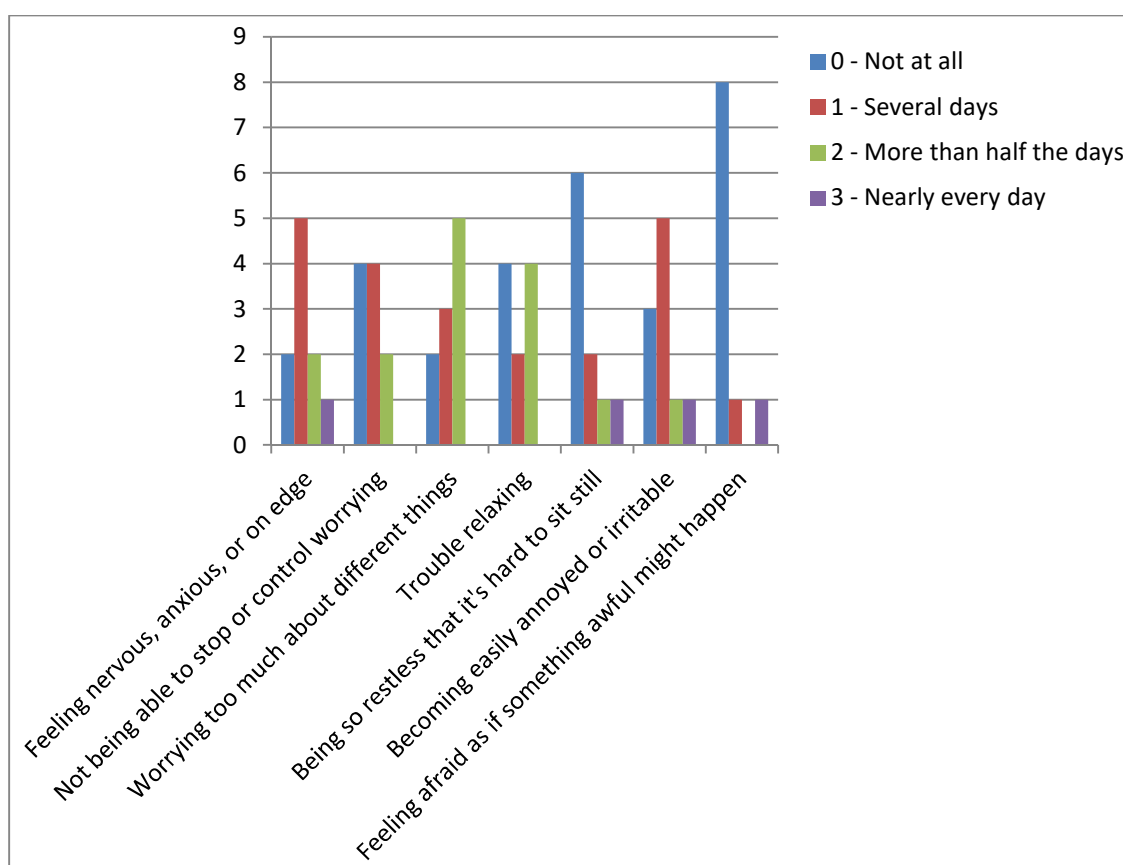
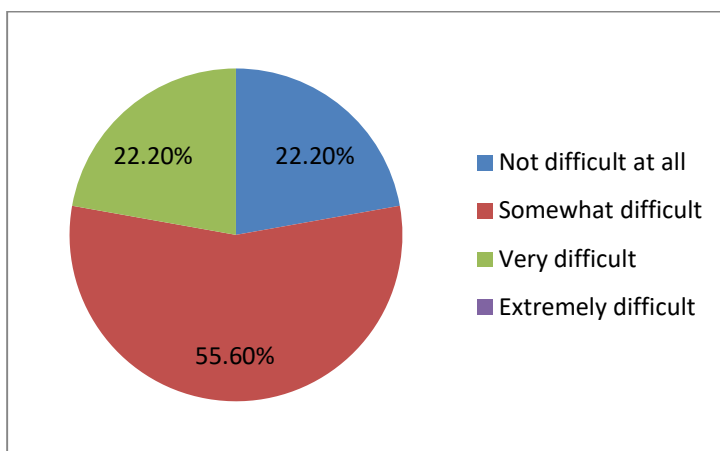


FIGURE 5: GAD-7 - LEVEL OF DIFFICULTY



Academic Performance (RQ3)

Grade reports for student participants showed the greatest negative effect on overall GPA during the 2nd semester schools reopened - 2020-2021 school year. However, 90% still maintained above a 3.0 GPA. By the 2nd semester of 2021-2022 school year, 80% of the students increased their GPA and 80% increasing yet again by 2nd quarter of 2023-2024 school year. Only one student had a GPA below 3.0, with a 2.95 by the 2nd semester of 2020-2021, a decrease to 1.28 by 2nd semester of 2021-2022 and increase to 2.85 by 2nd quarter of 2023-2024 school year. Based on official grades, students did better in English/Literature, Orchestra/Music/Choir and Reading and worse in Math. Despite this, overall grades were still average to above average.

Students generally reported being able to maintain the majority of their grades. Subjects that were reported as being the most challenging included: math (50%); history (30%); science (20%); English/language arts/literature (20%). The least challenging subjects students reported included: English/literature (50%); orchestra/choir (40%); reading (20%); history (20%); math (20%); science (20%). One student reports no subjects being least or most challenging due to her

ability to maintain consistent A's in all classes throughout the time period. One student who reported Math as being the most challenging, still earned a minimum grade of B+ and another who reported English and History as being the most challenging still earned a minimum of B+ in the respective subjects.

The ability to focus was reported to be negative among 90% of participants. The reasons shared included: environmental change distractions (being home), the stress of learning a new way, technology-induced distractions (increased use of devices), and procrastinating.

Individual Responses:

“With online learning, it's so easy to get distracted. There's so many things you can do on your device and so I developed off-task habits from the distractions.”

- 8th grader, female

“It was much harder for me to focus, I could not spend as much time on school or get myself to start schoolwork.”

- 12th grader, female

The student who showed consistency in grades throughout the time period, responded with the following (in regard to ability to focus):

“It wasn't changed; I am able to focus very well and only notice deficits in my attention span when I am very tired.”

- 9th grader, female

Eighty percent of students reported a positive experience with online learning and their academic performance. The responses included the ability to work at their own pace, not having to wait on others, flexibility and having access to new ways to learn independently.

Individual Responses:

“In online learning, I never had to wait on others, and no one ever had to wait on me. So there was less time wasted, and more work done.”

- 8th grader, female

“I found that time spent learning subjects outside of science and math was much better used than in the classroom where a lot of unnecessary time is wasted.

Foreign language and English are better taught online.”

- 12th grader, female

“I loved how I had fewer social interactions, got more sleep in the mornings and how it was much easier for me to work at my own pace. I would be able to finish a whole week by Wednesday.”

- 9th grader, female

One student who reported an overall negative experience with online learning and academic performance responded as follows:

“The teacher’s zoom camera would always start glitching and so we’d have practically no idea what she said, or there’d be a big delay.”

- 8th grader, female

When asked about whether the pandemic and risk of COVID impacted their academic performance, 40% reported it having a negative impact on them, causing more worry, need to hide or bury their fear and concerns, and frustration in the changes in learning. The other 60% reported it not impacting their academic performance.

Individual responses:

“I learned to close myself off from people, but only vulnerable parts. I became super positive and excessively expressive because everyone was stressed and it felt like my duty to be cute and make them forget.”

- 8th grader, female

“It caused a negative impact by the more work it was required to learn.”

- 9th grader, female

“It didn’t impact my ability to focus and I worried a little but not that much.”

- 10th grader, female

“My ability to focus was not impacted by the pandemic itself as I was not afraid of it, nor did I think that the virus itself was (is) a big issue.”

- 12th grader, female

Other comments that were shared when discussing the effects of online learning during a pandemic had on academic performance, students responded with the following:

“A/B schedule helped me be less scared going into middle school. The blend of online learning and in-person learning made it an easier transition.”

- 9th grader, female

“Online learning was one of the best things that happened to me, in terms of academics and focus. It helped me work at my own pace without having to wait on other, or vice versa.”

- 8th grader, female

“I lost interest in school and just indulged for a while, letting my brain do whatever was easiest.”

- 8th grader, female

“The separation from people lead to a sense of apathy towards school grades, as the sense of people themselves being the most important thing permeated.”

- 12th grader, female

Physical Activity (RQ4)

Physical activity during online learning was reported as not affecting mental health by 100% of the participants. Students reported participating in regular physical activity prior to the pandemic, such as running and walking, or group activities, such as tennis, soccer and swimming. After schools and recreational activities shut down, students reported varying effects on their level of physical activity: No change (30%); Change (40%); Change, but started new activity (20%); Increased (10%). All students reported no changes in weight. 50% reported no changes in their eating habits. Those who did have changes either started eating healthier (30%) or increased junk food, particularly carbs (20%).

Individual comments on changes in eating habits

“I ate more frequently during the day because I could eat whenever I felt hungry. I also ate a little healthier because I had more time to make food.”

- 12th grader, female

“I became more health conscious as I then had the time to focus on food even more so than before.”

- 12th grader, female

“I started eating more snacks to motivate myself for assignments I disliked, but the snacks were usually apples or other vegetables or fruits.”

- 9th grader, female

“Yes I constantly ate carbs and non nutritious crap because I was bored and home all day. My muscles completely disappeared.”

- 8th grader, female

Social Isolation (RQ5)

Student reports on social connection during online learning were found to have no negative effect (100%). 80% of students reported no negative effects, but were frustrated and missed their friends and having teachers available. These students reported finding ways to stay connected (texting, social media, phone/video calls) or they understood the need to isolate and prevent spreading illness. One student gained a new outlook on people connections and saw people as more important than grades, the student reported not feeling lonely, but did state that social isolation was the most challenging aspect of the pandemic. Another student reported loving fewer social connections and not knowing a lot of kids at the time. One student reported experiencing anxiety prior to the pandemic (no diagnosis) but stated symptoms of depression occurred during the pandemic, and 20% reported experiencing anxiety.

Individual comments on the positive and/or negative effects of social isolation:

“I find it a neutral impact, because I like to be around people but sometimes I need a break.”

- 9th grader, female

“Social isolation was a harder part of the pandemic. It made it harder to meet other people and make new friends after the pandemic.”

- 9th grader, female

“Isolation was positive. I understood the medical reasons of why, and it also let me do what I wanted at home more (read and play with my siblings).

- 9th grader, female

“Social isolation was SO MUCH BETTER than the immense stress s and anxiety I would’ve experienced interacting with people while knowing they could be sick.”

- 8th grader, female

“Social isolation had a positive impact on me. This is because since I was still a kid, I needed to find my own personality and likes. I couldn’t have done this under the influence of other classmates.”

- 8th grader, female

“I felt frustrated not being able to see my friends; however, I didn’t want to contribute to the pandemic and felt good about keeping others safe.”

- 12th grader, female

Food Insecurity and Other Family Stressors (RQ6)

No food insecurity was reported and one student reported a parental job loss. 50% reported having positive experiences with their home environment during online learning. Reporting that they were able to obtain help with homework, having routine stability and feeling comforted being with family. 50% reported negative experiences with their home environment. Reporting increases noises that were disrupting, ability to learn quickly with home distractions

and younger siblings or pets interrupting their learning ability. 50% of students reported at least one parent being able to work from home. 40% reported having a parent who worked in either a hospital setting or the local health department. 50% reported having COVID directly impact their family. 40% of students reported having COVID, with 30% reporting mild to no symptoms and 10% reporting severe symptoms.

Pros and Cons of Online Learning (RQ7)

When students were asked if there was any aspects to online learning benefits to mental health that was helpful, interesting or improved learning, 90% reported positive comments:

“Ability to pace myself and take breaks when I need and I got to see my parents all day.”

- 6th grader, male

“The fact that the classes didn’t take as long. It made it easier to focus on the classes we needed more help with.”

- 9th grader, female

“I started looking up random questions that I had throughout the day and learning their answers, as I had more access to technology.”

- 9th grader, female

“I love the flexibility of online learning and the multiple modes online learning can provide – in the form of movies, videos, books, etc.”

- 12th grader, female

“I found my time management to be better with online learning.”

- 8th grader, female

“I enjoyed being able to control my own learning schedule.”

- 12th grader, female

“I was able to take more breaks and eat when I wanted to.”

- 10th grader, female

Positive aspects included: ability to work at their own pace (flexibility); ability to take breaks as needed; able to sleep later in the morning; access to additional material and information with the use of technology (internet sources). Flexibility and sleeping in were the most notable aspects reported.

Negative aspects included: unable to ask teacher questions; unable to understand material; lack of social connection to friends; boredom; development of bad habits (playing on devices, rather than working); and technology issues. Social connection with both teachers and friends was the most notable aspect reported.

