School of Education, Communication and Language Sciences

Title: An exploration of how teenagers' electronic and social media use impacts wider areas of their lives.

Doctorate in Applied Educational Psychology

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Declaration:

This thesis is submitted as part of the award of Doctorate in Applied Educational Psychology. It is my own work and does not include material of others without acknowledgement. I have not submitted this assignment for any other academic award.

Faye Poole (August 2017).

Acknowledgements

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Indicative Abstract

This document includes 3 key sections; a systematic literature review, an empirical research study and a bridging document (linking both aforementioned documents).

This thesis examines how teenagers' electronic and social media use can impact wider areas of their lives including sleep, academic success and emotional wellbeing.

The first chapter, the systematic literature review, critically reviews research literature surrounding how teenagers' electronic media use impacts sleep and academic success. This review was modelled on recommendations by Petticrew and Roberts (2006). Seven pieces of research literature met the inclusion criteria and formed the basis of this review. Conclusions drawn from this review initially suggested teenagers' self-reported screen media use impacted their sleep and academic success. Moderate correlations were found between large amounts of electronic media use, sleep duration and academic performance. This was particularly the case when using electronic media before bedtime and after 'lights out'.

Conclusions drawn from the literature review informed the empirical research area. The literature review identified a gap in research literature with regards teenagers' perceptions about how social media use impacts wider areas of their lives including sleep, academic success, relationships and emotional well-being. Research in the literature review was predominantly quantitative; highlighting an absence of rich qualitative data.

The bridging document (chapter 2) links both the systematic literature review and the empirical paper. It explores the research journey, outlining theoretical, ontological and epistemological underpinnings of both documents, and provides a rational to justify key research decisions.

The empirical paper (chapter 3), explores teenagers' perceptions about the wider impact of social media on areas such as sleep, academic success, emotional wellbeing and relationships. This was achieved through the use of a mixed methods design whereby an initial questionnaire was completed to gather both qualitative and quantitative data. Findings from the questionnaire informed questions explored in the

focus groups to gain a deeper understanding of how teenagers' perceived social media use impacted wider areas of their lives.

A thematic analysis was used to analyse qualitative data.

Empirical findings suggested all teenagers who responded, reported to use some form of social media, however, frequency of use varied greatly.

Social media use both positively and negatively affected the lives of many young people. Teenagers perceived social media use could negatively affect their sleep duration and ability to initiate sleep, in addition to causing sleep disruptions. Similarly, social media affected learning both in the classroom and at home. Teenagers also reported emotional wellbeing and relationships could be affected through social media use by causing anxieties about what was happening online and worry about experiencing cyberbullying or arguments.

Conversely, teenagers perceived social media supported academic success through providing opportunities to learn online and receive support from others. Similarly, teenagers reported their relationships were strengthened online.

These empirical findings can be utilised by Educational Psychologists and wider professionals to consider how teenagers can be supported in their social media use, to optimise benefits associated with its use and reduce negative effects.

Chapter 1, Literature review.

How can teenagers' electronic media use influence sleep and factors associated with academic success? *(Step 1 in the literature review process)*

Abstract

This systematic literature review explores how teenagers' electronic media use can influence sleep and academic success in schools. Key terms are defined and problematised including the terms; 'adolescent', 'academic success', 'electronic media' and 'sleep'. The systematic literature review process was guided by recommendations by Pettigrew and Roberts. Seven pieces of research literature met the inclusion criteria and were included in this review. Research literature was predominantly quantitative and generally discovered moderate correlations between large amounts of electronic media use, sleep duration and academic performance. Findings also suggested a link between use of screen media prior to bedtime or after lights out and academic performance. Research also found age and gender differences in frequency and types of electronic media used.

Introduction:

Electronic media use is popular among many Children and Young People (CYP) in modern and developing societies. This popularity has led to concerns regarding how electronic media use can impact wider areas of their lives. Electronic media has been identified as a common contributing factor in causing shorter sleep duration and sleep disruption (Hysing et al., 2015; Marino et al., 2016; Nuutinen, Ray, & Roos, 2013; Zimmerman & Henry, 2008). Similarly, research has found those who spend significant amounts of time using electronic media can achieve lower academic success (Jacobsen & Forste, 2011; Roberts & Foehr, 2008).

Interest in this area stemmed from working with CYP and their families in the role of a Trainee Educational Psychologist (TEP). Teenagers regularly reported staying up late to use screen media and parents repeatedly expressed concerns regarding the impact their children's electronic media use had on wider areas of their life. In addition to this, my Local Authority recently identified improving Secondary attainment as a high priority, due to a decline in the number of young people gaining 5 A*-C's at GCSE in previous years. I wondered whether exploring this topic could contribute towards knowledge and understanding around key factors potentially influencing teenagers' academic success.

Defining and exploring key terms

Throughout this section, key terms referred to throughout this literature review are defined.

Adolescent

An adolescent is commonly defined in research literature as anyone between the ages of 10 and 19 (Sacks, 2003; World Health Organisation, 2015). For the purpose of this review, an adolescent refers to a young person aged between 11 and 19; based on the age many CYP attend Secondary Education, College or equivalent within the United Kingdom. The terms 'adolescent' and 'teenager' are used synonymously throughout this review.

Academic success

Early definitions of academic success adopted a narrow perspective, focusing specifically on 'intellectual achievement'; measured through grades achieved at school (May, 1923). More recently, 'academic success' was recognised as an ambiguous term; in an attempt to provide more transparency, York, Gibson, and Rankin (2015) proposed academic success functions as a broad umbrella term encompassing: academic achievement, satisfaction, acquisition of skills, persistence, attainment of learning outcomes and career success. Regardless of this change in current thinking however, literature quantifying academic success still predominantly adopts a narrow, outdated focus. Grades achieved and Grade Point Average (GPA) are still largely used as a key measurement (Coutinho, 2007; Dimitriou, Le Cornu Knight, & Milton, 2015; Titova et al., 2015; York et al., 2015).

The terms academic performance and academic achievement are used interchangeably in research literature; usually referring to academic ability in relation to grades (Kirschner & Karpinski, 2010; York et al., 2015).

Articles used within this review utilise academic achievement outcomes (number of subjects failed, grades achieved or GPA) and performance on memory tests as measurements for academic success. These measurements were dictated and restricted by existing research literature available.

Electronic media

Within research literature, the terms 'electronic media' and 'screen media' are used interchangeably (Lemola, Perkinson-Gloor, Brand, Dewald-Kaufmann, & Grob, 2015; Peiró-Velert et al., 2014; Touitou, 2013). Sleep-Time Related Information and Communication Technology (STRICT) is also a term commonly used (Polos et al., 2015).

Types of screen media include; TV, video, DVD, computers, video/ online games, use of mobile phones and social media use (Peiró-Velert et al., 2014; Polos et al., 2015) . For the purpose of this review, screen media excludes the use of TV, video and DVD. The rationale for this decision was guided by previous research literature highlighting this was a highly researched area; beyond the scope of this literature review (Cain & Gradisar, 2010). Additionally, a steady decline in teenagers reporting

to watch live TV has occurred in recent years. In 2014, the average use of online video content succeeded live TV use in teenagers aged 12-15 (OFCOM, 2016). This review therefore focuses more specifically on the impact of types of electronic media such as mobile phones, social media and computers.

Sleep

Sleep research generally focuses on sleep quality and sleep quantity (Zimmerman & Henry, 2008). Sleep quality can be affected by a range of factors including; early awakenings, late bed times and sleep onset latency (the duration of time between going to bed and falling asleep) (Zimmerman & Henry, 2008). Sleep quantity refers to the number of hours a person spends asleep and can be affected by a number of factors including; night time awakening, nightmares, inconsistent bedtimes and disturbances in sleep-wake transitions (Zimmerman & Henry, 2008).

In summary, the key terms 'adolescent', 'academic success' 'electronic media' and 'sleep' were defined and problematised to provide greater clarity around their meaning within this literature review.

Background literature

Teenagers' electronic media use

Electronic media use has vastly increased over the last few decades, including the use of mobile phones and computers due to technological advances (Cain & Gradisar, 2010; Lemola et al., 2015). The 1990's saw a surge in internet use and increased availability to high speed internet in the 2000s, led to the creation of the first primary social media platforms (Kaplan & Haenlein, 2010; Obar, 2015).

The widespread availability of various forms of electronic media like smart phones, has made it easier for teenagers to communicate with friends, surf the internet and watch videos when and where they wish (Lemola et al., 2015). Recent literature suggests teenagers report using on average, between 6-8 ½ hours of electronic media use per day (OFCOM, 2016; Roberts & Foehr, 2008). The Pew research centre reported 88% of teenagers have access to a cell or smart phone and on average, send 30 text messages per day (Lenhart, 2015a). 'Media multi-tasking'

has also become common, whereby different forms of media are used in unison (Lemola et al., 2015; Roberts & Foehr, 2008).

Electronic media use appears to increase with age. At 15 years of age, 55.6% of adolescents reported regular mobile phone use in comparison to 82.2% of 19 year olds (Söderqvist, Carlberg, & Hardell, 2008). More recently, around 62% of Year 8 students and 68.2% of Year 10 students reported sending between 26-101+ text messages per day (Horton, Taylor, & Power, 2015). Research suggests older adolescents are more likely to use their mobile phone for social networking and to deepen their friendships in comparison to their younger counterparts; accounting for this increase (Söderqvist et al., 2008).

Research also indicates gender differences in electronic media use (Punamäki, Wallenius, Nygård, Saarni, & Rimpelä, 2007). Of teenagers aged 14-18, boys were more likely to play digital games and surf the internet, in comparison to girls, who were more likely to communicate with peers, using their mobile phone (Lenhart, 2015a; Punamäki et al., 2007; Söderqvist et al., 2008).

Sleep and screen media use

Literature suggests adolescents should aim to sleep on average between 8.6 – 9.2 hours each night to function at their best (Calamaro, Mason, & Ratcliffe, 2009; Carskadon, Acebo, & Seifer, 2001; Wolfson & Carskadon, 1998). A growing body of literature however, indicates teenagers frequently experience a sleep deficit. Teenagers often report getting on average 7 hours and as low as 6.5 hours of sleep on school nights (Hansen, Janssen, Schiff, Zee , & Dubocovich, 2005; Hysing, Pallesen, Stormark, Lundervold, & Sivertsen, 2013; National Sleep Foundation, 2006; Wolfson & Carskadon, 1998). Roughly 20% of adolescents report achieving the recommended number of hours sleep per night, suggesting up to 80% experience a sleep deficit (National Sleep Foundation, 2006; Calamaro et al., 2009). This can be problematic because naturally, teenagers experience 'delayed sleep phase syndrome' (Crowley, Acebo, & Carskadon, 2007). Phase delay can lead to sleep difficulties and a delay in sleeping patterns; leading teenagers to fall asleep later and experience difficulties in waking early in the morning (Crowley et al., 2007). When this is combined with electronic media use at night, after lights out; the likelihood that teenagers will experience a sleep deficit is increased (Cain & Gradisar, 2010; Crowley et al., 2007; Hysing et al., 2015; Orzech, 2013; Van den Bulck, 2007;

Wolfson & Carskadon, 1998). OFCOM (2016) found 49% of 11-15 year olds reported active use of electronic media devices at 10pm and 12% at midnight. Further research found teenagers who slept for 8-10 hours were less likely to use electronic media devices in comparison to those who slept for 3-5 hours (Calamaro et al., 2009). These findings are particularly concerning in light of research proposing a small reduction in sleep of 25 minutes per night can negatively affect teenagers' grades in school (more likely to get C's, D's and F's) (Wolfson & Carskadon, 1998).

Wider research literature also highlighted a link between insuffient sleep and a decline in academic success (Gibson et al., 2006; Stea, Knutsen, & Tirstveit, 2014). Poor teenage academic performance is strongly associated with shortened sleep, late bedtimes and disrupted sleep (Wolfson & Carskadon, 2003). Insufficient sleep during teenage years can lead to a host of negative effects including: falling asleep in class, a decrease in daytime activities, concentration difficulties, difficulties in mood regulation, lateness to school, absenteeism and an increase in stress levels and peer disputes (National Sleep Foundation, 2006; Carskadon, Acebo, & Oskar, 2004; Eggermont & Van den Bulck, 2006; Gibson et al., 2006; Mullis, Martin, Foy, & Arora, 2011; Noland, Price, Dake, & Telljohann, 2009).

Screen Media use after school and before bed is associated with difficulties initiating sleep, a decrease in sleep duration and an increase in daytime sleepiness (Eggermont & Van den Bulck, 2006; Hysing et al., 2015; Marino et al., 2016; Nuutinen et al., 2013). Psychosocial factors like pressure from friends to respond to text messages during the night or a 'fear of missing out' have been linked to a decrease in sleep duration (Cain & Gradisar, 2010; Crowley et al., 2007; Schoeni, Roser, & Röösli, 2015).

Lack of sleep can negatively influence cognitive functioning (one measure of academic success) in some teenagers, particularly declarative (recall of facts) and procedural memory (skills) (Ellenbogen, Payne, & Stickgold, 2006; Plihal & Born, 1997; Potkin & Bunney Jr, 2012). Sleep particularly aids declarative memory consolidation (Ellenbogen et al., 2006; Potkin & Bunney Jr, 2012) The link between sleep and procedural memory is less clear although, deprivation of Rapid Eye Movement (REM) has been linked procedural memory deficits (Smith, 1995; Stickgold, 2005).

Academic success and screen media use*.*

High levels of screen media use have been found to negatively correlate with academic performance (Jacobsen & Forste, 2011; Roberts & Foehr, 2008). Supporting literature found an association between adolescents sleeping less than 8 hours a night, high screen media use (including TV) and poor academic achievement (Stea et al., 2014). The displacement hypothesis suggests time spent engaging in wider activities are often displaced by screen time (Neuman, 1995) . This proposes, children re-organise their time and allocate less time for wider activities like reading for leisure, homework and studying (Shin, 2004). The displacement hypothesis can be used to explain why high levels of screen media use are potentially associated with poorer academic success.

To summarise, electronic media use has increased in recent years, particularly the use of mobile phones and social media. Age and gender differences were also identified. Research has found teenagers often experience a sleep deficit which can lead to a reduction in academic success. Electronic media use has also been linked to lower academic success; the displacement hypothesis was offered as a potential explanation for this.

Aim of this review

To review research literature exploring the relationship between teenagers' electronic media use, sleep duration and academic success.

Method

Systematic literature review process

This section outlines the systematic literature review process; seven key stages were followed, guided by recommendations from Petticrew and Roberts (2006). The stages included:

1) Defining the research question;

2) Specifying search terms linked to the research question;

3) Carrying out a literature review using online databases and specified search terms;

4) Screening results using inclusion and exclusion criteria and selecting 7-10 papers addressing the research question;

5) Critically evaluating selected studies;

6) Synthesising and summarising findings of selected studies and considering the heterogeneity of their findings; and

7) Sharing the review findings.

(Petticrew & Roberts, 2006).

The Search process *(Step 2 in the literature review process).*

A systematic combination of searches were undertaken, using search terms identified in Table 1. Search terms were determined by exploring current research literature.

Table 1: Summary of Search Terms used

Sleep	Academic performance	Social media	Teenagers
bedtime	Academic attainment	Mobile Phone	Adolescents
rest	Academic success	Screen use	
snooze	Scholarly success	Blue light	
wakefulness	High grades	Electronic media	
Sleep*	Pupil attainment	Internet	
		Social networking	
		Mobile	

Databases used (Step 3 in the literature review process)

Electronic database searches were carried out on various occasions between July-November, 2015. Follow up searches were conducted between February - August, 2016 to explore whether any articles had been released since original searches took place.

Seven databases were used during the search process, higher than the recommended minimum of two (Petticrew & Roberts, 2006). Specific data bases used are detailed in Table 2. Grey literature searches were also carried out, however, they yielded zero responses.

A comprehensive log of searches and articles were recorded throughout this process. Articles were initially rated as red, amber or green according to relevance. An amber rating was allocated to articles focusing on two of the following: electronic media, sleep and academic performance. A Green rating was allocated to articles focusing on all three. Articles were then assessed according to the inclusion criteria.

Table 2: Summary of databases used

A summary of databases used

EBSCO
Databases searched within EBSCO include:
    - *Cumulative index of nursing and allied health literature*
    - *ERIC*

Medline
SCOPUS
Proquest

OVID
Data bases searched within OVID include:
    - *Embase 1974 to 2015 November 05,*
    - *EBM Reviews - Cochrane Central Register of Controlled Trials September 2015,*
    - *EBM Reviews - Cochrane Database of Systematic Reviews 2005 to September 2015,*
    - *EBM Reviews - Database of Abstracts of Reviews of Effects 2nd Quarter 2015,*
    - *EBM Reviews - ACP Journal Club 1991 to October 2015,*
    - *EBM Reviews - Cochrane Methodology Register 3rd Quarter 2012,*
    - *EBM Reviews - Health Technology Assessment 3rd Quarter 2015,*
    - *EBM Reviews - NHS Economic Evaluation Database 2nd Quarter 2015,*
    - *PsycARTICLES Full Text,*
    - *PsycINFO 1806 to November Week 1 2015*

Compendex
Jstor
Hand searches

Inclusion/ exclusion criteria (Step 4 in the literature review process)

An inclusion criteria was set to determine the relevance of journal articles in accordance with my literature review question, detailed in Table 3.

Table 3: Inclusion and Exclusion criteria

Inclusion criteria	Exclusion criteria
- A target population of young people between the ages of 11-19 years of age, and attending school/ college.	- A target population of children below the age of 11 or adults aged 20 or above.
- Papers written in English.	- Papers written in an alternative language to English.
- Papers published between 2000-2016.	- Papers published prior to 2000.
- Papers exploring the use of mobile phones, social media, computers and internet.	- Papers linked to mental health (apart from depression). - Papers exploring television, video or DVD. - Links to sleep disorders and parasomnias (except for insomnia).

Table 4: Articles meeting the inclusion criteria and selected for the literature review.

Articles selected for the literature review

Reference	Data base in which it was found
Peiró-Velert et al. (2014)	Proquest
Schoeni et al. (2015)	Scopus
Titova et al. (2015)	Medline
Pecor et al. (2015)	EBSCO
Dimitriou et al. (2015)	EBSCO
Polos et al. (2015)	EBSCO
Grover et al. (2015)	Scopus

Nine pieces of literature were initially found to meet the inclusion criteria. During the screening process and assessment using the Weight of Evidence tool (See table 6), I identified two further studies did not meet the inclusion criteria. These studies were therefore removed, leaving seven pieces of research literature in total in this review. A summary of each piece of literature is detailed in Table 5.

