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PARENTAL PERSPECTIVES OF ADOLESCENT SLEEP HYGIENE IN SUBURBAN
HIGH-ACHIEVING DISTRICTS

A dissertation submitted in partial fulfillment
of the requirements for the degree of

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by

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ABSTRACT

PARENTAL PERSPECTIVES OF ADOLESCENT SLEEP HYGIENE IN SUBURBAN HIGH-ACHIEVING DISTRICTS

Theresa Walter

The purpose of this phenomenological qualitative study is to examine parental perceptions of adolescent sleep hygiene in Long Island High School District; a suburban mid-sized district of 6, 515 students in a predominantly high socio-economic community. Sleep hygiene is defined as the regular, healthy habits and practices in order to obtain restorative, healthy sleep. Participants of the study included parents of different ethnic backgrounds, socio-economic backgrounds, gender, and marital status from both Richmond High School East and Richmond High School West.

A student's well-being relies on purposeful, healthy sleep. Obtaining and promoting healthy sleep is both a challenge and a priority for educators as wellness is the most important foundation on which to build a successful school experience. Lack of healthy sleep has severe consequences on development and has been shown to increase risks of psychiatric diseases. The Perfect Storm Theory has become relevant in the field of student sleep and it claims that loss of sleep throughout adolescence arises from a convergence of biological, psychological, and socio-cultural influences (Carskadon, 2014).

Parental perceptions of their own adolescent's sleep hygiene is an important aspect of wellness in their child. Sleep is an important part of memory formation; therefore, insufficient sleep can jeopardizing learning and performance. Understanding

these perceptions will uncover the extent of parental knowledge of their own child's sleep hygiene and the obstacles or aids to their child's healthy sleep.

Keywords: sleep hygiene, suburban high school, parental perceptions, well-being, adolescence, learning, performance, suicide-ideation, social jetlag.

DEDICATION

This dissertation could not have been possible without the devotion and support from my husband, Stephen Walter, and my exceptional children, Owen, Rhys, and Elke. My family supported me through my treatment for breast cancer as I began my process, my night classes and throughout my writing process. Dinners were made, homework was checked, and a supportive hug was never far away. Without their support, this project would not be possible.

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Chapter 1 Introduction

Understanding parental perspectives might assist educators, along with parents, to promote better sleep habits for adolescents and improve overall adolescent health. Sleep hygiene is defined as the healthy habits and practices in order to obtain restorative, healthy sleep on a regular basis. Sleep is essentially food for the brain. During sleep, regenerative processes occur; the circadian rhythm orchestrates cellular function, metabolism, and other vital biological processes (Elkhenany, Alokda, El-Badawy, El-Badri, 2018). Hormones necessary for regulation of functions throughout the day are secreted in response to optic signals and disruption to the circadian rhythm interferes with this hormone regulation. Adolescents need healthy sleep habits in order to ensure restorative biological processes take place each night.

The reality today is that many adolescents are not getting the healthy sleep they need. Understanding the parental perspectives of adolescent sleep is an important step in assuring educators and communities are equipped to confront this social issue for the sake of our children. Approximately 25 million U.S. adolescents have been diagnosed with sleep problems between 2006 to 2015 (National Sleep Foundation [NSF], 2015). The 2011 Sleep in America Poll found that 60% of adolescents in the United States obtain less than eight hours of sleep on school nights. (Hale & Guan, 2015). This figure has risen from the results from simply five years earlier. The 2006 Sleep in America Poll found that 45% of adolescents obtained less than eight hours of sleep on school nights. 77% of adolescents report waking with difficulty and feeling un-refreshed (Hale & Guan, 2015). Adolescent sleep disorders have contributed to increased student

stress, (Carskadon, 2011) decreased student achievement, and increased attention problems in the classroom and the school. Sleep disturbances in adolescents lead to other health problems including heart complications, obesity, diabetes, and blood pressure issues (Crowley, Acebo, & Carskadon, 2014). Research has long demonstrated the benefits of eight to ten hours of sleep each night in order to attain the restorative benefits of sleep. These benefits include mental, neurological, and physical restoration. (Lee-Chiong, 2008). Adolescents in the United States average seven hours, forty-two minutes of sleep at age thirteen, yet this time decreases by age nineteen to seven hours, four minutes (Wolffson & Carskadon, year). In their studies, Wolfson and Carskadon (year) found that 26% of high school students report sleeping less than six and a half hours Monday through Friday. Adolescents are sleep deprived in the United States.

While sleep needs increase at this stage of life, many adolescents experience fewer parental restrictions. These restrictions include less control and oversight of bedtimes and less control over sleep schedules in general; this phenomenon is referred to as “The Perfect Storm” (Carskadon, 2011). The Perfect Storm metaphor applies to patterns of sleep in adolescents in that developmental trajectories and biopsychosocial factors collide at the same time in a young person’s life (Carskadon, 2011). The Perfect Storm theory suggests that the drop-off of sleep was once considered a rite of passage for adolescents. Today, however, the lack of sleep is having a detrimental effect on children’s mental, social, and physical well-being, patterns of sleep must be reexamined (John, Bellipady, & Bhat, 2016).

Parental perspectives and parental monitoring have been found to influence adolescent behavior and can impact adolescent lives (Hart, Herriot, Bishop, & Truby,

2013; Moore & Bailey, 2013). Moore and Bailey (2013) found that understanding the motivating factors and barriers to healthy weight loss programs was important, and therefore, understanding perspectives on another health issue is important. Wiggins and Freeman (2014) found that when adolescent sleep habits were observed by parents, they comprehended the process, and ultimately, their advocacy as well as involvement, increased (Wiggins & Freeman, 2014). Sleep health disorders are as medically significant as other health disorders such as heart disease, lung cancer, diabetes, and HIV pathologies (Parsons, VanOra, Missildine, Purcell, & Gomez, 2014). These findings support the need to study parental perspectives to promote adolescent sleep health.

Purpose of the Study

The purpose of this descriptive phenomenological study was to address a knowledge gap in understanding parental views on sleep hygiene in order to promote more healthful sleep habits in adolescents. The study explored the perspectives of parents in communities of Long Island County, Long Island, a high-achieving, high-socioeconomic area of New York State.

High school students are sleep deprived and can be exhausted and unfocused in class. Unable to function at their best, sleep-deprived students exhibit a wide range of unhealthy adaptive behaviors. Research questions were designed to elicit parental perspectives about recognizing unhealthy sleep habits, improving daily sleep health routines, and identifying conditions that may lead to consultation with health professionals. Using Urie Bronfenbrenner's 1974 Ecological Systems Theory as a framework, the study investigated the extent of parental knowledge of their own child's

sleep hygiene and the obstacles to their child's healthy sleep along with the factors which may interfere with this sleep (Bronfenbrenner, 1974).

Theoretical Framework

This study is based on Urie Bronfenbrenner's (1979) Ecology Systems Theory. Bronfenbrenner's work *The Ecology of Human Development* focused on human growth and this growth as a function of interaction between the developing human and its environment. Bronfenbrenner calls this confluence of place, time, and context an ecology. If the individual and their ecology do not have the correct "fit", the individual cannot develop to his or her best potential (1979). These overlapping contexts of home, school, and the social world shape the development and adolescent experiences. This study examined the nests in which teenage high school students develop and used parental experiences as a lens through which to understand development.

Bronfenbrenner's bioecological theory calls this space, "immediate environments within which [the individual] lives, as this process is affected by relations obtaining with and between these immediate settings, as well as the larger social contexts, both formal and informal in which the settings are embedded" (Bronfenbrenner, 1977, pg. 180). Since adolescents today spend time at home, at work or play, and at school, these locations are what the research questions laid out in this study aim to examine. The environment this study sought to explore was the home, school, and play nests through parental experiences.

Today's teens are also a part of complex online and virtual lives. The time spent living and being in these worlds is not the scope of this project, yet how that time interferes with the natural biological processes of sleep and the function of healthy sleep

is. Johnson and Pupilampu's recent addition of the Techno-Subsystem to Bronfenbrenner's systems includes the digital space in which adolescents live an increasing part of their lives (Johnson & Pupilampu, 2008). This digital space includes interactions on a computer screen, an iPad, a Smartphone, or a video gaming system.

Bronfenbrenner argues five systems inform the development of individuals: the microsystem, the mesosystem, the exosystem, the macrosystem, and the chronosystem. Because these systems do not exist on their own, Bronfenbrenner's model highlights the interaction and overlap between these systems. These intersections, according to Bronfenbrenner, contain power to influence the development of the child (Bronfenbrenner, 1979). This study sought to examine the essence of the lived experience of parents who exist in their own adolescent's systems and to record and analyze this experience.

Significance of the Study

This study is significant to the field of education because it has implications for all stakeholders. For educators, this study will contribute to the growing body of information about the importance of considering sleep awareness and sleep hygiene as it pertains to the overall health, well-being, and productivity of the adolescent. Families have a significant influence over the health and well-being of the adolescent (Beebe, 2011). The family and family members are a significant part of the development team. Previous research has indicated that parents play a role in shaping adolescent behaviors (Costanzo & Woody, 1985). Parents will be given a voice in the understanding of their children and their children's well-being in this study. As a result, parents, counselors, and

educators may be better equipped to develop programs to assist their children develop healthy sleep habits, particularly during the critical period of adolescence.

Research Questions

The purpose of this descriptive phenomenological study is to address a knowledge gap in understanding parental views on sleep hygiene in order to promote more healthful sleep habits in adolescents. Considering the research needs within the field, the following research questions have been developed:

1. What factors do parents believe impact adolescent sleep hygiene and routines?
2. From a parental perspective, how does sleep affect their child's well-being?
3. What role do parents (from different socio-economic, family status, ethnic background, etc.) play in monitoring and regulating their child's sleep hygiene?

Definition of Terms

Chronotype: A person's chronotype is the propensity for the individual to sleep at a particular time during a 24-hour period.

Circadian Rhythm: a roughly 24-hour cycle in the physiological processes of living beings,. In a strict sense, circadian rhythms are endogenously generated, although they can be modulated by external cues such as sunlight and temperature.

Parental monitoring: defined as a process which seeks to understand behaviors, and which also structures time and activities within that time.

Sleep hygiene: a collection of behaviors and environmental conditions that aim to ensure a restorative and good quality sleep.

Social jetlag: The discrepancy between sleep banked on weekdays versus weekends.

Ecological Systems Theory: holds that we encounter different environments throughout our lifespan that may influence our behavior in varying degrees. These systems include the micro system, the mesosystem, the exosystem, the macro system, and the chronosystem.

Techno-Subsystem: includes child interaction with both living (e.g., peers) and nonliving (e.g., hardware) elements of communication, information, and recreation technologies in immediate or direct environments. From an ecological perspective, the techno-subsystem mediates bidirectional interaction between the child and the microsystem.

Chapter 2

Introduction

This chapter provides a description of the theoretical framework, Urie Bronfenbrenner's (1979) bioecological theory. The remaining text reviews related literature. The chapter outlines a detailed description of the theoretical framework of Bronfenbrenner's nested development theory. The chapter also provides a detailed description of the biological functions of sleep and the side effects of a lack of healthy, restorative sleep.

Theoretical Framework

This study is based on the theory that adolescents develop in what theorist and behavioral scientist Urie Bronfenbrenner (1979) described as an Ecology System. Bronfenbrenner's book *The Ecology of Human Development* focused on human growth and this growth as a function of interaction between the developing human and its environment. Bronfenbrenner calls this confluence of place, time, and context an ecology (1979). If the individual and their ecology do not have the correct "fit", the individual cannot develop to his or her best potential. The adolescent's experience is shaped by the overlapping contexts of home, school, and their complex social world.

Bronfenbrenner's bioecological theory suggests that the settings in which the developing adolescent spends time should be studied. The immediate environments the individual interacts with influence the developing individual, and this process is affected by the relations in each nest. Since adolescents today spend time at home, at work or play, and at school, these locations are what the research questions laid out in this study aim to study. Today's teens are also a part of complex online and virtual lives. The time

spent living and being in these worlds is not the scope of this project, yet how that time interferes with the natural biological processes of sleep and the function of healthy sleep is. Bronfenbrenner suggests studying these ecologies in a “nested” framework - one where structures interact and overlap (Bronfenbrenner, 1979). This nested system is similar to the structure of the Russian Doll (Bronfenbrenner, 1979).

Bronfenbrenner was interested in the interplay between the different environments a child lived in and claimed that a relationship between each of the environments existed in a space where information and communication were essential (Bronfenbrenner 1979). Bronfenbrenner argues five systems inform the development of individuals: the microsystem, the mesosystem, the exosystem, the macrosystem, and the chronosystem. Because these systems do not exist on their own, Bronfenbrenner ‘s model highlights the interaction and overlap between these systems. These intersections, according to Bronfenbrenner, contain power to influence the development of the child (Bronfenbrenner, 1979).

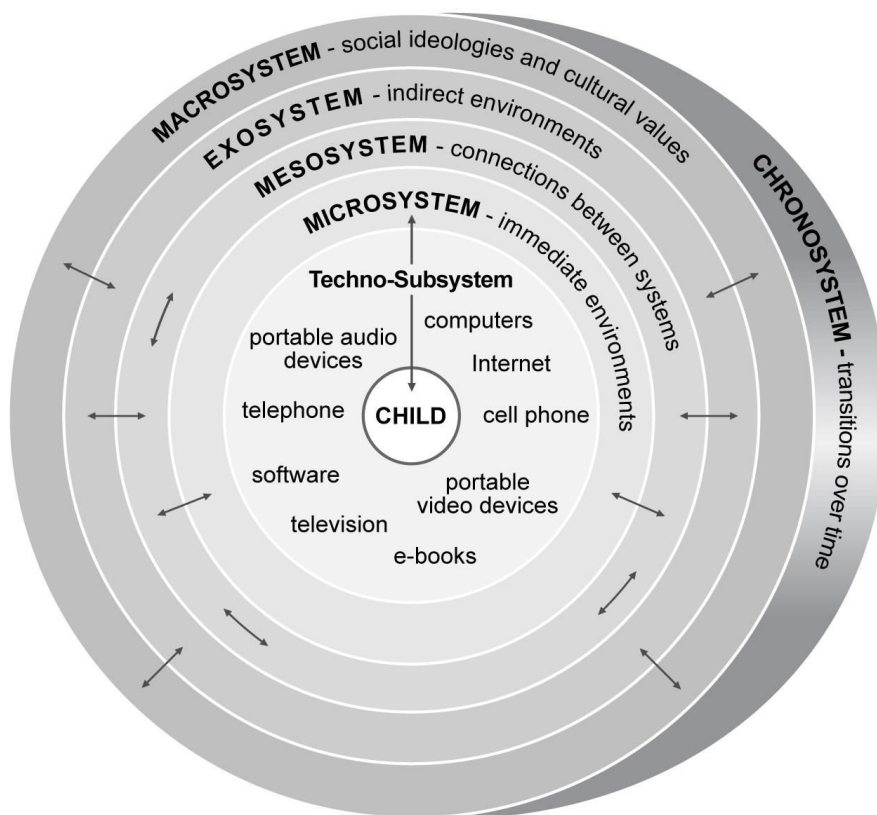
The systems Bronfenbrenner lays out also take into account the events in contexts like nesting Russian Dolls where the developing individual is not physically present (Bronfenbrenner, 1979). Today, the modern home setting is influenced by events that are happening in a virtual world. This virtual world is a place where adolescents are spending their time and it is often without the knowledge or supervision of parents. A parent may know their child is at home, yet they are interacting with the screens in their lives - thus bringing a new microsystem into the home. (Gamble, et. al., 2014).

Bronfenbrenner also maintains the idea of ecological transitions. Ecological transitions are shifts in the roles or the settings that occur over an individual's lifetime

(Bronfenbrenner, 1979). Within each shift comes a change in expectations. When a child reaches adolescence and moves into high school, parents relinquish control over bedtimes (Carskadon, 2011). Since this time in development is one of natural circadian shifts, adolescents are prime for distractions and infiltrations into their home ecosystem (Carskadon, 2011; Bronfenbrenner, 1979). Bronfenbrenner's framework places adolescents or students at the center of this comprehensive series of nests and contexts that interact with the child as he or she develops.

Ecological systems theory (Bronfenbrenner, 1979) emerged prior to the Internet revolution and the developmental impact of then-available technology (e.g. television) was conceptually situated within the child's microsystem. In theoretical response to dramatic increase in childhood use of digital technologies and the continuously increasing complexity and availability of childhood technology, the ecological techno-subsystem has been proposed (Johnson and Pupilampu, 2008). As illustrated in Figure 1, the techno-subsystem includes child interaction with both living (e.g. peers) and non-living (e.g. hardware) elements of communication, information, and recreation technologies in immediate environments. This refinement to Bronfenbrenner's systems is essential in understanding the new and emerging form of the microsystem. The intimate world of today's child is radically different than that of his or her parents (Johnson, 2010).

Figure 1: Urie Bronfenbrenner's Ecological Systems Theory.



The ecological techno-subsystem (Johnson & Puplampu, 2008).

The concept of interaction between different systems is called proximal processes. In 1999, Bronfenbrenner reclassified his systems as a process, person, context, and time (PPCT) framework (Bronfenbrenner, 1999). The interaction, called the proximal processes, is essential for development of individuals. The home and the school can be understood as environments that can change with the attitudes and interactions that affect the individual (Bronfenbrenner & Morris, 1998).

Using Bronfenbrenner's Ecology Systems theory with ecological techno-subsystem will allow this researcher to frame the study of parental perspectives in a way

that places the individual at the center of the ecology and pose questions from each of the systems to understand what environments may affect parental perspectives.

Review of Related Research

The review of related research explores biological aspects of sleep, environmental factors which interfere with sleep and the negative effects of lack of sleep. The review will also examine the role and function of parental perspectives in their teenagers' lives.