Religion and Mental Health

Religious activity was reported by 50% of the student participants. One student who reported not participating in religious activity independently or with family reported starting to meditate more. 30% reported their belief and faith helped them decrease stress, 40% reported it did not help, 20% reported a neutral effect, and 10% reported using the knowledge of science to understand and ease the fear and stress. One student who reported not participating in religious activity, still reported that belief and faith in a higher power helped provide comfort.

Individual perspective on religion and mental health:

“We can pray for guidance and healing.”

- 6th grader, male

“It can cause restrictions to a healthy life and cause people to not be living to their full extent.”

- 9th grader, female

“Religion gives people a place to put the blame that is (usually) away from a person/group of people and give them a community that can help pull them along during stressful life experiences. I know many people who found relief in their religion, but I also saw people in many religious/churches following their leaders blindly.”

- 9th grader, female

“I think it could help relieve you and focus on the good things.”

- 9th grader, female

“Religion can help with a lot of things, such as community relations or will to do things. Religion doesn't give a crap about stress. Why the heck are you being punished in the form of Covid by some deity?”

- 8th grader, female

“Knowing the gospel of Jesus Christ is the most grounding thing anyone can have, and understanding that everything great and small is for the benefit of all, does miracles. It is not what is presented to you or what you encounter that matters, but how you react to it.”

- 12th grader, female

“Religion can help you discover your own definition peace and steadiness.”

- 8th grader, female

“I think religion can help some people who really need it, to give someone something bigger to believe in; however, it is not personally helpful for me.”

- 12th grader, female

“You can find hope in your religion.”

- 10th grader, female

“It can help calm your thoughts and provide peace and comfort.”

- 9th grader, female

Student Interviews

During individual student interviews, students were asked to clarify any information from the questionnaires as needed. They were also asked to share whether they found specific classes least or most challenging online versus in-person. Students were given an opportunity to share any other thoughts about their online learning experiences and how they affected their overall mental health.

Focus Group

A focus group was completed to allow student participants to come together and discuss the areas pertaining to online learning in the study. They were able to collaborate on any similarities or differences with their perspectives.

PARENTS

Academic Performance (RQ3)

When parents were asked about their observation of their children(s) academic performance, five out of six parents reported a negative perspective. One parent reported that performance varied greatly when “teacher capabilities, interest and desire to put in the effort for a more successful learning experience). This parent reported finding teachers who were opposed

to the lockdown and online learning were more likely to provide a negative experience, compared to teachers who accepted and made all attempts to provide a better learning experience.

Physical Activity (RQ4)

Physical activity was not a concern for four out of six parent reports. These parents reported being an active family, having no changes in regular activities, or being able to participate in more physical activity due to the extra free time. The other two parents reported experiencing a decrease in physical activity or having concerns about their children(s) physical activity. The decrease in physical activity in one parent contradicted the statement from her child, who reported having an increase in physical activity due to being able to complete schoolwork and playing more outside. Weight gain or other issues with weight were not reported by parents.

Social Isolation (RQ5)

Four out of six parents reported negative effects of social isolation.

“There were more concerns when school started back up. My child had a very difficult time making new friends when they returned to school as none of her friends from her old school are attending Charter.”

- Mother of a 9th grader

“She was bored a lot, we tried zoom calls.”

- Mother of a 9th grader

“I did not notice any signs of depression but my children were sad with the circumstances of not seeing their peers every day. During the later portion of the pandemic, many of their peers stopped wearing masks. My kids kept masking

until they were vaccinated. This caused them to feel more isolated at school since it created political boundaries between them and their non-masking peers.”

- Mother of an 8th and 9th grader

“I didn’t realize how much social media shaped their mental health negatively.

One of my daughters required counseling, along with her dad from COVID, stress and isolation. One daughter was diagnosed with depression and anxiety. My other daughter struggled with changes in mood.”

- Mother of a 10th and 11th grader

One parent report contradicted with their children(s) reports on social isolation, in that the student did not report a diagnosis of depression and anxiety, or other mental health issues that occurred during online learning.

The other two parents who reported a positive experience in social isolation stated how online learning had great potential in time saved in classes and flexibility.

“If anything my students thought and expressed how much school time is wasted. This was shared by many parents and students.”

- Mother of an 8th and 12th grader

Food Insecurity and Other Family Stressors (RQ6)

None of the parents reported experiencing food insecurity. One parent did report having other family stressors, which included her husband not being paid for four months while working at a local hospital and causing a lot of stress and fear in the family.

Pros and Cons of Online Learning (RQ7)

Five out of six parents reported positive aspects of online learning, including being able to look up information, free time after assignments were completed, the benefits of having

teachers who took extra time to provide an exceptional online learning environment, extra family time and flexibility. Regardless, five out of six also shared the negative aspects, including their belief that learning is more productive in an in-person environment, the social interactions that are missed online (dances, lunch, sports, etc.), and the detrimental mental health effects and lack of friendships.

Religion and Mental Health

Three out of six parents reported participating in religious activities and stated that it did provide a positive impact on their mental health, as well as their children(s). One parent reported participating in independent religious activities, such as meditation, prayer, and watching church services online. The two other parents reported no religious activities. One parent clearly reported that she follows science, rather than following a religion.

Other Responses

Five out of six parents reported no negative effects or concerns that were connected to illness and the overall pandemic. One parent reported concerns due to her husband being a frontline medical worker. Therefore, she and her family were very concerned about his health, which negatively impacted her children(s) ability to focus on learning. Three out of six parents reported other concerns besides illness and the pandemic, including the concerns of others who were receiving the vaccine and experiencing negative effects. One parent shared that a family member received the vaccine and experienced miscarriages, and eventually had a baby with one arm. Another parent reported being more concerned over her children(s) mental health and reported their grades slightly dropping.

Two parents reported their dismay at teachers' lack of preparedness and reactions to students who were trying to learn the new learning styles and not able to participate in the

socialization aspects of school. Two parents reported being grateful to have their children back in traditional learning and two parents shared the positive aspects of online learning and the potential it has if certain improvements are initiated (socializing opportunities, improved teaching skills for teachers, etc).

TEACHERS

Academic Performance (RQ3)

All teacher participants reported varying degrees of motivation in their students. Two teachers reported changing lesson plans to accommodate students' lack of teacher availability and more opportunity to be able to complete assignments. Seven teachers reported observing students improve as they became more familiar with the online learning environment, which was Google Classroom.

One very outspoken teacher shared his unique perspective on online learning:

“Online learning is a farce, a travesty of genuine education that relates a healthy education as a left arm amputee does to a major baseball Southpaw Pitcher.

Teenagers relate to their teachers, and only through these relationships do most develop the intrinsic motivation to authentically absorb learning.

- History teacher, male

Another teacher shared three notable struggles she observed in her students: 1) following instructions and 2) meeting deadlines: she reported hearing students' excuses about not being able to turn assignments in, which included computer and Wi-Fi issues, or stating they thought they submitted it already. She stated that to help accommodate students, she put her policies on hold and allowed flexibility for late work. She heard from other teachers that they experienced similar problems, which continued when

schools re-opened and teachers were put in a position to retrain students and establish deadlines again. She claims that the current school year has shown to be back to pre-pandemic routines and expectations. 3) integrity: she reports that due to having to administer tests online, it led to anxiety among teachers due to test security and cheating risk. She stated they had no way to prevent or know if students were utilizing phones, tablets, looking up information, copying or sharing assignments, or connecting with other students while taking tests. She reports that since they still administer tests online using Chromebooks in class, they have found ways to decrease the risk of cheating, using Blocksi, where they can see the students' screens when they sign into their school accounts and limit or block access to areas they should not utilize.

Physical Activity (RQ4)

Six out of 10 teachers reported not being involved or not considering providing a physical activity component to their lessons. No physical education teachers participated either. Four teachers did attempt to provide extra free time for students to engage in physical activity and encourage them to do so, or provided assignments that gave them an opportunity to move. One teacher had an assignment that involved more hands-on work, which gave students the ability to step away from the computer; another gave assignments that decreased students' need to sit sedentary at their computer as well. Another teacher, who taught French during online learning, provided students with songs and had them make a video of themselves singing and moving to the song to encourage physical activity. Another teacher discussed with others about incorporating either some outdoor or physical activity that fit their lessons. She reported that the desire to do this was more about increasing students' mental well-being, rather than simply physical well-being.

Social Isolation (RQ5)

Teachers responses on social isolation showed they realized the detrimental effect of general isolation, but some reported not knowing whether the effects were based solely on the isolation or other deeper psychological factors (such as individual or family issues). 50% of the teachers reported social isolation was one of the most negative impacts of online learning and caused their students to spiral down further with additional issues in their performance and general well-being. 50% of the teachers made an effort to provide interactive work to encourage students to connect during online learning or implemented extra group work when school re-opened to help them reconnect and engage in socialization.

Two teachers shared individual examples of students that stood out among their students, who struggled the most with social isolation:

“An extroverted student who after being forced into isolation proceeded to have a dark year and struggled immensely with academic performance and well-being.”

- Math teacher, female

“A student who rarely turned in work even with teacher communication and accommodation, which was later found to be caused by struggling with isolation and dealing with strict COVID procedures because of an elderly/immuno-compromised grandfather.”

-English teacher, female

Two teachers shared some insightful and unique perspectives of social isolation:

“Under the very best of circumstances, I spare my students from the distracting nonsense of forcing kids into group projects where “A” students do all the real work and “F” students coast on their laurels. Under Pandemic pressures, I would

certainly not trammel my kids with such errant nonsense; they had far more critical and urgent priorities.”

- History teacher, male

“I witnessed strong and motivated students continue to be strong and motivated, and weak or disinterested students continue to be weak or disinterested. I think that it was this latter group who suffered the most in the online learning regime, however, because in the face-to-face setting these students would generally rely on the immediate presence of stronger students to provide them with explanation and assistance. Lacking this social component of schooling, I suspect that the weak and disinterested students had a hard time fully understanding the material that was being taught, and had a hard time maintaining focus on their work.

- Science/Math teacher, male

One teacher also shared thoughts about how teachers themselves struggled:

“Teachers were literally trying to survive. They were trying to figure out how to operate online LMS systems, how to design online curriculum and instruction, how to collect and grade assignments online, how to host Zoom or Google Chat meetings, how to use screencast technology, and a million other new skills.

- Science/Math teacher, male

Food Insecurity and Other Family Stressors (RQ6)

Teachers reported not observing food insecurity or being aware of students or families that might have experienced food insecurity. Two teachers stated since the school did not offer a free lunch program, it was harder to know who might be struggling. Another teacher stated that

food insecurity was typically not an issue with families at the school, because they were mostly mid-to-upper class income.

Five teachers reported that the school provided chromebooks to those who didn't have their own access to a computer at home and that they were not informed of any limited access to wifi. One teacher also reported making herself available at school for students who needed some one-on-one time to catch up on work. Three teachers did report an acknowledgement that some families did struggle with family stressors, such as parents working from home and unable to help their children, sharing that the school counseling staff implemented resources aimed to help emotional stress on students, and the hidden struggles families experienced with illness and worry about immuno-compromised family members.

Most notable response from a teacher on student and family stress:

“I did worry about the costs associated with having access to the internet, printing handouts from home, etc. The pandemic definitely revealed the ‘technology gap’ in our community.

Something that wasn't inherently visible to teachers were the family-related stressors that many of our students likely experienced, such as worry about immuno-compromised ill family members getting seriously ill, or financial challenges for parents who were not able to work, or the loneliness and isolation of being away from familiar activities and friends. ”

- English teacher, female

Pros and Cons of Online Learning (RQ7)

Many of the teacher participants (80%) had positive aspects to share about online learning.

“Saves teachers in commuting, allows people from great distances to engage, potentially a national class as opposed to just a local one.”

- Latin teacher, male

“It was nice to have more time for planning. I loved that students were able to mimic an online class because our school is a college prep school and I think most students will take an online class during their college career.”

- 6th grade teacher, female

“One of the positives of being forced online was having to be creative and flexible. I regularly reminded students that they were learning to be flexible and resilient.”

- Math teacher, female

One teacher shared her personal experience as an online student, as she was working on an MBA. She reported that listening to online lectures for hours was torture and she would find herself dozing off. She stated she does believe online learning can work if structured properly.

Another teacher shared his experience as a former online teacher at another school (before the pandemic). He reported that he already acquired the skills and knowledge that helped him transition back to an online learning platform. He did share his acknowledgement that most teachers were not taught to teach online and struggled to acquire the skills, such as using the LMS software, screencasting, digital assignment submission and grading, and many other aspects to teaching online.

One teacher who teaches English shared her list of positive aspects, which included: teachers learned new skills and accessed new tools; the community rallied around teachers and

supported us (in the early part of online learning); and as a staff we were very generous with ourselves and each other as we struggled to find our way.

Negative aspects that were reported by teachers included: time it took to type answers to homework for math; not all assignments could be easily completed online; teachers had to learn countless new skills, use new technology, reframe and rethink a lot of lessons and procedures, and revamp our practices substantially; once the pandemic became entangled in politics, suddenly the community support was overwhelmed, which insinuated that teachers were actively indoctrinating students rather than teaching them; with the rush to “get back to normal,” the generosity and graciousness we experienced during the pandemic shifted to agitation that things weren’t actually “normal”; students had a plethora of ways to cheat on tests or assignments, and those habits followed them back into the classroom. “Test integrity” was something we talking a lot about here at Charter; students lost a lot of self-management abilities during the pandemic - attending to deadlines, remembering due date, following instructions properly.