Table 5: Summary of research literature included in this review

Reference	Sample	Purpose / aim	Method	Evaluation and Ethics	Data collection	Outcome measure	Findings
Peiró-Velert et al. (2014)	Adolescents from Spain aged 12-18. 3095 students.	To consider the relationship between Screen Media Usage (SMU), sleep time, academic attainment and socio-demographics. To consider various behavioural profiles the adolescents may have using self-organising maps, comparing high and low academic attainment.	Self-report	Ethical approval gained from University of Valencia and written consent was gained from the adolescents and parents.	Adolescent Sedentary Activity Questionnaire, Family affluence scale, sleep hours, Screen media usage and number of subjects failed in previous academic year.	Self-organising maps were used focusing on 15 variables, analysed through a Spearman's Rho.	Gender differences: Girls used mobile phones more than boys. The youngest adolescents had the highest academic attainment, spent longer sleeping and used SMU less. The study reported a 'moderate' relationship was found using a spearman correlation between academic attainment and screen time (rs = -0.55) and SMU (rs =-0.55). Significant relationships were found between: • Academic achievement and using mobile phone for communicating (rs = -0.25). • Academic achievement and mobile phone for playing (rs =0.5). • Academic attainment and computer communicating (rs = -0.39) • Academic achievement and playing on a computer (rs = -0.46). • Academic achievement and passive video games (rs = 0.35). • Sleep time and use of mobile phone for communicating (rs = -0.61). • Sleep time and computer communicating (rs = -0.46). • Sleep time and active video games (rs = 0.71).

Reference	Sample	Purpose / aim	Method	Evaluation and Ethics	Data collection	Outcome measure	Findings
Schoeni et al. (2015)	Adolescents from Switzerland Aged 12-17. Median age: 13.9. 439 students.	To analyse how adolescents report they perceive their health and cognitive functions can be affected by being awakened in the night by a mobile phone.	Self-report measure And cognitive memory tests.	Acknowledges that unmeasured variables may have contributed to the results. Self-reported mobile phone use was confirmed by measuring operator mobile phone use. Ethical approval was obtained from the ethical committee of Lucarne, Switzerland. Written consent was gained from both adolescents and parents.	Self-report measure relating to mobile phone use and health and standardised cognitive tests (on a computer) to measure memory and concentration.	The association between mobile phone use, symptoms and cognitive functions were analysed using logistic regression. Risk estimates are described through OR (Odds Ratios) and CI (Confidence Intervals).	21.9% of adolescents reported being awakened by their mobile phone on a night at least once a month. Associations were found between self-reported mobile phone use (being awakened at least once a month) had significant effects on tiredness (OR:2.06, 95% CI:1.16-3.66) and exhaustibility (OR:2.94, 95% CI:1.30-6.63). For those who self-reported responding to their phone during the night, the following significant effects were found: tiredness (OR 3.33, 95% CI:1.67 – 6.66) and exhaustibility (OR:2.79, 95% CI: 1.13-6.91). The more the adolescents were awakened in a week by their mobile phone, the more the OR increased for tiredness, lack of concentration, and lack of energy. Cognitive functions: Reported mobile phone use during the night was not found to be associated with power, accuracy and homogeneity of concentration. Self-reported mobile phone using during the night was also not associated with verbal, figural and overall memory.

Reference	Sample	Purpose/ aim	Method	Evaluation and Ethics	Data collection	Outcome measure	Findings
Titova et al. (2015)	Adolescents from Swedish Uppsala county aged 12-19. 39,399 students.	To consider how sleep disturbance and short sleep duration can be associated with academic failure.	Self-report measure	Question whether it was social networking or whether the internet was used for homework.	Self-reported sleep disturbance and duration were assessed through specific questions (no specific scale). Academic failure was measured through number of subjects failed during the school year. Internet use was measured by the following question 'are you usually active on the internet on a night'.	Independent sample t-test and Chi-squared test were used to compare groups. Binary logistic regression analysis looked at the relationship between academic performance and sleep duration.	Sleep disturbances had an approximately two fold higher relative risk to fail at least one subject during the school year. This was particularly the case for those who slept 7-8 hours. No significant association was found between sleep duration and academic success. Those who reported sleep disturbances were more active on the internet on a night compared to those without sleep disturbances ($X^2 = 42.5$. df = 1, $P<0.001$). Similar findings were found on a weekend (teens who slept more than 7 hours = $X^2 = 241.2$, df = 1, $P<0.001$ and teens who slept less than 7 hours = $X^2 = 95.1$, df = 1, $P<0.001$)). Girls typically slept less than boys, 32% of girls had less than 7 hours of sleep in comparison to 27% of boys.

Reference	Sample	Purpose/ aim	Method	Evaluation and Ethics	Data collection	Outcome measure	Findings
Pecor et al. (2015)	Adolescents from New Jersey. 976 students 334 were removed. Leaving a sample of 633.	To explore the association between bedtime, total sleep time, instant messaging, headaches and academic performance.	Anonymous surveys	Only instant messaging was investigated. The research was approved by the institutional review board of New Jersey Medical School.	A survey containing 27 questions to investigate sleep, messaging habits, headaches and school grades.	Spearman's rank correlation was used to measure the association between academic performance and bedtime. Scheirer Ray Hara extension of the Kruskal-Wallis analysis was used to measure the association between messages sent after lights out and academic success.	A correlation was not found between academic performance and bedtime (rs = -0.69, P=0.08) or sleep duration (rs = 0.07, P = 0.07). Students who sent messages after lights out however, reported poorer academic success (H = 10.62, df = 1, P = 0.001).

Reference	Sample	Purpose / aim	Method	Evaluation and Ethics	Data collection	Outcome measure	Findings
Dimitriou et al. (2015)	Adolescents aged 16-19 attending sixth form in central London. 47 students.	To consider the relationship between sleep and school functioning in adolescence, exploring environmental factors mediating this relationship.	Self-report	Ethical approval was granted by the UCL-IoE Ethics Committee. All p's gave written informed consent and parental consent.	Sleep habits survey, sleep diary, GPA, Raven's Standard Progressive Matrices Plus and a background and lifestyle questionnaire.	Pearson's correlations were used to consider environmental factors. Three separate mediation analyses were used to explore whether environmental factors influenced academic performance and sleep.	Moderate correlations were found between GPA and weekly bedtimes (r=-0.39, p<0.05), weekend bedtimes (r =-0.51, p<0.01) and total sleep time (r =0.43 p<0.01). Better results at school were linked to early bedtimes and an increased amount of total sleep time per night. The use of social media 30 minutes before bedtime was negatively associated with GPA. Using technology 30 minutes prior to bedtime was strongly associated with later bedtimes and total sleep time. Social media use before bed correlated with GPA (r =-44) and bedtime on weekdays (r = 0.71).

Reference	Sample	Purpose / aim	Method	Evaluation and Ethics	Data collection	Outcome measure	Findings
Polos et al. (2015)	6th-12th grade (aged 11-18) adolescents from New Jersey, America. 3139 students.	To consider the incidence of teenagers' Sleep Time Related Information and Communication Technology (STRICT) use. Consider the link between STRICT use, duration of sleep, insomnia symptoms, daytime sleepiness and chronotypes.	Self-report measure		38 item online questionnaire gathering information relating to age, demographics, gender and self-reported academic performance (Grades achieved from A-F). Insomnia: minimal insomnia severity scale STRICT use: specific questions enquiring about STRICT use (cell phones, texting, facebook, twitter, Instagram, and online gaming). Sleep habits: use of multiple choice questions.	Percentages were used to measure STRICT use and its impact. Spearman's rank order correlations were used to measure STRICT correlations.	STRICT use of over 1 hour was more commonly found in high school students in comparison to middle school students. STRICT use in bed was reported by 61.8%. Sleep disruption due to incoming texts was reported by 20.7%. 61% reported STRICT impacted on school work and 65.7% felt that STRICT impacted on sleep. STRICT use correlations (Spearman's rank) with: _see table below_ STRICT use was reported to be a predictor of academic performance but sleep was not.

Findings sub-table:

Perceived impact on school work	$r_s = 0.272$, $P<.001$
Perceived impact on sleep	$r_s = 0.395$, $P<.001$
Academic grades	$r_s = -0.297$, $P<.001$
Sleep duration on school nights	$r_s = -0.322$, $P<.001$

Reference	Sample	Purpose / aim	Method	Evaluation and Ethics	Data collection	Outcome measure	Findings
Grover et al. (2015)	Adolescents in grades 9-12. Ages 14-18. 1537 students. From New Jersey.	To assess the relationship between messaging and daytime sleepiness symptoms and how bedtime messaging can impact on school performance.	Self-report	Only instant messaging investigated. Approval was gained from New Jersey Medical School.	Modified existing questionnaire. Added additional questions to measure electronic media use. Sleep duration: Hours asleep on school nights Daytime sleepiness: Questions about whether this is experienced on school days, whether adequate sleep is achieved and required naps. Academic performance: Grade averages Instant messaging: Duration before and after lights out.	2 way analysis of variance. Scheirer-Ray-Hare extension of the Kruskal-Wallis test for 2 way analysis used to look at associations with sleep duration.	Sleep duration differed across grades – boys in 9th grade slept longer. There was a significant difference in the time spent instant messaging after lights out in different grades (H = 8.62, df = 3, P<.05). Females messaged significantly more after lights out but there was no difference between grades. There was not an interaction between messaging after lights out and sleep duration however, there was a significant difference amongst categories (durations) of messaging after lights out. When students were grouped according to their messaging habits, those who spent 2 hours messaging after lights out had the shortest average sleep duration in comparison to those who messaged for 30 minutes after lights out who got on average the longest sleep. A significant difference was found between the messaging categories after lights out and academic performance (H = 16.00, df = 4, P<.005). Students who messaged for under 30 minutes after lights out reported better academic performance. An interaction was found between messaging after lights out and academic performance: mean rank score of 706.68 was found for teenagers who spent zero hours messaging after lights out in comparison to teenagers who spent 30-60 minutes messaging (850.91) and teenagers who spent 2 hours messaging after light out (835.23).

Table 6: Screening process: Weight of evidence, EPPI centre method *(Step 5 in the literature review process) (EPPI Centre, 2007; Gough, 2007).*

Paper	Weight of evidence A: **Trustworthy ness of results in terms of own question (methodological quality)**	Weight of evidence B: **Appropriateness of study design linked to this review Q (methodological relevance).**	Weight of evidence C: **Appropriateness of focus of research in answering this review Q (topic relevance)**		Weight of evidence D: **Judgement of overall weight of evidence in relation to this review Q.**
Peiró-Velert et al. (2014)	**Medium**	**Medium-high** Methods clearly measure 3 key areas: **Medium-high**	Sample uses 11-19 year olds	**High**	**Medium-high**
			Findings clearly report 3 key areas	**High**	
			Sound analysis used	**Medium**	
			Generalisation of findings to review	**Medium-high**	
			Total = **Medium-high**		
Schoeni et al. (2015)	**Medium-high**	**Medium** Methods clearly measure 3 key areas: **Medium**	Sample uses 11-19 year olds	**High**	**Medium**
			Findings clearly report 3 key areas	**Medium**	
			Sound analysis used	**Medium-high**	
			Generalisation of findings to review	**Medium**	
			Total = **Medium**		
Titova et al. (2015)	**Medium-high**	**Medium** Methods clearly measure 3 key areas: **Medium**	Sample uses 11-19 year olds	**High**	**Medium**
			Findings clearly report 3 key areas	**Medium-high**	
			Sound analysis used	**Medium-high**	
			Generalisation of findings to review	**Medium**	
			Total = **Medium- High**		
Pecor et al. (2015)	**High**	**Medium- high** Methods clearly measure 3 key areas: **High**	Sample uses 11-19 year olds	**High**	**Medium-high**
			Findings clearly report 3 key areas	**Medium**	
			Sound analysis used	**Medium- high**	
			Generalisation of findings to review	**Medium- high**	
			Total = **Medium-high**		
Dimitriou et al. (2015)	**High**	**High** Methods clearly measure 3 key areas: **High**	Sample uses 11-19 year olds	**High**	**High**
			Findings clearly report 3 key areas	**High**	
			Sound analysis used	**High**	
			Generalisation of findings to review	**Medium**	
			Total = **High**		
Polos et al. (2015)	**High**	**Medium-high**	Sample uses 11-19 year olds	**High**	**High**
			Findings clearly report 3 key areas	**Medium-high**	
			Sound analysis used	**High**	
			Generalisation of findings to review	**High**	
			Total = **High**		
Grover et al. (2015)	**High**	**Medium-High**	Sample uses 11-19 year olds	**High**	**Medium high**
			Findings clearly report 3 key areas	**High**	
			Sound analysis used	**Medium**	
			Generalisation of findings to review	**Medium-high**	
			Total = **Medium-high**		

<u>Synthesis of findings:</u> (Step 6 in the literature review process)

Seven pieces of research literature form the basis of this review, based on clear inclusion criteria. Participants were drawn from several western cultures including: Sweden, the United States, Spain, Switzerland and the United Kingdom.

This section provides an overview of research literature findings and specific themes identified.

Mobile phone use and awakening during the night.

A high proportion of adolescents own a mobile phone, research suggests this figure could be as high as 93% (Schoeni et al., 2015). Around 29% of teenagers reported regularly being woken by their mobile phone, of which, 67.8% stated they replied to messages and phone calls during the night, suggesting electronic media use can negatively affect the sleep of some teenagers (Schoeni et al., 2015).

The Impact of screen media use on sleep duration and academic success.

The relationship between how screen media use can impact sleep and academic success was explored. A moderate relationship was found between sleep duration and academic performance (rs = 0.55)[1] and frequency of use of sedentary screen media use overall (rs = -0.55) (Peiró-Velert et al., 2014). Exploring individual types of screen media use, this study reported significant relationships between all types of screen media use and academic performance (rs = -0.25 to -.50) e.g. playing on a mobile phone (rs = - 0.5) and playing on a computer (rs = -0.46) with the exception of use of active video games (rs = 0.05) (Peiró-Velert et al., 2014). Consistent with this, an initial moderate correlation was found between social media use in the 30 minutes prior to bedtime and Grade Point Average (GPA) (r = -0.44) (Dimitriou et al., 2015). A higher amount of sleep on weekdays was associated with increased school results (r = 0.43), conversely, total sleep time on weekdays negatively correlated with social media use 30 minutes prior to bedtime (r = -0.52) (Dimitriou et al., 2015). This indicates a tentative link between teenage electronic media use 30 minutes prior to

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[1] Spearman Rank-order Coefficient

going to bed, decreased sleep duration and reduced academic success (Dimitriou et al., 2015). Similarly, Pecor et al. (2015) found teenagers sending instant messages after lights out was associated with poorer academic success (H = 10.62, df = 1. P = 0.001)[2]. Conflicting research by Schoeni et al. (2015) however, found self-reported mobile phone use during the evening was not linked to verbal or figural memory scores, suggesting mobile phone use may not negatively impact types of memory identified as influential in determining academic success (Schoeni et al., 2015).

Teenagers reported that Sleep Time Related Information and Communication Technology (STRICT) use negatively impacted academic grades (rs = -0.297, P<0.001) (Polos et al., 2015) but perceived impact of STRICT on school work didn't find a negative correlation. Similarly, Grover et al. (2015) found an interaction between messaging after lights out and academic performance, a mean rank score of 706.68 was found for teenagers who spent zero hours messaging after lights out in comparison to teenagers who spent 30-60 minutes messaging (850.91) and teenagers who spent 2 hours messaging after light out (835.23)[3]. This indicates messaging for over 30 minutes after lights out can impact average grades achieved in school. Self-report measures suggested 61% of teenagers perceived STRICT use to impact their school work and 65.7% reported it impacted their sleep (Polos et al., 2015). STRICT use also negatively correlated with sleep duration on school nights (rs = -0.322) (Polos et al., 2015). Consistent with this, Grover et al. (2015) found instant messaging after lights out was associated with shorter sleep duration. Teenagers who spent over 2 hours messaging after lights out were found to have the shortest average sleep duration in comparison to those who messaged for less than 30 minutes, who were found to have the longest sleep duration on average (Grover et al., 2015).

Research indicates sleep disturbance doubles the risk of failing at least one subject within 1 academic year (P = 0.02)[4] this differed however, depending on gender (Titova et al., 2015). Teenagers who self-reported sleep disturbances more actively used the internet in the evening in comparison to those who did not report experiencing sleep disturbance (X^2 = 42.5, df = 1, P<0.001)[5]. Those sleeping less than 7 hours per night also reported a higher level of internet usage at night (X^2 =

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[2] Kruskal-Wallis **H** test
[3] The higher the mean rank score, the lower the academic performance.
[4] Significance level
[5] Chi Squared test

241.2, df = 1, P<0.001) (Titova et al., 2015). This research, however, should be approached with more caution because it received a lower rating in the WoE table.

Evidence exploring the relationship between duration of sleep and how this can impact academic performance is not clear cut. Thus while Dimitriou et al. (2015) and Titova et al. (2015) found sleeping less than 8 hours per night was linked to failing at least 1 subject. Pecor et al. (2015) found conflicting findings, indicating academic performance was not correlated with either the time a teenager goes to bed ($rs = -0.69$, $P = 0.08$) or sleep duration ($rs = 0.07$, $P = 0.07$).

Gender and age differences

Gender differences were discovered relating to how teenagers utilise screen media. Boys were more likely to use screen media to play on computer and video games whereas, girls were more likely to use mobile phones to communicate with others (Peiró-Velert et al., 2014). Similarly, Grover et al. (2015) found girls spent significantly more time sending instant messages before and after lights out in comparison to boys. Younger boys (9th grade) were found to sleep longer in comparison to girls and older boys (12th grade)(Grover et al., 2015). Similarly, Titova et al. (2015) found on average, 32% of girls slept less than 7 hours each night, in comparison to 27% of boys. Conflicting findings, however, found girls slept on average 1 hour longer than boys, spent less time using screen media (2 hours 20 minutes less per day) and achieved higher academic performance on average (Peiró-Velert et al., 2014). This suggests reduced screen media use is associated with higher school performance and sleep duration (Peiró-Velert et al., 2014).

Peiró-Velert et al. (2014) found younger adolescents were more likely to achieve higher academic success and also spend less time using screen media and more time sleeping. Similarly, Polos et al. (2015) found STRICT use of more than 1 hour each evening was more common in older teenagers (high school) in comparison to younger teenagers (middle school).

These findings highlight the need to be cautious when interpreting research findings. They demonstrate that a complex interaction of factors could influence whether electronic media use can impact on sleep and academic success.

It is important to approach findings from Schoeni et al. (2015) and Titova et al. (2015) with caution, as they received a WoE rating of 'medium' in comparison to other

studies. This questions the strength of their findings. Conversely, more weight should be given to Polos et al. (2015) and Grover et al. (2015), who both received 'high' WoE ratings.