Biological Aspects of Sleep

Each human has a chronotype – an individual biological clock that controls the body's natural rhythms - and this chronotype is regulated by the circadian cycle (Czeisler and Gooley, 2007). The circadian cycle, often referred to as circadian rhythm, is the 24-hour clock that controls the regulation of biological functions. Humans are not alone in having a circadian rhythm; most organisms also have a circadian rhythm. Sunlight is the resetting “synchronizer” in human beings. This synchronization is called “circadian photoreception”. Even those without sight are sensitive to circadian photoreception (Czeisler and Gooley, 2007). The circadian rhythm and chronotype is frequently referred as the sleep/wake cycle.

Like most living organisms, humans function in relation to their biological rhythms called a circadian rhythm (Touitou and Haus, 1992). Humans are highly complex beings and operate within the biological rhythms that are synchronized by environmental factors, such as day-night alteration. Humans are influenced by the sleep-wake cycle and social life cycle as well as internal factors such as genetics (Touitou, 2013). All parts of the ecology of development play a role in how closely a child follows

his or her natural rhythms, and the interplay between each nest promotes wellness, or, conversely, obstructs wellness.

For all mammals, the biological clock is regulated by the suprachiasmatic nuclei (SCN), each a pair of small nuclei in the hypothalamus of the brain, above the optic chiasma, thought to be concerned with the regulation of physiological circadian rhythms (Touitou and Haus, 1992).

Light is of the utmost importance in managing the human circadian rhythm. In this respect, it is important to stress the significance of sleep in structuring the circadian system, a function well demonstrated in humans through sleep deprivation experiments (Akerstedt et al., 2008). Light and social synchronizers “connect the circadian clock to the external environment while output pathways transfer circadian rhythmicity to the organism’s physiological, behavioral and biochemical parameters” (Bartness et al., 2001; Abe et al., 2001).

Disruption in the sleep cycle can be caused by diseases that modify the rhythm period such as mood disorders (McClung, 2007), hormone-dependent cancers (Touitou et al., 1996), alcoholism (Reinberg et al., 2010; Danel and Touitou, 2004; Danel et al., 2009), and the use of certain medications (Dispersyn). This is called desynchronization, which is characterized by sleep disorders leading to insomnia, fatigue, and mood disorders linked to depression (Levandovski et al., 2001).

Adolescent Sleep

As teenagers enter and then subsequently move through adolescence, a biological shift occurs and causes these teens to stay up later (Orzech, 2013). Bronfenbrenner marks this shift as well in his microsystem, now called Techno-Subsystem as part genetic

variations and environmental influences can interfere with the efficiency of the chronotype. For an adolescent, environmental factors include socio-environmental factors. Social factors for adolescents include school schedules and work schedules as well as increased academic demands and social demands (Orzech, 2013). Today's adolescents often use weekend days to compensate for sleep they do not receive during the week day when they need to adhere to a schedule (Orzech, 2013). This discrepancy between sleep banked on weekdays versus weekends is called social jetlag. Sleep quality is interrupted and therefore, well-being is affected in those who experience social jetlag (Dinich, et. al. 2006).

Environmental factors also include parental induced school stress. Because today's high school students face such grueling academic pressure, greater than their own parents had to face, modern parents contribute to the tremendous stress and pressure placed on these students (Ciciolla, et. al. 2017). Reports of higher unemployment and more competitive college acceptance rates are driving this growing academic pressure which leads to stress-filled lives. Students self report that getting into college is the biggest stressor in their adolescent lives (Ciciolla, et. al. 2017).

The consequences of these stresses lead to distinct problems in adolescents including a struggle with wellness, disengagement with academics, chronic stress, and difficulty adjusting. When children are consumed with pursuits of wealth, success, and top colleges as a means to this success, they may suffer because these pursuits do not satisfy the basic psychological needs (Maslow,) and foster excessive ego boosting and social comparison. These pursuits do not create well children. Focusing on the extrinsic goals leads to decreased mental health and social fulfillment and functioning.

When children perceive their own parent's feelings about the importance of success at any cost, they are affected negatively. Often, parents tend to stress life values in discussions, yet they spend much more time talking about and obsessing about academics and material gains. This behavior reinforces students' understanding of their parents true priorities.

A 2019 study found that only 35% of adolescents aged 10 to 14 obtain the optimal 9 or more hours of sleep on school nights (Gunn, et. al.). In a study of Canadian high school students also demonstrate the sleep loss that affects adolescents. As many as 70% of high school students get less than the recommended sleep for their age and more than 50% of these students report feeling exhausted and sleepy during the day (Gruber, et. al. 2014). Many adolescents in the United States also suffer from chronic insufficient sleep, especially during the school year of September through June (Orzech, 2013). American high school students average 7 to 7.5 hours of sleep each night.

Only 35% of young adolescents (10- to 14-year-olds) obtain the optimal amount of sleep, which is approximately 9 or more hours on school nights. Adolescents who fall behind on this scale have an increased likelihood of prehypertension, psychopathology and other emotional difficulties (Gunn, et al, 2019).

Environmental Factors That Affect Adolescent Sleep

The proliferation of electronic devices in the techno-subsystem such as cell phones, smartphones, tablets and televisions has been found to disrupt sleep in adolescents in recent years (Gamble, et al., 2014). While the presence of these devices in a bedroom has been linked with negative sleep behaviors, it is the use of the devices that has been found to be most problematic. Gamble's report revealed that adolescents in

large numbers are using devices in the hour before sleep. Seventy-two percent report using cellphones, 60% report using laptops, and 23% report using video games in the hour before sleep. Since the stimulation from these devices are particularly disruptive in the dark nighttime hours, this trend is concerning. In fact, this behavior has been linked to daytime sleepiness, increased caffeine use, and poor sleep quality (Gamble, et al., 2014).

Negative Effects of Lack of Sleep

According to the 2014 Technical Report from the American Association of Pediatrics entitled, “Insufficient Sleep in Adolescents and Young Adults: An Update on Causes and Consequences”, there are three main focuses to consider in order to understand the consequences of insufficient sleep: 1) there is an increased number of students in grades 9-12 who are not getting sufficient sleep when that number is defined as more than 8 hours. 2) Unhealthy sleep behaviors, including sleep-wake patterns, electronic media use in the bedroom, and unhealthy levels of caffeine use. 3) Mental and physical health consequences of inadequate sleep including depression, obesity, suicide-idealization, and poor academic performance (Owens, 2014). The causes and consequences of sleep disturbances and unhealthy outcomes are intertwined. Sleepiness causes unhealthy decisions and unhealthy decisions can cause a lack of sleep, such as alcohol use (Owens, 2014). Alcohol use can disrupt healthy sleep, and a lack of sleep can cause risk-taking behaviors, such as using alcohol. Because of the complex nature of this problem, attention must carefully be paid to sleep health.

Mood disorders and suicide ideation have been associated with sleep problems. There have been findings associating sleep disturbances such as insomnia with depression treatment. Sleep debt in college students has been studied and a correlation

between insomnia and depressive symptoms has been found (Russel, et al., 2019). Additionally, sleep deficiencies in high school students has been associated with depressive symptoms (Owens, et al, 2019). Anxiety and depression are reported in high school students who receive less than eight hours a night of sleep (Owens, et al., 2019). And, perhaps most alarming, is the connection between lack of sleep and adolescent suicide (Liu, 2006; Fitzgerald, Messias & Buysse, 2006). The APA report stated that middle and high school students who have parental determined bedtimes of midnight or later are significantly more likely to suffer from depression and have suicide ideation compared with those of the same age whose parents set bedtime at 10:00 PM (Owens, 2014; Porrás-Segovia et. al, 2019). The most severe suicide-ideation is seen in students who get less than 4 hours of sleep each night.

In addition, the most frequent comorbid conditions of sleep disturbance is Problematic Internet Use (PIU). Previous studies report that PIU among adolescents usually occurs at night, and can disrupt adolescents' sleep-wake schedule, which may disrupt sleep schedules and cause or sleep disturbances. Excessive PIU among adolescents was also found to be associated with insomnia and the disturbance of sleep (Ekinci, Celik, Savas, & Toros, 2014; Islamie, Allahbakhshi, Valipour, & Mohammadian-Hafshejani, 2016). Considering this problematic suicidal behavior, the association between PIU and the sleep-cycle must be considered. The sleep disruption may play a major role in the suicide ideation and addiction to the internet.

Reduced and insufficient sleep is related to obesity in both adolescents and adults. Because of neurological and biological processes, those who sleep less end up eating more calories and exercising less (Al-Disi et al., 2017). Problems in levels of the

neurohormones ghrelin and adiponectin, the hormones which control hunger and satiety, have been shown to be problematic in adolescents sleeping less than 5 hours per day (Hasler, Buysse & Klaghofer et al.). These same adolescents are shown to have higher levels of carbohydrate consumption which contributes to higher levels of obesity. One shocking fact Owens presents in the 2014 APA report is that sleeping one hour less than the recommended 8 hours of sleep makes an adolescent 80% more likely to be obese. The concerns the APA has on the link between obesity and sleep deficiencies will be addressed in this study.

Daytime sleepiness is associated with car crash fatalities. In a study of high school drivers, one fifth reported insufficient sleep and almost two thirds complained of daytime sleepiness (Findlay, 2000). 40% of these students reported being sleepy while driving and 11% of student drivers reported sleepiness as the cause of crashes. Young drivers, especially young men, are at high risk for serious car crashes related to drowsy driving (Findlay, 2008). A recent study showed that self-reported tiredness while driving at night correlated with slowed reaction times. With the addition of alcohol, the reaction times in all drivers decreased significantly. When combined with small sleep deficits, small amounts of alcohol contributed to major detrimental effects on reaction times and driving performance. Sleep deprivation combined with alcohol use has a major deleterious effect on driving performance (Findlay, 2008).

Parental Monitoring

Parental monitoring is essential in reinforcing healthy sleep habits. Parents are an essential part of the child's microsystem and therefore influence the development of the child. Parental monitoring keeps adolescents healthier and promotes restful and

restorative sleep (Gunn et al. 2019). Parental monitoring is defined as a process that seeks to understand behaviors and that also structures time and activities within that time. Parental monitoring is known to be linked with substance use, social-emotional problems, and health behaviors. In a study by Dittus in 2015, parental monitoring was found to be associated with healthier exercise and eating habits in young children. Fewer high-risk sexual behaviors were also found to be associated with close parental monitoring (Dittus et al., 2015).

Similar opportunities for monitoring occur around children's sleep, although these are studied less frequently. Gunn et al. found that parents that are aware of their child's bedtime behavior have children who wake in the night fewer times and sleep for a longer duration (Gunn et al., 2019). Parental rules regarding the daily activities of their children lead to more weekday sleep in 12-19 year-olds and 13-18 year olds (Gunn et al., 2019). In fact, Gunn's study reported that in a nationally representative sample of 6-to-17 year olds, bedtime rules were associated with longer sleep duration up to one hour.

Circadian rhythms are set by what is called a zeitgeber, a rhythmically occurring natural phenomenon that acts as a cue in the regulation of this rhythm. Parental set rules can also prevent depressive disorders and suicide-ideation (Owens, 2014). According to Gunn, et al., parental rules function as a social zeitgeber (Gunn et al, 2019). Parental monitoring and rules also have an effect on chronotype. Parents who had more supervision of their child's sleep were associated with earlier chronotypes in 11-to 20-year olds, and those children who did not have monitoring experienced a shift in chronotype to later evening preference than can be explained by developmental changes alone (Gunn et al., 2019).

Since parenting practices and monitoring practices change as adolescents gain more independence, regulations and attention to activities also change. Gunn's study revealed that awareness of daytime activities including caffeine use, screen time, television watching has an impact on sleep duration (Gunn, et al. 2019). Perhaps of most critical importance to this study, Gunn's study revealed that parental monitoring of bedtimes and bedtime routines yielded an hour extra of sleep per night for an adolescent. This extra time is paramount to optimal health. There is a gap in the knowledge about parental monitoring and this study will add to the most recent (2019) data available on the subject. The structure of parental monitoring can help reinforce healthy sleep habits and create sleep security for their adolescents in order to yield better health outcomes. (Kobak, et al., 2017)

A central challenge to parenting is the ever-changing nature of their child and the continual need to adapt and change parenting behaviors. As children enter adolescence, the child is wired to begin to test independence, make autonomous decisions, and increase social interactions with peers (Kobak, et al., 2017). The new time spent without parental supervision creates opportunities to engage in risk-taking behavior. Parents who monitor their children in an appropriate manner seem to maintain optimal caregiving (Kobak, et al., 2017). As young children transition to adolescence, parents change the way they monitor their children's sleep patterns. Millman's study found that 30 children aged 10 and 11 were significantly more likely than children who were 12-13 to report that they had parents who set their bedtimes. In high school students, this number was far less, only 5% of students had parent-set bedtimes (Millman, 2011). Parental attention to setting bedtimes changes dramatically as adolescents age and then enter into high school.

Ecology systems theory suggests as much: The microsystem influences the development of the child (Bronfenbrenner, 1979).

Buxton et al.'s 2015 study of protective family routines for healthy sleep revealed that 17% of parents did not enforce any formal sleep rules (Buxton et al. 2015). Parents of older children enforced fewer sleep time rules. Only 35% of parents of 15-to-17-year-olds have rules for sleep time, watching television, caffeine use, use of smartphone, or computer tablet rules (Buxton et al. 2015). Buxton's study showed that parents who enforced bedtime rules had children who slept 1.0 hours longer than those parents who did not have such rules. Parents who enforced rules about the consumption of caffeine had children who slept 0.8 hours more than those children whose parents did not enforce a caffeine rule (Buxton et al. 2015). This study also found that parents who always enforced rules about smartphones and bedtime had children who slept approximately 0.9 hours more than those who did not have rules about smartphones in place (Buxton et al. 2015).

Understanding parental perspectives may provide helpful insights into the problem of poor sleep in adolescents. Overall health and well-being can be improved with such insight (Costanzo & Woody, 1984). There is little research that investigates the parental perspectives on sleep and how that information can be useful to educators; therefore, this research is an important addition to the current body of knowledge educators have access to.

Environmental Factors That Interfere with Sleep

Because adolescence is a time of exploring independence and setting individual limits, adolescents today are consuming technology unsupervised at a dramatically higher

level than just a decade ago (Tashjian, Mullins, & Galvan, 2019). As mentioned before, cell phone use before bedtime, in the dark, delays sleep onset. Those adolescents who report more cellphone use do not meet the APA's sleep recommendations. Electronic devices left on in children's' rooms significantly reduces children's sleep quality. These electronic devices can include television sets, video game consoles, laptops, and tablets (Dimitriou, Knight, Milton, 2015). Media consumption in the bedroom in the hours before bedtime interferes with restorative, healthy sleep (Adams, et al., 2017). Interestingly, those adolescents who report using the devices to help them sleep are less likely to obtain the recommended hours for sleep (Eggermont & Van den Bulck, 2006).

The use of stimulants such as caffeine, nicotine, and alcohol are also environmental factors that interfere with sleep, and, as part of the cyclical nature of this problem, are caused by lack of sleep. Adolescents who consume caffeine in higher quantities are twice as likely to suffer from sleep problems (Wright et al., 1997). Cigarette smokers report higher level of sleep latency problems and also report more daytime sleepiness (Phillips & Danner, 1995).

Exercise is also an environmental factor that influences healthy sleep. Adolescents who participate in regular exercise report better or healthier sleep periods (Brand, et al., 2010). Adolescents who receive an average of 8.5 hours of exercise a week report more restorative sleep (Brand, et al., 2010).

This study sought to bridge the gap between what research has demonstrated about the potential for change in adolescent behaviors regarding diet and nutrition and the same potential for change in maintaining healthy sleep habits. The study sought to

understand the shared experiences of the parents in a high-achieving suburban district and add to the existing body of research about attitudes and student well-being.

This study sought to examine the lived experience of parents as they described the essence of their perspectives on their own child's sleep hygiene. Bronfenbrenner's Ecological Systems Theory and Johnson and Pupilampu's Techno-Subsystem serve as nests in which an adolescent develops. The interactions between each system and the impact these systems have on adolescent sleep was the primary interest in this study. This researcher sought to elicit and analyze thematic statements that captured the lived experiences of parents as it related to adolescent sleep hygiene.

Conclusion

Adolescence is marked by a time of change for young people. Biological changes and shifts intersect with social, academic, and familial adjustments. The confluence of these changes also comes with a shift in parental supervision. Because parents reduce the amount of supervision they provide to adolescents, there is an increase in risk-taking behaviors in this age group. One area in which parents tend to reduce supervision in adolescents is monitoring sleep hygiene. The decreased level of parental supervision and the increased use and abuse of technology in unsupervised areas has led to a pattern of unhealthy sleep schedules in adolescents. This study sought to examine the experiences of parents in high-achieving districts as it pertained to their adolescents' sleep hygiene.

Chapter 3

Introduction

This chapter will highlight and discuss the methodological design and procedures of this phenomenological qualitative study. Methods and Procedures are discussed in a step-by-step manner in order to ensure transparency in the study. The participants in the study are detailed and highlighted to create a clear picture of the parents interviewed in this process. The primary instrument used to collect data was an in-depth interview; this instrument was aligned with Bronfenbrenner's Ecology System's Theory as laid out in Chapter 2.

Methods and Procedures

The research questions were addressed using a phenomenological qualitative methodology with samples collected from parents in two high schools within the same high-achieving district on Long Island, New York. Phenomenological study investigates various perceptions of a particular phenomenon; descriptive phenomenology is concerned with revealing the essence of a phenomenon and the lived experiences under investigation (Colaizzi, 1978; Chan, Yuen-ling, & Wai-tong, 2013). Because the purpose of the qualitative study was to understand the lived experiences of a group of people at a specific period of time—the experiences of parents of different socio-economic, ethnic, gender in suburban Long Island, New York — a phenomenological approach will be used (Moustakas, 1994).