Religion and Mental Health

Participation in religious activity was reported among teachers: 90% participated in religious activity and reported it helpful, with 10% reporting no longer participating in religious activity after the pandemic; 10% reported using yoga as a stress reliever.

“A beloved religion helps deal with life all the time-whether in a pandemic or not.

My belief system helps me al l the time.”

- Latin teacher, male

“Yes, I regularly attend church and continued to do so during COVID. In addition, we had a small support group that met every Friday night during the lockdown.’

- Math teacher, female

“I am a Christian who regularly attends church. I did so before the pandemic, during the pandemic, and since the pandemic. I did find religious activity to help with stress release. I also found family get-togethers useful in the same manner. My main stress-release activity was not a spiritual or religious one, however, but the physical activity of hiking.”

- Science/Math teacher, male

“I have been in church my whole life, and I took great comfort in continuing those practices during the pandemic. I ramped up my efforts with taking yoga classes, learning about meditation, and digging deeper into other ways that I can protect and enhance mental health. The enhanced awareness around mental and spiritual health has been one of the most positive results of the pandemic in my opinion.”

- English teacher, female

Other Responses

Teachers were asked to share their own concerns and those they observed in their students pertaining to concerns of illness and the pandemic. Two teachers reported being isolated at home eased their concern of illness, but one reported missing family support. Two teachers reported having either immuno-compromised family members or those with other health issues that put them at increased risk and caused increased stress when schools re-opened and they were confined in classrooms with students.

“When classes were fully online, teaching in general was not affected by pandemic concerns since there was little or no human-to-human contact. When schools re-opened schools implemented policies to reduce viral transmission: complicated attendance regimes, face-masking, body-temperature scanning and in-building traffic-flow patterns. These protocols made teachers and students miserable, as it was not a ‘normal’ school experience.”

- Science/Math teacher, male

Summary

One of the most notable areas that stood out was the contradictory responses from two students in particular compared to the parents’ responses. In regard to the PHQ-9 and GAD-7 scores, as well as responses to whether anxiety or depression was experienced, two students, who are current 10th and 12th graders (and happen to be sisters), reported either not experiencing any detrimental mental health issues or minimized their experience, but their parent reported one was diagnosed with both anxiety and depression during online learning and the other experienced negative mood changes.

The results in all other areas, showed the varying opinions and perspectives of individuals, but showed a lot of similarities. The majority of participants showed the most agreement with the negative effects of social isolation. Academic performance effects were reported but was not a hugely negative impact among these particular student participants. Physical activity and food insecurity were also not a big factor. Family stressors that were reported did not seem to cause sufficient stressors in increasing negative effects on mental health. Except for a few participants, many shared the benefits or potential benefits of online learning, especially with improvements in such areas as adding components in socialization and

the opportunity for regular physical activity. Respectively, these areas would also not be such a complicated implement when a pandemic is not an issue.

CHAPTER 5: DISCUSSION

Overview

The purpose of this qualitative phenomenological study was to explore the positive and negative effects that online learning has on physical, emotional, social, educational and psychological aspects of mental health. Students were asked to share their lived experiences of online learning in the areas of physical, emotional, social, educational, and psychological well-being and whether they experienced mental health issues – anxiety or depression – prior to, during, or after online learning.

This chapter will discuss the overall results, limitations, and recommendation for future research. The following results are solely on this study, except for the section that compares the results of former studies involving online learning effects on physical, emotional, social, educational and psychological aspects of mental health. The participants included students attending a local Charter School, teachers who are currently teaching at the school and parents of student participants. Each participant submitted consent, including parental consent for students and student, parent and teacher consent. Student interviews and a focus group were conducted by the researcher and data collection was inputted into a private laptop, along with audio recordings on a private Ipad.

Summary of Findings

Academic Performance

Students did not report significant negative effects on their academic performance. Some did report they believed their grades were affected, however, official grade reports did not show significant decline. Teachers and parents who reported concerns about academic performance stated any struggle was more due to lack of teacher connections to fully understand assignments

or what needed to be done, as well as students becoming bored or frustrated, rather than a lack of ability in completing work or maintaining grades.

Physical Activity

Students at this school came from active families that either remained active participating in isolated type activities, such as hiking and walking or students reported starting a physical activity regime that helped them both physically and mentally.

Social Isolation

Social isolation was probably one of the most reported negative effects. Despite these reports, students reported being able to stay connected to friends and having teachers that provided them proper instruction or time to complete work.

Food Insecurity and Other Financial Stress

No students or parents reported food insecurity. Some students and parents reported family stress, due to parental jobs dealing with health care and the added stress and concern. Some students reported negative effects in their home environment when it came to concentration during schoolwork, but also reported that they were able to overcome it by communicating (explaining to younger siblings they needed to have quiet).

Pros and Cons to Online Learning

All students reported positive effects with online learning that included flexibility, ability to sleep late, access to increased information through the internet and other software, ability to plan their schedule and complete work early.

The most reported negative effect was social isolation and having the desire to have a more personable connection with friends and teachers.

Religion and Mental Health

Religion was not a big effect on students or parents overall. Those who reported practicing religious activities before, during or after the pandemic did report it being a positive influence. However, those who reported no participation in religious activity, did not show increased negative effects.

Discussion of Findings

Diagnosed Mental Health and Online Learning

No students reported having a diagnosed mental health condition, specifically anxiety or depression. Some reported experiencing symptoms of depression, but not to the extent it caused extensive disruption to their life. Those who experienced symptoms described online learning as more frustrating, yet established alternative methods to limit or eliminate issues.

Students who reported no diagnosed mental health condition or experiencing symptoms of anxiety or depression, described online learning as more of a nuisance initially, but found positive aspects and utilized the materials and technology to their benefit. Such as using the Internet to obtain more information for assignments or for their own interests or applications and social media to stay connected to friends.

Academic Performance

Academic performance among student participants was reported as not being negatively affected overall. Students did report struggling with certain classes or noticing a slight decline in grades, however, this was not as noticeable with official grade reports. Student grades were generally maintained among all participants. This can be explained due to the student population being at a more advanced academic level compared to the average student.

Former studies reported student interaction was not a significant impact as instructor presence (Gary & DiLoreto, 2016), which was a similar report among student in this study. However, most of the student participants reported they did not require teacher connection to understand the material or they reported utilizing online resources that provided them adequate information, which was also reported as being effective in a study by Ulum (2022). In fact, a number of students reported that having the internet and other technology to obtain information provided them with more learning opportunities than they would have in the classroom.

Studies that reported teachers' limited experience with technology and technology skills (Johnson et al., 2022; Van Wart et al., 2020), were not found in this study. Student and teacher participants reported already having experience with Google classroom, the online instruction site the school used. Google classroom was already being used regular before school closure and online learning and therefore the transition was smoother. This probably assisted in this study finding that online learning was not reported as having a detrimental aspect in performance compared to a study by Mohd Basar et al. (2021), which reported that student health was supported, but online learning was not as effective as conventional learning. Students in this study did report that parental support was helpful at times, which was also reported as being an effective teaching/learning aspect in the study by Mohd Basar et al. (2021).

A study by Spitzer and Musslick (2021) on how student performance may have been improved during online learning reported teacher incentives, which was not found among students in this study. This may be due to the students being driven by the schools belief in higher expectations of student academic performance. Student participants reported liking aspects of online learning, including the ability to learning independently, such as self-paced routines, no teacher/peer distractions; flexibility in schedules, which enabled them to complete

work and have more free time; sleeping in; and having access to a vast amount of online information (Spitzer & Musslick, 2021; Ulum, 2022).

A number of student participants reported finding new ways to learn without direct connection with teachers and used online resources to gain new skills and information (Hamdan & Amorri, 2022), which helped them stay interested, motivated and self-regulate their learning strategies (Chung et al., 2022). This study confirmed that online learning can provide increased information with the use of technology, such as the internet, software and online applications. It also shows additional confirmation that students who stay interested and motivated are able to self-regulate their study and learning habits for improved academic performance. Students in this study could be compared to the college students of a study by Zheng et al. (2021), who reported having a positive perception with online learning and an interest in continuing online learning. Although, a few did report being happy to return to the classroom, these students reported that online learning in itself was positive in some aspects, primarily the flexibility of learning.

Physical Activity

The student participants in this study were not required to participate in a physical education class, therefore, physical activity was not a required part of online learning. A few teachers did incorporate physical activity into assignments or provided more free time for students to participate in physical activity outside of online learning.

Parents and teachers reported having concern over the limited opportunities for physical activity. However, students reported that their physical activity was similar or more than before online learning. This was reportedly due to having more time to play outdoors in their backyards or begin a new physical activity at home.

Students reported that physical activity did have a positive effect on their mental health and well-being (Apriyanto & S, 2021; Beserra et al., 2022), but again was not due to a structured program incorporated into their online learning program. They reported new or increased physical activity from having extra time to play with siblings or being able to start their own exercise routine. At least 50% of the students reported having participated in a school sport or recreational center activity, which they were unable to continue during online learning (Laar et al., 2021). These same students reported finding alternatives to stay active individually or as a family.

Other former studies pertaining to physical activity did not correlate with this study due to no structured physical activity component to online learning at the school and no requirement for teachers to provide physical activity or need skills in doing so (Killian & Woods, 2021; Konukman et al., 2022; Yu & Jee, 2020). However, due to parents and teachers having concerns over the potential lack of physical activity, acknowledging this need and providing ongoing research and resources and/or a structure physical activity program online in the future would be agreeably recommended (D'Agostino et al., 2021; Webster et al., 2021; Zheng et al., 2021).

Social Isolation

Social isolation was a top concern among students, parents and teachers. Parents and teachers reported a higher concern about their child/students' mental health and well-being (Loades et al., 2020). While students admittedly reported that social isolation was the most negative aspect of online learning, but they were able to find alternative ways to connect with friends. Some students even reported appreciating the alone time, so they can focus on school work or engage with family more.

Students reported feeling lonely, with a few reporting concerns over illness, but not to the extreme that it caused increased depression, anxiety, or insomnia, which former studies reported an increase in these issues (Banerjee & Raj, 2020; Giovenco et al., 2022; Kraut et al., 2022). In fact, students reported being able to have a greater chance of obtaining more sleep with the flexibility of online learning. One student reported feeling concern over COVID-19, but reported that talking with a parent and having questions answered helped them deal with it effectively and did not experience a higher risk of mental health issues (Christ & Gray, 2022; Pietrabissa & Simpson, 2020). Four students reported a slight increase in concern over a parent who worked in the medical field, but also reported that they understood the situation and were content doing what they could to help limit the spread of illness by staying home.

Studies reported differences in ages – older versus younger students – and how they experienced social isolation (Schwartz et al., 2021; Sutcliffe & Noble, 2022). However, regardless of age in student participants, they all agreeably reported similar responses: social isolation was the more negative, but they were able to find alternative ways to stay connected or enjoyed the time alone.

Food Insecurity and Other Financial Stress

Food insecurity was not an issue for any participants in this study. Former studies, however, did report families needing food assistance and having access to little food (Harper et al., 2022; McRell et al., 2022). This is due to differences in socioeconomic status among families.

Financial strain and family stress were not reported as being problematic among participants either. Former studies reported negative aspects, such as increased responsibilities, disruption to home life and changes in personal relationships as causes of increased mental issues

(Dawes et al., 2021), but these were not reported among participants in this study. Students did report having involved parents to assist with school or provide answers to questions about the pandemic helped maintain a positive outlook (Chavira et al., 2022).

Even though this study did not have participants report negative mental health issues, that does not mean it was not experienced by others within the school population or that others in the families of the participants experienced the same positive outlooks. Former studies have acknowledged that the pandemic increased the risk for mental health issues, including stress, depression and anxiety and require the need for mental health professionals to assist families as a whole with coping skills, resiliency, and awareness of students' well-being during school closures (Gadermann et al., 2021; Gayatri & Irawaty, 2021, Theberath et al., 2022; Wang et al., 2021).

Parental stress can cause the home to become a stressful environment and studies have reported that parent stress during the pandemic increased and interventions in meeting the needs of parent mental health should be just as important as students (Roos et al., 2021). Not acknowledging parent stress can risk their inability to support their children, which will have a domino effect in increasing the risk of their mental health (Spinelli et al., 2020). This study did not have parent or teacher reports of experiencing excessive stress that interfered with parenting or teaching. The participants showed resilience and the desire to persevere.