To summarise, research literature generally found moderate correlations between large amounts of electronic media use, sleep duration and academic performance (Dimitriou et al., 2015; Peiró-Velert et al., 2014). Links have also been found between use of screen media before bedtime and after lights out and academic performance (Dimitriou et al., 2015; Grover et al., 2015; Pecor et al., 2015; Polos et al., 2015). Sleep disturbance has also been linked to reducing academic performance (Titova et al., 2015).

Teenagers self-reported that screen media use generally impacted school work and sleep (Polos et al., 2015). However, Schoeni et al. (2015) found electronic media use and sleep duration did not impact verbal or figural memory. Additionally, Dimitriou et al. (2015) and Titova et al. (2015) found a reduction in sleep duration negatively impacted academic performance whereas, Pecor et al. (2015) did not find a correlation. These mixed findings indicate the link between sleep duration and academic performance is more unclear.

Research also suggests age and gender differences in the frequency and different types of electronic media used. Males are more likely to play on computer games and females are more likely to use mobile phones (Grover et al., 2015; Peiró-Velert et al., 2014). Research also suggests younger teens spend more time sleeping, achieve higher grades and are less likely to use screen media (Peiró-Velert et al., 2014; Polos et al., 2015).

Limitations of this review and future research

This section provides a critique of the research literature explored within this literature review and considers future implications.

There is a need to be cautious when considering how the term 'academic success' is operationalised (York et al., 2015). 'Grades' can be measured in different ways; leading to unreliable measurements of academic success, as discussed in the

introduction section (York et al., 2015). Research within this literature review measured academic success in various ways including; GPA, number of subjects failed, grades achieved (grades A-F), average grades and performance on memory tests. It could be questioned whether this is a fair comparison, particularly given research has been conducted in various different countries, therefore, measurements of academic success will vary significantly.

It should also be questioned whether focusing solely on academic grades is an accurate measure of academic success; it neglects factors such as acquisition of wider skills and competences, persistence, attainment of learning outcomes and career success (York et al., 2015). Allen (2005) argued measuring academic achievement and success using grades can be accurate if effort, compliance and attitude are also measured alongside it; this would help to provide a more 'valid' picture of a young person's approach to school.

Academic success is not always viewed as static; as a person develops they may change their 'self-authorship' of how they perceive academic success, dependent on evolving internal values and beliefs over time (Baxter-Magolda, 2004). Additionally, much of the research literature in this area fails to take into account individual differences regarding how academic success is measured and demonstrated (York et al., 2015).

Challenges linked to self-report measures of sleep quantity and electronic media use

Use of self-report measures to investigate both sleep quantity and electronic media use have received significant critique for a number of reasons.

Subjective self-report measures of electronic media use are often criticised for potential bias because individuals often underestimate or overestimate their use; challenging the reliability of research findings (Aydin et al., 2011; Calamaro et al., 2009; Nathan & Zeitzer, 2013). To illustrate this, research found screen media use can be overestimated when compared to actual use (Aydin et al., 2011). Schoeni et al. (2015) gathered self-reported mobile phone use and operator recorded data and found a correlation of 0.52, further questioning the reliability of self-report measures of electronic media use.

Self-report measurements of sleep quantity receive similar criticism. Collecting retrospective sleep duration data can challenge the accuracy in which sleep duration is measured; reducing reliability of findings (Peiró-Velert et al., 2014). Borlase, Gander, and Gibson (2013) suggested teen self-report measures of sleep can also be biased due to 'kudos' associated with particular answers (e.g. having very little sleep) suggesting they might exaggerate or change their responses. It is also difficult to accurately report sleep duration, those who report poor sleep are likely to underestimate sleep duration in comparison to actigraphic[6] measurements (Van Den Berg et al., 2008). Sleep duration and quality can also be effected by wider factors including socio-economic factors, sleep routines and wider disruptions on sleep (O'Brien, 2009; Power, Taylor, & Horton, 2017).

Low response rates may have also influenced the findings of literature used within this review. Self-report measures notoriously receive low response rates; this can result in biased and unrepresentative findings (Munezawa et al., 2011). In addition to this, almost half of the studies included within this review used samples drawn from US populations, and all samples were drawn from Western societies. This could cause implications with regards to generalisability and how findings can be applied to wider societies who may have different cultural beliefs and practices.

Establishing a cause and effect relationship

Research used within this literature review should further be considered with caution, when drawing inferences about causation because none of the research was longitudinal (Polos et al., 2015; Spector, 1994). It is also difficult to establish a clear cause and effect relationship in correlational research (4 pieces of research in this review used correlations; Peiró-Velert et al. (2014), Pecor et al. (2015), Polos et al. (2015) and Dimitriou et al. (2015)). A range of other factors can influence findings when using correlational research (Spector, 1994). For example, when exploring the potential relationship between screen media use and sleep duration, other factors may contribute towards why an individual might experience lack of sleep e.g. alcohol consumption, a sleep disorder, caffeine use, substance abuse or a busy lifestyle (Choi et al., 2009; Rydzkowski, Canale, & Reynolds, 2016).

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[6] A measurement tool to measure sleep/wake data

Does the use of electronic media on a night always have negative effects?

Electronic media use is not always linked to negative effects, research suggests some forms of electronic media can help young children to initiate sleep and may form part of bedtime routines e.g. to soothe (Zimmerman & Henry, 2008). Access to electronic media can also help CYP to complete homework (Lee & Chae, 2007).

Alternatively, some forms of electronic media can have adverse effects for example, newer forms of media often involve exposure to 'blue light', which can inhibit melatonin production and prevent sleep (Calamaro et al., 2009; Smolensky, Sackett-Lundeen, & Portaluppi, 2015; Zimmerman & Henry, 2008). More modern types of electronic media also do not have a fixed 'end time' in comparison to a television programme, meaning teenagers can often end up losing track of time when using electronic media (Zimmerman & Henry, 2008).

The systematic literature review process

Great care was taken when searching various databases (See Table 2), follow up searches allowed the exploration of literature released since original searches took place. It is still plausible that literature meeting the inclusion criteria could have been missed. I however, felt I had reached 'saturation' given I had explored all key databases and various grey literature sources (Petticrew & Roberts, 2006). It could be argued that it is more important to carry out searches carefully, using productive and well known databases, rather than carrying out endless searches (Petticrew, 2015). My search process naturally came to an end when the same literature appeared in each database and all key data bases had been utilised. I also explored bibliographies of literature meeting the inclusion criteria (a method named pearl growing)(Petticrew & Roberts, 2006).

There may also be issues with publication bias whereby studies not finding a difference are often not published, leading to biased findings in particular fields of research, this could have potentially led me to miss unpublished research in this area (Dickersin, 1990; Petticrew, 2015).

Implications of findings and future research

There is a need to educate both teenagers and parents regarding the adverse effects of not gaining enough sleep (Van den Bulck, 2007). Research suggests improving 'sleep hygiene' (positive sleep practices) of young people is an important next step (Borlase et al., 2013; Munezawa et al., 2011). Sleep hygiene can be improved by reducing the amount of electronic media a young person is exposed to, particularly prior to bedtime (Munezawa et al., 2011; Van den Bulck, 2007). Tied in with this, Schoeni et al. (2015) recommended health prevention strategies should consider how they can assist young people in monitoring their mobile phone use during the night.

Educational Psychologists could look to re-evaluate how they can play a part in educating CYP, school staff and parents about the importance of maintaining healthy sleep practices and regulating electronic media use (Rydzkowski et al., 2016). Research suggests parental monitoring of electronic media use at bedtime can positively influence school performance and the amount of sleep their child achieves each week (Gentile, Reimer, Nathanson, Walsh, & Eisenmann, 2014). Offering education to both parents and teachers can help to equip them with relevant knowledge and resources to support good sleep practices in young people (Borlase et al., 2013; Polos et al., 2015). In addition to this, Educational Psychologists can promote interventions to facilitate healthy sleeping habits including; relaxation and Mindfulness based techniques (Rydzkowski et al., 2016).

Much of the research literature available focuses specifically on use of electronic media for example, on a tablet or mobile phone. There is limited research exploring student perceptions around the use of social media and its effects on sleep and academic success. This identified a gap in research literature that is explored in the empirical research section.

Conclusions

Literature in this review indicates mostly moderate correlations and relationships between large amounts of electronic media use, academic performance and sleep

duration. To illustrate this, links were found between teenagers' screen media use before bedtime and after lights out and academic performance. Similarly, teenagers reported screen media use impacted their school work and their sleep. Research however, found electronic media use and sleep duration did not impact verbal or figural memory. The link between sleep duration and academic performance was also unclear; mixed findings were discovered.

There is a need to be cautious when interpreting and comparing research discussed within this literature review. Firstly, this is due to the varied way academic success is measured and reported. Secondly, the use of self-report measures is also problematic, and can lead to unreliable measurements of sleep and electronic media use. In addition to this, the use of correlations in research allows relationships to be identified, however cause and effect relationships cannot be established.

Chapter 2: Bridging document.

Abstract

This document aims to bring together the systematic literature review and the empirical paper, providing a rationale for how the empirical research evolved from the systematic literature review process.

 It provides an opportunity to justify key research decisions made throughout the research process. It includes considering an underlying conceptual framework; addressing ontological and epistemological perspectives shaping key research decisions. It also problematises the use of a mixed methods design to explore teenagers' perspectives, drawing upon questionnaires and focus groups. Rationale is included to justify the use of thematic analysis as a data analysis method and ethical considerations during the research process are addressed.

This document concludes by considering reflexive considerations about my role as a researcher, providing a critical self-evaluation relating to my role in the process, how my position potentially influenced the outcome and how the research has changed my way of thinking.

Introduction

This document explores a number of questions including why I chose this area of research and considers methodological decisions I made throughout the research process. Many of these decisions were guided by my own areas of interest and beliefs about who I am as a Trainee Educational Psychologist (TEP) and what I perceive to be a key current issue amongst many Children and Young People (CYP) in modern society.

Firstly I explore how findings from my literature review guided my empirical research area. I then consider an underlying conceptual framework, including epistemological and ontological perspectives I drew upon within my research. I then provide a rationale for why a mixed methods design was used, and justify the use of questionnaires and focus groups to gather my data. Towards the latter part of this document I explore why I decided to use a thematic analysis to analyse my research data and ethical considerations underpinning my empirical research and reflexive considerations about my role as a researcher, providing a critical self-evaluation of my role within the research process.

Link between systematic literature review and bridging document

Whilst researching into how teenagers' electronic media use can impact sleep and academic success, I noticed limited research exploring the use of social media. In addition to this, much of the research was quantitative, investigating correlational relationships between variables. This identified a gap with regards to qualitative research, specifically exploring broader student perceptions relating to why CYP use social media and how they perceive it can affect wider areas of their lives including sleep, academic success, emotional wellbeing and relationships. Boyd (2014) highlighted very few researchers take time to listen to teenagers' experiences and perceptions about their engagement with social media; teenage voice rarely influences discourse around this topic.

During various consultation discussions with teachers and parents in a Secondary school, concerns were expressed regarding teenagers' social media use. Social media appeared to play a large part in the lives of many CYP, based on this, I was keen to explore opportunities and challenges social media presented to CYP.

Ontology and epistemology

The epistemology and ontology a researcher adopts reflects their view of the world which in turn, influences the methodology and research methods adopted within empirical research (Braun & Clarke, 2013; Grix, 2002).

Ontology

Ontology is concerned with 'what is'; i.e. our reality and what an individual perceives can be researched (Grix, 2002; Scotland, 2012).

My empirical research draws upon some aspects of a critical realist ontological position. This position acknowledges knowledge is socially influenced and can reveal different realities and truths (Braun & Clarke, 2013). The qualitative part of my research provided an opportunity to access individuals' subjective worlds and allowed me to construct a 'best fit' version of their reality (Braun & Clarke, 2013). The research aimed to capture the spectrum of teenagers' views relating to their social media use and make sense of how it can impact their wider lives. It however, acknowledges that this is only a partial understanding of their world (Braun & Clarke, 2013).

Epistemology

Epistemology is concerned with what it means to know, and what can be known i.e. how knowledge is gathered, constructed and communicated (Grix, 2002; Scotland, 2012).

The epistemology I mostly subscribed to throughout my empirical research is a critical realist stance. A critical realist epistemology accepts there might be a real world, however applies criticality about whether the real world can fully be captured by research (Braun & Clarke, 2013; Howitt, 2013). Reality can be perceived differently depending on the lens used, other realities and truths may exist (Braun & Clarke, 2013; Howitt, 2013). Critical realism highlights research can be influenced or distorted by a range of factors including a researchers' own culture, interests and perspectives, in addition to methods used to gather data (Howitt, 2013).

A thematic analysis was utilised to analyse qualitative data in my empirical research. The thematic analysis process is underpinned by critical realist principles (Braun &

Clarke, 2013). Thematic analysis aids to unpick the 'surface of reality' (Braun & Clarke, 2006). It acknowledges individuals construct meaning linked to their experiences and social context, however it believes there is no one single reality (Braun & Clarke, 2006).

The 'warranty through triangulation argument' is used as a justification for adopting a mixed method design. This accepts qualitative and quantitative data derive from different ontological and epistemological positions however, this should not be a concern if they both centre on the same research question and similar conclusions can be drawn (Scott, 2014). If findings are consistent it could be argued greater confidence could be placed in the findings (Scott, 2014).

The mixed methods approach taken within my empirical research can be likened to, and draws upon features of a 'nested analysis' (Lieberman, 2005). This can be described as utilising a quantitative large scale survey in combination with a qualitative, more in-depth analysis of a smaller group of participants from the larger sample. This allows the exploration of wider and individual perspectives and allows for comparison (Lieberman, 2005). A nested approach also does not adopt any single theoretical perspective and can fit with a number of epistemologies (Lieberman, 2005).

Mixed methods design

I identified there were limited up to date figures exploring experiences of CYP in the United Kingdom, providing a rationale to collect quantitative data in my empirical study. Much of the data reporting sleep duration of CYP originated from the United States with the exception of Horton et al. (2015). Similarly, I found limited literature exploring the incidence of teenagers' social media use with the exception of Gray (2016); Lenhart (2015a); O'Keeffe and Clarke-Pearson (2011). This highlighted a range of areas I wanted to explore through quantitative means within my empirical research.

 My rationale to gather qualitative data derived from identifying limited research literature exploring CYP perceptions of social media use; existing literature frequently ignored the complexity of messy thought commonly experienced in the real world (Braun & Clarke, 2013). Gray (2016) explored how the identity of teenagers' is

influenced by social media use, I wanted to extend this research by focusing on broader areas such as sleep and academic success.

My systematic literature review highlighted the majority of teenagers regularly used electronic media. I wanted to explore how teenagers construct and negotiate meanings specifically in relation to their social media use (Willig, 2008). Qualitative research provides individuals with a voice and the opportunity for researchers to generate meaning and gain thick descriptions of their perceptions (Braun & Clarke, 2013; Willig, 2008).

In my empirical research, I drew upon features of a nested analysis. Using a whole school survey followed by more in-depth focus groups to gather detailed perspectives of a small group of students. This is an extended version of a nested analysis because I also gathered qualitative data in questionnaires. Willig (2008) supported this approach, suggesting a questionnaire can be used to explore potential differences and a focus group can be used to gather a richer picture of why such differences exits. My questionnaire identified a difference between positive experiences and challenges linked to social media use. My focus groups provided an opportunity to explore this in more depth.

Robson (2011) argues using a mixed methods approach allows for triangulation and completeness. Combining research approaches provides a more comprehensive picture of how social media affects teenagers' lives (Robson, 2011). A mixed method approach also offsets weaknesses associated with the research methods I have utilised, with the aim to neutralise limitations where possible (i.e. in a questionnaire, misunderstandings of language can occur or they may not be completed seriously) (Robson, 2011).

Questionnaires

Questionnaires were used to gather initial quantitative and qualitative data to inform focus group questions. The questionnaire consisted of 17 questions completed on Survey Monkey. Limited existing questionnaires were available therefore, I created my own to explore my areas of interest. I scrutinised existing scales investigating sleep habits and social media use and created a questionnaire based on this knowledge and literature I had previously read (Buysse, Reynolds, Monk, Berman, &

Kupfer, 1989; Monk et al., 2003; Shabir, Hameed, Safdar, & Gilani, 2014; Terry, 2008).

The questionnaire explored a number of key areas detailed in Table 7.

Table 7: Key areas explored in the Questionnaires

• Average sleep duration each night and sleep disturbances.
• Average social media use per day, types of social media used and reasons for using social media.
How social media can impact: • Learning. • Sleep duration and tiredness. • Friendships.
• Advantages of using social media.
• Disadvantages of using social media.

Within the questionnaire, I wanted to get a sense of why social media use was popular and unpick whether there was a potential 'trade off' in relation to the positive impact of social media and whether it outweighed the negative. If social media use is impacting on sleep and academic success, why do students still persist in using it? Bryant, Sanders-Jackson, and Smallwood (2006) suggested the positive and negative effects of social media use balance one another out and that often the negative effects can be over emphasised. I aimed to explore this further.

Questionnaires were developed using age appropriate language. A group of Year 11 girls provided feedback in relation to how questions could be changed to aid the understanding of younger pupils.

Focus groups

The aim of the focus groups was to gather attitudes, perceptions and ideas of a target group of CYP, to clarify interpretation and add further depth to data already collected (Kruger & Casey, 2000; Vaughn, Schumm, & Sinagub, 1996). Focus groups are designed to elicit perceptions and differences in views however, they are not designed to determine strength of views (Kruger & Casey, 2000; Vaughn et al., 1996).

Each focus group contained between 4-5 students. Literature suggests this number of young people provides a good balance to encourage all students to contribute, share their ideas and actively engage in discussion (Stewart & Shamdasani, 2014; Vaughn et al., 1996; Willig, 2008).

Each focus group lasted approximately 1 hour. Students were seated in a circular arrangement with tables in the middle to provide a 'protective barrier' and encourage students to feel more confident in sharing their views (Stewart & Shamdasani, 2014). They were given a name badge to ensure I could invite them into the discussion (Stewart & Shamdasani, 2014). Ground rules were discussed to establish a safe environment for students to contribute (Stewart & Shamdasani, 2014). Eight open ended questions were used to stimulate discussion, using age appropriate language (See Appendix 7) (Kruger & Casey, 2000; Stewart & Shamdasani, 2014). Prompt questions were also used if students found a question difficult to answer (Stewart & Shamdasani, 2014). A time limit of 6 minutes was allocated to each question, a timer was used to enforce this; based on recommendations by Stewart and Shamdasani (2014).

Responses were recorded on flip chart paper by Year 1 Trainee Educational Psychologists. A flip chart method to record the data was used to ensure transparency about the information recorded. It also provided a reminder of what was already discussed and an opportunity for students to correct what had been written if it didn't reflect their views (Kruger & Casey, 2000).