Understanding phenomenological research methods as laid out by Moustakas(1994), this researcher sought to analyze the data using epoche,

phenomenological reduction, imaginative variation and then synthesis when processing and analyzing data obtained through in-depth interview. Moustakas's method, when applied to interview responses, provided emergent themes that were analyzed and evaluated by this researcher. The data was analyzed through reduction to significant statements and quotes that are combined into themes. This researcher developed a textual description of the experiences, a structural description of the experiences and conveyed the two to express the overall essence of the experience. Phenomenology is a method of enquiry that enables researchers to understand the fundamental structures of experiences (Cresswell & Ploth, 2018). It is also useful for exploring previously unknown or overlooked experiences (Berg & Lune, 2012): "Qualitative researchers are interested in understanding the meaning people have constructed, that is, how they make sense of their world and the 40 experiences they have in the world" (Merriam, 2008, p. 6).

This approach was chosen because this researcher examined the parents in their "real world conditions" and in their "everyday roles" (Yin, 2011, p. 8). Research of parental perceptions on adolescent sleep hygiene was a search for deeper meaning of the participants lived experiences (Marshall & Rossman, 1995). Qualitative approaches also allow researchers to share in the understanding of their experiences (Berg & Lune, 2012). This researcher was not interested in her own perspectives, but in the perspectives and views of the parents in the sampling (Merriam, 1998).

Phenomenological research was the appropriate method for this study as it examines the single phenomena of parent's perspectives of their own adolescent's behavior which relates to their child's well-being. Dimitriou, et. al (2015) found that healthy, restorative sleep influences school performance. Current research indicates

young adolescent sleep habits are influenced with parent monitoring (Gunn, et.al. 2019). Phenomenological research is appropriate because it addresses the perspectives these important figures in an adolescent's life and it may lead to understanding and charting a course towards prevention and treatment of the problem of sleep deprivation in adolescent students.

Research Questions

The purpose of this descriptive phenomenological study is to address a knowledge gap in understanding parental views on sleep hygiene in order to promote more healthful sleep habits in adolescents. Considering the research needs within the field, the following research questions have been developed:

1. What factors do parents believe impact adolescent sleep hygiene and routines?
2. From a parental perspective, how does sleep affect their child's well-being?
3. What role do parents (from different socio-economic, family status, ethnic background, etc.) play in monitoring and regulating their child's sleep hygiene?

Setting

This qualitative study was conducted in a suburban high-achieving district in New York State. The study was conducted in the two large sized high schools in the district. East High School has 1,220 students and West High School has 1,133 students. The setting was important to this study because this study sought to understand the lived experiences of parents and adolescents in a high-achieving district. Long Island District's Richmond East High School boasts a 94% graduation rate, has 76.4 college readiness score and is ranked in the top 200 of all high schools across the United States (U.S News and World Report, 2019) and Richmond West High School is ranked in the top 600 of all

high schools and has a 94% graduation rate and has a 74.6 College readiness index(US News and World Report, 2019). In order to understand perspectives in a high-achieving district, Long Island High School District proved to be an ideal setting. Demographically, Long Island High School District is 48.6% White, 39.2% Asian or Native Hawaiian/Other Pacific Islander, 9% Hispanic or Latino, 1% Black, and 2.2% Multiracial.

Access to the site was gained by seeking permission and approval from the district's Assistant Superintendent of Curriculum and Instruction. Once the Assistant Superintendent read this researcher's proposal, he granted permission to use the site for study.

In order to recognize and address biases related to setting, invitations were sent to every parent email from both high schools. Participants were selected in order to align with the district's demographic make-up and used gender and marital status as choice attributes in order to avoid bias. Neither grade point average, gender, age, nor student name was used in choosing participants. This exclusion allowed the researcher to avoid choosing parents of high-achieving students only. The sample was designed to provide a variety in participants that would accurately reflect the make-up of the district .

Participants

This was a qualitative study and the selection of data was purposeful. The design of purposeful sampling is to intentionally sample a group of people who can best inform the research topic (Moustakas, 1994; Creswell & Poth, 2018). For a phenomenological study, it is necessary for the participants to share common traits and to have experienced the same phenomenon (Creswell & Poth, 2018). In this study, the 11 participants came

from two different high schools within the same high achieving district in suburban New York. All participants were parents who had students in one of the high schools. The researcher was unaware of the name, gender and the age of the adolescent until the in-depth interview in order to avoid researcher bias. For the sake of anonymity, each participant was assigned a pseudonym and any identifying information has been redacted. Table 1 describes each participant and his/her gender, ethnicity, child's gender, year in high school, and lastly the marital status of the parent.

Table 1: Description of parent participants

Participant Pseudonym	Gender	Ethnicity	Adolescent's Gender and Year in High School	Marital Status
Mrs. Hernandez	Female	Latina	10 th grade daughter	Married
Mrs. Dunn	Female	White	10 th grade daughter	Married
Dr. Lin	Male	Asian-American	11 th grade daughter	Married
Mr. Sadiq	Male	Middle Eastern	11 th grade daughter	Married
Ms. Mandel	Female	White	11 th and 9 th grade daughters	Married
Dr. Brown	Female	White	11 th grade son	Married

Mrs. Davidson	Female	White	9 th grade daughter	Divorced
Mrs. Barry	Female	Middle Eastern	12 th grade son	Divorced
Mrs. Aolini	Female	White	12 th grade son	Married
Mrs. Chang	Female	Asian- American	11 th grade daughter	Married
Mrs. Chan	Female	Asian- American	11 th grade son	Married

The following provides more nuanced descriptions of each individual parent participant.

Mrs. Hernandez. Mrs. Hernandez is a new parent to the district, having moved from New York City. Her daughter is the first member of her family to attend one of the district's high schools.

Mrs. Dunn. Mrs. Dunn is a parent with two children who have already graduated from the district and has one daughter in the 10th grade. She is also a teacher herself and has been teaching for twelve years.

Dr. Lin. Dr. Lin is a fifth-generation Chinese Medicine Practitioner. His patients include adults and teens, the latter who often seek him out for acne treatment. He has a son who has graduated from this district, and he has a 11th grade daughter.

Mr. Sadiq. Mr. Sadiq is the father of an 11th grade daughter and a middle school aged son. He reported that his daughter still likes to spend time with the family and will sometimes sit and play guitar for them all.

Ms. Mandel. Ms. Mandel is the mother of three daughters, two of whom are high-school students. Her oldest daughter is in her sophomore year of college. She grew up in this town and also attended one of the high schools in the district.

Dr. Brown. Dr. Brown grew up in Pennsylvania and has been a practicing physician for the past twenty-four years. She has two sons; one is a high school junior and the other is an eighth grader at the high school's feeder school. Dr. Brown infused her discussion with her own medical knowledge.

Ms. Davidson. Ms. Davidson is the mother of three daughters, the oldest of whom is in 9th grade. Ms. Davidson is a high-school Advanced Placement teacher in another high-achieving district in suburban Long Island.

Mrs. Barry. Mrs. Barry is the mother of one son, a senior at one of the high schools. She did not describe her son as caring much about his schoolwork and grades, yet she described him as being very involved with activities and sports at school.

Mrs. Aolini. Mrs. Aolini is the mother of two children, one a senior son in one of the high schools, one a student at an Ivy League college. She reported that her children are very different in the way that they manage the demands of a rigorous course load. She reported that her son did apply to the same Ivy League College as his sister, but did not get in.

Mrs. Chang. Mrs. Chang has an 11th grade junior daughter and reports that she truly believes her daughter can be more productive and efficient if she became less engaged with her online life.

Mrs. Chan. Mrs. Chan is the mother of an 11th grade son. She was very direct in her responses. She is a first-generation immigrant from China and has lived in the United States for six months with her son.

Data Collection Methods

The primary method of data collection was a recruitment survey followed by in-depth interviews with parents from different socio-economic, ethnic, and marital status groups. Creswell discusses the importance of selecting the appropriate candidates for interviews. Acquiring participants who were willing to openly discuss their experience was of paramount importance to this researcher. Since this researcher sought to uncover the story of each participants, willing participants were sought so they would feel free to disclose experience. Table 1 describes examples of data that can be collected over the course of the study. One-on-one interviews containing general, open-ended questions in order to elicit responses about the participants experiences. The interview protocol was designed to uncover the experiences within the theoretical framework of Bronfenbrenner's nest. This alignment is listed in Table 3. Audio transcripts were created in order to allow for consistent transcription (Creswell, 2012). Interviews were the method used to elicit data because they uncover the story behind the parental experiences and they provide in-depth information around perspectives of adolescent sleep hygiene. Interviews are used to pursue meanings and themes in the experiences of the subjects (Creswell, 2014). Documents were created as transcripts of interviews and from survey responses.

Purposive sampling is widely used in qualitative research for the identification and selection of information-rich cases related to the phenomenon of interest (Palinkas, et al., 2015). This study used purposive sampling in order to target socio-economic, gender, and ethnicity differences in the population to be studied in order to complement the demographic make-up of the school population. This allowed comparison between characteristics of the groups if statistically significant.

Table 2: Data collection methods

Online Survey delivered to 3, 204 parent emails	Interviews
82 Online responses via Google Forms	11 Independent 1-hour in person or technology-based interview with each parent.

The interview protocol is described by Creswell as a form used for “recording and writing down information obtained during an interview” (Creswell, 2014, p. 292). This researcher created an interview protocol that includes a heading, date, interviewer, and interviewee; standard instructions that were shared exactly the same way for each interview; ice-breaking questions, and the questions laid out in Table 2. The interview questions were open-ended and addressed the parental perceptions of their own adolescent’s sleep hygiene. The interview

questions were based on the Bronfenbrenner's Ecology Systems Theory and align with the research questions. A log was kept as the interviews were recorded in order to back up data that could have been lost due to recording problems. Notes to the researcher were kept on this log as well as a general summary of the participants questions.

Table 3: Alignment of interview questions with research questions and theories

Research Question	Interview Question	Bronfenbrenner's Nest
1.What factors do parents identify as interfering with their adolescent's sleep hygiene?	1,3,5,6	Macrosystem, Microsystem, Techno-Subsystem
2.From a parental perspective, how does the lack of sleep interfere with their child's well-being?	4,5,8,9,11	Microsystem, Chronosystem, Techno-Subsystem
3 What role do parents (from different socio-economic, family status, ethnic background, etc.) play in monitoring and regulating their child's sleep hygiene?	2,6,7,10	Exosystem, Macrosystem, Mesosystem

Data Analysis Methods

Epoche, Phenomenological Reduction, Imaginative Variation and then

Synthesis was used when processing and analyzing data obtained through in-depth interview (Moustakas, 1994). Moustakas' heuristic process was employed to analyze the interviews (Creswell & Poth, 2018; Moustkas, 1994). The study used Moustakas's (1994) heuristic

process in phenomenological analysis to extract common themes across the data collected. The first step was epoche, or bracketing, in which the researcher set aside, as much as possible, her preconceived experiences of parental perspectives of adolescent sleep phenomenon. Second, the researcher conducted horizontalization of the data by listing every significant statement relevant to the topic and giving them equal value. The researcher used computer-assisted qualitative data analysis software (CAQDAS) NVIVO software to assist her in organizing statements of relevant significance and coded according to thematic cluster. Third, the researcher looked for clusters of meaning in the data and used Bronfenbrenner's nesting theory to organize ideas in the different arenas in adolescent life.

After the first three steps were conducted, the researcher created textural and structural descriptions of the data to search for how the phenomenon was experienced and why it was experienced. Textural description, as defined by Creswell and Poth (2018), provides a description of what participants experienced, and included verbatim examples. This step was conducted first, as it provided evidence on what happened, or what the experiences were of the phenomenon studied. Structural descriptions, on the other hand, provided explanations of how the experience happened, in which the researcher reflected on the setting and

context in which the phenomenon was experienced (Creswell & Poth, 2018). Using data collected through interviews and observations, the researcher constructed a description of how parental perceptions were experienced and how parents perceived the phenomenon and its impact on their child's well-being. The final step in phenomenological analysis and representation of the data included writing a composite description of the phenomenon, which includes both textual and structural descriptions, and developing the essence of the experience (Moustakas, 1994).

Data Collection Procedures and Analysis

After approval from the University's Institutional Review Board, parents from both high schools in the district were approached to participate in the study. A ParentLink email was sent by the administration from both high schools to all parents. ParentLink is a service through Blackboard that allows schools to communicate immediately and directly through email. The ParentLink included a letter introducing the study and requesting participation. The letter is included as Appendix D. Parents responded to the ParentLink by clicking on a Google Form that brought each willing participant to a demographic survey. The demographic survey is included as Appendix E. Parents indicated their gender, ethnicity, approximate income level, and marital status on the invitational, demographic survey. This researcher sought to choose a variety of participants and chose a diverse population to interview. Surveys were distributed through the parent portal email application using Google Forms and were sent to all parents in both secondary high schools in the district, primarily as a recruitment tool. The surveys

were used first because some parents may have been hesitant to answer questions about their own children without anonymity (Cresswell, 2014).

Following the survey, interviews were conducted with a select sampling of 11 parents that represented a variety of backgrounds and who were willing to participate in the study. After reaching out to 25 parents who completed the survey by email, 11 responded and were willing to be interviewed in person. Each parent visited the library of the high school which their child attended in the study and sat with this researcher for an hour-long in-depth interview. The interview was recorded and transcribed using the Otter.io software and the researcher took notes as the interview took place. After obtaining informed written consent, qualitative data was collected via survey followed by in-depth, one-on-one interviews. The interview tool is included as Appendix C

This researcher derived themes within the data collected by narrative analysis. The researcher read the transcripts of the interviews three times each. Before reading each transcript, this researcher uploaded the document into the NVIVO software. NVIVO is able to isolate words that appeared often throughout the interviews. Next, on each read, the researcher engaged in thematic analysis and coded statements that represented thematic statements and paid particular attention to words that recurred most frequently. The researcher had to decide if the statement was thematically relevant, and if it was, she coded and collated the statements into a NVIVO node. Once the documents were analyzed and coded into NVIVO software, the statements were collated and this process allowed for themes to emerge. These themes were then analyzed as a separate document and this

researcher was able to elicit thematic findings from the data.

Bronfenbrenner's Systems formed the basis for the initial codes. Further codes were then added based on interview information that emerged based on findings in the data. Interviews were the primary data sources for this study; there were 11 parent interview transcripts studied. There were 164 statements of thematic relevance coded and analyzed by this researcher. Table 4 demonstrates the amount of statements for each finding:

Table 4: Emergent theme statements coded

Emergent Theme	Number of References and Coded Statements
Exhaustion	11
Poorly Defined Sleep Habits and Routines	24
Stress or Stress due to Rigorous Course Load	18
Social Media and Computer Distractions	30
Progress in School Trumps Biological Well-Being	24
Awareness of Sleep Habits	12
Intervention in Sleep Habits	8

These statements were coded by emergent theme and organized by overlap in Bronfenbrenner's systems. Due to the nature of phenomenological qualitative research, documents were analyzed and read three times to determine if the essence described overlapped into one of these themes. This was intricate,

nuanced analytical work. Data were triangulated with member checking of transcripts once the transcripts were processed in Microsoft Word and emailed back to participants.

Trustworthiness of the Design. Trustworthiness is important for measuring the value of research and its effects on society as a whole (Collier-Reed, Ingerman, & Berglund, 2009). In order to ensure rigor of study, researchers use criteria as they collect data, including naturalistic research (Lincoln and Guba, 1985; Creswell and Poth, 2018). Trustworthiness involves establishing credibility, transferability, dependability and confirmability to validate the study and ensure that the findings are replicable and true (Lincoln and Guba, 1985). Since parental perceptions can lead to a change in societal behaviors and perceptions in adolescent sleep, the focus on trustworthiness is appropriate.

To ensure credibility, interviews were conducted by this researcher until saturation was reached. Interview notes and description are another way of achieving external validity and credibility and transferability (Creswell & Poth, 2018; Lincoln and Guba, 1985; Collier-Reed et al., 2009). Thick description in interview is when the researcher describes the phenomenon in rich and deep detail in order to allow for conclusions and findings to be found and for these conclusions to be transferable to other situations and people.

To establish trustworthiness, this researcher used epoche, or bracketing, to set aside researcher bias and engage in reflexivity (Moustakas, 1994). This researcher has a particular interest in healthy sleep habits and is raising adolescents

of her own and this bias may influence research outcomes; therefore, it was necessary to engage in bracketing and reflexive processes at every step of the research process to set aside biased beliefs.

Member checking. Member checking involves including the participants' views of the credibility of the findings and interpretations, so they can judge the credibility of the account (Creswell & Poth, 2018). After the interviews, participants of this study were emailed transcripts of the interviewed and were asked to review the session's findings to determine how well the data analysis was reflective of their actual experiences. A copy of the handwritten notes this researcher took was included as a PDF file and emailed along with the transcripts. Participants were asked to read over the notes and the transcripts, and participants were advised to edit any part of their words they felt did not feel relevant to their lived experiences.

Generating rich, thick descriptions and horizontalization. Enhancing transferability was met by generating rich descriptions of the phenomenon (Lincoln and Guba, 1985). The detailed descriptions generated in the interview process allowed the readers to "make decisions regarding transferability because the writer [will describe] in detail the participants or setting under study" (Creswell & Poth, 2018, p. 263; Geertz, 1973). Throughout the interview process, detailed notes were collected with information including information about where the interviews took place, the day and time of the interview, and a description of the responsiveness of the interviewee. As each participant spoke about their child, the researcher asked follow-up questions or asked parents to elaborate on a point that warranted further

discussion. At points, the researcher would ask the interviewee to rephrase certain elements of the answer in order to clarify the meaning. This practice added to the thick description that was generated in the conversation. The researcher added her own filler statements such as “yes, yes” or “ok, yes, I see” in order to encourage the interviewee to continue the lines of discourse. This small addition of filler words let the interviewee know they were providing valuable evidence and that they were welcome to continue and add more detail. The researcher was able to create meaning after in depth analysis of this rich and thick descriptions of the phenomenon.