Pros and Cons to Online Learning

Former studies and this study reported both pros and cons to online learning. Among the most notable pros reported included flexibility, ability to sleep in, and access to increase information through internet and other technology applications (Al Rawashdeh et al., 2021; Mohd Basar et al., 2021; Senft et al., 2022; Sharma, 2020). Students reported flexibility allowing

them to set their own schedule and finish early to allow more free time. The ability to sleep in was reported as helping students feel less tired and more motivated. Students also reported that being able to utilize the internet, software and other online applications, allowed them to gain more skills and knowledge. Some parents reported observing their child thriving with online learning and one parent in particular reported that her students seemed to benefit from the ability to work at their own pace (Panagouli et al., 2021).

Cons reported included social isolation, technology issues and problems with motivation (Al Rawashde et al., 2021; Senft et al., 2022; Sharma, 2020; Widiasih et al., 2022). Social isolation was the most notable con to online learning among participants, but students reported finding alternative ways to stay connected to friends helped decrease stress (De Coninck et al., 2022). In the study by De Coninck et al (2022), the most notable cause of stress reported was learning environment, which was rarely mentioned in this study. Technology issues reported involved glitches in video meetings and other minor glitches in applications. These issues were states as being minor, but annoying by students. Teachers, as well as students and parents, reported minor issues in motivation that was short-lived, but concerning (Senft et al., 2022). A few teachers reported a negative issue involving the inability to discover cheating and plagiarism during online learning and a student reported their parents accusing them of playing around instead of learning (Al Rawashdeh et al., 2021)

Families in this study did not report experiencing financial stress (only two reported a job loss or decrease in pay) that increased the well-being of any family member (De Coninck et al., 2022), nor did they experience a lack of access to the internet or required materials for online learning (Mohd Basar et al., 2021). Families showed a lot of resiliency and coping skills in both student attitude and parental involvement to avoid other stressors.

Students overall report with online learning was generally positive and any negative issues that arose, was able to be decreased or eliminated with alternative options. Students reported finding ways to remain positive through mindfulness and relaxation practices as a way to cope with any stress (Tesler, 2022) and a positive connection with peers, parents or teachers helped them stay motivated (Simm et al., 2021) .

Religion and Mental Health

Religion has a great effect on mental health and general well-being. It can provide the hope and faith to persevere through stressful and uncertain situations. Religious education was not a part of the school in this study, but a number of student, parent and teacher participants reported following some type of religious or spiritual practice and stated that it was a helpful aspect (Estrada et al., 2019; Fruehwirth et al., 2019; Sen et al., 2022).

Participants who reported religious or spiritual beliefs said it helped them stay positive and avoid mental health issues. Students who reported religious or spiritual beliefs said it helped them cope with stress of the pandemic and maintain hope for improvement, decrease feelings of depression and anxiety and obtain coping skills to stay positive (Estrada et al., 2019; Fruehwirth et al., 2019; Sen et al., 2022).

Those who reported not following any religious or spiritual practices stated they followed science and having the understand and awareness of what was happening during the pandemic, enabled them to have the knowledge to prevent stress and mental health issues from feeling uncertain and fearful.

Biblical Foundation in Study

The biblical foundation of this study shares advice and encouragement to face daily activities. In this study, it focuses on how it provides the hope and comfort of the stress and

uncertainty during a pandemic and thriving with continuity through online learning. Even for those who do not practice or follow a religion or spiritual beliefs, they can obtain comfort through biblical scripture.

Academic Performance

Philippians 3:13 says: “I can do all this through him who gives me strength” (New International Version, 1973/2017). This provides the motivation to have the strength to persevere through academic success despite environmental stressors, such as a pandemic and online learning. Even those who follow science, as opposed to religion, can follow this verse by just repeating that they can do all things regardless of obstacles.

Physical Activity

1 Corinthians 6:19 says: “Do you not know that your bodies are temples of the Holy Spirit, who is in you, whom you have received from God? You are not your own” (New International Version, 1973/2017). We are given one body to care and nourish and to do so, we need to keep it fit and healthy. Even those who do not believe that God provided them with this body, they should be reminded that keeping it healthy benefits their overall well-being.

Social Isolation

John 16:32 says: “A time is coming and has come when you will be scattered, each to your own home. You will leave me all alone. Yet I am not alone, for my Father is with me” (New International Version, 1973/2017). Just as the 10 Plagues of Egypt, which are explained in Exodus, this verse warns us of the impending chance of being in isolation. This is a reminder to seek comfort in Him and to trust his plans. For others who believe the plaques and any warnings in the Bible are just myths, they are still encouraged to remember that life has uncertainties and

obstacles that can occur at any time and preparing and acknowledging these conflicts can help us maneuver through them with a clear and conscious mind.

Food Insecurity and other Stressors

Luke 6:21 says: “Blessed are you who hunger now, for you will be satisfied. Blessed are you who weep now, for you will laugh” (New International Version, 1973/2017). When we experience stressors, we can learn to have empathy for others in their time of need. We gain a new perspective or how things could be if we were not prepared or acknowledged the risks. Those who follow God, can have the comfort and hope that he will provide, but others can still gain the comfort in knowing they are prepared for disasters or general conflicts in life, such as a pandemic.

Online Learning

Hebrews 11:1 says: “Now faith is confidence in what we hope for and assurance about what we do not see” (New International Version, 1973/2017). As this study found, online learning can have numerous risks, such as loneliness, feelings of isolation, and increased risk of mental health issues, but we are encouraged to remember that God is beside us through it all, even when we are unable to see Him. Faith in general is not always a focus on God and His Word, for some, it is simply having faith in a situation itself and that it will have a positive outcome. Either way, having faith can decrease the risk of feeling fear and worry over the future.

Religion and Mental Health

1 Peter 5:7 says: “Cast all your anxiety on him because he cares for you” (New International Version, 1973/2017). Following a religious or spiritual path provides a reduction in negative effects to stressors through stress-buffering reactions (Fruehwirth et al., 2019). It provides individuals to use their knowledge and awareness in their beliefs to build meaning to

stressful exposure through hope and faith (Sen et al., 2022). It also provides adolescents with healthier reactions to stimuli, by strengthening their coping skills, increasing beliefs and developing connections (Estrada et al., 2019).

Takeaways from Study

The results of academic performance in this study is primarily due to the population of participants. Students in this study attend a Charter school that has high expectations and a more advanced curriculum, which encourage students to take their academic success more seriously. Student responses verified that they have increased motivation for academic success, by reporting feeling they struggled with their grades, despite grade reports showing they maintained them quite well. Teachers reported overall positive observations of students' ability to maintain academic performance at or near their prior levels before online learning.

The results of physical activity in this study could be explained by participants being active on a regular basis with their family or having the initiative to incorporate a physical activity individually. Students reported prior family physical activity that continued during the pandemic, as well as implementing their own exercise programs due to more free time.

The result of social isolation in this study could be explained by a combination of involved parenting and student resilience and ability to find alternatives to alleviate negative issues. Students reported initial feelings of loneliness, but found other ways to stay connected and minimized or eliminated these negative feelings. A few parents seemed to perceive a higher level of negative effects of social isolation on their child(ren), but this was not followed by student responses.

The results of food insecurity and other stressors among participants is explained by the socioeconomic status of the families, as well as the coping skills and resiliency they either had or

acquired during online learning. Students, parents and teachers all reported no food insecurity and any family or environmental stressors were minimized or eliminated through parental involvement or students' resiliency and ability to transition.

The results of the pros and cons to online learning among participants show similarities to former studies, but also show the increased resiliency and ability of students in particular to acquire new skills and alternative ways to minimize the stress of the situation. This can be explained by the prior coping skills and resilience of these particular students, due to their higher level of academic performance and expectations. Student participants had a general overall positive perspective of online learning, but all agreed that being in school and having normalcy was best.

The results of religion and mental health show that those who follow a religious and spiritual practice do gain a sense of hope and comfort through uncertain times. However, those who follow science or other beliefs still have the ability of gaining an understanding of a situation that allows them to have a similar sense of hope and comfort.

Implications

This study found that in a school population of students who have a higher level of self and school expectations in academic performance are more likely to maintain their academic performance, regardless to changes in the type of learning format. However, it also found that students would appreciate certain additions, such as video lessons from their teacher, as opposed to online videos from random instructors. It was also reported by parents and teachers that more student/teacher connections would be encouraged through online formats to help teachers provide clearer instructions and any additional help face-to-face. These findings can provide an

impact in teaching students to have a higher level of expectation in their academic success, by encouraging and motivating them to want to learn.

Physical activity was found to be a helpful aspect, but was not a requirement for students'. Students did report that having more free time allowed them more time to be physical active and therefore used that time to incorporate new physical activity into their schedules. Since physical activity was not an issue for this participant population, new findings cannot be shared, but the importance of future online learning programs incorporating a physical activity component for secondary school students should be recommended. These findings can provide an impact in encouraging students and families to implement regular exercise into their day and by providing ideas for families and children of all ages.

Social isolation was reported as being a top negative issue of online learning. This finding was also reported by numerous other studies and provides additional data that future online learning programs should review and incorporate ways for students to stay connected, to not only teachers, but their peers. This negative issue in online learning during a pandemic could be an isolated outcome, due to the closures that occurred and the inability for students to access places to socialize. These findings follow former studies in the importance of providing opportunities for students to interact with other students during online learning. During a pandemic, this can be done through small group meetings in a safe and isolated location.

Food insecurity and other stressors was not a big impact on participants in this study. The participants came from middle to upper class families and also reported higher resilience and family support. These findings do impact the idea that making it a priority to assist families of lower socioeconomic status and assisting families with gaining coping skills and other strategies to avoid negative outcomes from stressors.

Pros and cons to online learning found that online learning does have its benefits, but also has some negative aspects that need review and revising. Acknowledging the needed changes, such as providing socializing opportunities, access to materials as needed, interactive activities to maintain interest and motivation and physical activities could be a great impact in future online learning programs. These findings can be a huge impact on communities and organizations by opening the door to another potentially effective way of teaching and learning for students, as well as parents and teachers.

Religion and mental health was found to be a positive effect for those who reported practicing religion or spirituality. Participants reported hope, encouragement and comfort that helped them through the stress. These findings can impact the community by encouraging churches and schools that provide a religious component to their curriculum to provide relevant information to assist students and families during stressful situations. For non-religious organizations, they can still provide an impact by assisting with coping skills and providing interventions, resources and referrals to appropriate agencies for students and families to obtain counseling or other assistance

Limitations

One of the initial challenges was obtaining school staff approval to conduct the study at their school. The main concern was for privacy and ethical reasons due to the involvement of mental health information in the study and parents not wanting to share their students' information. Regardless, the school staff was very open to granting permission stating they will take steps in assisting in the study as much as they were able. The next challenge was not obtaining parental consent and obtaining a big enough sample. This challenge led to the first main hurdle in the study, which involved an isolated group at a local Charter school. The already

small population limited the ability to gain a higher sample size group. After obtaining a sufficient number of student participants, time constraints did cause a limited number of participants to be available for the focus group.

However, there was no issue in scheduling and completing individual interviews when working with each student's school schedule. School staff also assisted in accommodating space and directing student participants to the designated area for the interviews and focus group. They had no issues with the study taking students out of class, mainly due to interviews and the focus group being scheduled during study lab or a student's free period and did not disrupt main classes. Despite prior concern with the school staff providing students past and current academic records, they had no problem providing this information granted I obtained parental consent and provided the appropriate forms to them. Parents who consented were also open to sharing and allowing their students' to share mental health history as well.

Other limitations included an unequal number of female vs. male participants. The study obtained a higher number of female participants – 9 female vs. 1 male. Age/Grade was another limitation, with the follow numbers: Sixth grade – one student; Seventh grade – no students; Eighth grade – two students; Ninth grade – four students; Tenth grade – one student; Eleventh grade – no students; Twelfth grade – two students. These limitations did not help provide substantial information for specific gender, age or grade.

Additional limitations included the general population of students had a higher academic level compared to other public schools. The school has a high expectation of student academic success and a curriculum that is more advanced. This meant that the majority of students had a higher level of academic goals. Participants were also in the middle to upper socioeconomic

class, which decreased their risk of certain issues, such as food insecurity. Families were also more involved with their students with a more active lifestyle.

Recommendations for Future Research

The focus of this study was isolated to one Charter school that involved students that are above average academically, come from active middle to upper class families, adapt well to changes and hold a stable foundation whether it be with religion, spirituality or science. However, despite this, it was still found that improvements and continued research is recommended in all areas, including academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons of online learning and religion and mental health.

It would be highly recommended to continue awareness and research in academic performance, physical activity and social isolation. These areas were found to be the most likely to cause negative issues. Research in finding ways to improve helping students maintain and excel academically, by obtaining opinions in various schools and locations, as well as obtaining information on what teachers need to improve their teaching skills in online learning. Obtaining data in various schools to help implement a physical activity component to online learning would help students maintain an active routine, to avoid additional health issues and finding options for teachers to help students engage physically through their online curriculum. Social isolation was more of an impact during a pandemic, due to closures of schools and recreational centers that provide a social component. Therefore, in times of no pandemic, social isolation should still be acknowledged and appropriate activities need to be considered and implemented. Obtaining data on what would be most beneficial for students in particular locations, such as urban, suburban

and rural living conditions. Location can be a factor in contributing to or assisting with socialization and should be studied and appropriate measures taken to meet the needs of students.