Focus groups are highlighted as an effective method for gathering teenagers' views (Hennessy & Heary, 2005). Literature suggests teenagers are more likely to be open and contribute to discussions in the context of a social group situation, especially when part of a homogenous group, who share similar features (Mauthner, 1997; Willig, 2008). Research also suggests people are more likely to discuss a shared

'problem' in a group situation (Lederman, 1990). This supports feedback provided by students within the focus groups. Students reported they felt more confident engaging in discussions within a small group situation. Engaging in a small group discussion closely replicates activities CYP engage in within the classroom, therefore this may have enabled teenagers to feel more comfortable in engaging in focus group conversations (Mauthner, 1997).

Using a flipchart method can stifle conversation and it can be difficult for scribes to keep up with discussions, this may therefore have challenged the accuracy of information recorded (Kruger & Casey, 2000).

Analysis of qualitative questionnaire and focus group data

A thematic analysis was used to analyse the qualitative data gathered from the questionnaires and focus groups. Thematic analysis is a method used to explore, investigate and report patterns in data (Braun & Clarke, 2006).

Following guidance from Braun and Clarke, the following definition of a theme was utilised; 'A Patterned response with meaning'.

I carried out an analysis of the whole data set to gain clear themes and rich explanations to justify identified themes (Braun & Clarke, 2006). The broadness of my research question allowed for flexibility in the generation of themes. An inductive analysis was used to identify themes strongly tied to the data. I was keen to ensure themes were data driven but I was also mindful that the data was drawn from pre-set questions (Braun & Clarke, 2006).

Thematic analysis process

I used Braun and Clarke's 6 phases of a thematic analysis as a framework when analysing the qualitative data.

Table 8: Braun and Clarke's 6 phases of a thematic analysis

Stage 1: Familiarisation of data.
Stage 2: Initial coding whilst going through each question.
Stage 3: Identification of initial themes by placing codes under over-arching themes and creating a thematic map (See Appendix 8 & 9).
Stage 4: Refining and collapsing themes.
Stage 5: Labelling and defining themes.
Stage 6: Synthesis of research findings guided by themes generated.

I initially undertook separate thematic analyses on the qualitative questionnaire and focus group data. I then combined the two data sets because they complimented one another, providing a richer picture of how teenagers' construct and negotiate meanings around social media use. The thematic analysis generated almost identical themes and subthemes from both data sets. Focus group data were used as the core source of qualitative data and questionnaire data were used to strengthen and supplement responses given. Reporting the two data sets together also provided a more streamlined and succinct synthesis of findings.

Ethics

Ethics linked to completion of questionnaires:

When undertaking research, it is important to ensure fully informed consent is provided, deception is avoided, participants are given the right to withdraw and confidentiality is assured (Willig, 2008).

My research was submitted to the Newcastle University Ethics Committee to ensure it was ethically sound. The BPS code of research ethics and conduct were followed (BPS, 2009).

Informed consent

Full informed written consent was gained from students through the completion of a consent form detailing what their involvement would entail and contact details if they required further information (see Appendix 1). Students were briefed by a PowerPoint presentation detailing what the research would involve. Participation was entirely voluntary and students were made aware they could stop completing the questionnaire at any point prior to pressing the submit button.

'Opt out consent' was gained from parents for the questionnaires. This decision was guided by a discussion with the head teacher of the school; he highlighted parental response rates to letters could be as low as 10% in his school. This may have potentially limited the sample I was able to draw from. He highlighted his school regularly carried out research projects utilising Survey Monkey questionnaires; it was a part of everyday practice within school. The head teacher confirmed he was comfortable with the use of 'opt out' parental consent. He and I were both confident completion of the questionnaire was unlikely to cause any undue stress or discomfort to students.

To guide my decision around using 'opt out' parental consent, I engaged in discussions with my University tutors and I drew upon guidance from the BPS who suggest:

'In relation to the gaining of consent from children and young people in school or other institutional settings, where the research procedures are judged by a senior member of staff or other appropriate professional within the institution to fall within the range of usual curriculum or other institutional activities, and where a risk assessment has identified no significant risks, consent from the participants and the granting of approval and access from a senior member of school staff legally responsible for such approval can be considered sufficient. Where these criteria are not met, it will be a matter of judgement as to the extent to which the difference between these criteria and the data gathering activities of the specific project

warrants the seeking of parental consent from children under 16 years of age and young people of limited competence.'

<div align="right">

(BPS, 2010, p. 17).

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'Opt out' parental consent involved sending a letter home to parents detailing the nature of the study and exactly what it would involve (See appendix 2). It then requested if they would not like their child to participate in the study, they return a reply slip to school within 1 week.

Full parental and student consent was gained for the focus groups (See appendix 4 and 5).

Protection from harm

The year groups were split into 2 separate focus groups. The first explored views of pupils' in years 8- 9, the second explored views of pupils' in years 10-11. This decision was guided by ethical considerations highlighted by University tutors. They suggested younger children may feel reluctant or intimidated to speak if older students were present. It is also questionable whether social media use of older teenagers should be shared with younger teenagers and whether this could potentially be a bad influence. This is supported by Lenhart (2015a) who found social media use changes with age.

Harm was kept to a minimum during the data collection. The questionnaire and focus group questions were worded sensitively and did not request any obtrusive or sensitive information.

Confidentiality

Questionnaire responses were unidentifiable. The only personal information collected was year group and whether the young person was male or female.

Student responses during the focus groups were also unidentifiable. Data was recorded on flip chart paper; names were not recorded next to responses (Stewart & Shamdasani, 2014).

Only one admin personnel in school and I had full access to the raw questionnaire data collected. Two year 1 Trainee Educational Psychologists (TEPs) were present during the focus groups to scribe on the flip chart paper. School staff were not present.

Validity

Focus groups are highlighted as high in ecological validity in comparison to individual interviews, particularly when carried out in a naturalistic setting (Willig, 2008). Applying this to my empirical research, students engaged in a focus group discussion in a school setting with peers they were distantly familiar with. Questionnaires were also completed online during ICT lessons using a website pupils regularly use within school, increasing the ecological validity of the data collection method.

Reflexive considerations

Reflexive thinking involves critical self-evaluation relating to my role in the process, how my position potentially influenced the outcome and how the research has changed my way of thinking (Berger, 2015; Willig, 2008).

It could be argued my approach came from a partly shared experience because I personally use social media. I am also in an outsider position because I am from a different generation, as I am a post graduate student rather than a pupil at their school, therefore to some extent, I was studying the unfamiliar. I therefore needed to ensure I adopted a non-judgemental approach and exercised language sensitivity through socially constructing key terms (Berger, 2015).

When engaging in reflexive thinking relating to how this research has changed my thinking; initially I had a preconception that social media would negatively impact the lives of CYP, gained from my previous role as a sixth form teacher. As I became more immersed in my research, this view started to change and allowed me to see social media use from an alternative perspective (Willig, 2008).

<u>Summary</u>

This document brings together the systematic literature review and the empirical paper, providing a story around how the empirical paper evolved from wider research literature.

It justifies key research decisions and considers an underlying conceptual framework. It problematises the use of a mixed methods design, drawing upon questionnaires and focus groups. Rationale is included to justify the use of thematic analysis and ethical considerations during the research process are also discussed.

It concludes by considering reflexive considerations about my role as a researcher.

Chapter 3, Empirical research

Project title

How do teenagers perceive that social media use impacts wider areas of their lives?

Abstract

Social media use has become increasingly popular amongst the lives of many Children and Young People (CYP). This empirical paper explores discourse around how teenager's construct and negotiate meaning around their social media use. A particular focus is placed on how social media use affects sleep, academic success, relationships and emotional wellbeing.

Qualitative and quantitative data was initially gathered from questionnaires. This data informed questions utilised in the focus groups to explore teenagers' perceptions in greater depth. Thematic analysis was employed to analyse qualitative data.

100% of teenage respondents reported to use some form of social media, however, frequency of use varied.

Social media use both positively and negatively affected the lives of many young people.

Social media use negatively affected sleep duration, teenagers' ability to initiate sleep and caused sleep disruptions. Similarly, social media use had a detrimental impact on academic success through distracting teenagers from their learning, both in the classroom and when completing homework.

Teenagers reported emotional wellbeing and relationships could be affected through using social media by causing anxieties about what was happening online. In addition to this, they also highlighted worries about becoming involved in cyberbullying or arguments.

Conversely, teenagers perceived social media supported academic success through providing opportunities to learn online and receive support from others. Similarly, teenagers reported their relationships were strengthened online.

These empirical findings can be utilised by Educational Psychologists and wider professionals to consider how teenagers can be supported in their social media use, to optimise benefits associated with its use and reduce negative effects.

Introduction

This section outlines key terms within this empirical paper and explores existing literature relating to how teenagers' social media use impacts wider areas of their lives.

Popularity of social media

Social media is at the centre of contemporary society (Boyd, 2014). It is used now more than ever before and plays a major role in the lives of many CYP in modern and developing societies (Bright, Kleiser, & Grau, 2015; OFCOM, 2016). Global use increases rapidly each day; within seconds, estimation figures are outdated (Carrigan, 2016). Worldwide, it is estimated 1,882,711,000 people have a Facebook account and roughly 80 million photos are shared on Instagram each day (Internet Live Stats, 2017; Ratcliff, 2016). Around 6,000 tweets are posted on Twitter every second, equating to over 500 million tweets per day; a significant increase in Twitter use since 2006, when the first tweet was posted by its founder, Jack Dorsey (Internet Live Stats, 2017; Twitter, 2011).

In light of these figures it is unsurprising society has seen a dramatic increase in social media use among teenagers over the last decade (Lenhart, 2015a, 2015b; Lenhart, Purcell, Smith, & Zickuhr, 2010; O'Keeffe & Clarke-Pearson, 2011). It is a daily activity for many; figures suggest 88 - 93% of teenagers regularly use social media and 24% report going online 'almost constantly' (Lenhart et al., 2010; O'Keeffe & Clarke-Pearson, 2011; OFCOM, 2016). This popularity in social media use amongst CYP recently led Ofsted to review their guidance; highlighting schools should prioritise promoting online safety; starting in early years (Ofsted, 2015).

Technological advances in the last few decades have resulted in a digital age whereby CYP, from birth, are growing up in a world surrounded by various digital technologies at their fingertips (Prensky, 2001). Prensky (2001) refers to this generation of CYP as 'digital natives'. Developing in this environment has potentially led CYP to think, learn and process information differently in comparison to previous generations; leading them to gain a different insight into our world (Prensky, 2001). Availability of digital technologies has allowed social media to develop a central role in the ecosystem of most teenagers (Bronfenbrenner 1994; Lenhart, 2015a). Social

media has revolutionised how teenagers communicate with others; 'Likes' are exchanged as social currency and terminology from social media is embedded into everyday life (Carrigan, 2016; OFCOM, 2016).

Given these statistics and the steep rise in social media use over the last decade, it is important to understand the discourse of young people around their social media use and how it affects their lives.

Definitions of Social media

Numerous attempts have been made to define social media since its creation in the early 2000's (Boyd, 2014; Bright et al., 2015). In its simplest form, social media is defined as a website or application permitting the sharing of user created content or allowing individuals to engage in social networking through online communities (Kim, Jeong, & Lee, 2010; Oxford Dictionaries, 2016). Social networking's popularity has contributed to a lack of clarity and limited understanding around the complexity of the term 'social media'; in fact, it is much broader than this (Bright et al., 2015; Kaplan & Haenlein, 2010). Social media typically encompasses; blogging, collaborative projects, social network sites, content communities, virtual social worlds and virtual gaming worlds (Bright et al., 2015; Kaplan & Haenlein, 2010).

The debate surrounding social media

Opinions are often divided around the impact of social media; adults in particular often express concern regarding teenagers' social media use (Boyd, 2014). Research indicates social media can negatively affect teenagers' sleep, academic success, emotional wellbeing, and relationships (Bright et al., 2015; Juvonen & Gross, 2008; Lenhart, 2015b; Meena, Mittal, & Solanki, 2012; O'Keeffe & Clarke-Pearson, 2011). Conversely, social media can be a positive tool, providing opportunities to develop autonomy in learning and strengthen social connections (Gottfried & Shearer, 2016; Lenhart, 2015b; O'Keeffe & Clarke-Pearson, 2011; Seidman, 2013).

This debate led me to consider wider research literature exploring positive and negative outcomes of social media use.

Research indicates excessive use of social media can impact educational outcomes; teenagers can often favour going online rather than completing homework or revising (Meena et al., 2012). CYP frequently lose track of how long they spend using social media, which can distract from learning (Andersson, Hatakka, Grönlund, & Wiklund, 2014; Boyd, 2014; Meena et al., 2012). Social media use has also been found to affect concentration in the classroom, with 80% of college students reporting use of digital devices to respond to text messages or to social network during lessons (McCoy, 2013).

Social media can also affect the emotional wellbeing of CYP. Teenagers are particularly vulnerable to feelings of anxiety and judgement; meaning they are more likely to seek approval from others (Knorr, 2016; Packard, 2007). Increased low self-esteem and unhappiness among CYP has been linked to pressures encountered on social media, particularly in response to negative feedback (Valkenburg & Schouten, 2006). Similarly, research found social media use led some CYP to feel ugly, inferior, unpopular and worse about their own lives (Lenhart, 2015b; Milani, Osualdella, & Blasio, 2009; NSPCC, 2016).

Relationships can also be affected by social media. Many teenagers report engaging in arguments online as a result of having greater confidence to express thoughts through social media (Gray, 2016). 20% of 11-12 year olds report becoming upset daily by content and interactions on social media (NSPCC, 2013).Cyber bullying is also very common; 72% of teenagers reported experiencing cyber bulling at least once in the previous year (Juvonen & Gross, 2008).

The younger generation are often criticised for their openness and lack of privacy when using social media. Some argue CYP do not have the necessary skills to deal with dangers experienced online and lack knowledge about how to maintain privacy settings (Livingstone, 2008; Waugh, 2017). Conflicting research, however, suggests teenagers regularly express privacy concerns and carefully consider content they disclose and share with others (Boyd, 2014; Gray, 2016; Livingstone, 2008).

Social media use can negatively affect sleep (Breus, 2016; Zimmerman, 2008). Recommendations suggest teenagers should achieve between 8.6 – 9.2 hours per night (Calamaro et al., 2009; Carskadon et al., 2001; Wolfson & Carskadon, 1998). Teenagers frequently experience a sleep debt; average figures suggest teenagers obtain closer to 7 hours per night (Dimitriou et al., 2015; Hansen et al., 2005; Wolfson

& Carskadon, 1998). Recent research indicated social media use is often associated with daytime sleepiness, late bedtimes and reduced hours of sleep (Power et al., 2017). High levels of social media use are also associated with poor sleeping habits and sleep disturbance; to illustrate this, 20% of CYP reported 'almost always' waking during the night to utilise social media (Levenson, Shensa, Sidani, Colditz, & Primack, 2016; Power et al., 2017; Vernon, Barber, & Modecki, 2015). Lack of sleep can also negatively affect emotional wellbeing and concentration (Mental Health Foundation, 2011).

Research indicates teenagers can experience several benefits from using social media. Active social media use can be advantageous educationally through providing autonomy, enhanced learning experiences and resources to engage in self-directed learning (Lu, Hao, & Jing, 2016). For instance, 92% of students reported using YouTube to supplement their learning (Jaffar, 2012).

Literature suggests social media engages CYP in a collaborative learning process, steering away from students becoming passive learners in the classroom (Al-rahmi, Othman, & Musa, 2014). Vygotsky's socio-cultural theory suggests social communication and interactions with others facilitates learning and construction of knowledge (John-Steiner & Mahn, 1996; Vygotsky, 1978, 1987). Mediation plays an important role in learning, particularly through 'mediating agents' within a CYP's environment (Kozulin, 2003). Wider access to peers and experts through the use of social media could help teenagers to become more autonomous within their learning. Social media offers broader opportunities for CYP to engage in wider social networks and provides opportunities to aid and embed learning and wider knowledge.

Social media also helps teenagers to make sense of their world by providing opportunities to keep up to date on current affairs and issues (Boyd, 2014; Przybylski, Murayama, DeHaan, & Gladwell, 2013).

Teenagers can benefit socially from social media by developing relationships online and increasing social capital; this can optimise opportunities to 'see and be seen' and provides a platform to develop wider social networks (Boyd, 2014; Ellison, 2007; Livingstone, 2008; Marwick, 2014; Przybylski et al., 2013). Social media sites allow teenagers to socialise with peers and for some, it is an extension of face to face interaction (Boyd, 2014; Lu et al., 2016).

Young people regularly communicate and initiate friendships with strangers online; figures suggest 57% of teens develop friendships through social media (Lenhart, 2015b). Social media is an easily accessible 'public space' where experiences can be shared instantly with others around the world; this allows global ties to be maintained cheaply and evolve quickly (Boyd, 2014; Bryant et al., 2006; Ellison, 2007). Some researchers argue social media can be socially isolating, cutting teenagers off from real world experiences (Livingstone, 2008; Meena et al., 2012). Young people, however, often report they become disconnected and experience a 'fear of missing out' if they do not regularly engage with social media (Boyd, 2014; Przybylski et al., 2013). Fear of missing out has also been linked to reduced sleep duration; students showed a preference for socialising rather than getting a good night's sleep (Adams, 2016).

Identities are constructed and shaped through interactions with others (Kent, 2015; Livingstone, 2008). Social media is unique and provides opportunities for teenagers to engage in self-expression and communicate their 'interpersonal ideal' (Kent, 2015; Livingstone, 2008; Przybylski et al., 2013). It can be argued, interaction on social media platforms helps to guide teenagers' transition into adulthood (Boyd, 2014).

To summarise, the last decade has seen a dramatic increase in social media use among teenagers. Those growing up in a world surrounded by digital technology from a young age are referred to as 'digital natives'. The challenges of social media are widely reported including its detrimental impact on educational success, sleep and emotional wellbeing. Social media use can provide a number of opportunities to develop autonomy in learning, strengthen relationships and broaden social networks. Boyd (2014) argues challenges experienced when using social media are often outweighed by the opportunities it presents. Media coverage often sensationalises the negative impact of social media. It portrays teens in modern day society as highly addicted and unable to control social media use; in contrast, it is more than likely teenagers are forging a healthy relationship with social media (Boyd, 2014).

Relevance to Educational Psychologists (EPs)

To date, research literature exploring how EPs can become involved in supporting challenges associated with social media use is rare. The only literature discovered

was by Gray (2016), who found teenagers used social media to socialise, serve an emotional response, broaden knowledge and for entertainment purposes.

Increased knowledge in this area can guide EPs in supporting CYP to develop a healthy relationship with social media. This can assist teenagers within their journey through education, facilitating successful transition into adulthood.