This researcher next proceeded with the horizontalization of data. The analysis of each relevant quotation and response from the participant was studied and analyzed. The researcher coded responses and began to organize the data into categories. Relevant

topics from the participants were grouped thematically and emergent themes were collected and analyzed.

Research Ethics

This study was created keeping research ethics at the forefront of study design. A critical element of qualitative research is respect and confidentiality of the participants (Brinkman & Kvale, 2015). Informed consent was obtained using the letter explaining participant rights attached as Appendix A. At the start of each interview, parents were told that anonymity was paramount in the study and that their responses were recorded on a password-protected computer. All parents were told that records of the conversations as well as emails would be deleted or destroyed at the end of the study. Anonymity was ensured by the use of pseudonyms in the interview protocol; participant children's names were also removed or changed upon analysis of the data. Participants were reminded at each stage of the interview process that their participation was voluntary and they could choose to stop the interview at any point. Information that would be considered private or potentially damaging was removed by this researcher (Moustakas, 1994). Confidentiality of research records were strictly maintained by using codes to refer to schools within the district, so that specific schools were distinguishable from each other, but not identifiable as any particular school in the district. Participants names, addresses, email addresses and other personally identifiable information were destroyed when the interview was completed.

Researcher Role and Positionality

Temple and Young (2004) explain that positionality can affect research outcomes and interpretations because "one's position within the social world influences the way in which you see it" (p. 164). This researcher used epoche to set aside her own ideas and

biases about adolescent sleep hygiene throughout the research process. When writing interview questions, the researcher parsed the questions so that they were not leading the participants to an expected answer; rather, the questions were open ended and allowed for any response to be acceptable. The researcher sought to make a connection with parents so that their responses would be as authentic as possible. If an idea was discussed that was a bit unclear, the researcher would ask participants to phrase the idea again or to elaborate on the meaning so there was not a risk of interpreting the statements with any bias. Since the researcher is a high-school teacher and mother of adolescent children, she has her own preconceived notions of the state of adolescent sleep hygiene. This researcher sought to acknowledge biased thoughts that surfaced as she conducted interviews. This information was kept on the handwritten notes taken during the interview. Acknowledging the cognitions of this researcher and raising the awareness of the bias helped this researcher acknowledge, then put aside the bias she may have felt.

Sample size. A saturation of the data methodology was used as the criterion in this study to determine the appropriate sample size. Glaser and Strauss (1967) recommend the concept of data saturation, in which researchers seek to find as many data points as possible to provide support for categories, until the categories become saturated with data and the researcher no longer finds new information. It is used as a criterion to discontinue data collection and analysis in qualitative research (Saunders et al., 2017).

Because the collected data was categorized according to the theoretical framework laid out by Bronfenbrenner, organized by nest and was aligned according to research question, it was evident which themes occurred most often and which themes populated the data. Once the themes became repetitive, there was no longer a need to collect additional data (Creswell & Ploth, 2018). Using the data saturation approach, it

was determined that a sample size of 11 parents of students at one of the two high schools within the district allowed for a clear saturation point (Saunders et al., 2017).

Population. In order to avoid researcher bias, participants were selected without knowledge of the name and age of parent's children, and this researcher did not know the gender of the child upon selecting the parent to interview. All participants currently had at least one child in one of the district's two high schools. Parent participants were first recruited through an email invitation shared with each high school's ParentLink notification system. Parents were asked to complete the survey if they were interested in speaking with this researcher about their child's sleep habits. If participants noted yes, they were taken to a four question survey asking for demographic information. The respondents were asked for their ethnicity, gender, marital status, and income level. This researcher used the demographic information to select the most diverse sample population possible from the information that was shared via the survey.

Conclusion

This study used a phenomenological qualitative methodology in order to study parental perceptions of adolescent sleep hygiene in a high-achieving school district on Long Island, New York. The research questions were addressed by in-depth interviews of parents from both high schools in the district. Parents were recruited for the study with a survey that was shared by district administrators. Willing participants met with this researcher in the school's library and completed the interview protocol.

Interview transcripts were recorded with Otter.io software and were then uploaded into NVIVO software. NVIVO enabled this researcher to analyze the

documents and cull thematic statements around each research question. As the researcher undertook this process, she was able to explore commonalities and create findings as reported in chapter 4.

CHAPTER 4

Findings

The purpose of this study was to recognize and understand parental perceptions of their own adolescent's sleep hygiene and sleep habits. This qualitative phenomenological study explored how parents understand their own child's sleep habits, routines, and ultimately well-being. The questions that have guided this inquiry are: (1) what factors do parents believe impact adolescent sleep hygiene and routines; (2) from a parental perspective, how does sleep affect their child's well-being; and (3) what role do parents (from different socio-economic, family status, ethnic background, etc.) play in monitoring and regulating their child's sleep hygiene?

There were 11 participants in this study; all parents of high school students in two high-achieving suburban high schools within the same district on Long Island. The parents were recruited through a district-wide ParentLink invitation and participation demographic survey. The participants were then contacted by this researcher and completed a 30-60 minute interview. The interviews were recorded and transcribed using Otter.ai software. The transcripts of the interviews were uploaded and coded into NVIVO software. The researcher utilized code analysis as she read the interview transcripts twice and ensured the coding represented the themes present in the transcripts in order to establish validity. The coding was then compared as yet another assurance of validity.

The data elicited from interviews with 11 parents of students was uploaded into NVIVO software and were analyzed and coded using questions designed to align with the theoretical framework. Table 2 details the alignment of research questions with

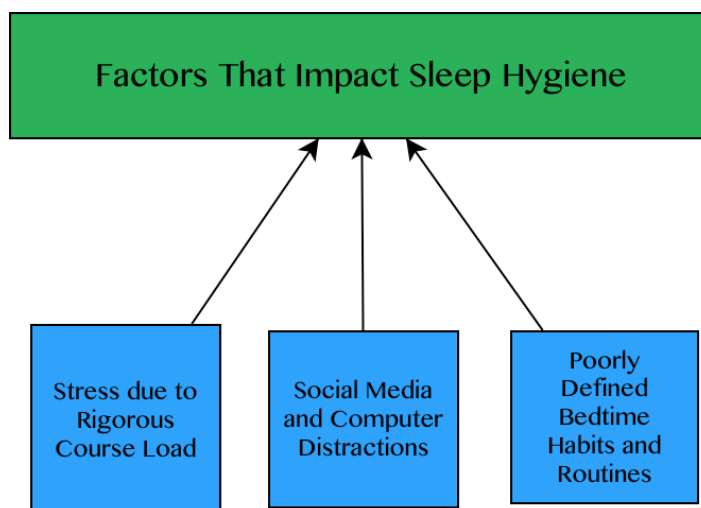
Bronfenbrenner's Ecology System's Theory. The coded and analyzed data from parents from one of the high schools in this high-achieving district revealed that, while parents had a variety of experiences with their adolescents and their adolescents sleep and well-being, there were many similarities in their responses. Because this was a phenomenological qualitative study, the researcher analyzed the data and searched for thematic statements in the transcripts recorded to understand the shared experience of the parental perspectives. The following discusses these shared experiences in relation to the three research questions:

Findings for Research Question #1

What factors do parents believe impact adolescent sleep hygiene and routines?

This question was answered through interview questions aligned with Bronfenbrenner's Nested Systems: the Macrosystem, Microsystem, Chronosystem, Exosystem, Mesosystem, and Techno-Subsystem.

Figure 2: Findings for Research Question #1



Theme: Three themes emerged as most impactful on sleep hygiene: Stress due to Rigorous Course Load, Social Media and Computer Distractions, and Poorly Defined Bedtime Habits and Routines.

Stress due to Rigorous Course Load. The high-achieving district in which this study was conducted is marked by a high level of students taking a rigorous course load. This course load is designed to be attractive to highly competitive colleges and universities. Students often take between 2-4 AP courses per year in the high school. Because of the work-load required for each of the classes, student stress and work completion impact sleep and sleep routines. This stress due to a rigorous schedule was discussed by six parents. Because of high-pressured community standards, some students are taking classes that interfere with many other activities and sleep schedules. In the below example, Ms. Randy Brown discusses her perspective on what happens to students who try to take the most competitive schedules:

You know, they're being encouraged and advised to take the greatest number of difficult classes they can, whether it's appropriate for them or not to the point that I told my kid he couldn't take certain classes that were being recommended for him. [Parents] push to put their kid into classes they don't belong in right, and by the end of this year these kids are burnt out. And they're freaked out; some of the kids don't even take a lunch period, so they can add another impressive class.

This theme continued to populate the data and appeared in discussions with parents who described their children as “in the top 10 %” of all students who attend the two schools represented in this study”. In these cases, parents acknowledged the demands exerted on their children to stay in the top of their class. Mrs. Chan described her son, “[h]e's 15

years old, and he is taking three of the AP classes this year and he hopes to take four of them next year". She also said:

He takes accelerated classes; he's at the top of his school class. And that's because he wants to get into a good college and he wants to do very well. And because he's taking all those hard classes the work is much harder. And he wants to get A's in every class. He's done a good job so far of getting all the A's, that he needs and we tell him that it's very important to do that. During the summertime, he takes classes too, so he is working. Most of the time he's working on some kind of schoolwork.

Parents understand that some children who choose to take the most rigorous class load are going to have to sacrifice some part of what most adolescents live in their high school years. Explaining the situation in the surveyed district, Ms. Mandel said:

You know, in some school districts are not allowed to take honors classes as a freshman, and other school districts, the number of AP's are limited, so that you don't get overwhelmed, whereas the pressure of our school district freshmen are allowed to take an honors class, and there are no limits on the number of AP's. That being said, if you're a full load of honors and AP, you're going to get less sleep because you're up late or studying and doing the work for those more intensive classes.

Five parents, Mrs. Davidson, Mrs. Mandel, Dr. Lin, Dr. Brown, Mrs. Chan, and Mrs. Aolini reported that, because of a rigorous course load, coupled with high expectations, their children will not go to sleep unless they feel like all their schoolwork or studying is done.

Mrs. Davidson expressed the experience of her 9th grade daughter staying up late until her homework is done. Mrs. Davidson reported that her daughter “will only go to sleep once she feels like her homework is done” and “even if she has activities or extracurricular activities that will not go to sleep.” Mrs. Aolini reported that her son will turn into his room in the evening and spend his night working, lying in bed, using his computer for a variety of things, including entertainment, and will not sleep until the homework or studying is finished. She spoke about her 17 year-old son and reported:

So he, so he'll finish his work, and usually that takes him up to the wire sort of what you know what he can do, and so it goes straight from whatever you know homework he's working on into bed. So there's no downtime or anything like that he's usually just up to the wire of when he needs to go to sleep”.

In line with both Mrs. Aolini and Mrs. Davidson, Mrs. Chan reported, ‘schoolwork is always the reason [to stay up]. She reports her son says, “Mommy, I have schoolwork. I have to stay up, I have to finish this. If I don't get a perfect score I'm going to have to get another A on the next test, and because he's taking so many classes’ He has lots of homework”. While her own daughters did not feel the school schedule created a sleep problem for her children, Mrs. Mandel expressed, “I mean I guess they would have the later they would stay up for the sleep schedule would be interrupted by making them possibly stay up later to study.

In response to questions, Dr. Brown expressed her frustration with what she believes is the system the competitive environment has created for her son, and which she fears for her 8th grade son eventually. Dr. Brown discussed her 16-year-old son’s sleep schedule and expressed that her son “[f]rankly, he generally works until he goes to sleep

at this point”. Dr. Brown expressed that this has been the case since “junior year of high schools where it's been like that every night, sophomore year some nights freshman year some nights depending on when he had exams or something the other, but we're really at a point where he takes a shower he goes to bed’. Dr. Brown demonstrated that the course work and stress load has been building since freshman year, and now, in junior year, her son works until it’s time to sleep.

In analysis of this thick description, this researcher found that the Macrosystem, in this case, the high expectations of family culture and these particular schools, and the Microsystem, in this case the school environment, directly affect the behavior of the students. Students seem to accept a practice where sleep is put off until completion, even perfection as Dr. Lin put it, of work.

Dr. Brown, herself a physician, has set limits for her son’s ability to take accelerated classes. She feels pressure both from her son and from her Macrosystem where she hears friends and family members talk about taking the most rigorous and stressful schedules possible. She reports the uncomfortable pushback she feels when limiting her son:

“You and I see the consequences of that push push push push push push push push push push and you know maybe he'll be mad at me at some point maybe next year when he applies to college, and the college advisor says you can't get into this school this school because you didn't take this classes, and maybe you'll be mad at me. Yeah, but you know what, I'll take that risk”.

Parents in this high-achieving district report that their adolescent’s sleep routine is determined by the amount of work they have in accelerated classes and by their own

children's desire to perform well in these classes because of the impact they believe it will have on their academic future.

Social Media and Computer Distractions. Today's students have myriad platforms for learning, socializing, and entertainment at their fingertips. Students can use their computers to compose essays, conduct research, design software. The possibilities for learning and working are endless. The school district included in this study has a 1:1 iPad initiative and each student is given an iPad they keep with them all throughout high school. While the iPad is an essential part of the students in this study's daily learning experience, parents report that it has become a distraction for their children. Johnson and Puplampu call the interaction of the child with these personal items part of the Techno Sub-System (Johnson and Puplampu, 2008). This researcher found that the iPad, the student's own computer, and the student's phone were noted as distractions for both delaying bedtimes and reducing efficiency. Six parents reported both frustration and resignation about their child's use of digital devices.

The prominent frustration felt around computer distractions and efficacy interrupters was summarized by the initial statement of Ms. Aolini. At the beginning of our interview, Mrs. Aolini prefaced our conversation with, "Well, I'll preface everything by saying that we definitely have an electronics issue. As I think, you know, many kids unfortunately do these days". She went on to report that:

I think a lot of times he has his phone in his bed with him. And that is like a constant source of, you know, argument in our house where I, you know, demand to take it or whatever so that that it these those few hours that he does have are actually sleep, um, but in terms of like him being on electronics and doing all that,

that is happening up to the wire. And then he goes to sleep and I definitely you know I know very well that that is, you know, bad for sleep but, again, is you know 17/18 years old and it's a struggle. A lot of times, though he will be he listens to music on his phone before he goes to sleep.

To her frustration, her son, she reported, will open many windows on his computer and lack focus to finish his work. She finds her son to be sitting with his computer, yet she knows he is using the computer and being lured off task by the many entertaining and distracting elements of the internet and streaming services:

We have an issue that we're trying to deal with him that definitely and he knows it too. He gets off task; he's got a million windows open and then he doesn't get the work done. That's the problem of Tom's whole you know situation of why he you know is not doing what he should be doing.

Adding to this conversation, Mrs. Davidson found her teen daughter to engage in the very same behavior. Mrs. Davidson reported that her daughter, a ninth-grader, does the "bulk of her schoolwork" in her bedroom, and has her Chromebook and her phone with her. Mrs. Davidson noted that her daughter needs her computer open to study because "[e]verything is assigned on Google Drive". Mrs. Davidson went on to discuss the different types of distractions her daughter faces:

And obviously she can open up a tab and open up Netflix or she can watch YouTube. So it's very easy, like I would imagine to like go down a spiral. She's working on, you know, out of her textbook, and she's got a show playing in the background. Often, just having her phone in the room, your phone in the room, she can hear you know whatever sound, if you get the Snapchat, which is, of

course, immediately open so that you can see what's someone sent. And, she might check her Instagram.

In the bedroom, the site where four parents reported their child does their homework, students are working, yet they are met with time consuming interactions on social media, and internet searches which take them off task. Because students are assigned work that can only be completed with the devices, parents feel that this problem cannot be solved.

Six parents expressed frustration with the efficiency of their children's work. These parents reported that they believe there would be more time for sleep if the digital distractions were removed for homework and study time.

Dr. Lin, in speaking about his 10th grade daughter, said his daughter works inefficiently because of "that cell phone, iPad, and not organizing time very well". His sentiments were echoed by Mrs. Barry who reported feeling unable to monitor her 12th grade son's computer activity. She said:

"When we were on computers, it was to do work and now you can be doing 40 different things at the same exact time. It's so hard to really know the difference between different apps and different things. They can really quickly change. If I walk in the room and say, 'Oh, hi' You haven't even blinked and they've probably changed windows".

Frustration dominated the conversation about sleep and devices as companion for her son. When describing her 18-year-old senior, Mrs. Aolini expressed her frustration with the way the digital devices interfere with her son's sleep and her ability to regulate her

soon-to-be-adult son. She described this frustration when she revealed his bedtime routine:

He'll brush his teeth and fall into bed. I think a lot of times he has his phone in his bed with him. And that is like a constant source of, you know, argument in our house where I, you know, demand to take it or whatever so that that it these those few hours that he does have are actually sleep. But in terms of like him being on electronics and doing all that, that is happening up to the wire. And then he goes to sleep, and I definitely you know I know very well that that is, you know, bad for sleep but, again, is you know 17/18 years old and it's a struggle.

Mrs. Davidson, herself a high-school science teacher, expressed that she believed both her students and her daughter underestimate the time they spend on social media and how distracted they really are. Her high school, she reported to me, has done longitudinal studies that demonstrate this. She reported, “[a]nd one of the things we found is that kids, teenagers Middle School whatever High School vastly underestimate the amount of time that they are distracted by social media”. Her own daughter, she reported: “will spend time scrolling, using Snapchat, and calling her cousin who lives in Los Angeles, she wastes all this time while she’s trying to work”.