Food insecurity and other stressors, including family related stress should be acknowledged, regardless of whether students are attending school in-person or online. These issues can affect students in various ways from being hungry, sick, or carrying fear and/or stress due to family situations. Studies conducted on how schools and communities can assist families experiencing these stressors, especially those who do not qualify for federal or state assistance need to be found and steps taken to diminish or limit these issues.

The benefits of online learning, such as flexibility, being able to sleep in, being able to work at their own pace, having the additional ability to obtain information using technology or gaining new skills using various software and technology should be implied and used to students and teachers advantage. The cons, such as lack of student-teacher connection, ability to understand assignments and home-based distractions need to be studied and data obtained to find ways that would help students, teachers and parents find a way to help students connect with teachers as needed, be able to find ways to understand assignment through written, audio recordings or visual aids or a hybrid schedule for students and teachers to engage with one another in person should be discussed with schools and families.

The effects of religion on mental health were found to be both beneficial and unnecessary for some. Additional studies should be continued to obtain more information on whether or not other factors or personalities effect whether religion is beneficial or whether those who do not turn to religion have another focus and belief system that provides them with the same assistance as those who have reported religion does for them.

Since this study focused on the effects of online learning during a pandemic, additional studies should be done on this, as well as the effects of how general online learning has on mental health with no pandemic.

Summary

The results of this study might have been limited, due to the isolated population. But the information gathered through questionnaires and interviews provided results that can be beneficial to former and future research. Students, parents and teachers provided lived experiences, observations and perspectives of online learning during a pandemic. These results showed that academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons to online learning and religion and mental health are important aspect to overall online learning.

Academic performance, physical activity and social isolation, where the top three areas that were most reported. Students reported feeling their academic performance declined, despite grade reports showing otherwise. Students were observed as being high achieving, self-focused and self-motivated when it came to their academic success. They showed self-reliance in their motivation to stay active and connected to friends, by finding alternative ways to do so. Parents and teachers showed concern over their child(ren) and students effects of lack of physical activity and social isolation, with a few teachers reporting making an effort for students to incorporate physical activity into assignments or providing more free time, as well as encouraging students to connect with peers.

Food insecurity and other stressors and religion and mental health were not a big impact for participants. Students and families were in middle to upper class status and did not experience lack of food or other necessities and were involved as a family. Those who reported

religious or spiritual practice did state it was helpful, but those who reported not religious or spiritual practice stated their belief in science helped them, therefore, both those who followed religion and those who did not reported similar effects that provided a decreased risk in negative reactions.

In conclusion, despite the small participant number, this study was able to obtain sufficient data to add more information for former and future research in helping with recommended reviews and revising in how online learning programs can be planned and implemented to provide an improved learning method for students, as well as improvements in how teachers teach through online learning programs.

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APPENDIX A: PERMISSION REQUEST AND RESPONSE LETTERS

Christina J. McRae



July 26, 2023

Mr. Dan Nicklay
Principal
Coeur d'Alene Charter Academy
4904 N. Duncan Drive
Coeur d'Alene, ID 83815

Dear Mr. Dan Nicklay,

As a graduate student in the Psychology Department/School of Behavioral Sciences at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The title of my research project is "The Effects of Online Learning on Mental Health During a Pandemic" and the purpose of my research is to explore the positive and negative effects that online learning has on educational, physical, social, emotional and psychological aspects of mental health and general well-being.

I am writing to request your permission to conduct my research at Coeur d'Alene Charter Academy.

Participants will be asked to complete the attached questionnaires, including the PHQ-9, GAD-7 and the Mental Health-COVID-APSFPR questionnaire (newly created). It will also be requested that students (and any teacher interested) participate in an individual interview and focus groups (for interested students). Parents and teachers interested in assisting with the study will be provided with a short questionnaire (attached). Participants will be presented with informed consent information prior to participating. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you choose to grant permission, please provide a signed statement on official letterhead indicating your approval. A permission letter document is attached for your convenience.

Sincerely

Christina J. McRae
Graduate Student



COEUR D'ALENE CHARTER ACADEMY

4904 N. Duncan Drive • Coeur d'Alene, Idaho 83815-8312
 (208) 676-1667 • FAX (208) 676-8667
 www.cdacharter.org • info@cdacharter.org

August 28, 2023

Christina J. McRae
 Graduate Student
 Liberty University



Dear Christina:

After careful review of your research proposal entitled “The Effects of Online Learning on Mental Health During a Pandemic,” I have decided to grant you permission to conduct your study at Coeur d’Alene Charter Academy.

Check the following boxes, as applicable:

I grant permission for Christina McRae to contact students, teachers and parents to invite them to participate in her research study

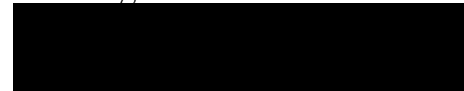
Request for archival data (grades from 2020-2021 school year to current):

The requested data WILL NOT BE STRIPPED of identifying information before it is provided to the researcher.

Request for results:

I am requesting a copy of the results upon study completion and/or publication.

Sincerely,



Daniel Nicklay
 Principal

APPENDIX B: RECRUITMENT DOCUMENTS

Recruitment Letter

Dear students,

As a graduate student in the Psychology Department at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The purpose of my research is to explore the positive and negative effects that online learning has on educational, physical, social, emotional, and psychological aspects of mental health well-being. I am writing to invite you to join my study.

Participants must be students attending Coeur d'Alene Charter Academy and who participated in online learning during the 2020-2021 school year, regardless of what school they attended that year. Participants, if willing, will be asked to complete a series of questionnaires (35-40 minutes), take part in a one-on-one audio-recorded interview (20-45 minutes), and take part in an audio-recorded focus group (30 minutes). Names and other identifying information will be requested as part of this study, but participant identities will not be disclosed in the final results.

To participate, please click here [StampedConsent\(Student\).pdf](#) or [ChildAssentFinal.pdf](#) for more information about the study. If you are interested, please sign the consent form and return it to the North building office (only the last signed page is required). Your student will then receive a link to the PHQ-9 and GAD-7 surveys and the main student questionnaire. I will then work with you and your teachers to schedule an individual interview during a convenient time that does not disrupt your classes, such as during study lab to go over the questionnaire for clarification.

A consent document is attached to this letter. The consent document contains additional information about my research. If you choose to participate, you will need to sign the relevant consent document(s) and return it to me prior to taking part in any procedures..

Participants will receive a \$5 coffee gift card.

Sincerely,

Christina J. McRae
Graduate Student



Recruitment Follow-Up Letter

Dear parents and students,

As a graduate student in the Psychology Department at Liberty University, I am conducting research as part of the requirements for a doctoral degree. [two weeks ago/etc.] an email was sent to you inviting your child (and you) to participate in a research study. This follow-up email is being sent to remind you to complete the consent form if you would like to participate and have not already done so. The deadline for participation is [DATE OF DEADLINE].

Participants must be students attending Coeur d'Alene Charter Academy and who participated in online learning during the 2020-2021 school year, regardless of what school they attended that year. Participants, if willing, will be asked to complete a series of questionnaires (35-40 minutes), take part in a one-on-one audio-recorded interview (20-45 minutes), and take part in an audio-recorded focus group (30 minutes). Names and other identifying information will be requested as part of this study, but participant identities will not be disclosed in the final results.

To participate, please click here [StampedConsent\(Student\).pdf](#) or [ChildAssentFinal.pdf](#) for more information about the study. If you are interested, please print and sign the relevant consent form and return it to the North building office (only the last signed page is required). You will then receive a link to the PHQ-9 and GAD-7 surveys and the main student questionnaire. I will then work with you and your teachers to schedule an individual interview during a convenient time that does not disrupt your classes, such as during study lab to go over the questionnaire for clarification.

A consent document is attached to this letter. The consent document contains additional information about my research. If you choose to participate, you will need to sign the relevant consent document(s) and return it to me prior to taking part in any procedures.

Participants will receive a \$5 coffee gift card.

Sincerely,

Christina J. McRae
Graduate Student



Recruitment Letter for Parents

Dear Charter Academy Parents,

As a graduate student in the Psychology Department at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The purpose of my research is to explore the positive and negative effects that online learning has on educational, physical, social, emotional, and psychological aspects of mental health well-being. I am writing to invite you to join my study.

Participants must be current parents of a student attending Coeur d'Alene Charter Academy AND who consented to allow their student to participate in this study. Only 1 parent per student/family is required. Participants will be asked to complete a questionnaire which should take approximately 10 minutes to complete (8 questions). Names and other identifying information will be requested as part of this study, but participant identities will not be disclosed in the final results.

For parent participation, please click here: [StampedConsent\(Parents\).pdf](#), [StampedConsent\(Student\).pdf](#), [ChildAssentFinal.pdf](#) for more information about the study. If you are interested, please print the relevant consent forms and drop off the signed forms at the North building office (only the signed last page is required). You will then receive a link to the parent questionnaire.

A consent document is attached to this letter. The consent document contains additional information about my research. If you choose to participate, you will need to sign the relevant consent document(s) and return it to me prior to receiving the questionnaire link.

Participants who participate in the entire study will receive a \$5 coffee gift card.

Sincerely,

Christina J. McRae
Graduate Student



Recruitment Follow-Up Letter for Parents

Dear Charter Academy Parents,

As a graduate student in the Psychology Department at Liberty University, I am conducting research as part of the requirements for a doctoral degree. [two weeks ago/etc.] an email was sent to you inviting you to participate in a research study. This follow-up email is being sent to remind you to complete the online survey/consent form if you would like to participate and have not already done so. The deadline for participation is [DATE OF DEADLINE].

Participants must be current parents of a student attending Coeur d'Alene Charter Academy AND who consented to allow their student to participate in this study. Only 1 parent per student/family is required. Participants will be asked to complete a questionnaire which should take approximately 10 minutes to complete (8 questions). Names and other identifying information will be requested as part of this study, but participant identities will not be disclosed in the final results.

For parent participation, please click here: [StampedConsent\(Parents\).pdf](#), [StampedConsent\(Student\).pdf](#), [ChildAssentFinal.pdf](#) for more information about the study. If you are interested, please print the relevant consent forms and drop off the signed forms at the North building office (only the signed last page is required). You will then receive a link to the parent questionnaire.

A consent document is attached to this letter. The consent document contains additional information about my research. If you choose to participate, you will need to sign the relevant consent document(s) and return it to me prior to receiving the questionnaire link.

Participants who participate in the entire study will receive a \$5 coffee gift card.

Sincerely,

Christina J. McRae
Graduate Student



Recruitment Letter for Teachers

Dear Coeur d'Alene Charter Academy Teachers,

As a graduate student in the Psychology Department at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The purpose of my research is to explore the positive and negative effects that online learning has on educational, physical, social, emotional, and psychological aspects of mental health well-being. I am writing to invite you to join my study.

Participants must be current teachers at Coeur d'Alene Charter Academy, who participated in teaching online learning during the 2020-2021 school year. Participants will be asked to complete a questionnaire which should take approximately 10 minutes (8 questions). Participation will be completely anonymous, and no personal, identifying information will be collected.

For teacher participation, please click here [StampedConsent\(Teachers\).pdf](#) for more information about the study. If you are interested, please sign the consent form and return it to the North building office (only the signed last page is required). You will then receive a link to the teacher questionnaire.

A consent document is attached to this letter. The consent document contains additional information about my research. If you choose to participate, you will need to sign the consent document and return it to me prior to receiving the questionnaire link.

Participants who participate in the entire study will receive a \$5 coffee gift card.

Sincerely,

Christina J. McRae
Graduate Student



Recruitment Follow-Up Letter for Teachers

Dear Charter Teachers,

As a graduate student in the Psychology Department at Liberty University, I am conducting research as part of the requirements for a doctoral degree. [two weeks ago/etc.] an email was sent to you inviting you to participate in a research study. This follow-up email is being sent to remind you to complete the online survey/consent form if you would like to participate and have not already done so. The deadline for participation is [DATE OF DEADLINE].

Participants must be current teachers at Coeur d'Alene Charter Academy, who participated in teaching online learning during the 2020-2021 school year. Participants will be asked to complete a questionnaire which should take approximately 10 minutes (8 questions). Participation will be completely anonymous, and no personal, identifying information will be collected.

For teacher participation, please click here [StampedConsent\(Teachers\).pdf](#) for more information about the study. If you are interested, please sign the consent form and return it to the North building office (only the signed last page is required). You will then receive a link to the teacher questionnaire.

A consent document is attached to this letter. The consent document contains additional information about my research. If you choose to participate, you will need to sign the consent document and return it to me prior to receiving the questionnaire link.

Participants who participate in the entire study will receive a \$5 coffee gift card.

Sincerely,

Christina J. McRae
Graduate Student



APPENDIX C: PARTICIPANT NOTICES (INFORMATION AND CONSENT FORM)

RESEARCH STUDY INFORMATION

Hi, I am a doctoral student working on my dissertation to fulfill my final requirement for a PhD in Developmental Psychology. The topic of my study is “The Effects of Online Learning on Mental Health During a Pandemic.” The study will collect data for the following criteria: academic performance; physical activity; social isolation; food insecurity and other stressors; pros and cons to online learning; and religion and mental health.