Research question

How can teenagers' social media use impact academic success, sleep, emotional well-being and relationships?

I aim to unpick this research question throughout my findings and discussion section.

Aim

To explore teenagers' perceptions around how social media use impacts wider areas of their lives.

Method

This section outlines the sample, procedure and types of data analysis utilised in this empirical paper.

Sample

The sample was drawn from a Secondary School in the North East of England. Students were aged 12-16. Questionnaires were completed during ICT lessons using the website 'Survey Monkey'. 199 pupils completed the questionnaire: 40 from year 8, 71 from year 9, 68 from year 10 and 20 from year 11 (response rate 20.7%). All students in years 8 and 9 study ICT. However, ICT is optional for students in years 10 and 11; accounting for the smaller number of respondents in Year 11.

Two focus groups were undertaken; Focus group 1 (FG1) included 4 pupils from Years 8-9 and Focus Group 2 (FG2) consisted of 5 pupils from years 10-11. The

decision to carry out two separate focus groups was guided by research suggesting teenagers' social media use changes with age (Lenhart, 2015b). Pupils were recruited through a volunteer sample, advertised by a poster in school (Appendix 6).

Procedure

Ethical Approval was gained from Newcastle University Ethics committee. Consent was gained from pupils prior to taking part (Appendix 1 & 4). Full parental consent was gained for participation in the focus groups and 'opt out' consent was gained for completion of the questionnaires (following BPS (2009) ethical guidelines) (Appendix 2 & 5).

Questionnaires contained questions relating to: Sleep, social media use and how social media use impacts different areas of teenagers' lives (Appendix 3).

Responses from the questionnaire were used to inform the focus group questions (Appendix 7).

Data analysis

Quantitative data from the questionnaires was analysed using descriptive statistics (measures of central tendency) to gain an initial understanding of the effects of social media.

Thematic analysis was utilised to analyse qualitative data collected from questionnaires and focus groups. The thematic analysis procedure was guided by the 6 step process recommended by Braun and Clarke (2006). Originally an inductive analysis was used; initial themes were identified including; communication, relationships, emotional factors, distractions, wider problems and independence (See appendix 8 and 9 for thematic maps). Qualitative data from questionnaires and focus groups were combined to provide a detailed picture of CYP views.

Findings:

This section explores how teenagers construct and negotiate meanings around their social media use. It provides a summary of quantitative data, collected from questionnaires, combined with teenagers' qualitative responses; unpicking discourse and reflecting teenagers' perceptions in greater detail (Willig, 2008).

199 students completed and submitted the questionnaire on survey monkey of which, 115 were male (55%) and 84 were female (45%).

Social media use

Questionnaire responses indicated 100% of teenagers who responded reported using some form of social media. Use varied greatly; responses ranged from less than 1 hour per day to over 15 hours (Table 9). 46% reported using social media over 6 hours each day, indicating high popularity of social media use amongst teenagers.

Table 9: Average hours of social media use per day

Average hours of social media use	Percentage of teenagers
Less than 1 hour	5.35%
Between 1 - 2 hours	5.10%
Between 2 - 3 hours	12.30%
Between 3 - 4 hours	9.20%
Between 4 - 5 hours	8.70%
Between 5 - 6 hours	13%
Between 6 - 7 hours	7.65%
Between 7 - 8 hours	8.10%
Between 8 - 9 hours	9.10%
Between 9 - 10 hours	9.45%
Between 10 - 11 hours	1.10%
Between 11 - 12 hours	3.20%
Between 12 – 13 hours	0%
Between 13 - 14 hours	1.70%

Between 14 - 15 hours	0.35%
Over 15 hours	5.80%

Respondents reported to use a range of different social media platforms; YouTube was the most popular, followed by Snap Chat and Instagram (Table 10). Using numerous social media platforms simultaneously was common, to illustrate this, one student highlighted:

'It is routine… going through and checking each one before bed' (FG2)[7].

Table 10: The percentage of students reporting to use each social media platform

You tube	**89.70%**
Snap Chat	**80.50%**
Instagram	**79%**
Facebook	**75%**
X-box live	**46%**
Twitter	**38.15%**
WhatsApp	**30.40%**
Pinterest	**15.90%**
Tumblr	**11.60 %**
Vine	**5.10%**

Just over 90% of respondents reported positive outcomes from using social media and 63% acknowledged problems associated with its use (Table 11). This led to further exploration in the focus groups relating to this variance in views.

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[7] FG = Focus group.

Table 11: Percentage of students reporting 'good' reasons and 'problems' associated with using social media.

Question: 'Do you think there are any good reasons for using social media'?	Percentage of teenagers
'Yes' responses	90.6%
'No' responses	9.4%
Question: 'Do you think there are any problems linked to using social media'?	
'Yes' responses	63%
'No' responses	37%

Sleep

Questionnaire responses indicated the average number of hours teenagers reported to sleep each night varied (Table 12). Around 68% reported sleeping less than the minimum daily recommended hours for a teenager (8.6 hours per night) (Calamaro et al., 2009; Carskadon et al., 2001; Wolfson & Carskadon, 1998).

Table 12: Average hours of sleep students reported on weekdays

Average hours of sleep on week days	Percentage of teenagers
Less than 4	4.6%
Between 4-6	14.7%
Between 6-8	49%
Between 8-10	29.1%
Over 10	2.6%

Challenges

Many students perceived social media use impacted their sleep, particularly through reducing sleep duration and disturbing their sleep (See table 13). Teenagers did not report social media had any positive influence on their sleeping habits.

Table 13: The percentage of students reporting social media use affected the amount of sleep they gained each night

Year group	Percentage of 'yes' responses
Year 8	40%
Year 9	29%
Year 10	47%
Year 11	70%
Average	47%

Overall, of the teenagers sampled, 47% reported social media use affected their sleep duration; with this figure increasing to 70% for year 11 respondents.

Some highlighted they often avoided going to sleep because they wanted to use social media.

> *'Because when you are on your device you are attached so you have less sleep' (Y8Q)*[8].

> *'You can't just leave the conversation' (Y9Q).*

> *'I stay up to look on social media instead of going to bed early' (Y11Q).*

Losing track of time when using social media was highlighted as a factor affecting the amount of sleep teenagers gained. Young people identified the availability of various social media applications as a key explanation for this.

> *'When using social media, time can go really quickly'* (FG1).

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[8] Y = Year group and Q = Questionnaire.

'It is never just a quick check' (FG2).

'You forget about the time' (Y8Q).

Several teenagers reported that they often found it difficult to initiate sleep after social media use at night; students highlighted:

'If you have a screen in front of you before bed it's harder for you to sleep' (Y8Q).

'Your mind is still active' (Y9Q).

'Blue light emitted from the phone affects eyes…. it keeps you awake' *(FG1).*

Questionnaire responses indicated 41% of teenagers reported waking during the night. A number of students reported being disturbed or woken by their phone whilst sleeping.

'I sometimes get alerts in the middle of the night' (Y9Q).

'I can be woken up during the night because of notifications' (FG2).

Alternative common explanations included needing the toilet, medical conditions, noises, ruminating thoughts and dreams.

Table 14: The percentage of students reporting social media use affected how tired they felt the next morning

Year group	Percentage of 'yes' responses
Year 8	35%
Year 9	24%
Year 10	40%

Year 11	35%
Average	33.5%

33.5% of teenagers who responded to the questionnaire reported social media use affected how tired they felt the next morning, leaving them feeling sleepier and less ready to learn in school the next day*.*

> *'You are too tired to focus' (Y11Q).*

> *'You are tired and your brain can't concentrate on exams' (Y8Q).*

Academic success

Benefits

Many teenagers perceived that social media use positively affected academic success, particularly when completing homework.

Social media increased teenagers' independence in learning and provided opportunities to contact experts and broaden their knowledge in topics of interest.

> *'You can use it to learn about topics not covered in school like, computer science' (FG1).*

> *'Asking experts about topics I do not know enough about' (Y9Q).*

Social media facilitated academic success by allowing students to take more ownership over their learning through communicating with peers about homework tasks or watching YouTube videos. Communicating through social networking and various social media applications also provided opportunities to experience wider success in learning.

> *'You can use it to check with friends about homework given or ask for help' (FG1).*

'It can be good if you are stuck on a homework task' (FG2).

'It can help me revise or do my homework for things I'm stuck on' (Y9Q).

Challenges

Some teenagers reported social media use could have a detrimental impact on their academic success.

Table 15: The percentage of students reporting their social media use affected how prepared they were to learn the following day

Year group	Percentage of 'yes' responses
Year 8	22.5%
Year 9	15.5%
Year 10	28%
Year 11	50%
Average	29%

29% of questionnaire respondents highlighted social media use at night affected how prepared they were for learning the following day.

Table 16: The percentage of students who reported social media use affected their motivation to complete homework

Year group	Percentage of 'yes' responses
Year 8	35%
Year 9	44%
Year 10	54%
Year 11	65%
Average	49.5%

Social media use distracted from learning both at home and school. 49.5% of respondents reported social media use impacted their motivation to complete

homework. Year 11's reported a higher percentage of 'yes' responses, with 65%; indicating social media use affected their motivation to complete homework; highlighting a potential age difference.

Students indicated a preference for using social media instead of completing homework. Teenagers often perceived social media to be more entertaining; as a consequence, many respondents expressed a reluctance to stop using it. Similarly, a number of students highlighted social media use affected motivation to complete homework; often using social media as a way to procrastinate. This frequently led to a reduction in the amount of time spent revising and completing homework. A number of individual responses included:

'You can use it to procrastinate from school work' (FG2).

'I'd rather be on social media than doing homework' (Y11Q).

'Social media takes up revision time' (Y10Q).

'I am addicted to it' (FG1).

It was estimated between 50-70% of students used their phone during lessons. Social media use was therefore found to be a distraction, by breaking teenagers' focus and concentration whilst learning. Some also reported thinking about what was happening on social media throughout lessons.

'It can stop you paying attention' (Y10Q).

'I hear it vibrate, I'm anxious to get out of lesson and check' (FG2).

'You might think about what you have seen on social media other than the test' (Y10Q).

Emotional wellbeing

Teenagers perceived social media use could support emotional wellbeing, however, many reported detrimental effects.

Benefits

One student reported she found scrolling through different social media applications to be 'therapeutic'.

> *'It can help you relax by mindlessly scrolling through something, it can be therapeutic' (FG2).*

Use of social media also helped to alleviate feelings of anxiety, because teenagers could contact others quickly to check they were safe. One student highlighted if they didn't use social media regularly they would feel:

> '…*pretty anxious in case something happened to my family and I didn't know' (FG2).*

Challenges

Social media use negatively affected the emotional wellbeing of a number of teenagers by causing anxiety and worry.

A range of anxieties and worries were attributed to social media use. These included worries about what they have been tagged in and what others were saying, but also worries when they did not check their feeds or notifications for a period of time.

> *'I feel anxious without my phone for an hour' (FG2).*

> *'If I get tagged in something, I worry in case it's rude' (FG2).*

> *'I'd be lost without it, I wouldn't be able to rest' (FG2).*

Additionally, involvement in arguments on social media was reported to cause significant anxiety and stress. Individuals appear more confident when using social media because they are '*hiding behind their phones*'. Teenagers suggested this led others to say things online that they wouldn't usually say in 'real life', that may cause upset.

> '*Things can be said on social media that affects people' (Y9Q).*

> '*It causes a lot of fights because I feel that I have a lot more confidence when I am speaking on social media*' (Y9Q).

Relationships

Many teenagers who responded to the questionnaire perceived social media use strengthened relationships and broadened communicative methods; conversely, social media use also negatively affected relationships.

Benefits

Social media use opened up opportunities to communicate, as well as connect in new ways with family, friends and people students met online. Social media provided opportunities to share experiences and get to know others better through; '*getting updates', 'sharing pictures', 'talking to friends'* and *'looking back at memories'*. Social media also provided a supportive network for; '*homework*', '*hearing about problems*' and *'community groups'*.

> '*You can make friends and stay in contact with old ones' (Y8Q).*

> '*Group chat is a good support network' (FG2).*

> '*I found most of my friends through social media'* (Y10Q).

Challenges

Teenagers perceived their relationships can be negatively affected by social media use. It is a place where gossip and rumours can be spread and where arguments can be instigated.

'A place where rumours are spread across the world' (FG2).

'It is not important for dramas and gossip' (FG2).

Teenagers were very aware of the risks of themselves or others being cyberbullied when using social media, and the implications this could have on their wider lives.

'Because people could spread information and cyber bullying could happen' (Y8Q).

'If you are being cyber bullied you could think about it all day' (FG2).

It was highlighted, however, that if many students didn't use social media, it could potentially leave them feeling isolated.

'You end up with no friends if you don't use it' (Y11Q).

'I'd be worried in case I was left out of things' (FG2).

Wider challenges linked to social media use

Students were well informed about the dangers associated with social media use. There appeared to be a tension between having talents noticed whilst still ensuring safety and an element of privacy online. Students highlighted they were particularly concerned by strangers finding things out about them, and being careful about the information they shared with strangers.

'It can be dangerous' (FG1).

'There is conflict between getting noticed and being private; I am a dancer and want to get noticed so my Instagram is open' (FG1).

'People invade your privacy' (FG2).

'*People can find information out about you' (FG1).*

'You don't know who is behind the screen' (Y9Q).

Managing social media use

Students identified a number of ways they were autonomous in managing their social media use. They were clear it was important for individuals to take responsibility for their own social media use, through adopting security precautions and *a 'common sense approach'.* Strategies to reduce social media use included; *'putting my phone in another room'*, *'giving my phone to a parent'*, or placing their phone on *'silent', 'aeroplane mode' or 'do not disturb'.*

Conversely, some reported they found it difficult to regulate their social media behaviour. They either hadn't tried strategies or had attempted to use strategies unsuccessfully.

'I intend to set timers and end up ignoring them' (FG2).

Young people identified a number of sources of wider support to help them to become more independent when using social media. These included; direct intervention from social media providers like guidance on privacy and how to implement safety precautions.
Teenagers also suggested wider support could be available e.g. '*Posters'*, and *'leaflets with basic steps of what to do'.* Further recommendations also included:

'*Early intervention through organising student led assemblies and PSHCE days' (FG2).*

'Providers should have a video to show how to block people' (FG1).

Individual differences

It is important to acknowledge approximately 5% of the questionnaire respondents used social media for less than an hour each day. Some teenagers highlighted they had little interest in using social media.

>*'It doesn't do anything for me' (FG2).*

>*'I wouldn't be bothered; I do use it but I find it easy to stay away from' (FG2).*

In contrast, for many teenagers, there was an acceptance that social media formed an important part of their everyday life and identity.

>*'It is normal to be on your phone… its society now' (FG1).*

>*'I couldn't imagine life without it' (FG2).*

This highlights that young peoples' experiences vary significantly in how they use and are affected by social media use.

Evaluation of taking part in the focus group process

The final question in the focus groups asked students to feedback their experience of the process. Responses were largely positive. Students valued sharing their ideas and found listening to the opinions of others helpful. Students reported they benefited from the process of reaching their own conclusions on the topic rather than being told by an adult about the challenges associated with its use. Providing young people with the opportunity to reach their own conclusions regarding their social media use could potentially facilitate feelings of empowerment in moving forward and changing behaviours.

Engaging in the focus group process provided an opportunity to evaluate their social media use, consider security measures and pick up tips others were using to regulate

their social media use. One student reflected displaying the information in front of them on flip chart paper helped to:

'Reflect, put things into perspective and reconsider priorities' (FG2).

Further reflective comments also included:

'It was helpful to hear others opinions on the topic' (FG1).

'It shocked me how much I use social media' (FG2).

'It made me think how much I use it, the benefits and how much time I waste' (FG2).

Students reported the small group environment allowed them to feel more confident and safe when sharing information. They suggested future focus groups could be helpful to address a number of topics including bullying online and evaluating social media use; particularly for those who engage in high levels of use.

Discussion

This section provides a summary of the empirical findings and reference to previous research literature. Limitations and implications for future research and EP practice are identified.

This study explores teenagers' perceptions regarding how social media use affects wider areas of their lives, particularly in relation to sleep, academic success, relationships and emotional wellbeing.

Overall, 100% of teenagers sampled reported to use some form of social media, a higher figure than previous findings by Lenhart et al. (2010); O'Keeffe and Clarke-Pearson (2011) and OFCOM (2016). This increase is unsurprising given the steep rise in the creation of new social media platforms in recent years and the availability

of various forms of electronic media young people have readily available at their disposal. In critique of these findings, however, this figure may be higher in comparison to previous findings because definitions of social media can vary significantly and can evolve quickly i.e. not all definitions may include YouTube as a form of social media (Lomborg, 2015).

Average social media use varied; with a relatively even spread of responses across categories, with the median and mode response falling within the 5-6 hours per day category (Figure 1). 5.4% stated they used social media for less than 1 hour a day in contrast to 5.8% of teenagers who stated they used social media for over 15 hours each day. This variance in findings suggest it is likely each teenagers' perception and experience of using social media could be very unique and individual. This was also reflected in qualitative responses whereby some teenagers believed social media use had a great impact on wider areas of their life, whereas others did not.

Figure 1: *The Average number of hours students reported to use social media each day.*
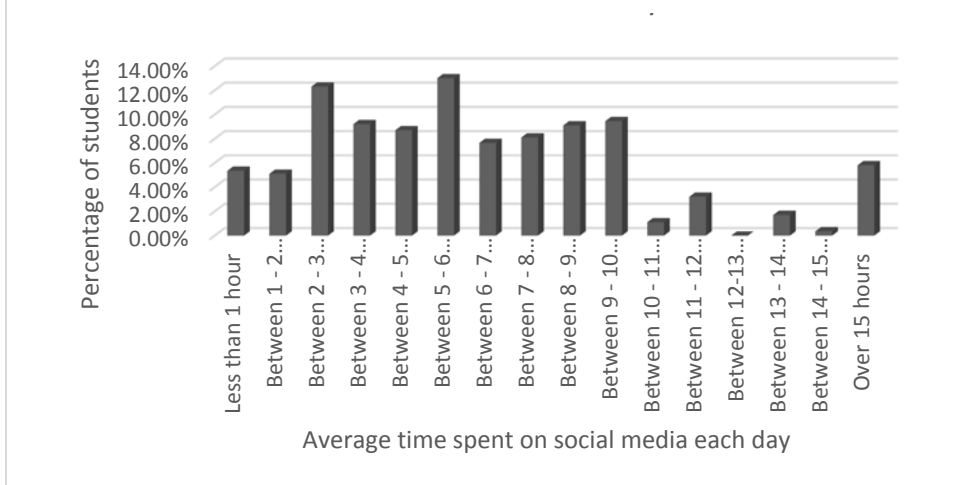
Sleep

Of the teenagers sampled, 68% reported to sleep below the daily recommended amount for a person their age (Calamaro et al., 2009; Carskadon et al., 2001;

Wolfson & Carskadon, 1998).   In addition to this, almost half of the sample reported staying up late to use social media, leading to later bedtimes and reduced sleep, consistent with findings by Power et al. (2017). This often left students feeling less ready to learn the next day.