Mrs. Barry, the mother of a senior son, detailed that while her son isn’t staying up socializing while trying to get work done, he is indeed staying up late interacting online and that the hours are getting later and later into the night: “But, so whatever time and this thing seems to be getting even during weekdays I don't think he's going to sleep”. She can hear her son spending time with friends from outside of his bedroom. She stated, “sometimes I hear the texting noise or something you know that, or even like FaceTime I

could hear voices or whatever so, like, I'll get up to get the water and I'm still see the lights on or something. And, I'll think, "Oh my god. It's one o'clock at night". Since her son is a senior, she does not regulate his sleep, but she is aware of his habits. She discussed his weekday habits as "I guess he's maybe getting five hours six hours of sleep, you know, and that's probably interrupted because, as much as I've tried to get control of this situation, that failed and so it's constantly on". Here, Mrs. Barry revealed that she has failed to intervene with her son's sleep behaviors on weekdays and on weekends. She also reported that she does not feel alone in this struggle: "But I think the social media aspect of it is not helping especially kids who are easily distracted".

Online gaming has become increasingly social. Video games were once limited to persons in the room playing on one console. Today, gamers can interact with many different people as they play the video game. Friends log on to play together, online acquaintances meet up to talk through the game as they play with each other. A video gaming session can take place in an adolescent's room, yet many people can be situated together playing. Ms. Chan discussed the role online video games play in her 11th grade son's daily schedule:

The kids are upstairs with their phones, and they are doing Snapchat and they are doing, video games, and the kids can play video games on their iPads and they can also play on their phones. So, sometimes they are studying but also playing games and talking to friends. He gets to be with his friends even though he's at home, studying.

Video games were also cited by two other parents as distractors from work and sleep. Ms. Chan also noted that her son will wake in the middle of the night to watch

online video worldwide championships. These tournaments take place in Asia and Europe and her son will wake up and interrupt sleep to see the tournaments live. She reported, “sometimes my son will wake up very early to watch video game tournament that are happening in China or in Korea. And so he'll spend some time awake in the middle of the night watching these live events on his computer”.

One parent, Mrs. Chang, discussed what she described as her 11th grade daughter's addiction to video games. She noted the change in her daughter's behavior since first receiving a phone in the sixth grade: “After we gave her the cell phone in as a birthday gift sixth grade she did not read books, and it doesn't have access to buy books available from the library”. Today, her daughter spends most of her time on her cell phone. She “reads a little from the cell phone; all kinds of stuff from cell phone”. Then, very quickly, Mrs. Chang told me she thinks her daughter is addicted to video games. She did not dwell on this fact yet slid the comment in and laughed a little to ease her discomfort with the situation and reported, “and after she goes through high school she is kind of a little bit addicted to online games”. In trying to understand the phenomena, Mrs. Chang asked her daughter about her need to play every day and her daughter told her, “Mommy, I don't want to miss the goal”. The goal is the record she tries to get every day. If she does not play every day, she will not get the opportunity to reach her goal. She says, “Mommy, I finish all my work”. Mrs. Chang's daughter promises she finishes her work, then goes on the games. Mrs. Chang reported, “she tells me that she finishes her work and then she spends a lot of time on her video game system”.

In her experience with her daughter, Mrs. Chang also reported that she has found herself in negotiations with her daughter about her online time. Her daughter has

explained that she needs to unwind with social media and relax for a few hours before starting schoolwork. bargains with her daughter to get her to organize her time differently:

She[my daughter] says, “Mommy after that whole school day, I'm tired and I get home. I really need to be relaxed by relaxing is talking with a friend.” She gets on social media and texts this and she texts that, Snapchat, Instagram, all those. She says she works more efficiently this way, but she still goes to sleep so late. It bothers me but after she went to 11th grade, I gave up. Since she goes to sleep at one, or one-thirty, I tried to tell her that if she could sleep by 10 o'clock every day, Monday through Thursday, we can see if you can do this for a month, I'll give you a reward.

Two parents, Mrs. Hernandez and Ms. Chan, discussed a phenomenon known as the Snapchat streak. A Snapchat streak is when a person with the Snapchat app sends direct snaps, messages with photos, back and forth with a friend for several days. The longer the communications are maintained; the longer your streak is. Snapchat will reward longer streaks with special emojis. It is important to understand the significance of a Snapchat streak as it pertains to adolescent behavior. Adolescents feel that the more streaks you have, the more popular you feel. The friendship maintained by a Snapchat streak feels more committed as friends and is the sign of a true and meaningful friendship. To break a streak can be devastating to an adolescent.

Mrs. Hernandez reported that her daughter will not go to sleep at night unless she has caught herself up with all her streaks. She detailed the process by stating, “I know that's important for her. It's like her connection to people, she likes to be connected to her

friends”. Mrs. Hernandez discussed the streaks here and reported that her daughter and friends will share passwords in the event that they are unable to post to continue the streak: “The one thing about the streaks I hear it all the time, even when like her friends will go on vacation and they share each other's passwords so they can help us run through the streaks”. Her daughter feels that her streaks are essential to her friendships because a Snapchat streak makes her feel the “connection to her friends”.

Mrs. Chen also commented about the Snapchat streaks by name. She said, “So some parents say that their kids do Snapchat streaks, and the Snapchat streaks sometimes take a long time”. Adolescents can spend upwards of two hours engaging with streak catch-ups, and engage in other aspects of the app. The nature of these Snapchat streaks are to keep users engaged with the app. The addictive nature of the design keeps people using the app; as is the case described by Mrs. Hernandez and Mrs. Chen.

The Microsystem is dominated by the Techno-Subsystem. While Johnson and Puplampu cite “cell phone, eBook, software, television, portable audio devices, internet, and portable video devices”, today’s teens have one or two devices that serve as all these elements. The iPad, smartphone, and Laptop computer serve as constant companions to the adolescent. The devices occupy space in the bedroom, oftentimes the bed, and two parents reported their child sleeps with their phone. Some adolescents, as a result, are always connected.

Poorly Defined Bedtime Habits and Routines. Each Parent interviewed revealed that there was a lack of a clearly defined sleep schedule for their child. Parents described their experiences in different ways, yet when analyzing the responses, this researcher found that the lack of a particular routine influenced sleep hygiene.

Three parents reported that the bedroom and the bed has become the primary study area for their child. Mrs. Davidson reported that her 9th grade daughter”, typically works every night on her homework, and she'll probably stop at, I'd say 10 o'clock. She does the bulk of her work in her room”. This leads to unintentional napping, however. About her daughter’s after-school routine Mrs. Davidson also said:

Okay. She'll come home, and she'll go into a room, so no one thinks anything of it, because that's where she does her work. But then all of a sudden we realized we haven't seen her and we go in her room, and she is under the covers and sound asleep in the dark. So again I know that's not a healthy thing that are because it's important for your body to be consistent.

Mrs. Davison conceded that her daughter was in an unhealthy sleep cycle and the unintentional naps were happening because her daughter was exhausted by three p.m. Mrs. Barry also discussed her senior son’s habit of coming home from school, from practice, and falling asleep due to exhaustion. She reported:

So, because he's got after school activities, by the time he gets back it's like seven o'clock and so if I don't catch him like in the sense like okay you know have dinner right away or something. And or make sure that he comes out and starts doing things, he actually fall asleep because he's tired, but you know he hasn't slept, so he's tired. He'll just fall asleep right on his bed, in the same clothes and, you know, not even like going under the blanket on his bed- crash. And he'll be like okay I'll wake up I'll wake up, but it's almost impossible to wake them up and then I'm like okay, you know, like how much work do you have. If I can get that answer out of them then I'll put an alarm for like 4am. And I'll wake up at 4am

and then start waking up I'm like okay you didn't do any work last night do work what you need to do. And then I don't know how, you know, how that plays out of this hole because now you've been up since four 5am, and you have a full day so I don't know how weak he is and his concentration.

Four additional parents also noted that naps are a part of their child's weekday routine.

In conversations with friends and social groups, Bronfenbrenner's Exosystem, Mr. Sadiq discussed both his own son's penchant for napping as well as what he's heard:

So he will take naps. As soon as he gets in his back from full and then a nap and then start studying within late, and then take naps in between. But I know from just kids talking to me that they regularly go home Take a two or sometimes three hour nap and then they wake up then they eat, and then they do their homework until like two or three in the morning, which I don't know how they function but some kids apparently that's what they're doing.

Mrs. Barry discussed her son's attempts to catch up on sleep he lost during the week and said, "he try to catch up with naps at all, because I hear, I hear that some kids, you know they're tired so they come home, they take a nap and then they do their studying, as well as sleeping on the weekends."

Ms. Chan's son also takes naps and feels as if his naps are an essential part of his sleep routine:

My son comes home at about 3:30, and he likes to take a nap, because he is really tired from school. He comes home takes a nap, maybe get something to eat. wakes up around five or six o'clock has some more food, then sits in the bedroom and studies. He wakes up from school for school every morning, and is very, very

tired. It's hard to get him out of bed. But that's why he takes his naps. He does not get all that kind of asleep, so he tells me that he doesn't need that much, that he's fine. As long as he gets his naps he's fine; he can make it through the day Yes, he does. He says that it's okay as long as he can get his nap and study when he needs to study in his room at night.

Mrs. Chan has also spoken to friends about this issue and reported, “But many of his friends also come home, take the naps stay up and get their homework done so they can still get their very good grades, but most parents say that it's a problem. Sometimes they say it”.

Mrs. Chang had a different experience with naps. Her daughter takes naps in school in both the hallway and in the lunchroom. Her daughter also assures her that this is fine, and that her well-being is not impacted by these habits. Mrs. Chang reported that her daughter “sleeps in school sometimes.” Since the first period of school does not start until 8:00 a.m., Mrs. Chang’s daughter finds space in the hallway to lie down and sleep after she gets off the bus at 7:30. Mrs. Chang said, “she wants to come to school in the by the morning, and she's sleeping in the hallway”. Mrs. Chang’s daughter also uses her lunch period to sleep. Mrs. Chang reported that her daughter says, “I can sleep during the lunch, and eat later lunch”. She told me, “yes, I took a quick lunch, like 20 minutes, and then I can sleep for another 20 minutes during lunch time”. Her daughter, Mrs. Chang reported, always assures her mother that she finds time to sleep in school: “Don't worry about if I feel tired, I'll find time to sleep.”

Mrs. Dunn described her sophomore daughter’s sleep routine as the following:

She goes up in her room usually around sometimes right after dinner, and does her homework, which merges into socializing with their friends, which merges into jumping in the shower getting ready for bed, which merges into going to sleep, so I'm not really sure where one phase begins and the other one ends.

Mrs. Barry also discussed her son spending time in his bed while he works. She discussed that so much of his work time is spent sitting on the bed or in the bed:

I feel like the bed is like the new desk for children, I don't know. Technology is helping with that. Like in terms of just having that accessibility, you know, the convenience of that iPad versus like when you had books and papers and notes you know notepad you had to be you needed space, you had to write and read and write and now everything is on that iPad or your laptop, which could be just sitting on the sofa sitting on the floor or sitting on your bed.

Mrs. Mandel, a parent who did not express frustration with sleep habits and sleep routines, with two high-school aged children did discuss her daughters as regimented.

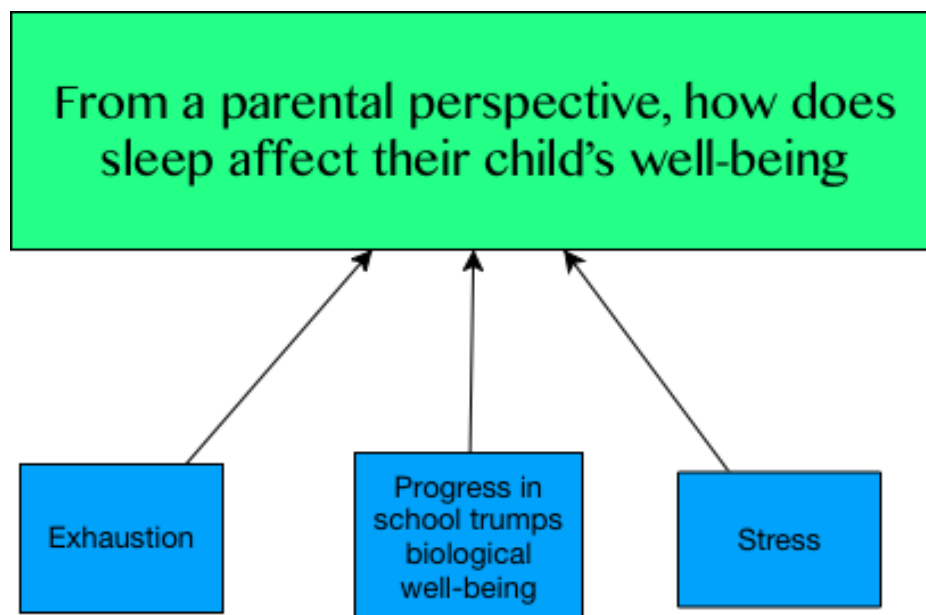
She expressed:

The 16-year-old is more regimented and needs to get her sleep. So, she will at, let's just say, 10 o'clock 10:30 and they like the room not hot. Cool room. I'm the same way. You know they both love their beds.

Only one parent noted that their child's sleep hygiene fell in a clearly defined sleep routine. From the data collected, eleven parents pointed to three factors consistently that impacted sleep hygiene. These factors: Stress due to Rigorous Course Load, Social Media and Computer Distractions, and Poorly Defined Bedtime Habits and Routines.

Findings For Research Question #2: From parental perspective, how does sleep affect their child's well-being?

Figure 3: Findings for Research Question #2



Exhaustion: There were 14 parental statements that reflected exhaustion on the part of the adolescent student. These statements defined exhaustion using the words exhaustion and crashing, and even “zombified”. Parents used the phrasing of excessive tiredness in response to the following questions: Could you describe your adolescent’s nightly sleep routine? When do you think your child sleeps best? How much sleep do you think your teenager needs to function at his/her best? Have you read or watched any type of news report about teen sleep? Could you describe what you saw/read? Have you ever discussed this topic outside of this interview? If so, can you elaborate upon these discussions? How does your child’s schoolwork influence their own sleep schedule?

Exhaustion was reported in the following ways:

Mrs. Barry reported that her senior son comes home from school and “just collapses”. He falls asleep in his basketball clothes on his bed at 7 at night. She reported that, “by the time he gets back, it's like seven o'clock 6:30, 7 o'clock and so if I don't catch him” he will end his night there and sleep until 3 or 4 a.m. She “makes sure that he comes out and starts doing things so he won't actually fall asleep”. Her son won't even get under the covers; he will just lie on top of his bed and fall asleep. Mrs. Barry noted that she will try to wake her son, but at that point it is “almost impossible to wake him up”. Mrs. Barry tries to rouse her son when she sees him sleeping at 7 at night, yet, as she said, he is too tired to wake up. She lets him sleep until 4 in the morning, then wakes him up to complete his schoolwork.

Mrs. Mandel's younger, ninth grade daughter stays up later at night and finds it hard to get up in the morning, “But you know, then in the morning it's more of a struggle for the younger one to get up then the older one”. Mr. Sadiq said the same about his son. He reported that, “And then, even then he doesn't really want to wake up easily”. He also mentioned that, in conversation with friends, he's learned this is not a problem just for himself:

You know our friends will tell me that they can't get their, their child to school on time because they just can't get them out of bed which I'm surprised I you know, for, for me that's that's hard to imagine even though I know that it's going on I just can't imagine having kids that you physically cannot get out of bed, you know.

Our son is sleepy, but we manage to get him out of bed in time for school. It's a struggle, not really a problem beyond our house.

Mrs. Chang reported, that along with sleeping in the school hallways, she's struggled to get her daughter to bed on time. And, she does not feel alone. She too spoke with family friends and heard the following: "I've heard you know one o'clock two o'clock, kids are going to sleep, so 12:30 is a little bit earlier but, you know, I still think they're very tired if they go to sleep at 12:30". She felt uncomfortable with her own experience and tries to compare with what she hears other report: "and I know it's ,it's a struggle it's it's hard to, to know what's enough and what's right".

Mrs. Davidson spoke about exhaustion when she described the seniors in her high school biology class. She noted that the students in first period are much more exhausted than the students who have her class later in the day. She also noted that the students are drinking coffee routinely. She compared students today with those she saw in years prior: "I don't think the kids in my class are less intelligent I don't think they're less driven. I don't think that they're less enthusiastic in their heart, where their mind, I think that they are extremely tired". She noted that to combat exhaustion, students have turned to caffeine. She reported, "Yeah, and it takes them a lot to wake up the caffeine from their coffee hasn't kicked in yet. And, you know, it's like they're a little, they're a little zombified". Mrs. Davidson told me that " even on a 25 degree day they're drinking iced coffee. And I think that makes it more of a beverage. They're just tired and using sugar and caffeine to get through the morning". Mrs. Davison compared her own experiences as a teen and she did not remember anyone drinking coffee in her high school years.

In recent years, attention has been paid to starting school later than the regular hours of 7:00-8:00. Changing school times to meet the circadian shift teenagers face is an element to combat exhaustion. Dr. Brown discussed this:

“But there's also I know a lot of districts in different states have changed their school hours, so that kids start later because they're saying the kids aren't getting enough sleep. And then if they start the school day later and that the studies have shown that the kids more sleep better have more optimal school experiences.

Yeah, that's why having that, and our high schools actually start later than most.

Dr. Brown discussed the experience of physicians in her own field who reached a point of exhaustion where a large medical mistake was made and a patient died. This death sparked changes in the number of consecutive hours doctors could work. She discussed this in context of the type of exhaustion 13-16 years old's work. She passionately expressed:

They don't have the coping skills at 16 to function on that little sleep, they make on this all sorts of other things in medicine, they pass laws that you can only work a certain number of hours a week when you're a resident, you can only work so many 24 hour shifts a week, you can only work so many 12 hour shifts a week right, you have to have a minimum of a 24 hour period leaving off. But 13, 14 15, 16 year-olds are working like this. But think about what it took to change - a horrible medical mistake and malpractice suit to internet really yeah, it happened to Cornell Medical Center. If you look it up it's I believe was The Bell Commission, that's what it's called, the Bell Commission that established these laws residency based on this case of a woman who like somebody made a medical mistake at Cornell. The patient went into a coma and it was here. Yeah, and they determined that the mistake was made based on sleep deprivation. I've heard young people will kill themselves if they're so exhausted. It terrifies me.