The questionnaires will include: Patient Health Questionnaire (PHQ-9); General Anxiety Disorder (GAD-7); and Mental Health-COVID-APSFPR (newly created). These questionnaires are attached for review and includes the general questions.

Personal information will initially be collected, which will only be used to be able to contact participants for interviews, focus groups and verification of responses. Personal information, including name and any contact information, such as e-mail addresses and phone numbers **WILL NOT** be used in the final results. Personal demographics that **WILL** be used include age, gender, grade level and school. Therefore, the information collected pertaining to individual grades or other responses **WILL NOT** be discussed on an individual basis in the final results. If for some reason, a student or students respond with significant information and it would be useful to include in the results/discussion of my dissertation, I will first ask permission from both the student and parent **BEFORE** utilizing the information in an individual way (names and identifying information will remain confidential and will only be discussed as a “student” within the study).

ADDITIONAL NOTES:

- Any concerning information that arises during review of questionnaires, interviews or focus groups will be brought to the attention of the school counselors and parents as needed.
- As noted, personal information will initially be collected to be used to contact participants for individual interviews, focus groups and any additional verification on information collected. No personal identification information will be used in the final results.
- If students, parents, or staff are interested in the results, they will be made available for review.
- A parent and teacher questionnaire will be administered (attached) for any parent or teacher willing to participate for additional data.
- Participants who participate in the **ENTIRE STUDY** will have their name put into a raffle for a \$5 coffee gift card (this includes parents and staff). (The number of gift cards for raffle will be determined when the study begins and will be shared with participants).

For any parent, teacher, or student who have concerns about the information collected or who would like more information, please feel free to contact me and/or provide me with any revisions that will help make this study more appealing.

Thank you for your consideration.

Parent/Guardian Consent Form

Title of the Project: The Effects of Online Learning on Mental Health During a Pandemic

Principal Investigator: Christina McRae, Graduate Student, School of Behavioral Science, Liberty University

Invitation to be Part of a Research Study

Your child/student is invited to participate in a research study. To participate, he/she must be: a current student of Charter Academy and participated in online learning during the 2020-2021 school year, regardless of what school they attended that year. This research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to allow your child/student to take part in this research.

What is the study about and why is it being done?

The purpose of this study is to explore the positive and negative effects that online learning has on educational, physical, social, emotional and psychological aspects of mental health. Students will be asked to share their lived experiences of online learning in the areas of academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons of online learning and religion and mental health. They will also be asked to share if they experienced mental health issues – anxiety or depression – prior to, during or after online learning.

- **Academic performance:** Comparison of general grades before, during and after online learning during the pandemic.
- **Physical Activity:** Assessing if participants had participated in regular physical activity prior to online learning and whether there was consistent physical activity during the pandemic or a lack of physical activity.
- **Social Isolation:** Assessment of general reactions and perceptions of social isolation during online learning.
- **Food Insecurity and other stressors:** Assessment of whether participants experienced lack of food access, loss of a parent's job, illness of self or loved one and experiences of participating in online learning in their home environment, which may include various noises, lack of materials (including no internet or computer), interruptions or other issues that would not be experienced in a traditional classroom that decreased the ability to focus or participate in online learning.
- **Pros and Cons of Online Learning:** Participants individual perspectives of the pros and cons to online learning that they experienced.

- **Religion and Mental Health:** Participants involvement in religious activities before and during the pandemic and how it positively or negatively affected their general experience.

What will participants be asked to do in this study?

If you agree to allow your child/student to be in this study, I will ask her/him to do the following:

1. Complete the **Patient Health Questionnaire (PHQ-9)**, to assess current level of depression.
2. Complete the **Generalized Anxiety Disorder (GAD-7)**, to assess current level of anxiety.
3. Complete the **Mental Health-COVID-APSFPR**, which is a newly created questionnaire to collect data on academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons of online learning and religion and mental health (see attached).

The total time for these questionnaires should be approximately 35-40 minutes.

Individual interviews will be scheduled with students to go over the main questionnaire for a higher level of clarification on responses. Individual interviews should last between 20-45 minutes, depending on the clarity of responses on the questionnaire prior to the interview.

Focus groups will also be conducted for students interested. Focus groups will be a maximum of 8 participants and will be scheduled for at least 30 minutes, depending on the interest and time constraints of participants.

Parents and teachers will also be asked to complete a short questionnaire (8 questions) if they are interested in participating.

How could participants or others benefit from this study?

The direct benefits participants should expect to receive from taking part in this study are:

- sharing their experiences, so other students, teachers and parents can make any necessary changes to improve certain aspects that were found to be most challenging.
- share how they dealt with some of the more challenging aspects of online learning during a pandemic, especially if they or their family experienced increased hardships (illness, lack of materials, food insecurity, health complications, etc.)
- share ideas for teachers, parents and other school and/or health professionals can utilize in the future.
- having the overall opportunity to provide helpful input for their peers or future research studies.

Final results will be available to parents, staff and students who are interested. The results can provide students, teachers and parents with more information that is focused on areas that were of concern during online learning and gain more insight on student perception.

What risks might participants experience from being in this study?

There are no direct risks involved in this study. There will be no medications administered or requirement that puts physical, mental, emotional or general well-being at risk. The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

However, I am a primary researcher in this study and if I receive information about any risk of serious mental health issues reported by a participant, I will be required to report it to the appropriate authorities, which could include school counselors and parents.

The information pertaining to mental health is minimal. Basic information, such as general (past) diagnoses, symptoms experienced during online learning and any continued symptoms after online learning, which were triggered to online learning and/or the pandemic. Conditions and symptoms will be focused on anxiety and depression. No intrusive or detailed information on mental health statuses will be required.

How will person information be protected?

The records of this study will be kept private. All published reports **WILL NOT** include any identifying information. Research records will be stored securely, and only the researcher will have access to the records on a password protected personal computer that is not shared with others.

Participants responses will be kept confidential by replacing names with pseudonyms.

Individual interviews will be conducted on school grounds in a private area to avoid being overheard by others.

Confidentiality cannot be guaranteed in focus group settings. Focus group participants will be discouraged in sharing what is said in the group, but this is not a guaranteed.

Data collected from your child/student may be used in future research studies, but identifying information **WILL NOT** be shared. Data will be stored on a password-locked computer.

How will participants be compensated for being part of the study?

Participants who participate in the entire study will have their name put into a raffle for a \$5 coffee gift card.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to allow your child/student to participate will not affect your or his/her current or future relations with Coeur d'Alene Charter Academy or Liberty University. If you decide to allow your child/student to participate, she/he is free to not answer any question or withdraw at any time without affecting those relationships.

What should be done if a participant wishes to withdraw from the study?

If you choose to withdraw your child/student from the study or your child/student chooses to withdraw, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw her/him or should your child/student choose to withdraw, data collected from your child/student will be destroyed immediately and will not be included in this study. Focus group data will not be destroyed, but your child/student's contributions to the focus group will not be included in the study if you choose to withdraw her/him or your child/student chooses to withdraw.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is a grad student at Liberty University. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at [REDACTED]. You may also contact the researcher's faculty sponsor Dr. Margaret Gopaul at [REDACTED].

Whom do you contact if you have questions about rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher[s], **you are encouraged** to contact the IRB. Our physical address is Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA, 24515; our phone number is 434-592-5530, and our email address is irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent/Opt-Out

By signing this document, you are agreeing to allow your child/student to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to allow my child/student to participate in the study.

Printed Child's/Student's Name

Parent/Guardian's Signature

Date

Minor's Signature

Date

Consent Form

Title of the Project: The Effects of Online Learning on Mental Health During a Pandemic

Principal Investigator: Christina McRae, Graduate Student, School of Behavioral Science, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be: a current student of Charter Academy and participated in online learning during the 2020-2021 school year, regardless of what school they attended that year. This research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to allow your child/student to take part in this research.

What is the study about and why is it being done?

The purpose of this study is to explore the positive and negative effects that online learning has on educational, physical, social, emotional and psychological aspects of mental health. You will be asked to share your lived experiences of online learning in the areas of academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons of online learning and religion and mental health. You will also be asked to share if you experienced mental health issues – anxiety or depression – prior to, during or after online learning.

- **Academic performance:** Comparison of general grades before, during and after online learning during the pandemic.
- **Physical Activity:** Assessing if participants had participated in regular physical activity prior to online learning and whether there was consistent physical activity during the pandemic or a lack of physical activity.
- **Social Isolation:** Assessment of general reactions and perceptions of social isolation during online learning.
- **Food Insecurity and other stressors:** Assessment of whether participants experienced lack of food access, loss of a parent's job, illness of self or loved one and experiences of participating in online learning in their home environment, which may include various noises, lack of materials (including no internet or computer), interruptions or other issues that would not be experienced in a traditional classroom that decreased the ability to focus or participate in online learning.
- **Pros and Cons of Online Learning:** Participants individual perspectives of the pros and cons to online learning that they experienced.
- **Religion and Mental Health:** Participants involvement in religious activities before and during the pandemic and how it positively or negatively affected their general experience.

What will participants be asked to do in this study?

If you agree to be in this study, I will ask you to do the following:

4. Complete the **Patient Health Questionnaire (PHQ-9)**, to assess current level of depression.
5. Complete the **Generalized Anxiety Disorder (GAD-7)**, to assess current level of anxiety.
6. Complete the **Mental Health-COVID-APSFPR**, which is a newly created questionnaire to collect data on academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons of online learning and religion and mental health (see attached).

The total time for these questionnaires should be approximately 35-40 minutes.

Individual interviews will be scheduled to go over the main questionnaire for a higher level of clarification on responses. Individual interviews should last between 30-45 minutes, depending on the clarity of responses on the questionnaire prior to the interview.

Focus groups will also be conducted for students interested. Focus groups will be a maximum of 8 participants and will be scheduled for at least 30 minutes, depending on the interest and time constraints of participants.

How could you or others benefit from this study?

The direct benefits participants should expect to receive from taking part in this study are:

- sharing their experiences, so other students, teachers and parents can make any necessary changes to improve certain aspects that were found to be most challenging.
- share how they dealt with some of the more challenging aspects of online learning during a pandemic, especially if they or their family experienced increased hardships (illness, lack of materials, food insecurity, health complications, etc.)
- share ideas for teachers, parents and other school and/or health professionals can utilize in the future.
- having the overall opportunity to provide helpful input for their peers or future research studies.

Final results will be available to parents, staff and students who are interested. The results can provide students, teachers and parents with more information that is focused on areas that were of concern during online learning and gain more insight on student perception.

What risks might participants experience from being in this study?

There are no direct risks involved in this study. There will be no medications administered or requirement that puts physical, mental, emotional or general well-being at risk. The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

However, I am a primary researcher in this study and if I receive information about any risk of serious mental health issues reported by a participant, I will be required to report it to the appropriate authorities, which could include school counselors and parents.

The information pertaining to mental health is minimal. Basic information, such as general (past) diagnoses, symptoms experienced during online learning and any continued symptoms after online learning, which were triggered to online learning and/or the pandemic. Conditions and symptoms will be focused on anxiety and depression. No intrusive or detailed information on mental health statuses will be required.

How will person information be protected?

The records of this study will be kept private. All shared and/or published reports **WILL NOT** include any identifying information. Research records will be stored securely, and only the researcher will have access to the records on a password protected personal computer that is not shared with others.

Participant responses will be kept confidential by replacing names with pseudonyms.

Individual interviews will be conducted on school grounds in a private area to avoid being overheard by others.

Confidentiality cannot be guaranteed in focus group settings. Focus group participants will be discouraged in sharing what is said in the group, but this is not a guaranteed.

Data collected from your child/student may be used in future research studies, but identifying information **WILL NOT** be shared. Data will be stored on a password-locked computer.

How will participants be compensated for being part of the study?

Participants who participate in the entire study will receive a \$5 coffee gift card.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Coeur d'Alene Charter Academy or Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

What should be done if a participant wishes to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you, apart from focus group data, will be destroyed immediately and will not be included in this study. Focus group data will not be destroyed, but your contributions to the focus group will not be included in the study if you choose to withdraw.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is a grad student at Liberty University. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at [REDACTED]. You may also contact the researcher's faculty sponsor Dr. Margaret Gopaul, at [REDACTED].

Whom do you contact if you have questions about rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher[s], **you are encouraged** to contact the IRB. Our physical address is Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA, 24515; our phone number is 434-592-5530, and our email address is irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to allow my child/student to participate in the study.

Printed Participant Name

Signature & Date

Child Assent to Participate in a Research Study

What is the name of the study and who is doing the study?

The name of the study is “The Effects of Online Learning on Mental Health During a Pandemic,” and the person doing the study is Christina McRae.

Why is Christina McRae doing this study?

Christina McRae wants to know how online learning during the pandemic affected students in specific areas, including: academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons to online learning, and religion and mental health.