Qualitative responses suggest teenagers reported staying online late because of losing track of how long they spent online, consistent with findings by Andersson et al. (2014) and Boyd (2014). Students also expressed a reluctance to stop using social media instead of going to sleep, a number of teenagers attributed this to a fear of missing out, consistent with Adams (2016). Regularly being woken by social media notifications during the night was also perceived to reduce sleep duration of some teenagers. Similarly, various teenagers reported their mind was kept awake when attempting to sleep, after using electronic and social media before bed, similar to findings by Calamaro et al. (2009).

Academic success

Many teenagers perceived social media could positively affect their academic success. Previous research indicated social media was often used by teenagers to support homework (Lu et al., 2016). Social media also provided opportunities for teenagers to learn independently and gain wider support from others. Forging links to Socio-cultural theory, social media extends the environment from which CYP can learn, drawing upon knowledge from interactions and mediation with wider peers and experts (more knowledgeable others) (John-Steiner & Mahn, 1996; Vygotsky, 1978, 1987). Social media also exposes CYP to wider psychological tools to facilitate and embed learning (Kozulin, 2003).

These findings also tie into self-efficacy theory which suggests individuals hold efficacious expectations regarding their ability to achieve desired outcomes (Bandura, 1977). Prior experience and success influences intrinsic motivation and readiness to engage in future learning activities (Bandura, 1977; Pekrun, Goetz, Titz, & Perry, 2002). Experiencing success in learning through the use of social media platforms could potentially help to develop self-efficacy beliefs of CYP in relation to their wider academic success, leading to greater intrinsic motivation to engage in future learning activities.

Teenagers also perceived social media use could have a detrimental impact on academic success; 49.5% of respondents reported social media use reduced motivation to complete homework, similar to findings by Meena et al. (2012). Students reported a preference for using social media rather than completing homework because they found social media more entertaining and interesting; in contrast, many reported to find the completion of homework boring. Cognitive motivational theory can be used to provide an explanation for why many teenagers demonstrated a preference for interacting with social media, rather than engaging in wider activities such as homework. Cognitive motivational theory proposes young people feel more motivated to learn when they engage in tasks that induce positive activating emotions such as interest and enjoyment (Pekrun, 1992; Pekrun et al., 2002). Conversely, if young people experience negative deactivating emotions such as boredom, this can lead to cognitive deactivation and a reduction in concentration and attention (Pekrun, 1992; Pekrun et al., 2002).

In light of Cognitive motivational theory (Pekrun, 1992), the current research suggests social media could play an important role in the learning of 'digital natives', particularly given Prensky's (2001) proposal that the younger generation learns and processes information differently in comparison to previous generations. Social media provides an alternative, interactive, faster paced method of gaining wider knowledge, whereby information is available in real time and teenagers can network with others to facilitate understanding. These findings highlight the importance of teachers drawing upon various social media platforms to inform their planning of some homework tasks, to engage and motivate more young people in their learning at home.

The current study highlighted teenagers reported social media caused distractions and affected concentration in class. It was estimated between 50-70% of students used social media during lessons, consistent with findings by McCoy (2013). This is particularly concerning given that previous research suggested multi-tasking when using social media whilst learning can negatively affect performance and memory consolidation in the classroom (Wood et al., 2012).

Approximately one third of respondents reported social media use affected how ready they felt they were able to learn the next day. This is a novel finding; suggesting social media use causes tiredness and can negatively affect learning.

Emotional wellbeing

A number of teenagers reported social media use supported emotional wellbeing by helping them to relax. It also provided a method to contact others instantly which students reported led to a reduction in anxiety levels. This appears to be a novel finding, previous existing literature did not indicate social media could have this positive affect.

Conversely, teenagers perceived social media use often left them feeling anxious and worried particularly regarding what they had been tagged in. Feeling left out or experiencing arguments was also highlighted by young people as a source of worry and upset, consistent with Gray (2016), NSPCC (2016) and Przybylski et al. (2013).

Relationships

Teenagers perceived social media use broadened their communicative opportunities, and strengthened friendships by allowing them to connect with friends, share experiences and interests and network with wider communities; supported by Boyd (2014) and Lu et al. (2016). Teenagers can become part of what Boyd (2014) described as 'imagined communities' online, developed through shared interests. This allows young people to gain acceptance and a sense of belonging in wider online communities.
Engaging in positive social relationships can lead to a number of benefits; Relational cultural theory posits relationships are central to healthy psychological development, developing connections and engaging in positive interactions are influential in affecting wider areas of life (Miller, 1976; Miller, 2008). This was illustrated by Goodenow (1993) who discovered high levels of relatedness were associated with academic motivation and achievement.

Social media was also reported to negatively affect relationships; it was highlighted that social media provides a platform whereby rumours and gossip can be spread instantly, which can initiate arguments amongst teenagers; consistent with Gray (2016).

Concerns regarding cyberbullying were also highlighted as a potential worry for teenagers. It was suggested individuals often 'hide behind their phones', and will say things they wouldn't normally say in 'real-life'. This is consistent with findings by Gray (2016) who suggested young people often do not perceive interactions on social media as 'real-life' and therefore may be more inclined to engage in cyberbullying or instigate arguments. The concept of deindividuation can be utilised to explain this behaviour; deindividuation is where individuals lose their sense of identity and awareness which can lead to antisocial behaviours, particularly when part of a group (Vaughan & Hogg, 2008). It could be argued, when young people use social media, they can be more inclined to engage in behaviours such as cyberbullying and trolling, particularly on sites where posts can be made completely anonymously (Boyd, 2014). More regular interactions on general social media sites, like Facebook, can also appear to be more anonymous because interactions are not face to face, which reduces accountability and can lead them to become 'faceless aggressors' (Finley, 2011). This can particularly be the case when collaborating in such behaviours with others because individuals are less likely to be identified when part of a group and can become 'lost in the crowd' (Vaughan & Hogg, 2008).

Even though teenagers often experience challenges to their relationships online, they also highlighted if they didn't use social media, this would negatively affect their friendships and lead them to become isolated, consistent with previous research by Boyd (2014). These findings suggest teenagers experience a tension between going online to strengthen relationships and to feel a sense of belonging, whilst also being at risk of experiencing negative interactions, which can cause a host of negative feelings and lead to anxieties and worries.

Social media appears to play a key role in the lives of many young people, this is particularly pertinent given such a high percentage of young people regularly use social media on a daily basis. The benefits teenagers experience from regularly using social media leads me to propose that social media can serve as a facilitator of growth and development within the ecosystem of many teenagers, particularly with regards to academic success and relationships (Bronfenbrenner 1994). If teenagers are provided with effective support from wider systems, it could be questioned whether the negative effects of social media can be reduced (i.e. implementing effective ways to regulate social media use) and whether benefits linked to social media use could be capitalised and built upon.

<u>Limitations</u>

Difficulties in defining social media

It is difficult to find a time enduring, mutually accepted definition of social media (Kaplan & Haenlein, 2010; Lomborg, 2015; Obar, 2015). This is partly due to the rapidly evolving social media world, which makes it difficult to establish clear boundaries relating to terminology (Kaplan & Haenlein, 2010; Lomborg, 2015; Obar, 2015). Social media research and definitions are time specific and quickly become outdated (Lomborg, 2015). This issue was addressed at the beginning of each focus group, by asking students to explain their understanding of social media. This allowed the group to socially construct a definition of social media from which focus group discussions could evolve from.

Difficulties in defining cyberbullying

Caution should be exercised when defining both bullying and cyberbullying, as it is a contentious issue amongst academics and young people alike (Boyd, 2014). Narratives around what constitutes as cyberbullying can often differ significantly, interpretation of whether an act is classed as bullying is often determined by how it is intended, perceived and experienced (Boyd, 2014).

This empirical research used a modest sample from one Secondary School in the North East of England to gain an understanding of student perceptions relating to their social media use and how it impacts wider areas of lives. This challenges the generalisability of findings when exploring perceptions and behaviours of others outside the sample used. In defence of this research, however, it was not carried out with an intention to be representative, its aim was to gain an in-depth understanding of students' perceptions within this geographical area (Rawlings & Cowell, 2015). It can be argued the findings are generalisable, through theoretical generalisability because aspects of the research data are consistent with existing research and knowledge (Smith, Flowers, & Larkin, 2009).

The method and approaches selected within this research posed a number of limitations. Questionnaires are criticised for lacking detail or depth in participant

responses (Kelley, Clark, Brown, & Sitzia, 2003). Gaining a high response rate when using questionnaires is also notoriously difficult (Kelley et al., 2003). The response rate achieved in this research was approximately 20.7%. These limitations guided the decision to adopt a mixed-methods approach within this research.

When utilising focus groups, there is the potential individuals may not be willing to share their thoughts accurately, as is the case with any self-report measure (Lederman, 1990). Caution should also be exercised when considering responses given, particularly in relation to social media use. Some teenagers may have potentially exaggerated their responses due to potential kudos associated with high amounts of social media use. Lederman (1990) however, suggested we should believe individuals are good reporters of their experiences and the majority aim to share their experiences honestly.

This research was only undertaken by one researcher. This is a limitation as it narrowed down the scale of the research undertaken. Had a wider research team been available, a much bigger sample could have been utilised.

Implications for future research

Based on feedback from the focus groups, students discussed in depth, worries regarding others and their social media use, particularly younger children. It was suggested some younger children were '*losing their childhood'* because they used social media so frequently. This highlights a potential future research area to be explored.

Implications for Educational Psychology practice

The nature of EP work provides opportunities for EPs to work closely with schools and CYP. I propose EPs could support CYP in their use of social media, similar to the suggestion by O'Keeffe and Clarke-Pearson (2011) that Paediatricians should educate families and CYP about the complexities and challenges linked to social media use. EPs are equally placed to adopt this role.

In light of recent research suggesting teachers and parents are frequently ill equipped to provide essential support; EPs could provide training and advice around social media use (Andersson et al., 2014; Waugh, 2017).

EPs could work with schools to identify CYP who are at higher risk of experiencing dangers online and offer interventions to support this (Gray, 2016). In light of the success experienced when carrying out focus groups within this thesis, I propose a 'focus group approach' as an early intervention, to tackle challenges experienced online; allowing CYP to talk through thoughts and concerns with peers of a similar age. Providing a collaborative problem solving process and an opportunity to socially construct their own conclusions.

<u>Summary</u>

Exploring teenagers' perceptions around how social media use impacts wider areas of their lives is a complex issue; experience can be unique to each young person. This research has attempted to explore the complex relationship many young people have with social media use, and provide a best fit insight into teenagers' perceptions of how social media affects their sleep, academic success, emotional wellbeing and relationships.

This study highlights high popularity of social media use amongst teenagers of secondary age.

Teenagers often reported social media use reduced sleep duration, consistent with Power et al. (2017), the current research extended this finding by indicating losing track of time or a reluctance to stop using social media at bedtime as potential causes. Social media use often affected teenagers' ability to initiate sleep and caused sleep disturbances during the night, consistent with Levenson et al. (2016), Power et al. (2017) and Vernon et al. (2015). These factors affected how ready some teenagers felt they were ready to learn the next day.

Teenagers reported regularly using social media as a tool to support their learning, particularly when completing homework, supported by Lu et al. (2016). They perceived social media provided opportunities to engage in collaborative learning with peers and contact experts; increasing independence and confidence in learning.

These experiences led students to perceive social media could positively influence their academic success.

Conversely, social media negatively affected students' motivation to complete school work, by causing a distraction; many teenagers showed a preference for engaging with social media rather than completing homework, consistent with Meena et al. (2012). Social media was also found to affect academic success by causing a distraction in the classroom, affecting concentration and productivity; consistent with McCoy (2013). Current research findings also suggested social media use negatively affected the academic success of teenagers when engaging in learning both at home and school.

A novel finding from this research suggested social media use could support emotional wellbeing through helping teenagers to feel less anxious, by knowing they can contact others, particularly family members, 24/7.

In contrast, teenagers reported experiencing anxieties and worries linked to social media use, particularly regarding what they had been tagged in, what others were saying and feeling worried about being left out. Involvement in arguments was also highlighted as a source of worry and upset, consistent with Gray (2016) and NSPCC (2016).

Teenagers perceived relationships could be strengthened through regular social media use, by providing wider opportunities to connect with friends, share experiences and interests and network with wider communities, supporting findings by Boyd (2014) and Lu et al. (2016). Conversely, relationships were negatively affected through arguments, gossiping, rumours online and cyberbullying.

Teenagers were aware of many challenges associated with social media use and reported a range of strategies used to regulate their use. They however, suggested young people could benefit from more support from social media providers and school staff.

Findings suggest social media plays a key role in the lives of many young people, and presents various challenges through its use. This is particularly pertinent given such a high percentage of young people regularly use social media on a daily basis. The benefits teenagers experience from regularly using social media led me to propose social media can serve as a facilitator of growth and development within the ecosystem of many teenagers, particularly with regards to academic success and

relationships; if teenagers are equipped with support and guidance to effectively manage their social media and reduce negative effects associated with its use.

These findings can be utilised by EPs to consider how to support young people, school staff and families around social media use.

References

Adams, S. (2016). The young and the restless: Socialising trumps sleep, fear of missing out, and technological distractions in first year college students. *J Women's health care, 5*(299).

Al-rahmi, W. M., Othman, M. S., & Musa, M. A. (2014). The Improvement of Students' Academic Performance by Using Social Media through Collaborative Learning in Malaysian Higher Education *Asian social science, 10*(8). Retrieved from http://www.ccsenet.org/journal/index.php/ass/article/view/35490/20138

Allen, J. (2005). Grades as valid measures of Academic Achievement of Classroom Learning. *Heldref publications, 78*(5). Retrieved from http://www.tcnj.edu/~senate/resources/documents/GradesasValidMeasures.pdf

Andersson, A., Hatakka, M., Grönlund, Å., & Wiklund, M. (2014). Reclaiming the students – coping with social media in 1:1 schools. *Learning, Media and Technology, 39*(1), 37-52. doi:10.1080/17439884.2012.756518

Aydin, D., Feychting, M., Schüz, J., Andersen, T. V., Poulsen, A. H., Prochazka, M., . . . Röösli, M. (2011). Predictors and overestimation of recalled mobile phone use among children and adolescents. *Progress In Biophysics And Molecular Biology, 107*(3), 356-361. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=cmedm&AN=21907731&site=ehost-live

Bandura, A. (1977). Self Efficacy: Toward a unifying theory of behavioural change. *Psychological review, 84*(2), 191-215. Retrieved from http://www.infocenters.co.il/lesley/multimedia/15700.pdf

Baxter-Magolda, M. (2004). Self-authorship as the common goal. *Learning partnerships: Theory and models of practice to educate for self-authorship*, 1-35.

Berger, R. (2015). Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. *Qualitative research, 15*(2).

Borlase, B. J., Gander, P. H., & Gibson, R. H. (2013). Effects of school start times and technology use on teenagers' sleep: 1999–2008. *Sleep and Biological Rhythms, 11*(1), 46-54.

Boyd, D. (2014). *It's complicated*. New Haven and London: Yale University press.

BPS. (2009). BPS Code of ethics and conduct.

BPS. (2010). Code of Human Research Ethics. *The British Psychological Society*.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. Retrieved from http://www.tandfonline.com/doi/abs/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2013). *Successful Qualitative Research: A Practical Guide for Beginners*. London: Sage.

Breus, M. (2016). *Tweeting, Not sleeping? What is your Social Media/ Sleep Balance?* Retrieved from http://www.huffingtonpost.com/dr-michael-j-breus/tweeting-not-sleeping-what-is-your-social-mediasleep-balance_b_9103468.html

Bright, L. F., Kleiser, S. B., & Grau, S. L. (2015). Too much Facebook? An exploratory examination of social media fatigue. *Computers in Human Behavior, 44*, 148-155. Retrieved from http://www.sciencedirect.com/science/article/pii/S0747563214006566

Bronfenbrenner , U. (1994). Ecological Models of Human Development. *International encyclopedia of Education, 3*(2).

Bryant, A., Sanders-Jackson, A., & Smallwood, A. (2006). IMing, Text Messaging, and Adolescent Social Networks. *Journal of Computer-Mediated Communication, 11*(2), 577-592. Retrieved from http://dx.doi.org/10.1111/j.1083-6101.2006.00028.x

Buysse, D. J., Reynolds, C. F., Monk, T. H., Berman, S. R., & Kupfer, D. J. (1989). The Pittsburgh Sleep Quality Index: A new instrument for psychiatric research and practice. . *Psychiatry research, 28*(2).

Cain, N., & Gradisar, M. (2010). Electronic media use and sleep in school-aged children and adolescents. *Sleep medicine, 11*, 735-742.

Calamaro, C. J., Mason, T. B., & Ratcliffe, S. J. (2009). Adolescents living the 24/7 lifestyle: effects of caffeine and technology on sleep duration and daytime functioning. *Pediatrics, 123*(6), e1005-e1010.

Carrigan, M. (2016). *Social media for academics.* London: Sage.

Carskadon, M. A., Acebo, C., & Oskar, J. (2004). Regulation of Adolescent Sleep. Implications for behaviour. *New York academy of sciences, 1021*, 276-291.

Carskadon, M. A., Acebo, C., & Seifer, R. (2001). Extended nights, sleep loss and recovery in adolescents. *Archives Italiennes de Biologie, 139*, 301-312. Retrieved from http://www.architalbiol.org/aib/article/viewFile/139301/461

Centre, E. (2007). EPPI-Centre Methods for Conducting Systematic Reviews. *Evidence for Policy and Practice Information and Co-ordinating Centre.*

Choi, K., Son, H., Park, M., Han, J., Kim, K., Lee, B., & Gwak, H. (2009). Internet overuse and excessive daytime sleepiness in adolescents. *Psychiatry and clinical neurosciences, 63*(4), 455-462.