The comparison to the type of exhaustion and the consequences extended exhaustion can have on people, are, in her words, deadly.

Mr. Aolini also discussed consequences of her son's exhaustion. She reflected that it affected his ability to cope with emotional situations. She acknowledged that the lack of sleep can be "catastrophic" for a teen. She compared his experience to that of her older daughter, now in college. Mrs. Aolini remembers her older daughter's schedule in high school and felt "the lack of sleep, health wise, particularly for a developing body is just like, you know, catastrophic possibly". Mrs. Aolini's knowledge of developmental needs were revealed as she said, "you know when they're growing and their, you know, bodies are developing and brains and developing all of that if they don't have that restorative time. It's really consequential". Mrs. Aolini went on to describe the challenges a lack of sleep has on her children's abilities to face emotional situations: "The other thing that I noticed more with my daughter, but probably with Tom, in a different way is you know their personalities and the way that they deal with stressful situations". When functioning without restorative sleep, Mrs. Aolini felt "you're functioning on not enough sleep, you can be irritable and all that but it's also like literally your knee jerk reaction to a stressful situation". Her son will avoid dealing with stressful situations because he is exhausted: "I'll see Tom just throw his hands up at something and be like, whatever I'm not gonna deal with it because he just doesn't have the you know the energy and the focus to do something". While her son may not be able in her words, be able to "pinpoint" the reason why he struggles with some coping skills, Mrs. Aolini contributes this to his exhaustion. Mrs. Aolini gave a very open assessment when asked to assess her son's well-being. She reported:

Well, I'll give you a quick one on a scale of one to 10, his well-being in general is a 4. Well-being. I think he's tired. I think he's overwhelmed. I think he's ,I mean, granted you're also talking about a first semester senior who, you know, it's like, that's really the worst time. Not 11th grade and everybody told me that and it's totally true. I just, it's a lot of things but I'm thinking about I can't imagine it doesn't affect your sleep but it's you know, it's lack of sleep, it's feeling overwhelmed with schoolwork with college with changes with all of these things that happens to a 17/18 year old.

In studying the “essence” of parental experiences, this researcher found a wide variety of responses that were getting at the idea of exhaustion. Parents equated exhaustion as an aspect of their teenager’s well-being. And, while parents did not always speak of the two in the same sentence, they were expressing an experience of having depleted, exhausted children who were not functioning at their best.

Progress in School Trumps Biological Well Being: In the competitive school atmosphere that defines the district in which this study took place, parents reported that their adolescents believed lack of sleep was a price to be paid for academic success. Dr. Brown expressed this theme in a very insightful manner. She reported that her junior son will, “And then I'll pull himself back together and he'll joke about it be like, I've only had three nervous breakdowns the school year so I think that's pretty good for junior year, right, like, but it's a joke but it's not”. Students and parents alike expect stress, nervous breakdown, crashing, in return for high marks and a place in a competitive college. Junior year has a reputation for being the most stressful and rigorous year of school. This reflects conversations with the Mesosystem, the community at large. Mrs. Dunn reported

that her 10th grade daughter, “knows that next year is going to be the year where sleep just gets, gets pushed to the back burner. She knows that there’s going to be stress, and crying and sweating out her grades because it’s junior year. Like, we all know that junior year is the year things fall apart before they get better”.

Dr. Brown described the overall impression of junior year as one marked by insanity. Lifestyle choices in the junior year are expected to be unhealthy and designed to stress a child to the max:

I'll talk to other moms; do these kids, cry on the regular. Yeah they do. That's a function of the perception of junior year the reality of the courses that they're taking, I think it's a combination. I think they go in scared because they're thinking ‘Oh junior year’. But the truth is, it has that reputation for a reason. You know, these kids are all studying for their standardized testing whatever it is an ACT or SAT, a lot of them are taking driver's ed so then you add that on, right, most of them play some sort of sports so they take some hours there. This is the year where they have to take the “hard courses”, right, so they pile it into their schedule so that when they apply to college next year, that it looks good. We live in a school district where the competition is nothing short of insane.

Mrs. Barry’s son is a senior who has never felt the pressure to attain top grades. Mrs. Barry described her son as someone who found school boring, yet she does find him to surround himself with others who do. While Mrs. Barry did not describe her son as a top achiever, she did discuss conversations she’s had about this with her friends:

It was basically our friend but I did differently you know so yeah it's like you had to compromise and say okay, sleep is my next priority after work and that's it,

You know if there is a lot of schoolwork, and I do understand these kids have a lot of pressure. Her kids are willing to let schoolwork and their grades get in the way of healthy things like sleep. She said she fights with her son because he obsesses over grades and she can't get him to go to bed anytime before midnight. We both are like yeah, but that's Long Island High for you, grades are all that matter.

Mrs. Mandel's conversation centered around school culture suggesting, in some ways, that top level courses were the most important thing in the teenage life. She reported that other high-performing districts will set limits to the load a child can carry: "You know in some school districts are not allowed to take honors classes as a freshman, and other school districts, the number of APS are limited, so that you don't get overwhelmed". Contrary to this point of view, Long Island High School District, in Mrs. Mandel's perspective, creates a situation where young students, even freshmen, can take a very heavy load. She said, "whereas the pressure of our school district freshmen are allowed to take an honors class, and there are no limits on the number of APS. That being said, if you're a full load of honors and AP, you're going to get less sleep because you're up late or studying and doing the work for those more intensive classes". Mrs. Mandel equated course load directly with less sleep.

This researcher found that four parents described their child as tired, overwhelmed, stressed, and exhausted, yet still reported their state of well-being as good to very good. One parent even used grades as a measure of well-being. Dr. Lin's describes his daughter's her well-being as "[s]he works very well. Perfect. So, well, it's always great, about 95/97". Dr. Lin also used "and all the teacher likes her" in his

description of his daughter's well-being. Mrs. Chan also reported that her son was "doing very well in school. And he's growing, and he seems happy. He seems tired but he seems very happy in school". Her description of well-being was defined first by school accomplishment, then biological growth, then emotional well-being. She finished the thought with "and I would say that he's doing a really good job" The definition of well-being for Dr. Lin and Mrs. Chan began with school grades.

Mrs. Davidson described her daughter's experience during this, her ninth grade year as placing schoolwork and performance at school as defined by her participation at school, not in terms of healthy habits. She felt that her daughter was feeling more self-esteem about her decision making and her ability to immerse herself in school culture. She reported that her daughter "She has less anxiety about that. herself and as a citizen of the high school". She did, at the end of her statement, concede that her daughter's health has suffered: "I feel like she is stressing, a lot, and I don't think she has adopted healthy habits that I would want to see or have". She believes her daughter is "chronically tired" and:

I just don't think she has overall healthy habits. And I really do think that you sacrifice, all of those habits that are not up to par. I think she is sacrificing for school. That is probably very, very typical for all teenagers. And I think because it's so common. It's easy for us as adults to say that it's natural. And I would push back against that just because something is typical doesn't mean it's healthy.

Mrs. Davidson was the only parent to discuss parent shortcomings when it comes to well-being. She directly stated that parents, in her experience, have dismissed the definition of true physical and mental health in place of academic success.

Stress: Stress was discussed 18 times in the study, including the words stress, stressed, stresses, or stressful. 7 parents discussed student or child stress in the context of well-being and as a factor in their everyday life.

These references include Mrs. Davidson’s experience that her daughter sleeps better in the summer when she “doesn’t have the stress of school”. Dr. Lin sees students in his Chinese Medicine practice that “they have a lot of stress, the students at the high schools”. Mr. Sadiq feels that his daughter gets her best sleep when stress is not present. He thinks that in a “perfect circumstance, she’ll be done with her things, mark off her to-do list. Not too much stress, she likes the weekends when she doesn't have much going on”. His daughter sleeps best if “she doesn’t have the stress of school the next day, or even if she does he has some plans”.

In thinking about what would make her son the most well-rested, most present version of her son, Mrs. Aolini imagined her son as he might be if he slept enough when she reported, “I don't know, I've come to bless when he can sleep though because of the amount of stress and stuff that goes on I've just like thank God because if you weren't sleeping a little I don't even want to know what that would be like.”.

Sleep, and the lack of sleep, Mrs. Aolini feels, is not only affects sleepiness and intellectual cognition, Mrs. Aolini felt her son’s exhaustion hindered his ability to handle emotional demands of adolescent life. She also acknowledged the stress that interfered with her son’s ability to function at his best in terms of emotional readiness to handle stressful situations. She reported, “[y]ou know when they're growing and their, you know bodies are developing and brains and developing all of that if they don't have that restorative time. It's really consequential”. She went on to discuss his emotional readiness

with his sleep deprived self: “with Tom, his personality and the way that he deals with stressful situations. I mean, we all know that if you don't have the sleep I mean I don't necessarily know that kids can pinpointed, and be able to articulate what it is, but when you're functioning on the you know not enough sleep you okay yes you can be irritable,” She noted that her son is irritable, more than she thinks he should be, and she sees “Tom just throw his hands up at something and be like, whatever I'm not gonna deal with it because he just doesn't have the you know the energy and the focus to do something”. Mrs. Aolini's observation of her son's exhaustion leads to the inability to deal effectively with emotional upset.

On the topic of emotional upheaval, Dr. Brown reported that the single factor that influenced her son's well-being as “stress”. She went on to describe what that stress looks like to in her experience:

There are things that are weighing on his mind in terms of what's there left to do still ,what happened, I remember what I accomplished that needs to get done. I think that's the biggest thing that influences his sleep. So I would say like for a teenager he's even keeled now, will there be times I walk into room, say hello and like he explodes like a volcano. And that is usually when all of the school pressures building up because he doesn't really let athletic pressure get to him, or social pressure to him like, he doesn't care if he's the number one star athlete he doesn't care if he's the most popular kid in the school, he cares if his grades are good. Yeah, he cares about getting his work done correctly. And so every once in a while just he'll be so all the pressure builds and build and build and build and

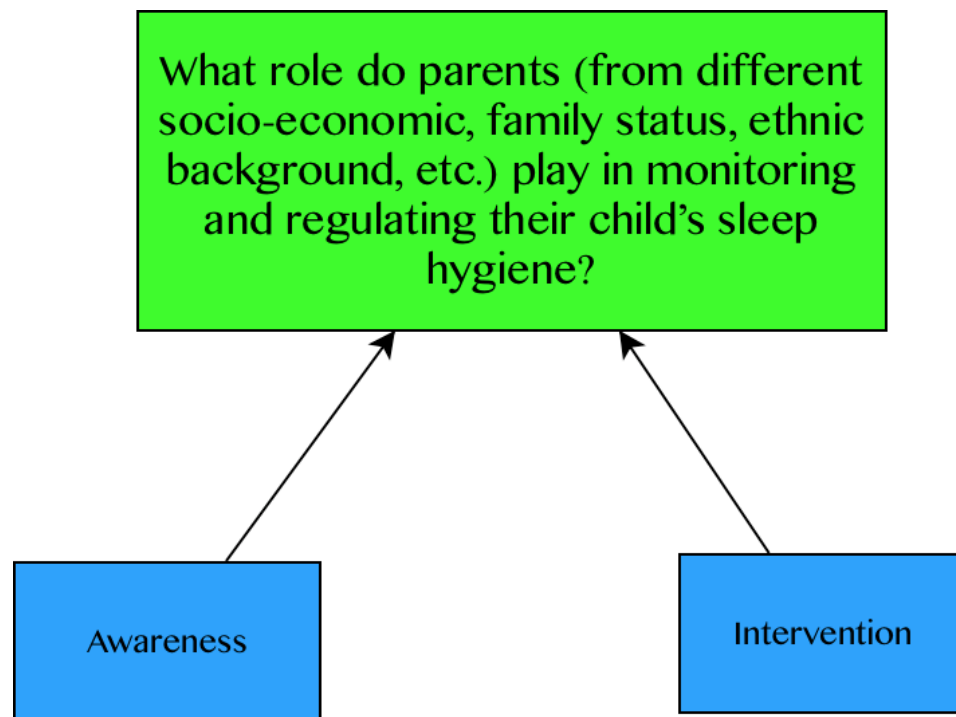
like there's no one else to take it out on and I'll walk into bed. How was your day.

Dr. Brown ended this long discussion with a very powerful moment; “But other than those and they'll be times where he'll cry like he will literally be so overwhelmed, that he'll cry”.

Mrs. Barry described her son's crashing in bed at 6pm, struggling to make it through the day, and then described her son's well-being as: a happy person, like, really happy go lucky. Very few things tend to, you know, get him down he is emotional but very overall very, you know, healthy. Overall, and you know about life and where he's headed. I think recently there's good girl trouble. He's not handling too well but he is a teenage boy”. Mrs. Barry reported that his “stress factor” is a part of what she described as “teenage stress” and that when asked, she does not believe her son would be able to articulate such a statement, but from her perspective, the stress from teenage life has an impact on his well-being, regardless if her son would describe it that way.

Findings For Research Question 3: What role do parents (from different socio-economic, family status, ethnic background, etc.) play in monitoring and regulating their child's sleep hygiene?

Figure 4: Findings for Research Question #3



Awareness: Parental Monitoring had the widest variety of responses with responses ranging from awareness of what seems to be sleep hygiene, defined as the habits of healthy sleep to interventions in order to promote healthier, restorative sleep. There were 38 coded responses that revealed a degree of monitoring as expressed by parents interviewed.

Dr. Brown reported awareness of her 11th grade son's sleep habits. Her son works until he is ready for bed. She reported:

Really, junior year of high schools where it's been like that every night, sophomore year some nights freshman year some nights depending on when he had exams or something the other, but we're really at a point where he takes a shower he goes to bed.

His weekend sleep schedule is a bit different, and Dr. Brown has taken to encouraging more sleep when he does not have obligations on the weekend. When her son does not have other obligations such as driver's education or athletics. She described this process in the following terms:

And then on the weekends. He just crashes. He's just, you know, I'll say to him, we want you to go out with your friends tonight. He's like, Mom, I just want to relax. I just want to relax, I'm so tired. He has limited his social activity, as opposed to if he can sleep late on the weekends, he will. Meaning if he doesn't have a sport event in the morning or driver's ed or whatever so he definitely sleeps later. But even on the weekends like when he should be able to catch up on sleep can, because every Sunday morning is driver's ed or Saturday morning a practice SAT, or when it's in season for one of his sports, even the school sports have practices on Saturdays, and often in the morning. Yeah, so, as much as he used to sleep later on the weekends this year, he can't. Yes, he's a booked solid guy, this year he is spoken for at all times.

Dr. Brown discussed that while she has a direct amount of influence over her son's activities, she feels as if she cannot intervene in a way that will help her son reduce stress, limit activities, and help him to prioritize sleep. She discussed her conversations with friends and she reported that they share similar levels of begrudging acceptance of

routines that rob their children of sleep: “I’ll talk about it how like our kids are exhausted and we’re exhausted because frankly, you’re not going to go to sleep if your kids still up working, right, you know, like most of us don’t”. Her professional friends speak together about their own levels of exhaustion due to their jobs and their high school aged child’s schedule. She said, “[s]o we all talked about how tired, we are because we wouldn’t otherwise be at this late and we have to get up early in the morning to get them to school. And so my friends and I are talking about how it’s just out of control at this point. And that we’re exhausted, as result of their schedules”.

Mrs. Chen was aware of her son’s sleep hygiene and his sleep schedule. She knows that he sleeps best when he engages outdoors and gets physical activity. She believes that “[her] son sleeps best when he has a very dark room. After a long day if we have been outside as a family or we play some games, or we work during the day. And if he’s tired he goes to bed, and has a very good sleep, a deep sleep’. She noted that after a day of outdoor activities and physical activities, her son sleeps well. Mrs. Chen noted on the weekends, her son stays in bed later in order to catch up with his sleep. On weekends, “he tries to sleep later. And I think he sleeps better when he gets to sleep later on the weekends, he wakes up from school for school every morning, and is very, very tired. It’s hard to get him out of bed”. Mrs. Chen reported an awareness of her son’s sleep habits and knew what conditions needed to be in place for her son to sleep his best.

Her son, Mrs. Chen reported, assures her that he does not need the kind of sleep researchers have proven adolescents do (Beebe, 2011). Mrs. Chen reported, “as long as he gets his naps he’s fine he can make it through the day”. Her friends are also reporting that tells they are aware of their children’s late-night habits: So some of my friends, their

kids also do that, and we talked about how they're up at late at night. Sometimes making noise when I wake up to go to the bathroom". The awareness of sleep habits as reported by Mrs. Chen is marked by understanding the routines that her son has developed and did not report interventions to address those routines.

Mrs. Barry's experience with her son's sleep hygiene was marked with frustration and acceptance of the sleep hygiene habits that her senior son has developed. She reported, "I can't remember having so much struggle, I guess, when I'm trying to, you know, trying to get him to sleep". Mrs. Barry acknowledged that her son's sleep hygiene practices are monitored from outside his room, often after she has gone to sleep herself:

It will be like 11 o'clock and, I'm like, okay you know what I'm going to bed.

You're going to do what you're going to do. He stays in his room and he's a senior, so at this point, I don't really do anything. I get up, and it tends to be a ladies room. I would say most of the time, he's in his room, and to the point where he is like studying is not at his desk anymore, which we have in the living room and like in a common area. But just to be all in his room on his bed. He has no routine, especially when it comes to sleep.