Why am I being asked to be in this study?

You are being asked to be in this study because you are a student at Coeur d’Alene Charter Academy and participated in online learning during the pandemic during the 2020-2021 school year, regardless of what school they attended that year.

If I decide to be in the study, what will happen and how long will it take?

If you decide to be in this study, you will be asked the following:

1. To complete these questionnaires (total of 35-40 minutes):
 - Patient Health Questionnaire (PHQ-9): assess current risk of depression (9 questions).
 - Generalized Anxiety Disorder (GAD-7): assess current risk of anxiety (7 questions).
 - Mental Health-COVID-APSFPR: newly created questionnaire that includes questions focused on academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons to online learning, and religion and mental health.
2. Participate in an individual interview. During this interview the researcher will go over the Mental Health-COVID-APSFPR questionnaire to clarify responses. This is also the time you will be able to add any additional information as desired.
3. If interested, you will be invited to participate in a focus group.

The individual interviews will take between 30-45 minutes, depending on how much needs to be clarified on the questionnaire and if the student has questions or other information to share. Focus groups will be at least 30 minutes, depending on interest and time constraints.

Do I have to be in this study?

No, you do not have to be in this study. If you want to be in this study, then tell the researcher. If you don’t want to, it’s OK to say no. The researcher will not be angry. You can say yes now and change your mind later. It’s up to you.

What if I have a question?

You can ask questions any time. You can ask now. You can ask later. You can talk to the researcher. If you do not understand something, please ask the researcher to explain it to you again.

Signing your name below means that you want to be in the study.

Signature of Child/Witness

Date

Graduate Student

E-mail: [REDACTED]

Dr. Margaret Gopaul

[REDACTED]

Liberty University Institutional Review Board
1971 University Blvd, Green Hall 2845, Lynchburg, VA 24515
irb@liberty.edu

Consent Form for Parent Participation

Title of the Project: The Effects of Online Learning on Mental Health During a Pandemic

Principal Investigator: Christina McRae, Graduate Student, School of Behavioral Science, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be: a current parent of a student attending Coeur d'Alene Charter Academy AND who consented to allow their student to participate in this study. Only one parent per student/family is required. This research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to allow your child/student to take part in this research.

What is the study about and why is it being done?

The purpose of this study is to explore the positive and negative effects that online learning has on educational, physical, social, emotional and psychological aspects of mental health. You will be asked to share your lived experiences of online learning in the areas of academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons of online learning and religion and mental health. You will also be asked to share if you experienced mental health issues – anxiety or depression – prior to, during or after online learning.

- **Academic performance:** Comparison of general grades before, during and after online learning during the pandemic.
- **Physical Activity:** Assessing if participants had participated in regular physical activity prior to online learning and whether there was consistent physical activity during the pandemic or a lack of physical activity.
- **Social Isolation:** Assessment of general reactions and perceptions of social isolation during online learning.
- **Food Insecurity and other stressors:** Assessment of whether participants experienced lack of food access, loss of a parent's job, illness of self or loved one and experiences of participating in online learning in their home environment, which may include various noises, lack of materials (including no internet or computer), interruptions or other issues that would not be experienced in a traditional classroom that decreased the ability to focus or participate in online learning.
- **Pros and Cons of Online Learning:** Participants individual perspectives of the pros and cons to online learning that they experienced.

- **Religion and Mental Health:** Participants involvement in religious activities before and during the pandemic and how it positively or negatively affected their general experience.

What will participants be asked to do in this study?

If you agree to be in this study, I will ask you to do the following:

1. Complete the **Parent Questionnaire**, which is a newly created questionnaire to collect data on academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons of online learning and religion and mental health (see attached).

The questionnaire contains 8 open-ended questions and will take [approximately] 10 minutes to complete.

How could you or others benefit from this study?

The direct benefits participants should expect to receive from taking part in this study are:

- sharing their experiences, so other parents and school officials can understand the effects and make any necessary changes to improve certain aspects that were found to be most challenging.
- share ideas and opinions that could potentially benefit others and provide positive improvements.
- share ideas for teachers, parents and other school and/or health professionals can utilize in the future.
- having the overall opportunity to provide helpful input for their peers or future research studies.

Final results will be available to those who are interested. The results can provide students, teachers and parents with more information that is focused on areas that were of concern during online learning and gain more insight on student perception.

What risks might participants experience from being in this study?

There are no direct risks involved in this study. There will be no medications administered or requirement that puts physical, mental, emotional or general well-being at risk. The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will person information be protected?

The records of this study will be kept private. All shared and/or published reports **WILL NOT** include any identifying information. Research records will be stored securely, and only the researcher will have access to the records on a password protected personal computer that is not shared with others.

Participant responses will be kept confidential by replacing names with pseudonyms.

Data collected from you may be used in future research studies, but identifying information **WILL NOT** be shared. Data will be stored on a password-locked computer.

How will participants be compensated for being part of the study?

Participants who participate in the entire study will receive a \$5 coffee gift card.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Coeur d'Alene Charter Academy or Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

What should be done if a participant wishes to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is a grad student at Liberty University. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at [REDACTED]. You may also contact the researcher's sponsor Dr. Margaret Gopaul, at [REDACTED].

Whom do you contact if you have questions about rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher[s], **you are encouraged** to contact the IRB. Our physical address is

Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA, 24515; our phone number is 434-592-5530, and our email address is irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to allow my child/student to participate in the study.

Printed Subject Name

Signature & Date

Consent Form for Teacher Participation

Title of the Project: The Effects of Online Learning on Mental Health During a Pandemic

Principal Investigator: Christina McRae, Graduate Student, School of Behavioral Science, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be: a current teacher of Coeur d'Alene Charter Academy and taught (at any school) during online learning during the 2020-2021 school year. This research project is voluntary.

What is the study about and why is it being done?

The purpose of this study is to explore the positive and negative effects that online learning has on educational, physical, social, emotional and psychological aspects of mental health. You will be asked to share your lived experiences of online learning in the areas of academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons of online learning and religion and mental health. You will also be asked to share if you experienced mental health issues – anxiety or depression – prior to, during or after online learning.

- **Academic performance:** Comparison of general grades before, during and after online learning during the pandemic.
- **Physical Activity:** Assessing if participants had participated in regular physical activity prior to online learning and whether there was consistent physical activity during the pandemic or a lack of physical activity.
- **Social Isolation:** Assessment of general reactions and perceptions of social isolation during online learning.
- **Food Insecurity and other stressors:** Assessment of whether participants experienced lack of food access, loss of a parent's job, illness of self or loved one and experiences of participating in online learning in their home environment, which may include various noises, lack of materials (including no internet or computer), interruptions or other issues that would not be experienced in a traditional classroom that decreased the ability to focus or participate in online learning.
- **Pros and Cons of Online Learning:** Participants individual perspectives of the pros and cons to online learning that they experienced.
- **Religion and Mental Health:** Participants involvement in religious activities before and during the pandemic and how it positively or negatively affected their general experience.

What will participants be asked to do in this study?

If you agree to be in this study, I will ask you to do the following:

7. Complete the **Teacher Questionnaire**, which is a newly created questionnaire to collect data on academic performance, physical activity, social isolation, food insecurity and other stressors, pros and cons of online learning and religion and mental health (see attached).

The questionnaire contains 8 open-ended questions and will take [approximately] 10 minutes to complete.

How could you or others benefit from this study?

The direct benefits participants should expect to receive from taking part in this study are:

- sharing their experiences, so other teachers can make any necessary changes to improve certain aspects that were found to be most challenging.
- share ideas and opinions that could potentially benefit others and provide positive improvements.
- share ideas for teachers, parents and other school and/or health professionals can utilize in the future.
- having the overall opportunity to provide helpful input for their peers or future research studies.

Final results will be available to those who are interested. The results can provide students, teachers and parents with more information that is focused on areas that were of concern during online learning and gain more insight on student perception.

What risks might participants experience from being in this study?

There are no direct risks involved in this study. There will be no medications administered or requirement that puts physical, mental, emotional or general well-being at risk. The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will person information be protected?

The records of this study will be kept private. All shared and/or published reports **WILL NOT** include any identifying information. Research records will be stored securely, and only the researcher will have access to the records on a password protected personal computer that is not shared with others.

Participant responses will be kept confidential by replacing names with pseudonyms.

Personal information initially collected will only be used by the research to be able to contact participants for individual follow-up if needed. No personal identifying information will be used in the final results

Data collected from you may be used in future research studies, but identifying information **WILL NOT** be shared. Data will be stored on a password-locked computer.

How will participants be compensated for being part of the study?

Participants who participate in the entire study will receive a \$5 coffee gift card.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Coeur d'Alene Charter Academy or Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the questionnaire without affecting those relationships.

What should be done if a participant wishes to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is a grad student at Liberty University. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at [REDACTED]. You may also contact the researcher's faculty sponsor, Dr. Margaret Gopaul, at [REDACTED].

Whom do you contact if you have questions about rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher[s], **you are encouraged** to contact the IRB. Our physical address is Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA, 24515; our phone number is 434-592-5530, and our email address is irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

Printed Participant Name

Signature & Date

APPENDIX D: QUESTIONNAIRES

Patient Health Questionnaire (PHQ-9)

Date: _____ Name: _____ Date of Birth: _____

*Over the last 2 weeks, how often have you been bothered by any of the following problems?
Please circle your answers.*

<i>PHQ-9</i>	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things.	0	1	2	3
2. Feeling down, depressed, or hopeless.	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much.	0	1	2	3
4. Feeling tired or having little energy.	0	1	2	3
5. Poor appetite or overeating.	0	1	2	3
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down.	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television.	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual.	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself in some way.	0	1	2	3
<i>Add the score for each column</i>				

Total Score (add your column scores):

If you checked off any problems, how difficult have these made it for you to do your work, take care of things at home, or get along with other people? (Circle one)

Not difficult at all Somewhat difficult Very difficult Extremely difficult

Interpretation of Total Score

Total Score	Depression Severity
1-4	Minimal depression
5-9	Mild depression
10-14	Moderate depression
15-19	Moderately severe depression
20-27	Severe depression

PHQ-9 Survey Link:

https://docs.google.com/forms/d/e/1FAIpQLSfCpPU5M8zcbGFpHL0epq7m6jWgzyMCwka7A_7v4Y1S17_5Q/viewform?usp=sf_link

Generalized Anxiety Disorder (GAD-7)

GAD-7	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious, or on edge.	0	1	2	3
2. Not being able to stop or control worrying.	0	1	2	3
3. Worrying too much about different things.	0	1	2	3
4. Trouble relaxing.	0	1	2	3
5. Being so restless that it's hard to sit still.	0	1	2	3
6. Becoming easily annoyed or irritable.	0	1	2	3
7. Feeling afraid as if something awful might happen.	0	1	2	3
<i>Add the score for each column</i>				

Total Score (add your column scores):

If you checked off any problems, how difficult have these made it for you to do your work, take care of things at home, or get along with other people? (Circle one)

Not difficult at all

Somewhat difficult

Very difficult

Extremely difficult

Scoring GAD-7 Anxiety Severity

This is calculated by assigning scores of 1, 1, 2, and 3 to the response categories, respectively, of “not at all,” “several days,” “more than half the days,” and “nearly every day.” GAD-7 total score for the seven items ranges from 0 to 21.

0-4: minimal anxiety

5-9: mild anxiety

10-14: moderate anxiety

15-21: severe anxiety

GAD-7 Survey Link:

https://docs.google.com/forms/d/e/1FAIpQLScIGeAk7ie5SQkz7b1sl8-QEwRxVKo8FtaDXyVBC4NwdQv-A/viewform?usp=sf_link

Mental Health-COVID-APSFPR

Name: _____ Date: _____

Grade: _____ Age: _____ Gender: _____

School attended during the 2020-2021 school year: _____

Basic history:

- 1) Were you diagnosed with a mental health condition – anxiety or depression, prior to the pandemic and online learning? If so, what and how long?
- 2) If you were diagnosed with a condition, did online learning worsen or provide relief?
- 3) If you were **NOT** diagnosed with a condition prior to the pandemic, did you experience symptoms of either condition **DURING** the pandemic and/or online learning? Explain.

ACADEMIC PERFORMANCE
1. Did online learning cause a negative change in grades? - Did overall GPA have a positive or negative change? - Were there specific classes that were impacted more (such as math or science grades)? Explain your answer.
2. Was your ability to focus while participating in online learning impacted? (Explain how it was impact, whether positively or negatively).
3. What did you find to be a positive aspect of online learning in regards to your academic performance? - Did you find any websites, apps, software used to be more effective in learning? - Did you find learning and participating to be easier online compared to in a traditional classroom?