Coutinho, S. (2007). The relationship between goals, metacognition, and academic success *Educate journal*, 39-47. Retrieved from http://educatejournal.org/index.php/educate/article/viewFile/116/134

Crowley, S. J., Acebo, C., & Carskadon, M. A. (2007). Sleep, circadian rhythms, and delayed phase in adolescence. *Sleep medicine, 8*(6), 602-612. Retrieved from http://www.sciencedirect.com/science/article/pii/S1389945706007076

Dickersin, K. (1990). The existence of publication bias and risk factors for its occurrence. *JAMA, 263*(10), 1385-1389. doi:10.1001/jama.1990.03440100097014

Dimitriou, D., Le Cornu Knight, F., & Milton, P. (2015). The Role of Environmental Factors on Sleep Patterns and School Performance in Adolescents. *Frontiers in Psychology, 6*, 1717. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4664801/

Eggermont, S., & Van den Bulck, J. (2006). Nodding off or switching off? The use of popular media as a sleep aid in secondary-school children. *Journal of Paediatrics and Child Health, 42*(7-8), 428-433. Retrieved from http://dx.doi.org/10.1111/j.1440-1754.2006.00892.x

Ellenbogen, J., Payne, J., & Stickgold, R. (2006). The role of sleep in declarative memory consolidation: passive, permissive, active or none? *Current opinion in neurobiology, 16*(6), 716-722.

Ellison, N. B., Steinfield, C. and Lampe, C. . (2007). The Benefits of Facebook "Friends:" Social Capital and College Students' Use of Online Social Network Sites. *Journal of Computer-Mediated Communication, 12*, 1143–1168. Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1083-6101.2007.00367.x/full

Finley, L. (2011). *Encyclopedia od School Crime and Violence. A-N.* (Vol. 1). Santa Barbara: ABC Clio.

Gentile, Reimer, Nathanson, Walsh, & Eisenmann. (2014). Protective Effects of Parental Monitoring of Children's Media Use. *JAMA Pediatrics, 168*(5), 479-484.

Gibson, E., Powles, P., Thabane, L., O'Brien, S., Molnar, D., Tranjanovic, N., . . . Chilcott-Tanser, L. (2006). "Sleepiness" is serious in adolescence: Two surveys of 3235 Canadian students. *BMC public health, 6*(116), 1-9.

Goodenow, C. (1993). Classroom Belonging among Early Adolescent Students. *The Journal of Early Adolescence, 13*(1), 21-43. Retrieved from http://journals.sagepub.com/doi/abs/10.1177/0272431693013001002

Gottfried, J., & Shearer, E. (2016). *News use across Social Media platforms 2016.* Retrieved from Pew research Center: http://www.journalism.org/2016/05/26/news-use-across-social-media-platforms-2016/

Gough, D. (2007). Weight of evidence: a framework for the appraisal of the quality and relevance of evidence. *Special Edition of Research Papers in Education, 22*(2), 213-228.

Gray, L. (2016). *Exploring How and Why Young People use Social Networking Sites.* (Doctorate in Applied Educational Psychology), Newcastle University, Newcastle university etheses.

Grix, J. (2002). Introducing Students to the Generic Terminology of Social Research. *Politics, 22*(3).

Grover, K., Pecor, K., Malkowski, M., Kang, L., MacHado, S., Lulla, R., . . . Ming, X. (2015). Effects of Instant Messaging on School Performance in Adolescents. *Journal of child Neurology, 31*(7), 850-857. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-84969174958&partnerID=40&md5=2dd4ca4ae9a9fddcc1e8d8e09c88068b

Hansen, M., Janssen, I., Schiff, B., Zee , P., & Dubocovich, M. (2005). The Impact of School Daily Schedule on Adolescent Sleep. *Pediatrics, 115*(6), 1555-1561.

Hennessy, E., & Heary, C. (2005). Exploring childrens' views through focus groups. In D. H. Sheila Greene (Ed.), *Researching Children's Experience: Approaches and Methods.* London: Sage publications.

Horton, K., Taylor, C., & Power, S. (2015). *Routines and rest: the sleep behaviours of 12 to 15 year olds* Draft paper. Cardiff University. Wales Institute of Social & Economic Research, Data & Methods

Howitt, D. (2013). *Introduction to Qualitative methods in Psychology* (Second Edition ed.). Harlow: Pearson.

Hysing, M., Pallesen, S., Stormark, K. M., Jakobsen, R., Lundervold, A. J., & Sivertsen, B. (2015). Sleep and use of electronic devices in adolescence: results from a large population-based study. *BMJ Open, 5*(1). Retrieved from http://bmjopen.bmj.com/content/5/1/e006748.abstract

Hysing, M., Pallesen, S., Stormark, K. M., Lundervold, A. J., & Sivertsen, B. (2013). Sleep patterns and insomnia among adolescents: a population-based study. *Journal of Sleep Research, 22*(5), 549-556. Retrieved from http://dx.doi.org/10.1111/jsr.12055

Jacobsen, W., & Forste, R. (2011). The Wired Generation: Academic and Social Outcomes of Electronic Media Use Among University Students. *Cyberpsychology, Behavior, and Social Networking, 14*(5), 275-280.

Jaffar, A. A. (2012). YouTube: An emerging tool in anatomy education. *Anatomical Sciences Education, 5*(3), 158-164. Retrieved from http://dx.doi.org/10.1002/ase.1268

John-Steiner, V., & Mahn, H. (1996). Sociocultural approaches to learning and development: A Vygotskian framework. *Educational Psychologist, 31*(3-4), 191-206. Retrieved from http://dx.doi.org/10.1080/00461520.1996.9653266

Juvonen, J., & Gross, E. F. (2008). Extending the School Grounds?—Bullying Experiences in Cyberspace. *Journal of School Health, 78*(9), 496-505. Retrieved from http://dx.doi.org/10.1111/j.1746-1561.2008.00335.x

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons, 53*(1), 59-68. Retrieved from http://www.sciencedirect.com/science/article/pii/S0007681309001232

Kelley, K., Clark, B., Brown, V., & Sitzia, J. (2003). Good practice in the conduct and reporting of survey research. *International Journal for Quality in Health Care, 15*(3), 261-266.

Kent, M. L. (2015). Social Media Circa 2035: Directions in Social Media Theory. *Atlantic Journal of Communication, 23*(1), 1-4. Retrieved from http://dx.doi.org/10.1080/15456870.2015.972407

Kim, W., Jeong, O.-R., & Lee, S.-W. (2010). On social Web sites. *Information Systems, 35*(2), 215-236. Retrieved from http://www.sciencedirect.com/science/article/pii/S0306437909000866

Kirschner, P. A., & Karpinski, A. C. (2010). Facebook® and academic performance. *Computers in Human Behavior, 26*(6), 1237-1245. Retrieved from http://www.sciencedirect.com/science/article/pii/S0747563210000646

Knorr, C. (2016). How Girls Are Seeking (and Subverting) Approval Online. *Common sense media*. Retrieved from https://www.commonsensemedia.org/blog/how-girls-are-seeking-and-subverting-approval-online#

Kozulin, A. (2003). *Vygotsky's Educational Theory in Cultural Context*. Cambridge: Cambridge press.

Kruger, R., & Casey, M. (2000). *Focus Groups* (T. Edition Ed.). California: Sage Publications.

Lederman, L. C. (1990). Assessing educational effectiveness: The focus group interview as a technique for data collection. *Communication Education, 39*(2), 117-127. Retrieved from http://dx.doi.org/10.1080/03634529009378794

Lee, S.-J., & Chae, Y.-G. (2007). Children's Internet use in a family context: Influence on family relationships and parental mediation. *Cyberpsychology and behaviour, 10*(5), 640-644.

Lemola, Perkinson-Gloor, Brand, Dewald-Kaufmann, & Grob. (2015). Adolescents' Electronic Media use at night, sleep disturbance, and depressive symptoms in the smartphone age. *J Youth Adolescence, 44*, 405-418.

Lenhart, A. (2015a). Teens, social media and Technology overview 2015. *PEW research centre*. Retrieved from www.pewresearch.org

Lenhart, A. (2015b). *Teens, Technology and Friendships report*. Retrieved from Pew research center: http://www.pewinternet.org/2015/08/06/teens-technology-and-friendships/

Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). Social Media & Mobile Internet Use among Teens and Young Adults. Millennials. *Pew internet & American life project*.

Levenson, J. C., Shensa, A., Sidani, J. E., Colditz, J. B., & Primack, B. A. (2016). The association between social media use and sleep disturbance among young adults. *Preventive Medicine, 85*, 36-41. Retrieved from http://www.sciencedirect.com/science/article/pii/S0091743516000025

Lieberman, E. (2005). Nested analysis as a mixed-Method strategy for comparative research. *American Political Science Review, 99*(3), 435-452.

Livingstone, S. (2008). Taking risky opportunities in youthful content creation: teenagers' use of social networking sites for intimacy, privacy and self-expression. *New Media & Society, 10*(3), 393-411. Retrieved from http://dx.doi.org/10.1177/1461444808089415

Lomborg, S. (2015). "Meaning" in Social Media. *Social Media + Society, 1*(1). Retrieved from http://sms.sagepub.com/content/1/1/2056305115578673.abstract

Lu, J., Hao, Q., & Jing, M. (2016). Consuming, sharing, and creating content: How young students use new social media in and outside school. *Computers in Human Behavior, 64*, 55-64. Retrieved from //www.sciencedirect.com/science/article/pii/S0747563216304472

Marino, C., Vieno, A., Lenzi, M., Borraccino, A., Lazzeri, G., & Lemma, P. (2016). Computer Use, Sleep Difficulties, and Psychological Symptoms Among School-Aged Children: The Mediating Role of Sleep Difficulties. *Int J School Health, In Press*(In Press), e32921. Retrieved from http://intjsh.com/?page=article&article_id=32921

Marwick, A. E. (2014). Networked privacy: How teenagers negotiate context in social media. *New Media & Society*.

Mauthner, M. (1997). Methodological Aspects of Collecting Data from Children: Lessons from Three Research Projects. *Children and Society, 11*, 16-28.

Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1099-0860.1997.tb00003.x/pdf

May, M. A. (1923). Predicting Academic Success. *Journal of Educational Psychology, 14*(7), 429-440.

McCoy. (2013). Digital distractions in the classroom: Student classroom use of digital devices for non-class related purposes. *Journal of Media Education*.

Meena, P., Mittal, P., & Solanki, R. (2012). Problematic use of social networking sites among urban school going teenagers. *Industrial Psychiatry Journal, 21*(2), 94-97. Retrieved from http://www.industrialpsychiatry.org/article.asp?issn=0972-6748;year=2012;volume=21;issue=2;spage=94;epage=97;aulast=Meena

Mental Health Foundation. (2011). *Sleep Matters: The impact of sleep on health and wellbeing*. Retrieved from https://www.mentalhealth.org.uk/sites/default/files/MHF-Sleep-Report-2011.pdf

Milani, L., Osualdella, D., & Blasio, P. (2009). Quality of Interpersonal Relationships and Problematic Internet Use in Adolescence. *Cyberpsychology and behaviour, 12*(6). Retrieved from http://online.liebertpub.com/doi/abs/10.1089/cpb.2009.0071

Miller, J. (1976). *Toward a new Psychology of women* (Second edition ed.). Boston: Beacon press.

Miller, J. B. (2008). How Change Happens: Controlling Images, Mutuality, and Power. *Women & Therapy, 31*(2-4), 109-127. Retrieved from http://dx.doi.org/10.1080/02703140802146233

Monk, T., Buysse, D., Kennedy, K., Potts, J., DeGrazia, J., & Miewald, J. (2003). Measuring sleep habits without using a diary: The Sleep Timing Questionnaire. *Sleep, 15*(26).

Mullis, I., Martin, M., Foy, P., & Arora, A. (2011). Trend in international Mathematics and Science Study: TIMSS 2011 International

Results in Mathematics. *TIMMS and PIRLS International study centre*. Retrieved from http://timssandpirls.bc.edu/timss2011/downloads/T11_IR_Mathematics_FullBook.pdf

Munezawa, T., Kaneita, Y., Osaki, Y., Kanda, H., Minowa, M., Suzuki, K., . . . Ohida, T. (2011). The association between use of mobile phones after lights out and sleep disturbances among Japanese adolescents: a nationwide cross-sectional survey. *Sleep, 34*(8), 1013.

Nathan, N., & Zeitzer, J. (2013). A survey study of the association between mobile phone use and daytime sleepiness in California high school students. *BMC public health, 13*(1), 840.

National Sleep Foundation. (2006). *2006 sleep in America poll*. Retrieved from Washington:

Neuman, S. B. (1995). *Literacy in the television age: The myth of the TV effect*. Greenwood Publishing Group.

Noland, H., Price, J., Dake, J., & Telljohann, S. (2009). Adolescents' Sleep Behaviours and Perceptions of Sleep. *Journal of School Health, 79*(5), 224-230.

NSPCC. (2013). *Younger children and social networking sites: a blind spot.* Retrieved from NSPCC.org.uk:

NSPCC. (2016). *Children plagued by low self-esteem and loneliness.* Retrieved from NSPCC.org.uk:

Nuutinen, T., Ray, R., & Roos, E. (2013). Do computer use, TV viewing, and the presence of the media in the bedroom predict school-aged children's sleep habits in a longitudinal study? *BMC public health, 13*(684). Retrieved from http://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-13-684

O'Brien, L. M. (2009). The Neurocognitive Effects of Sleep Disruption in Children and Adolescents. *Child and Adolescent Psychiatric Clinics, 18*(4), 813-823. Retrieved from http://dx.doi.org/10.1016/j.chc.2009.04.008

O'Keeffe, G. S., & Clarke-Pearson, K. (2011). The Impact of Social Media on Children, Adolescents, and Families. *Pediatrics, 127*(4), 800-804. Retrieved from http://pediatrics.aappublications.org/content/127/4/800.abstract

Obar, J. A. a. W., Steven S.,. (2015). Social Media Definition and the Governance Challenge - An Introduction to the Special Issue. *SSRN.* Retrieved from http://ssrn.com/abstract=2663153

OFCOM. (2016). *Digital Day 2016.* Retrieved from https://www.ofcom.org.uk/__data/assets/pdf_file/0017/94013/Childrens-Digital-Day-report-2016.pdf

Ofsted. (2015). Making Sense of the New Online Safety Standards. Retrieved from http://swgfl.org.uk/news/News/online-safety/Making-Sense-of-the-New-Online-Safety-Standards

Orzech, K. M. (2013). A qualitative exploration of adolescent perceptions of healthy sleep in Tucson, Arizona, USA. *Social Science & Medicine, 79*(0), 109-116. Retrieved from http://www.sciencedirect.com/science/article/pii/S0277953612004078

Oxford Dictionaries. (2016). Definition of Social media in English. Retrieved from http://www.oxforddictionaries.com/definition/english/social-media

Packard, E. (2007). That teenage feeling. *Harvard researchers may have found biological clues to quirky adolescent behavior., 38.*

Pecor, K., Kang, L., Henderson, M., Yin, S., Radhakrishnan, V., & Ming, X. (2015). Sleep health, messaging, headaches, and academic performance in high school students. *Brain and Development.* Retrieved from http://www.sciencedirect.com/science/article/pii/S0387760415002582

Peiró-Velert, C., Valencia-Peris, A., González, L., García-Massó, X., Serra-Añó, P., & Devís-Devís, J. (2014). Screen Media Usage, Sleep Time and Academic Performance in Adolescents: Clustering a Self-Organizing Maps Analysis. *PLoS ONE, 9*(6).

Pekrun, R. (1992). The Impact of Emotions on Learning and Achievement: Towards a Theory of Cognitive/Motivational Mediators. *Applied Psychology, 41*(4), 359-376. Retrieved from http://dx.doi.org/10.1111/j.1464-0597.1992.tb00712.x

Pekrun, R., Goetz, T., Titz, W., & Perry, R. P. (2002). Academic Emotions in Students' Self-Regulated Learning and Achievement: A Program of Qualitative and Quantitative Research. *Educational Psychologist, 37*(2), 91-105. Retrieved from http://dx.doi.org/10.1207/S15326985EP3702_4

Petticrew, M. (2015). Time to rethink the systematic review catechism? Moving from 'what works' to 'what happens'. *Systematic Reviews, 4*(1), 36. Retrieved from http://dx.doi.org/10.1186/s13643-015-0027-1

Petticrew, M., & Roberts, H. (2006). *Systematic review in the Social Sciences.* Malden, USA: Blackwell publishing.

Plihal, W., & Born, J. (1997). Effects of Early and Late Nocturnal Sleep on Declarative and Procedural Memory. *Journal of Cognitive Neuroscience, 9*(4), 534-547. Retrieved from http://dx.doi.org/10.1162/jocn.1997.9.4.534

Polos, P. G., Bhat, S., Gupta, D., O'Malley, R. J., DeBari, V. A., Upadhyay, H., . . . Chokroverty, S. (2015). The impact of Sleep Time-Related Information and Communication Technology (STRICT) on sleep patterns and daytime functioning in American adolescents. *Journal of adolescence, 44*, 232-244.

Potkin, K. T., & Bunney Jr, W. E. (2012). Sleep improves memory: the effect of sleep on long term memory in early adolescence. *PLoS ONE, 7*(8).

Power, S., Taylor, C., & Horton, K. (2017). Sleepless in school? The social dimensions of young people's bedtime rest and routines. *Journal of Youth Studies*, 1-14. Retrieved from http://dx.doi.org/10.1080/13676261.2016.1273522

Prensky, M. (2001). Digital Natives, digital Immigrants. *MCB University Press, 9*(5).

Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior, 29*(4), 1841-1848. Retrieved from http://www.sciencedirect.com/science/article/pii/S0747563213000800

Punamäki, R.-L., Wallenius, M., Nygård, C.-H., Saarni, L., & Rimpelä, A. (2007). Use of information and communication technology (ICT) and perceived health in adolescence: The role of sleeping habits and waking-time tiredness. *Journal of adolescence, 30*(4), 569-585. Retrieved from http://www.sciencedirect.com/science/article/pii/S014019710600073X

Ratcliff, C. (2016). 23 up-to-date stats and facts about Instagram you need to know. Retrieved from https://searchenginewatch.com/2016/04/20/23-stats-and-facts-about-instagram/

Rawlings, E., & Cowell, N. (2015). Educational Psychologists' experience of taking part in group supervision: A phenomenological study. *Educational and child psychology, 32*(2).

Roberts, D. F., & Foehr, U. (2008). Trends in Media Use. *The future of children, 18*(1), 11-37.

Robson, C. (2011). *Real World Research* (Third Edition ed.). Chichester: Wiley.

Rydzkowski, W., Canale, N., & Reynolds, L. (2016). A review of interventions for adolescents with insomnia and the role of the educational and child psychologist: when sleep does not come easily. *Educational Psychology in Practice, 32*(1), 24-37. Retrieved from http://dx.doi.org/10.1080/02667363.2015.1090403

Sacks, D. (2003). Age limits and adolescents. *Paediatrics & Child Health, 8*(9), 577-577. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2794325/

Schoeni, A., Roser, K., & Röösli, M. (2015). Symptoms and Cognitive Functions in Adolescents in Relation to Mobile Phone Use during Night. *PLoS ONE, 10*(7).

Scotland, J. (2012). Exploring the Philosophical Underpinnings of Research: Relating Ontology and Epistemology to the Methodology and Methods of the Scientific, Interpretive, and Critical Research Paradigms *English Language Teaching, 5*(9).