She is aware that when her son does sleep, it is interrupted sleep. She said, "as much as I've tried to get the devices turned off, but that failed and so it's constantly on". Her son wakes up at night and sends text messages or reads texts or Snaps that are sent to him in the middle of the night: "I think he tends to text like 4am". She noted that her son is on the receiving end of the snaps, but there are other teenagers up that late sending the snaps: "I guess all the kids have that accessible throughout the night so they tend to just text whenever they seem to wake up in the middle of the night. He'll get up to go the

bathroom and then he checks his phone and he'll text a little bit and then go back to bed and so I think he never gets a full, solid night of sleep". Mrs. Barry acknowledged her awareness of her son's habits and also spoke about the habits of his friends as part of this system of interrupted sleep.

Mrs. Barry had one intervention that she believe did not work. She took him to his physician and asked the doctor to explain the necessity of sleep to her 12th grade son:

Well at his physical check out this summer. I asked his doctor about you know and he said the same thing to him that you, because that's when your body resets your brain reset So, and it's just like a computer if you don't reset it. You're not gonna be able to function. And even in terms of his growth. You know his height and all of that is affected.

Mrs. Barry discussed her attempts to speak with her son further about his sleep and he was dismissive of what she had to say, "because I think when he doesn't think it applies to him".

Mrs. Aolini expressed full knowledge of her son's sleep routine and reported that she feels frustrated about her lack of ability to influence her son's habits. She described their struggle to keep his cellphone out of his bedroom in the evening, citing knowledge of the screen being unhealthy for his sleep. When discussing his nightly routine she said, "so he, so he'll finish his work, and usually that takes him up to the wire sort of what you know what he can do, and so it goes straight from whatever you know homework he's working on into bed, so there's no like you know downtime or anything like that he's usually just up to the wire of when he needs to go to sleep". Her son's routine blended from work into brushing teeth and then falling back into bed: "He'll, you know, brush his

teeth and fall into bed. I think a lot of times he has his phone in his bed with him”. Mrs. Aolini expressed frustration about this habit and noted that “And that is like a constant source of, you know, argument in our house where I, you know, demand to take it or whatever so that that it these those few hours that he does have are actually sleep”. She feels conflicted about setting limitations on her son’s electronics use because he is 18 years old. She noted, “I definitely you know I know very well that that is, you know, bad for sleep but, again, is you know 17 1/8 years old and it's a struggle”. Awareness of her son’s problematic habits was reported as well as the discomfort with addressing the problem.

Mrs. Aolini was also aware that her son wakes early sometimes to use his devices or check his phone and she felt unsettled by this too. She reported that her son was always exhausted, yet, “there have been times where I have gone in to wake Tom up that he's already up. And that is what really worries me because, and I and I've asked him I'm like, you know, why are you up with me, you know. So, is there an issue with him sleeping”.

Mrs. Aolini is aware when he stays up later than usual if he has large assignments to complete: “Well, I'll give you an example because he had a research paper due today for English. So, he was up until 2:30”. The Mesosystem has communicated to Mrs. Aolini that these habits are not healthy for kids. As she reported to me: “I mean your research is really really pertinent because we all know, I mean that's like the number one thing that they tell adults, that if you're not sleeping you are going to have problems.” While Mrs. Aolini is aware of repercussions of screens, she reported,

It's interesting, just go on a tangent also, you know I had this conversation with Tom about, you know, getting quality sleep, you know, having this conversation of what that means you know you're not supposed to be on your screen before you go to sleep and have about a couple of times I've gone into his room like, Alright Well, I can see you aren't interested.”

As seven other parents reported, Mrs. Aolini also allows her son to sleep later on the weekend in order to get what she called “recuperative sleep”. Her son will sleep into the later part of the morning, about 12:30 or 1:00 pm. She and her husband allow this to happen because they feel that his body, “he's body desperately, desperately needs it”. When she knows that she has his electronics, “and he's in bed and I let him sleep”.

Mr. Sadiq's experiences were quite different than that of all the parents this researcher interviewed. He was very aware of his daughter's sleep hygiene. He reported that she will text a little to her friends and then “pick up the guitar to sing a little bit”. He reports that she is not a napper, unlike the son of a close family friend:

Our friends discuss college and we do talk about a lot, especially because their son is same age as Sharon and then his schedule is completely different than that of Sharon's, I think And on the other hand, their son is the opposite and then he likes to study at night. So he will take naps. As soon as he gets in his back from full and then a nap and then start studying within late, and then take naps in between.

Mr. Sadiq reported that his junior age daughter feels well and does not seem exhausted to him. He feels she does a good job balancing her work and her relaxing time.

Intervention: Parental Monitoring was reported incorporating ways to change or influence bedtimes and behavior. Interventions varied between parent to child discussion, doctor to child discussion with a parent present, and two parents reported bribing their adolescent in order to follow healthier sleep routines.

Dr. Lin reported that his daughter stayed up late studying and devoting time to her skin care. He reported that both he and his wife struggled to stay up with their daughter, so he began to give her back massages in the evening. If she did not keep a reasonable sleep routine, he told his daughter he would no longer give the relaxing massages. He said, “I can help her to do crack the back. I do some back massage for her to help her sleep more sound. And I told her, if you pass 11:00, no more massage.” Dr. Lin has also made a deal with his daughter to attend a Hip Hop workshop if she works more efficiently; “I believe if she works a little more efficiently, she can sleep early. Because she’s asking for a Hip Hop workshop and if I let her go, she’ll work a little more efficiently.”

Another intervention that blends with his awareness of his daughter’s exhaustion is his wife and his habit of letting his daughter sleep late on weekend to catch up on her sleep deficit during the week. His daughter, he reported, is tired and he and his wife, “On the weekend, we tried to let her sleep until 11 or 12. She’s tired. I believe she’s tired on the weekend”.

As reported earlier in this chapter, Mrs. Barry brought up sleep and her concerns with sleep at her 12th grade son’s well-visit. She asked the doctor to discuss the need for sleep with her son and reported: “At his physical this summer, I asked his doctor and he said the same thing to him that you, because that’s when your body resets, your brain

reset. The physician reported that, “it's just like a computer if you don't reset it. You're not gonna be able to function”.

Mrs. Hernandez reported that she trusts her daughter to make good and healthy sleep decisions. She discussed that “because that's how you grow and learn on your own. Right. Go, go far to go and I tell them you know II choose to trust her intuition. I kind of know that she's listening, even though comes in one ear sometimes and is not great but I know she's listening”.

Summary of Findings

The findings of this study indicate that parents believe teens struggle to maintain healthy sleep hygiene and parents struggle to monitor their adolescent’s sleep habits. School pressure, and to a lesser extent, socialization are two factors identified as impacting sleep. At the high-achieving high school district, the pressure to attain excellent grades and accumulate courses that will set them up for entrance to competitive colleges drives the sleep routines of nine out of ten adolescents whose parents were interviewed. This influence of the Macrosystem drove both adolescent and parental behavior. Parents reported that school schedules and study routines interfere with their child’s sleep routines. Adolescents do not keep regular sleep schedules in part due to keeping up with rigorous school schedules. Stress from school was also cited as reasons for not sleeping well. Students who may not interrupt their sleep schedules for academic reasons may lack a routine because of disruptions from social media and entertainment available in their pocket. Parents cited the ubiquitous nature of such devices, cited as the Techno-Subsystem by Johnson and Pupilampu (2008). Parents reported frustration with

their inability to intervene effectively and remove these distractions from their adolescent's daily routines.

Well-being was reported differently by each participant in this study. One parent gave a score of 4 out of 10, while others reported physical well-being in terms of grades and progress in school. This researcher found that there was some contradiction in reported exhaustion and stress and the description of a positive well-being of their adolescent. Parents did report worry about sleep habits and discomfort with the patterns their adolescents have adopted. Happiness was a metric several parents used to measure their adolescents well-being. Overall, parents reported their child was healthy and growing and developing.

CHAPTER 5

Discussion

The purpose of this study was to recognize and understand parental perceptions of their own adolescent's sleep hygiene and sleep habits. This qualitative phenomenological study explored how parents understand their own child's sleep habits, routines, and ultimately well-being. The following is an analysis of the findings and future research and practice possibilities to help answer the following three qualitative research questions: (1) what factors do parents believe impact adolescent sleep hygiene and routines; (2) from a parental perspective, how does sleep affect their child's well-being; and (3) what role do parents (from different socio-economic, family status, ethnic background, etc.) play in monitoring and regulating their child's sleep hygiene? This chapter includes a discussion on the major findings of this research, and how these findings connect to the theoretical framework of Urie Bronfenbrenner's Ecological Systems Theory coupled with Johnson and Pupilampu's Techno-Sub System. Also included is a discussion on how the findings relate to existing literature on human biology and chronology, the role of parental monitoring of adolescent behavior, and the impact digital devices have on adolescent well-being. The chapter concludes with a look at the limitations of this study as well as a discussion of recommendations for future research and practice.

Interpretation of Findings

This study used a theoretical framework to study the social and biological impact of restorative sleep on the adolescent well-being as perceived by the adolescent's own

parents. While sleep needs increase at this stage of life, many adolescents experience fewer parental restrictions. These restrictions include less control and oversight of bedtimes and less control over sleep schedules in general; this phenomenon has been previously noted. Parents noted discomfort with their own ability to monitor and regular their child's electronic use and their sleep schedules. Some of this was because they felt that their child was too old to monitor that closely. The confluence of biological and social maturation is referred to as "The Perfect Storm" (Carskadon, 2011). The Perfect Storm metaphor applies to patterns of sleep in adolescents in that developmental trajectories and biopsychosocial factors collide at the same time in a young person's life (Carskadon, 2011). The Perfect Storm theory suggests that the drop-off of sleep was once considered a rite of passage for adolescents. Today, however, the lack of sleep is having a detrimental effect on children's mental, social, and physical well-being, patterns of sleep must be reexamined (John, Bellipady, & Bhat, 2016).

Parental perceptions and perspectives and parental monitoring were the lens used to study adolescent sleep hygiene because parental perspectives and parental monitoring have been found to influence adolescent behavior and can impact adolescent lives (Hart, Herriot, Bishop, & Truby, 2013; Moore & Bailey, 2013). Adolescent sleep hygiene behaviors are no less important than healthy eating habits and healthy activities for adolescents. Wiggins and Freeman (2014) found that when adolescent sleep habits were observed by parents, they comprehended the process, and ultimately, their advocacy as well as involvement, increased (Wiggins & Freeman, 2014).

This study uses Bronfenbrenner's systems theory and parental perceptions as a lens through which adolescent well-being was studied. Adolescents nests are changing as

our world is changing. The adaptation of electronic media has brought about a monumental shift in adolescent behavior. The Techno-Subsystem must be considered when addressing adolescent health concerns.

The circadian cycle, our individual biological clock that controls the body's dictates and regulates the biological functions (Czeisler and Gooley, 2007). Since this is a 24-hour cycle where restorative sleep is designed as one extended 7-12 hour block of sleep, routine napping disrupts this complex rhythm. This researcher found that poorly defined sleep routines include disruption of the circadian cycle by taking naps. The influence of electronics also disrupted the natural circadian cycles of adolescents, as perceived or experienced by parents.

The time when a child enters their bedroom to begin a sleep process is also poorly defined. The best sleep is achieved when a bedroom is kept quiet, dark, and free from LED lighting (Wolfson & Carskadon, 2003). Sleep researchers recommend using the bed only for sleeping and sex (Czeisler and Woody, 2006).

Research Question #1: (1) what factors do parents believe impact adolescent sleep hygiene and routines? The results of this study concluded that parents isolated three main factors that they believe impact adolescent sleep hygiene and routines. They were: stress due to rigorous course load, social media and computer distractions, and poorly defined bedtime habits and routines. The high-pressured academic setting this suburban high-achieving district created stress for adolescents and the work expectations, coupled with inefficient study and work habits, impacted the amount of restorative sleep and appropriate circadian cycle sleep adolescents in this study earned. Recall in chapter five when Dr. Brown succinctly stated, “We live in a school district where the

competition is nothing short of insane.” This stress was a driving factor for almost all parental participants. Parents reported this stress as a fact of life for themselves as well as for their children. This study found that the disruptions to a circadian cycle were an accepted price to pay for the perceived benefits of attaining top grades and academic success.

Social Media and computer distractions were cited as interferences for students that disrupted their ability to gain 10-12 hours of restorative sleep. Parents reported that the distractions that can follow their children into their very bed and impact their child. Adolescents use their bed to send Snapchat messages to dozens of friends, they text and send videos through their messaging services, adolescents scroll through social media sites such as Instagram in order to relax themselves, yet all of this is interfering with quality rest and deep, restorative sleep a growing adolescent requires. Many parents also reported an inability to intervene or monitor their children’s interactions with their laptop, phone, and iPad. Frustration and resignation was reported by almost every parent interviewed for this study. In fact, recall that Mrs. Aolini reported, “And that is like a constant source of, ... argument in our house where I, ... demand to take it or whatever so that that it these those few hours that he does have are actually sleep”. The presence of the electronic distractions is almost another person in the household; the devices have their own decision-making power.

Poorly defined bedtime habits and routines were reported by nine out of the eleven participants interviewed for this study. Czeisler and Gooley,(2007) stated that following a circadian cycle is essential for resetting hormones and supporting the body’s natural rhythms. Without a clear start to a bedtime routine, the circadian cycle is

disrupted. These bedtime habits were characterized as not having clear beginnings or ends. Adolescents use their beds as study spaces, hangout spaces, as well as for sleep. They charge and use their digital devices in bed and parents reported not having a clear idea as to when that use ends and sleep begins. Many parents reported naps that interfered with the sleep-wake circadian cycle. Naps were reported to start right after school, after dinner, but before the extended bedtime sleep, and even in the school building itself. The routine of waking in the morning, attending school, coming home to work and eat, then sleep a 8-10 hour cycle seems to be disrupted in many of the parental responses recorded in this study. Parents seem to accept the fact that their child will work in the bedroom until the schoolwork is finished. Since the laptop and iPad come into the bed with the adolescent, the line between working and sleeping has been blurred. Also, the line between working and socializing has been completely blurred. Adolescents work a little on the devices, switch screens to a social media app, work a little, switch into a movie or TV streaming app, and return to the work. Dr. Lin told me “I believe she would not have a problem if she learned how to work efficiently”. This phenomenon is almost impossible to monitor. Recall that Mrs. Barry noted that before she can even approach her son, he has toggled away from whatever site he was accessing in a blink. Since the phone or the computer is with the adolescent at all times, even when the adolescent is sleeping, the opportunities for interactions, and therefore distractions, are omnipresent.

Research Question #2: (2) from a parental perspective, how does sleep affect their child’s well-being? Parents identified three elements that impacted well-being as it regards to sleep. Parents noted exhaustion and stress as side effects of being unable to

attain restorative, dark/light sleep. Parents reported that progress in school, however, trumps biological well-being for their child.

Parents revealed their children felt well when a block of healthy and deep sleep was available to their adolescent. The times when most parents felt their adolescents attained that type of sleep was on weekends and vacations. Parents allow their children to catch up on the sleep deficits they create during the school week by allowing them to “sleep in” on weekends. Parents are unaware of the unhealthy cycle this creates and the effects of “social jet-lag” created by this pattern. Dr. Lin, Mrs. Aolini, and Mrs. Mandel all discussed the habit of allowing their child to sleep late because their child’s body “desperately needed sleep”. Dinich (2006) noted that those who experience social jetlag have an interrupted sleep quality and well-being is affected. Several parents reported that their own adolescents assure them that restorative sleep is not necessary for themselves. Recall that Mrs. Chang’s daughter assured her “Mommy, don’t worry. I get sleep’. Parents seem to be appeased by these reassurances; however inaccurate they may be.

Stress was identified as a side effect of inefficient, non-restorative sleep.

Adolescents report stress as interfering with their ability to feel their best, function their best in academic and social interactions, and maintain positive outlooks. Again, this researcher found that stress was an expected and accepted part of their adolescents high school lifestyle. Adolescents accept stress as a factor of everyday life, as do parents. Parents have come to accept the terms of adolescence and high school life in the high-achieving districts as one of stress, lack of sleep, and high grades. Healthy habits have been pushed to the side in some cases. As Mrs. Davidson said, “And I think because it's so common. It's easy for us as adults to say that it's natural. And I would push back

against that just because something is typical doesn't mean it's healthy". Mrs. Davidson's point of view captured the essence of parental acceptance of a stress-filled lifestyle.

Progress in school was cited as being important to well-being in this study. In fact, the concept of school progress was folded into the definition of well-being for many parents in this high-achieving school district. After reporting exhaustion and stress, several parents described their adolescents as well, healthy and happy. When asked to describe their child overall, many parents described their children as being in the top percent of students or described them using their numerical grade point average.

Research Question #3: what role do parents (from different socio-economic, family status, ethnic background, etc.) play in monitoring and regulating their child's sleep hygiene?

Parental roles fell into two categories which overlapped at times: awareness and intervention. This researcher asked parents to describe their adolescent's sleep routine, and parents seemed puzzled by this question. Many parents asked me to explain what I meant by that, and responses varied. This researcher found that parents of adolescents leave the nighttime routine up to their individual child, as it suited the child. Active roles of monitoring as defined as maintaining regular surveillance was not observed in parents of high-school aged adolescents. Monitoring was defined more in this study as awareness. Parents were able to describe the sleep habits and hygiene of their adolescents yet did not show evidence of direct monitoring; often citing the age of their child as a prohibitive factor.

Parents reported attempting to intervene and taking a more active monitoring role with their adolescents due to concerns about health and wellness, yet these attempts were

not successful as reported to this researcher. The awareness led to intervention in some cases and parents tried to take a more active monitoring role in their own child's sleep hygiene practices.

Parents reported that they were very interested in my study because they felt this issue was one of serious concern, and parents expressed concern about their child's sleep habits. Recall that Mrs. Chang reported, "I have not been happy about her sleeping for a few years". Parents struggle to intervene and expressed that they have given up trying to intervene because it is difficult and because their child's age presents a developmental challenge for parents. Parents reported feeling that their adolescent was too old to have rules about sleeping in place in the home.