<p>4. Did the concerns about the pandemic (getting sick, having a loved one get sick, new vaccine, etc) cause a positive or negative impact to your academic performance?</p> <ul style="list-style-type: none"> - Did it impact your ability to focus? - Did you experience worry and/or fear? <p>Explain.</p>
<p>5. Do you have anything else to add to how online learning was either positive or negative to your academic performance?</p>
<p>PHYSICAL ACTIVITY</p>
<p>6. Did you participate in a regular/daily physical activity prior to online learning (including school sports)?</p> <p>If so,</p> <ul style="list-style-type: none"> - How often? - What type of activity?
<p>7. Did your level of physical activity change during online learning?</p> <p>If so,</p> <ul style="list-style-type: none"> - Was it due primarily to online learning? - Did you not have access to your usual physical activity location?
<p>8. Did a lack of physical activity cause you to gain weight?</p> <ul style="list-style-type: none"> - If so, were you able to return to your normal weight since online learning ended? - If not, what did you do to prevent excess weight gain?

9. Did your eating habits change during online learning? Please Explain.
10. Was physical activity disrupted due to concerns about the pandemic? - Was there fear in going outside? - Did you become sick with COVID or have to help care for someone who was sick? Explain.
SOCIAL ISOLATION
11. Were you able to stay connected to friends during online learning? If so, - How did you stay connected? - Did it help with avoiding the effects of being socially isolated physically? If not, - How did it affect you? - Did you experience loneliness or depressive symptoms? Explain your answer.
12. Did being socially isolated from teachers affect your learning? - Were you unable to navigate the online classroom or understand assignments and your teacher was unavailable? - Was it difficult to connect to teachers?
13. Did social isolation affect your overall ability or desire to participate in online learning? - Did you find it difficult to navigate the online classroom? - Did being isolated increase stress levels, which made it more difficult to want to participate with online learning?

<p>14. Did social isolation increase feelings or symptoms of either depression or anxiety? If so, - Did you have a history of either condition? If not, - What might have helped prevent experiencing these symptoms?</p>
<p>15. Due to concerns with COVID, did you find social isolation to be a positive or negative impact? - Was social isolation a relief to you (to help avoid getting sick)? - Was social isolation simply a frustrating part of the pandemic and you were relaxed in interacting with others in-person? Explain.</p>
<p>FOOD INSECURITY AND OTHER STRESSORS</p>
<p>16. Did your family experience a lack of food? If so, - Were you able to access food banks or obtain other assistance? - Were you expected to assist with more home tasks, such as finding food, cooking, cleaning?</p>
<p>17. Did a parent experience job loss? If so, - How did it affect the family overall? If not, - Was the parent able to work from home? In either case, was having your parent home helpful? - Was your parent able to help you with online learning? - Was there a noticeable increase in stress levels within the family (especially in the case of a job loss)?</p>

<p>18. How did your home environment affect online learning?</p> <ul style="list-style-type: none"> - Do you have siblings that assisted or interrupted you during online learning? - Did you experience specific home-based noises that made it difficult to participate in online learning? (Such as home appliances, young children, pets, etc.) Explain.
<p>19. Did your family experience any specific stressors that were primarily caused by the pandemic?</p>
<p>20. Were you or your family personally impacted by COVID?</p> <ul style="list-style-type: none"> - Did you get COVID? If so, were you in the hospital? - Did a family member get COVID? If so, were they in the hospital or did you have to help care for them? <p>Explain.</p>
<p>PROS AND CONS TO ONLINE LEARNING</p>
<p>21. Was there any aspects to online learning that you found helpful, interesting, or that improved your ability to learn?</p>
<p>22. What general aspects of online learning did you find to be positive? (such as the ability to search vast information on the internet, staying connected with the use of social media and other apps, etc). Explain your answer.</p>
<p>23. What general aspects of online learning were the most negative? (such as social isolation, inability to learn adequately, lack of peer and teacher connection, lack of skills or knowledge to access online classrooms, lack of necessary materials, etc.) Explain your answer.</p>

24. Do you have anything else you can add to the potential pros and cons to online learning?
RELIGION AND MENTAL HEALTH
25. Did you or your family participate in regular religious activities prior to the pandemic? Explain what type (Sunday services, Sunday School, Youth Group, etc). - Were you able to attend church (even remotely) during the pandemic?
26. If you regularly participated in religious activities prior to the pandemic, did your belief and/or faith help you deal with the stress during that time? How so?
27. If you did not participate in religious activities prior to the pandemic, did that change during the pandemic? Did you start to turn too religion, spirituality or even meditation to help you through the stressful time?
28. Regardless of your religious/spiritual beliefs, what is your perspective on how religion can or cannot assist during stressful life experiences, such as a pandemic?

The Mental Health-COVID-APSFPR questionnaire was created July 2023.

Student

https://docs.google.com/forms/d/e/1FAIpQLSfBXDMsRdIyv_RLLxhJ0C-j2dDkYaD25eSzwKDJrV3qjX4acQ/viewform?usp=sf_link

Parent Questionnaire

Parent Name: _____

Date: _____

Student Name: _____

Grade: _____

E-mail: _____

Phone #: _____

ACADEMIC PERFORMANCE

1. What did you observe in your students academic performance during online learning?
- Did they transition to online learning well?
 - In what ways did they struggle the most? (such as lack of materials; inability to access the online classroom; not having the face-to-face connection with their teacher for better focus and learning)?

PHYSICAL ACTIVITY

2. Did you have any concern with your students level of physical activity during online learning?
- What was most concerning? (General lack of physical activity, weight gain, eating habits)?
 - Did you participate with regular physical activity as a family before or during the pandemic?
- Explain your answers.

SOCIAL ISOLATION

3. Did you observe how social isolation affected your student during online learning?
- Did you observe symptoms including: loneliness, depression, anxiety, changes in mood?
 - What, if anything, were you able to try to help your students connect with friends?

FOOD INSECURITY AND OTHER STRESSORS

4. Was your family affected with an insufficient amount of food or inability to access food?
- Did you visit food banks or apply for assistance to meet your families need?
 - Did you require your student to assist in finding, purchasing or cooking food?

PROS AND CONS TO ONLINE LEARNING
<p>5. What was your overall perspective of online learning?</p> <ul style="list-style-type: none"> - What, if any positive aspects to online learning did you observe? - What, if any negative aspects to online learning did you observe?
RELIGION AND MENTAL HEALTH
<p>6. Did your family participate in religious or spiritual activities before or during the pandemic?</p> <p>If so,</p> <ul style="list-style-type: none"> - Did you find it to help decrease stress levels? <p>If not,</p> <ul style="list-style-type: none"> - Did you have another belief system that your family participated in to provide hope and positive inspiration?
OTHER
<p>7. Did the concerns about the pandemic (getting sick, having a loved one get sick, new vaccine, etc) cause a positive or negative impact of online learning? How so?</p>
<p>8. What other observations or perspectives did you find during online learning and the overall pandemic?</p> <ul style="list-style-type: none"> - Is there anything else you would like to share about your personal experience or observations of students of online learning during the pandemic?

The parent questionnaire was created July 2023.

PARENT Survey Link:

https://docs.google.com/forms/d/e/1FAIpQLScUrvqnfXkIF8dEiLXS471D_wvq_ngoJWcR8Ou8S4mXPGovww/viewform?usp=sf_link

Teacher Questionnaire

Teacher Name: _____ Date: _____

E-mail: _____ Phone #: _____

ACADEMIC PERFORMANCE

1. What did you observe in your students academic performance during online learning?
- Did they transition to online learning well?
 - In what ways did they struggle the most? (such as lack of materials; inability to access the online classroom; not having the face-to-face connection with their teacher for better focus and learning)?

PHYSICAL ACTIVITY

2. Did you have any concern with the little to no physical activity your school provided for students?
- What was most concerning? (General lack of physical activity, weight gain, eating habits)?
 - Did you make any attempts to provide your students with physical activity in your lessons/assignments (all subjects)?

Explain your answers.

SOCIAL ISOLATION

3. Do you think social isolation had an impact on your students' ability to maintain consistency in their learning?
- Did you observe changes in students grades, work, and/or behaviors compared to before and after online learning?
 - Did you make any attempts to encourage students to connect with each other (group work, interactive assignments or lessons)?

FOOD INSECURITY AND OTHER STRESSORS

4. What concerns did you have or observe in your students when it came to the increased stressors involving lack of or inability to access food, or the increase in negative effects within families due to job losses, financial strain and lack of materials (internet, computer, etc)?
- Were you or the school able to assist students in obtaining the materials they needed to participate in online learning (internet access, computer, textbooks, etc.)?

PROS AND CONS OF ONLINE LEARNING
<p>5. What was your overall perspective of online learning?</p> <ul style="list-style-type: none"> - What, if any positive aspects to online learning did you observe? - What, if any negative aspects to online learning did you observe?
RELIGION AND MENTAL HEALTH
<p>6. Did you participate in religious or spiritual activities before or during the pandemic?</p> <p>If so,</p> <ul style="list-style-type: none"> - Did you find it to help decrease your stress levels? <p>If not,</p> <ul style="list-style-type: none"> - Did you have another belief system that you participated in to provide hope and positive inspiration?
OTHER
<p>7. Did the concerns about the pandemic (getting sick, having a loved one get sick, new vaccine, etc) cause a positive or negative impact of teaching online? How so?</p>
<p>8. What other observations or perspectives did you find during online learning and the overall pandemic?</p> <ul style="list-style-type: none"> - Is there anything else you would like to share about your personal experience or observations of students of online learning during the pandemic?

The teacher questionnaire was created July 2023.

TEACHER Survey Link:

https://docs.google.com/forms/d/e/1FAIpQLSfQwyUy5mGm0D_7nI8cHyofUdHQzdwV37aazxxMxfRrKqb_uQ/viewform?usp=sf_link

APPENDIX E: INTERVIEW, FOCUS GROUP AND GRADE REPORT OUTLINES

Student Interview**Date:** _____**Name:** _____**Grade:** _____

1. Prior to the interview, verify the student participant has completed the Mental Health-COVID-APSFPR Student questionnaire.
2. Review responses and ask for clarification for any response that was not clear.
3. Ask the following additional questions:
 - a. What subject was the most challenging during online learning? Why?
 - Were you able to find ways around the challenges (teacher or parent assistance, seeking additional materials, hiring a tutor)?
 - Did the challenge continue once school re-opened?
 - How did this challenge effect your attitude, behavior and mood?
 - b. What subject was the least challenging during online learning? Why?
 - Did you excel in this subject prior to online learning and did not require the in-person benefits?

- Did the teacher or school provide you with adequate materials that assisted in making this subject less challenging?

 - How did this effect your attitude, behavior and mood?

 - c. Did you have any teachers that helped make the transition to online learning easier, such as with maintaining student-teacher connections (zoom meetings), provided videos for any lectures they would have done in-class, had open hours to call or video chat, etc? If so, did it help to maintain your learning, academic performance and general well-being despite the situation?
4. Before thanking the student for their time, invite them to participate in a focus group. Maintain a list and if at least 8 participants show interest, organize a time for a focus group.

Focus Group Open Discussion

Date: _____

Group Participants:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Open Discussion Topics: Choose one for discussion.

_____ Academic performance

_____ Physical activity

_____ Social isolation

_____ Food insecurity and other stressors

_____ Pros and cons of online learning

_____ Religion and mental health

Notes:

GRADE REPORT COMPARISON

Student Name: _____ **Grade:** _____

GPA 2020-2021: _____ **Current GPA 2023:** _____

SCHOOL YEAR	2020-2021		2021-2022		2022-2023		2023-2024	
	1 st	2 nd	1 st	2 nd	1 st	2 nd	1 st	2 nd
Math								
Science								
English								
History								
Language								
Orchestra/Band								
Choir								
Art								

Course Descriptions:

MATH: Grade 6 Math; Intro to Pre-Algebra; Pre-Algebra; Algebra I; CP & Honors Geometry; CP & Honors Algebra II; Honors Pre-Calculus; AP Calculus AB; AP Calculus BC; Honors Finite Mathematics; Honors Finite Mathematics; AP Computer Science

SCIENCE: Grade 6 Science; Life Science; Earth Science; CP & Honors Physical Science; CP & Honors Biology; AP Biology; Honors Chemistry; AP Chemistry; Honors Physics; AP Physics; AP Computer Science

ENGLISH: Grade 6 Writing and Grammar; Grade 6 Reading; English 7; English 8; College Prep Ancient Literature; Honors Ancient Literature; Honors European Literature; Honors American Literature; Honors World Literature; Advanced Placement Language and Composition;

HISTORY/SOCIAL STUDIES: Western Hemisphere Geography; Eastern Hemisphere Geography; Civics; Honors Ancient History; Honors European History; Advanced Placement European History; Honors U.S. History; Advanced Placement U.S. History; Advanced Placement U.S. Government & Politics; Economics

LANGUAGE: French I; French II; French III; AP French; Latin I; Latin II; Latin III; AP Latin IV; Spanish I; Spanish II; Honors Spanish III; AP Spanish IV

ORCHESTRA/BAND: Cadet Band; Cadet Strings; Symphonic Strings; Wind Ensemble; Concert Band; Chamber Orchestra; Jazz Ensemble

CHOIR: 6th Grade Choir; Middle School Choir; High School Choir

ART: Grade 6 Visual Arts; Art I; Art II; Art III/IV/V-Advanced Studio