Scott, D. (2014). Ontology, Epistemology, Strategy and Method in Educational Research. A Critical Realist Approach. *magis, Revista Internacional de Investigación en Educación,, 7*(14).

Seidman, G. (2013). Self-presentation and belonging on Facebook: How personality influences social media use and motivations. *Personality and Individual Differences, 54*(3), 402-407. Retrieved from http://www.sciencedirect.com/science/article/pii/S0191886912004916

Shabir, G., Hameed, Y., Safdar, G., & Gilani, S. (2014). The Impact of Social Media on Youth: A Case Study of Bahawalpur City. *Asian Journal of Social Sciences & Humanities, 3*(4).

Shin, N. (2004). Exploring Pathways From Television Viewing to Academic Achievement in School Age Children. *The Journal of Genetic Psychology, 165*(4), 367-382. Retrieved from http://dx.doi.org/10.3200/GNTP.165.4.367-382

Smith, C. (1995). Sleep states and memory processes. *Behavioural Brain Research, 69*(1–2), 137-145. Retrieved from http://www.sciencedirect.com/science/article/pii/016643289500024N

Smith, J., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method and research.* London: Sage.

Smolensky, M., Sackett-Lundeen, L., & Portaluppi, F. (2015). Nocturnal Light polution and underexposure to daytime sunlight: Complementary mechanisms of circadian disruption and related diseases. *Chronobiology International, 32*(8), 1029-1048.

Söderqvist, F., Carlberg, M., & Hardell, L. (2008). Use of wireless telephones and self-reported health symptoms: a population-based study among Swedish adolescents aged 15–19 years. *Environmental Health, 7*, 18-18. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2430957/

Spector, P. (1994). Using self-report questionnaires in OB research: a comment on the use of a controversial method. *Journal of Organizational Behavior, 15*.

Stats, I. L. (2017). Internet Live Stats. Retrieved from http://www.internetlivestats.com

Stea, T., Knutsen, T., & Tirstveit, M. (2014). Association between short time in bed, health-risk behaviours and poor academic achievement among Norwegian adolescents. *Sleep medicine, 15*, 666-671.

Stewart, D., & Shamdasani, P. (2014). *Focus groups: theory and practice* (3rd Edition ed.): Sage publications.

Stickgold, R. (2005). Sleep-dependent memory consolidation. *Nature, 437*(7063), 1272-1278.

Terry, M. (2008). The use of Social Networking sites Online survey. Retrieved from Yorkshire and Humber east life long learning network

website:

Titova, O. E., Hogenkamp, P. S., Jacobsson, J. A., Feldman, I., Schiöth, H. B., & Benedict, C. (2015). Associations of self-reported sleep disturbance and duration with academic failure in community-dwelling Swedish adolescents: Sleep and academic performance at school. *Sleep medicine, 16*(1), 87-93.

Touitou. (2013). Adolescent sleep misalignment: A chronic jet lag and a matter of public health. *Journal of Physiology, 107*, 323-326.

Twitter. (2011). #numbers.   Retrieved from https://blog.twitter.com/2011/numbers

Valkenburg , P., & Schouten, A. (2006). Friend Networking Sites and Their Relationship to Adolescents' Well-Being and Social Self-Esteem. *Cyberpsychology and behaviour, 9*(5).

Van Den Berg, J. F., Van Rooij, F. J. A., Vos, H., Tulen, J. H. M., Hofman, A., Miedema, H. M. E., . . . Tiemeier, H. (2008). Disagreement between subjective and actigraphic measures of sleep duration in a population-based study of elderly persons*. *Journal of Sleep Research, 17*(3), 295-302. Retrieved from http://dx.doi.org/10.1111/j.1365-2869.2008.00638.x

Van den Bulck, J. (2007). Adolescent use of mobile phones for calling and for sending text messages after lights out: results from a prospective cohort study with a one-year follow-up. *Sleep, 30*(9), 1220.

Vaughan, G., & Hogg, M. (2008). *Social Psychology* (5th Edition ed.). Harlow, Essex: Pearson Education limited.

Vaughn, S., Schumm, J., & Sinagub, J. (1996). *Focus Group Interviews in Education and Psychology*. California: Sage Publishing.

Vernon, L., Barber, B. L., & Modecki, K. L. (2015). Adolescent Problematic Social Networking and School Experiences: The Mediating Effects of Sleep Disruptions and Sleep Quality. *Cyberpsychology, Behavior And Social Networking, 18*(7), 386-392. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=cmedm&AN=2616783 7&site=ehost-live

Vygotsky, L. (1978). *Readings on the development of children* (Vol. 2nd edition). New York: WH Freeman and company.

Vygotsky, L. (1987). *The Collected Works of L.S. Vygotsky* (Vol. 1).

Waugh, P. (2017). Children's commissioner calls for new digital watchdog to curb bullying on instagram. *Huffpost.*

Willig, C. (2008). *Introducing Qualitative Research in Psychology* (Second ed.). Berkshire: Open University press.

Wolfson, A. R., & Carskadon, M. A. (1998). Sleep Schedules and Daytime Functioning in Adolescents. *Child Development, 69*(4), 875-887.

Wolfson, A. R., & Carskadon, M. A. (2003). Understanding adolescents' sleep patterns and school performance: a critical appraisal. *Sleep Medicine Reviews, 7*(6), 491-506. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=cmedm&AN=1501809 2&site=ehost-live

Wood, E., Zivcakova, L., Gentile, P., Archer, K., De Pasquale, D., & Nosko, A. (2012). Examining the impact of off-task multi-tasking with technology on real-time classroom learning. *Computers & Education, 58*(1), 365-374. Retrieved from http://www.sciencedirect.com/science/article/pii/S0360131511002077

World Health Organisation. (2015). Adolescent Health.

York, Gibson, & Rankin. (2015). Defining and measuring academic success. *Practical assessment, research and evaluation, 20*(5). Retrieved from http://pareonline.net/getvn.asp?v=20&n=5

Zimmerman, F. J. (2008). Children's Media Use and Sleep Problems: Issues and Unanswered Questions. *The Henry J. Kaiser Family Foundation.* Retrieved from http://files.eric.ed.gov/fulltext/ED527857.pdf

Zimmerman, F. J., & Henry, J. K. F. F. (2008). *Children's Media Use and Sleep Problems: Issues and Unanswered Questions. Research Brief.* Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED527857&site=ehost-live

Appendix

Appendix 1: Student Consent form (Questionnaires)

Purpose of the study:

My name is Faye and I am a student at Newcastle University looking to explore your views around how social media use can impact on your sleep and school work.

Procedure:

If you are involved in this project you will be asked to:
- Fill in a short questionnaire about how social media impacts on your sleep and school work.

Benefits:

- You will have the opportunity to have a voice around how using social media impacts on your sleep and school work.

Voluntary nature of the study and confidentiality

Would like to take part? If the answer is yes, please complete this form and return it to your school. You have the choice to stop being involved at any point. Please contact me on the email address below within a week of completing the questionnaire, if you would like to leave the study.
If you have any questions about the research please send me an email to
f.poole@newcastle.ac.uk

All data within this research will be anonymous. You will be given a participant number. All information gathered will be stored in a secure place, and will only be accessible to me and my supervisors.
My contact details are: f.poole@newcastle.ac.uk .
My University Tutor's contact details are: david.lumsdon@newcastle.ac.uk

Statement of consent: I have read the information above and would like to take part in this study

Name of student …………………………………………….. Date …………………

Signature of student …………………………………………………………………….

Thank you for your interest in this study.

Appendix 2: Parent opt out consent (questionnaires)

Parent / Guardian information

Purpose of the study:

My name is Faye and I am a student at Newcastle University looking to explore teenage views around how social media use can impact on their sleep and school work.

Procedure:

This study will involve your child completing a short questionnaire about how social media use impacts upon their sleep and academic success.

Benefits:

Your child will have the chance to have a say about how social media use can impact on their sleep and school work.

Voluntary nature of the study and confidentiality

Your child's participation in this study in purely voluntary. In school they will be asked to complete a consent form before completing the questionnaire to confirm they are happy to take part. If they do not wish to take part, this decision will be respected. They will be allowed to stop competing the questionnaire at any point if they wish to do so.

If you are happy for your child to participate in this study you do not need to do anything. If however, you would not like your child to participate, within a week of receiving this letter, please contact me by the email address below or complete the reply slip at the bottom of this page and return it to your child's form tutor.

Your child will not be able to be identified in the study as everything will be anonymous. All information gathered will be stored in a secure place, and will only be accessible to me and my supervisors.

If you have any questions about the research please do not hesitate to contact me on: f.poole@newcastle.ac.uk

If you have any additional questions my University Tutor's contact details are: david.lumsdon@newcastle.ac.uk

Statement of opt out: I have read the above information. I would not like my child to participate in the study exploring teenage views around how social media use can impact on their sleep and school work.

Name of child …………………………………………………………….

Name of Parent or Guardian ………………………………………………. Date …………………

Signature of Parent or Guardian …………………………………………………………………

<u>Questionnaire</u> (Please note, the questionnaire was presented in a slightly different format on survey monkey).

| Your year group: |
| Your gender: |

<u>Questionnaire</u>

Instructions: Please complete all answers as honestly and as accurately as you can.

<u>Questions about your sleep</u>

| On a week night how many hours sleep do you get on average?

……………. Hours | On a weekend how many hours sleep do you get a night on average?

……………. Hours | Do you wake up during the night or sleep through until morning? If you wake up, what usually causes this?

…………………………. | When you wake up in the morning on the average day you usually feel (please circle 1)

a) Full of energy
b) Ready to learn
c) A little bit tired
d) Very tired |

<u>Questions about your social media use</u>

| On average, how many hours do you spend using social media each day (e.g. using facebook, Instagram, X-box live, snap chat etc)?

……………. Hours | What different types of social media do you use? (please tick)

☐ Facebook ☐ You tube

☐ Instagram ☐ Twitter

☐ Snap chat ☐ Vine

☐ WhatsApp ☐ Pin interest

☐ X-box live ☐ Tumblr

Other (please state)…………………………………… | What do you mostly use social media for? (please tick)

☐ Speaking to friends ☐ Posting photos

☐ Watching videos ☐ Playing games

☐ reading the news ☐ Celebrity gossip

Other (please state)…………………………………… |

<u>Further questions</u>

1) Do you think using social media in the evening and at night affects the amount of sleep you get? **Yes/ No** (Please circle).   If you answered yes, please explain why.
   ....
   ....

2) Do you think using social media in the evening and at night affects how tired you feel the next morning? **Yes/ No** (Please circle). If you answered yes, please explain why.

....

....

3) Do you think using social media in the evening and at night affects how ready you are to learn in school the next day? (E.g. concentrate in class) **Yes/ No** (Please circle). If you answered yes, please explain why.

....

....

4) Do you feel your social media use in the evening and at night affects how well you perform on school tests? **Yes/ No** (Please circle)   If you answered yes, please explain how.

....

....

5) Do you think social media use affects your ability / motivation to complete homework? **Yes/ No** (Please circle) If you answered yes, please explain your answer.

....

....

6) Do you think using social media affects your friendships? **Yes/ No** (Please circle) Please explain what you think about this.

....

....

7) Do you think there are any good reasons for using social media? **Yes/ No** (Please circle)   Please explain what you think they are.

....

....

8) Do you think there are any problems linked to using social media? **Yes/ No** (Please circle)   Please explain what you think they are

....

....

Thank you for completing this questionnaire

Focus group student consent form

Purpose of the study:

My name is Faye and I am a student at Newcastle University looking to explore your views around how social media use can impact on your sleep and school work.

Procedure:

If you are involved in this project you will be asked to:

- Join a focus group to talk about the use of social media, sleep and its impact on school work. This will involve you answering questions in a group of around 4-6 young people where you will be asked to share your views.

Benefits:

- You will have the opportunity to have a voice around how using social media impacts on your sleep and school work.

Voluntary nature of the study and confidentiality

Would like to take part? If the answer is yes, please complete this form. You have the choice to stop being involved at any point. If during the focus group you would like to leave or would no longer like to continue sharing your views please let me know.
If you have any questions about the research please send me an email to
f.poole@newcastle.ac.uk

All data within this research will be anonymous. Your names will not be recorded. All information gathered will be stored in a secure place, and will only be accessible to me and my supervisors.
My contact details are: f.poole@newcastle.ac.uk .
My University Tutor's contact details are: david.lumsdon@newcastle.ac.uk

Statement of consent: I have read the information above and would like to take part in this study

Name of student …………………………………………….. Date …………………

Signature of student …………………………………………………………………….

Thank you for your interest in this study. Please also make sure your parent/ guardian signs their consent form to confirm you can take part in this study.

Appendix 5: Parental consent form (focus groups)

Focus group Parent / Guardian Consent form

Purpose of the study:

My name is Faye and I am a student at Newcastle University looking to explore teenage views around how social media use can impact on their sleep and school work.

Procedure:

If your child is involved in this project they will be asked to:
- Join a focus group to talk about their use of social media, sleep and its impact on school work. This will involve sharing their views within a small group of around 8-10 young people.

Benefits:

Your child will have the chance to have a say about how social media use can impact on their sleep and school work.

Voluntary nature of the study and confidentiality

Would you and your child like to take part? If so please complete this form and return it to their school. They have the choice to stop being involved at any point during the focus group. If you have any questions about the research please send me an email to f.poole@newcastle.ac.uk

Your child will not be able to be identified in the study as everything will be anonymous. All information gathered will be stored in a secure place, and will only be accessible to me and my supervisors.

If you have any further questions, my University Tutor's contact details are: david.lumsdon@newcastle.ac.uk

Statement of consent: I have read the above information. I consent for my child to participate in this study

Name of child …………………………………………………………….

Name of Parent or Guardian …………………………………………. Date …………………

Signature of Parent or Guardian
…………………………………………………………………………….

Please hand this form into your child's school alongside their student consent form.

Thank you in advance for agreeing for your child to take part.

Are you interested in sharing your views?

You have the opportunity to take part in Psychological research where you will be asked to share your views about how social media use impacts on wider areas of your life.

It will involve taking part in a small group discussion lasting around 1 hour on the 30th November.

Years 8 and 9 will take place between 12-1pm.

Years 10-11 will take place between – 1-2pm.

If you are interested or would like any further information please speak to Mr XXXXX.

Appendix 7: Focus group questions

1) What does the term social media mean to you?

2) On average how often do you use social media? – write on post it notes.

3) How does your social media use impact on your school work at:
   - School
   - Home

4) To what extent does social media use impact on your sleep? i.e:
   - How tired you feel during the day
   - Your motivation
   - Are other factors equally or more important in influencing the amount of sleep you get?

5) Would you say social media use if important to you?
   -Do you ever worry you spend too much time using it?
   - Do the benefits outweigh the problems associated with it?
   - If social media was taken away from you for a week, would this be a problem?

6) Do you use any strategies to help you to monitor or reduce your social media use?

7) Could more support be available to help you to deal with problems you come across when using social media?

- What would this support look like?

- Who would be the best person to provide this support?

8) Has taking part in this focus group/ completing the online questionnaire made you think a little more about how your social media use can impact on wider areas of your life like school work and sleep?

Appendix 8: Questionnaire Thematic map

Emotional effects

Causes distractions

Communication/ relationships

Making friends
Improves friendships
Getting to know others

Keeping in touch
Friends & Family

Make more friends/ meet people online

Bullying/ arguing/ losing friends

More confidence

Rather use SM

Less sleep/ tiredness

Worry about being talked about

Jealousy

Revision
-distraction
- replaces revision time

Busy on SM
Motivation
Don't want to come off
Not noticing the time

Reduced focus/ concentration

Thinking about SM

Wider networks/ common interests

Share things:
- Feelings
- Posts
- Memes
- Updates
- Photos

Connecting in new ways

Social media: Questionnaire thematic map

Other

Shared without consent

Can't/ harder to sleep:
-Light emitted
-Brain occupied

Not leaving the house

Further downfalls

Safety/ privacy

Further benefits

Valuable resource
-revision
-homework
-learn about new things
-speak to experts

Entertainment
-Enjoyment and interest
- something to do
-reading the news

Depends how long on SM

Tired anyway

Doesn't effect me

See things you don't want to see

Losing friends if don't have it

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Appendix 9: Focus group Thematic map

Supportive networks:

Stuck on homework

Easy to assess e.g. on phone

Hear about others problems

Social media groups

Sharing things

- Pictures
- Posting online
- Looking back at memories

Communication and relationships

Staying in touch:

-Friends & Relatives

- People who live far away

- Group chats

Personal life is on there

Lost without it – wouldn't be able to rest

More confident on SM V's face to face.

Helps to relax - therapeutic

Anxiety/ worries:

Anxious to check it

Worried about tags

Anxious not checking for an hour

Anxious something might happen to family – responsible

Being left out

What others are saying

Arguments – impact on concentration

Worries about others

-Losing childhood

- Kids don't want to play out

- worrying young children can use SM.

- What will the next generation be like?

- disconnected to people/ antisocial

Home work:

Procrastination

Prefer SM/ busy using SM

Don't want to come off SM

In class:

-Phone buzzing/ vibrating in class

- Approx. 50-70% use phone in class

- Depends on engagement of lesson

Emotional factors

Distractions

Time:

Time can go really quickly

Lose track of time

Once you go on one, you go on another

Busy catching up on SM when I get home

Sleep:

Keeps me awake

Look at it before bed

Go to bed late/ tired next day

Never just a quick check

Addictive – don't want to go to sleep

Normalisation:

-it is normal to be using SM on your phone. Its society now.

Additional benefits

Entertainment:

Something to do when bored

Playing games

Better than homework

Finding out information

Updates on what others are doing/ gossip

Stuck on homework

Learn about new topics

Keeping up to date

Ways to earn money

Focus group thematic map

Taking ownership/empowerment

Security precautions e.g. block/delete/come off SM/private profile

Common sense approach

Putting phone in another place

Giving phone to parent

Putting phone on silent/ aeroplane mode/ switch off

Time limits

Changing passwords

Blocking websites/restricting internet access

Playing music as a distraction

Managing SM use

Drawing on wider support:

Support from SM providers

Support from school staff

Knowing who to do go if there is a problem.

Not regulating behaviour

Don't use strategies

Some post online at 3am.

Intend to use strategies but I ignore them.

Biology:

-Blue light

Keeps you awake

Wakes me up:

Notification in the morning

Notifications during the night

Depends who it is/ how tired I am whether I look.

Additional downsides

Arguments:

Probably wouldn't happen face to face

People hide behind their phones

Hard to interpret what people have said e.g. sarcasm.

Dangerous

-Others finding things out about you.

Posting location .public profiles

Fake profiles/ catfish

Can post anonymously