Parents report allowing their child to sleep later on weekends when the adolescent does not have to wake up early for school. Parents allow this behavior because they feel their child is sleep-deprived and that this extra time is essential for recovering lost hours of sleep. Recall Dr. Lin's statement, "On the weekend, we tried to let her sleep until 11 or 12. She's tired. I believe she's tired on the weekend". Parents do not seem aware of the disruption social jetlag creates on the circadian cycle of their adolescent.

Parents also make "deals" with their child in order to encourage more sleep. Dr. Lin offered Hip Hop dance classes. Mrs. Chang discussed offering a reward if her daughter could go to bed by 10 pm at night. Her daughter made it for two nights and the incentive was forgotten. Mr. Sadiq did not directly state an incentive, yet he did discuss his wife and his attempts as keeping their daughter as young as they possibly could. He meant to say that he was holding on to habits and routines of the house that kept his

daughter focused on family life and on following the routines she did when she was a middle school student.

The interpretations of these findings indicate that parental roles in monitoring adolescent sleep hygiene to promote well-being in their child are poorly defined. This research revealed there is a lack of restorative sleep attained by the adolescent population included in this study. This phenomenological study sought to explore the essence of the experience of this specific group of participants.

Relationship Between the Results and Prior Research

This study was built upon three threads of existing research: biological aspects of sleep, the unique characteristics of adolescent sleep, and the negative effects of the lack of sleep. The following discussion will examine how the findings of this study support and extend prior research in each of these threads.

As introduced in chapter 2, the circadian cycle, often referred to as circadian rhythm, is the 24-hour clock that controls the regulation of biological functions. Humans are influenced by the sleep-wake cycle and a social life cycle as well as internal factors such as genetics (Touitou, 2013) . Disruption in the sleep cycle can be caused by diseases that modify the rhythm period such as mood disorders (McClung, 2007), hormone-dependent cancers (Touitou et al., 1996), alcoholism (Reinberg et al., 2010; Danel and Touitou, 2004; Danel et al., 2009), use of certain medications (Dispersyn). This is called desynchronization, which is characterized by sleep disorders leading to insomnia, fatigue, and mood disorders linked to depression (Levandovski et al., 2001). The results of this study noted and supported desynchronization as reported by parents of adolescents. Parents interviewed noted their own child's fatigue and described mood

disturbances due to a lack of a regular and healthy sleep routine. The data indicates that sleep cycle has been interrupted by social stress, school stress, and digital distractions and has interrupted the circadian sleep/wake cycle.

Adolescent sleep is characterized by a biological shift in the sleep/wake cycle and teens stay up later (Orzech, 2013). This biological shift is complicated by the social, academic, and work obligations. Social factors for adolescents include school schedules and work schedules as well as increased academic demands and social demands (Orzech, 2013). Today's adolescents often use weekend days to compensate for sleep they do not receive during the week day when they need to adhere to a schedule (Orzech, 2013). This discrepancy between sleep banked on weekdays versus weekends is called social jetlag. Sleep quality is interrupted and therefore, well-being is affected in those who experience social jetlag (Dinich, et. al. 2006).

The results of this study confirmed the presence of sleep deprivation because of the shift in adolescent sleep and the presence of school stress and academic obligations. Studying and homework were cited as two primary factors in school stress. This study found that social demands on devices that adolescents are attached to day and night interrupt adolescent sleep. The existing literature findings were confirmed by this study and supported by details in anecdotes about Snapchat, Instagram, and other online media. This study supported the research that details stress created by academic pressures to succeed at the top-rated universities. Because today's high school students face such grueling academic pressure, greater than their own parents had to face, modern parents contribute to the tremendous stress and pressure placed on these students (Ciciolla, et. al. 2017). Reports of higher unemployment and more competitive college acceptance rates

are driving this growing academic pressure which leads to stress-filled lives. Students self-report that getting into college is the biggest stressor in their adolescent lives (Ciciolla, et. al. 2017). In this study, parents confirmed this trend in the high-achieving school district.

As confirmed by this study, the consequences of these stresses were found to lead to distinct problems in adolescents including a struggle with wellness, disengagement with academics, chronic stress, and difficulty adjusting.

When children are consumed with pursuits of wealth, success, and top colleges as a means to this success, they may suffer because these pursuits do not satisfy the basic psychological needs. In this study, sleep was the basic physiological need, and foster excessive ego boosting and social comparison. These pursuits do not create well children. Focusing on the extrinsic goals leads to decreased mental health and social fulfillment and functioning (Ciciolla, et. al. 2017).

Today's young people face more competition for academic and career achievement than any previous generation, a reality that includes declining college acceptance rates (NCES, Snyder & Dillow, 2015) and rising rates of underemployment and unemployment for recent graduates (Abel, Dietz, & Su, 2014). This study confirmed the trend of parents, all too aware of the competition and high stakes associated with college admissions, are thought to contribute to the mounting achievement pressure on children by raising academic expectations and emphasizing excellence (Garn, Matthews, & Jolly, 2010; Grolnick & Seal, 2008; Mudrak, 2011). As the reports from parents in this study, the expectations of the community feed this pressure and affect their children's well-being.

The pressure to achieve, along with other extrinsic motivations governed by external rewards and sources of approval such as the quest for good grades, acceptance to top universities, and financial success, have been associated with elevated levels of maladjustment, chronic stress, decreased well-being, and inconsistent academic engagement (Leonard et al., 2015). This study confirmed this research and revealed that adolescents at the high achieving high school district were struggling with stress, sleep, and community and self-expectations.

Limitations of the Study

Limitations pertaining to the design of this descriptive, phenomenological, qualitative study included time, financial resources, and administrative management for obtaining a representative population of parents with adolescents on various spectrums of sleep habits. In addition, the convenience-based sample of 11 parents may not consistently represent the broad spectrum of perception of parents globally. The possible drawback of convenience-based sampling was that the data collection may not represent the viewpoint of the entire participant population (Mason, 2010). Phenomenology studies, however, are specific to a group of individuals who have experienced the same phenomena of research inquiry. More so, the outcomes and addressing the collection of data are subject to the bias of the researcher as asserted by Creswell (2012) and Moustakas (1994). More so, the outcomes and addressing the collection of data are subject to the bias of the researcher as asserted by Moustakas (1994).

For reasonable measures to address limitations, this researcher adhered to the parameters identified within the scope of this study. The study took place across two high schools in a suburban high-achieving district. The smaller scale of the research study was a limit to the perspectives elicited and analyzed.

The researcher became more skilled in interviewing as she completed more interviews until saturation. Thus, a limitation was the inability to elicit the same quality responses at the beginning of the process as she did at the end. This researcher is a high school teacher who sees adolescents struggle with maintaining healthy sleep habits. This researcher therefore set her own bias aside as she interviewed parents, and she designed questions that eliminated the possibility of leading participants towards responses she may have expected.

This study relied on interviews of parents reporting their experiences with their high-school aged children. This study only has presented one aspect of adolescent sleep hygiene. Had the study used focus groups, or opportunities for parents to speak together, another aspect may have emerged.

This researcher only interviewed one parent of an adolescent. In families, one parent may view a situation in a very different way than the other parent, even if the parents are living in the same home together. A limitation to this study is that only one parent of the adolescent was interviewed. More details may have emerged if both parents were interviewed.

Research question number three sought to identify commonalities in sub-groups such as gender, ethnicity, marital status, and income. While this researcher anticipated generalizations in each group, she did not find any. Perhaps the assumption that certain family structures would yield patterns is incorrect because of the ubiquity of problematic screen use and unhealthy sleep habits.

Implications for Future Practice

It is clear that educators and parents need to become more educated about the circadian cycle and the necessity for maintaining habits to promote healthy, restorative sleep. Hormones play an essential part in biological functioning. Adolescents are influenced by the sleep-wake cycle and social life cycle as well as internal factors such as genetics (Touitou, 2013). Because school stresses, technology distractions, and a change in parental acceptance of sacrificing well-being in order to maintain a schedule in order to gain acceptance into prestigious universities has influenced sleep schedules and cycles, the adolescents in this study suffered lack of sleep. Adolescent experience substantial changes in their biological, cognitive, and psychological functioning that make them more susceptible to sleep problems (Roane and Taylor, 2008). The social and societal demands made on adolescents in the crux of these changes leaves adolescents vulnerable to sleep problems, which in turn make them more susceptible to mental health problems (Roane and Taylor). The changes happening in adolescent lives are very stressful, as noted by this researcher, and can be precipitating factors that can activate other problems. Previous research has indicated that insomnia is a risk factor for psychological problems in adults such as major depression, alcohol or drug abuse and dependence, and suicide ideation. The stakes are much too high for educators to ignore. Parents, educators, and adolescents themselves must become educated as a preventive measure for these mental health risks

Sleep education is of paramount importance for educators, policy makers, parents, and adolescents. How and when this happens will most likely be of debate. Many districts have adopted practices to address Social Emotional Learning and Health education

programs; folding in sleep education as part of these practices. Health and well-being education is simply essential. The stakes are much too high to dismiss the findings of this study.

Implications for Future Research

This topic can be studied more in depth across various regions of the country. This researcher found alarming experiences in the small sample size and can deduce that the problem of high school students struggling with sleep and their parents struggling to set appropriate and healthy nighttime habits is very much real. Future studies can measure parental awareness and then set to provide education for parents and study the extent of change that occurs after education and implementation of new routines and procedures. Since this study did not reveal a significant amount of parental monitoring that took place, this seems like an appropriate recommendation for future study.

The focus of this study can be replicated in a district where school and academic expectations are not as high as the one presented in this study. Future study can reveal if the same factors are influencing students sleep without parental or community pressure. If they are not the same, future study can reveal what the factors are in those communities.

Conclusion

The findings from this descriptive phenomenological qualitative study extend knowledge in the discipline of education to raise awareness of a growing problem for many parents and adolescents. Today's teens sleep hygiene is vulnerable to disruption by the ubiquitous screens that surround them and by the stress a heavy course load coupled with high parental expectations brings. The consequences of lack of sleep are

exceptionally serious with depressive symptoms, anxiety, and adolescent suicide ideation leading the concerns. This study sought to examine the perspectives of parents about their own adolescent sleep habits in order to form a new awareness and understanding for educators and administrators. Understanding the lived experiences of parents with teenagers in this suburban high-achieving district will allow educators to begin to address the concerns through education and outreach. Parents seem to need skills to help their child achieve the recommended hours of sleep per night. This study may lead to such programs being developed to support and educate parents and guardians in order to promote better sleep habits among adolescents.

The results may help increase the knowledge parents attain to promote better sleep health habits to adolescents and the effects on their daily behaviors. Finally, the results may add insight for conditions and behaviors parents perceive poor sleep habits as a health concern that requires exploration with health professionals to reduce adolescent health problems

Key findings and concerns reflect results from the parent participants to promote better sleep health among adolescents were provided based upon alignment of theories and research questions. By understanding parental perspectives through these research findings, health professional may better understand adolescent sleep health and offer critical insight within the field of education. These insights may contribute to the development of effective solutions to improve adolescent sleep health and influence school leaders and administrators to maximize parental outreach and education. Given these possible benefits, understanding parental perspectives as it pertains to their experiences with adolescent sleep hygiene is an important contribution to this research domain.

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Appendix A



Federal Wide Assurance: FWA00009066

Dec 9, 2019 12:05 PM EST

PI: Theresa Walter

CO-PI: randall clemens

Organization: Ed Admin & Instruc Leadership

Re: Expedited Review - Initial - IRB-FY2020-265 Parental Perceptions of Adolescent Hygiene in High-Achieving Suburban School Districts

Dear Theresa Walter:

The St John's University Institutional Review Board has rendered the decision below for Parental Perceptions of Adolescent Hygiene in High-Achieving Suburban School Districts. The approval is effective from December 6, 2019 through December 4, 2020 Decision: Approved

PLEASE NOTE: If you have collected any data prior to this approval date, the data needs to be discarded.

Selected Category: 7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Sincerely,

Raymond DiGiuseppe, PhD, ABPP
Chair, Institutional
Review Board
Professor of
Psychology

Marie Nitopi, Ed.D.
IRB Coordinator

Appendix B



Informed Consent

Dear Participant,

You have been invited to take part in a research study to learn more about parental perceptions of adolescent sleep hygiene. This study will be conducted by Theresa Walter, School of Education, Administration and Supervision, St. John's University, as part of her doctoral dissertation. Her faculty sponsor is Dr. Randall Clemens.

If you agree to participate in this study, you will be asked to participate in an in-person interview about your perceptions of adolescent sleep practices and habits. Participation in this study will involve approximately 45 minutes to complete the interview.

There are no known risks associated with your participation in this research beyond those of everyday life. Although you will receive no direct benefits, this research may help the investigator understand the perceptions of adolescent sleep hygiene in high school students.

Confidentiality of research records will be strictly maintained by using codes to refer to schools, so that specific schools and/or districts are distinguishable from each other, but not identifiable as any particular school or district. Participants names, addresses, email addresses and other personally identifiable information will not be recorded when the interview is completed. Participants will not be asked to provide their name or their child's school.

Participation in this study is voluntary. You may refuse to participate or withdraw at any time without penalty. While completing the questionnaire, you have the right to skip or not answer any questions that you prefer not to answer.

If there is anything about the study or your participation that is unclear or that you do not understand or if you have any questions or wish to report a research-related problem, you may contact Theresa Walter at (516) 441-4844 or theresa.walter09@stjohns.edu, or the faculty sponsor Randall Clemens at (718) 990-2554.

For questions about your rights as a research participant, you may contact the University's Institutional Review Board, St. John's University, Dr. Raymond DiGiuseppe, Chair digiuser@stjohns.edu, 718-990-1955 or Maria Nitopi, IRB Coordinator, nitopim@stjohns.edu, 718-990-1440.

Agreement to Participate

Signature

Date

Appendix C

Interview Tool

Introduction: State name of researcher, title, research purpose, and IRB approval number. Obtain demographics including gender of parental participant, highest level of education completed, socio-economic income status, age of parental participant, and number of child(ren) along with gender and ages. Inform the participant the interview may last 45-60 minutes. Administer ice breaker conversation, if needed.

Script:

Hello, I'm Theresa Walter, I am a doctoral student, a high school teacher, and I'm also a mom of adolescents. As you know, I'm doing a study about teenagers and sleep habits. I want to thank you again for taking the time to speak with me.

Interview Questions (verbiage of some questions may need to be explained depending on the education level, socio-economic income status, or age of the parental participant).

As a mother of teenagers, I myself struggle about when to set bedtimes and monitoring my own children's sleep habits. I'm very interested in your son or daughter; can you talk to me a little about them in general?

1. Can you describe your adolescent's nightly sleep routine?
2. When do you think your child sleeps best?
3. How much sleep do you think your teenager needs to function at his/her best?

4. Have you read or watched any type of news report about teen sleep? Could you describe what you saw/read?
5. Have you ever discussed this topic outside of this interview? If so, can you elaborate upon these discussions?
6. How does your child's school work influence their own sleep schedule?
7. How does your own work schedule influence your child's sleep schedule?
8. What factors does your teenager describe as influencing the amount of sleep they obtain each night?
9. How would you describe your adolescent's current state of well-being?

Is there anything I should know that I didn't ask today, or can you fill me in on anything you think I can ask?

I heard you talking about _____, can you tell me more about that...

Any questions for me? Any questions you have for me?

Conclusion: Thank the parents for their time as a research participant.

Debrief: Provide the participants with a description of what happens next and how they will be contacted for follow-up and verification. Also explain how their data will be protected.

Appendix D

Good Afternoon,

My name is Theresa Walter and I am an English teacher at South High School, and I am pursuing my doctorate in Education at St. John's University. My research centers around teenagers and teen sleep habits. I am looking to interview parents about their perceptions of their own child's sleep and sleep habits to better understand student wellness. Your experience as a parent can provide valuable first-hand information from your unique perspective. If you are interested in participating, please click the link below and complete a brief one-minute survey.

If you choose to complete the survey, I may contact you to set up an informal interview. Your participation is completely voluntary and has the potential to be a valuable addition to the research in the field of education.

If you are interested and have further questions, please don't hesitate to contact me at theresa.walter09@stjohns.edu

Appendix E

Talk about Teen Sleep: A Survey

* Required

1. Email address *

2. Name *

3. Would you be willing to discuss your thoughts about your teenager's sleep habits? * Mark only one oval.

Yes Skip to question 3.

No Skip to "Thank you. Have a good day.."

Thank you. Have a good day.

You have completed the survey.

Stop filling out this form.

Additional Information

Please answer the following information to allow me to understand a little about who you are. All information is kept secure and confidential and will be destroyed upon completion of this project.

4. How would you describe your gender? *

Mark only one oval.

Female

M

a

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5. How would you describe your primary ethnic identity? * Mark only one oval.

- African American
- Asian American
- White, non Hispanic
- White, Hispanic
- Latino/Latina
- Multi-ethnic
- Middle Eastern
- Other
-
- _____

Pre
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Not
to
Ans
wer
Oth
er:


6. How would you describe your marital status? * Mark only one oval.

- Married
- Divorced
- Separated
- Unmarried
- Prefer Not To Answer

7. How would you describe your family's annual household income? * Mark only one oval.

- \$0-\$20,000
- \$20,000-\$50,000
- \$50,000-\$75,000
- \$75,000-\$100,000
- \$100,000-\$150,000
- \$150,000-\$200,000
- \$200,000 or above
- Prefer Not to Answer
- Other: _____

Send me a copy of my responses.

Powered by
 Google Forms

Vita

Name	<i>Theresa Walter</i>
Baccalaureate Degree	<i>Bachelor of Science, University of Delaware, Newark, DE English Education</i>
Date Graduated	<i>June 1996</i>
Other Degrees and Certificates	<i>Professional Diploma in Educational Administration (2005)</i> <i>Master of Science, Fordham University, New York</i>
Date Graduated	<i>May, 2000</i>