Message

From: Pell, Dylan, DOH [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=83B904064FED43EEB1DE8187B65CB02E-DYLAN.PELL]
Sent: 12/13/2022 8:58:10 PM
To: Potrzebowski, Alina, DOH [alina.potrzebowski@doh.nm.gov]; Miller, Clarie, DOH [clarie.miller@doh.nm.gov]
CC: Green, Dan, DOH [dan.green@doh.nm.gov]; Courtney Fitzgerald (cafitzgerald@salud.unm.edu) [CAFitzgerald@salud.unm.edu]
Subject: AWSM social media/youth mental health survey draft documents

Hi Clarie and Alina,

We're about to meet and you won't have time to look at this, but I wanted to share some documents (very much still in draft mode/constantly changing) of the social media/mental health survey project. I think it would be really helpful to get your feedback on our survey questionnaire about the quality of the questions and if we're capturing things that we need to capture. I'm attaching two documents:

- A proposal submitted by the UNM Prevention Research Center for a small amount of funding to do pilot study/finalize a questionnaire on this topic
- The current/ever changing draft of the survey questionnaire.

I'm cc'ing Dan and Courtney Fitzgerald, a senior research scientist, with UNM who has done an incredible amount of work on this project (and is also a wonderful person!) who I'm sure are also interested in your feedback.

Talk to you in a minute,

Dylan Pell
Mental Health Epidemiologist

New Mexico Department of Health
Epidemiology and Response Division
1190 St. Francis Dr. N1320
Santa Fe, NM 87502-6110
Office: (505) 476-1440
Fax:(505) 827-2110
Email: dylan.pell@doh.nm.gov
www.nmhealth.org

I. SPECIFIC AIMS

Behavioral health concerns among New Mexico youth have increased significantly over the past decade. The percent of New Mexico high school students who felt persistent sadness or hopelessness increased by 52.0% from 29.1% of students in 2011 to 44.2% of students in 2021. Simultaneously, the rate of suicide deaths among New Mexico adolescents (ages 12-17) increased 34.2% from 2011 to 2020 (New Mexico Department of Health, 2020). In 2020, New Mexico had the second highest rate of suicide among youth (ages 5-17) among all U.S. states (Centers for Disease Control and Prevention, 2020).

Some researchers have suggested that the substantial increases in behavioral health concerns among young people may be associated with the increasing role of social media in adolescents' lives (Haidt, 2021). Local data support an association: the percent of New Mexico high school students who used a computer or played computer games three or more hours per day more than doubled from 2009 (21.0%) to 2019 (43.1%) (New Mexico Department of Health, 2020). No other data on social media use among New Mexico youth are currently available. Nationwide data from 2021 reveal that youth (ages 13-18) spent an average of 8.39 hours per day with entertainment screen time (Common Sense Media, 2022).

Despite increases in behavioral health concerns and concurrent increased social media consumption among youth, there is lack of actionable information about the ways in which social media engagement may harm or benefit young people, and very little is known about its impact on New Mexico youth, specifically. Risks and benefits of social media use for young people is an emerging area of study where substantial gains can be made in understanding how this important aspect of adolescent life relates to health. There is also an opportunity to promote knowledge about how to protect young people from associated harms as well as leverage potential benefits for adolescent health (Naslund, 2020).

We propose to conduct a school-based, anonymous survey about adolescents' social media use and mental health outcomes. Data form this pilot study will inform a larger, statewide survey on this topic. The objectives of this pilot research are to provide expeditious **preliminary evidence** on this important health policy issue, **inform the full-state study** sample size and item choice and **demonstrate the feasibility** of a full-state study.

The scientific premise of this proposal is that social media use has complex associations with adolescent health and behavior that must be understood in order to develop programs and policies that will protect young people and improve adolescent health. The overarching goal of the proposed project is to use data we collect on social media use and behavioral health among New Mexico high school students to generate information and recommendations that will help government, schools, community organizations, families, and students promote adolescent health. **This research has five specific aims:**

Aim 1: Determine which social media New Mexico public high school students use, the frequency and duration of use, reasons for use, and how they use it.

Aim 2: Determine relationships/associations of social media use with mental health concerns, suicidal thoughts, suicide attempts, and self-harm.

Aim 3: Determine the extent to which parental oversight of adolescent social media use, youth experiences of bullying and/or exploitation online, and young people's media literacy moderate relationships between media exposures and mental health outcomes.

Aim 4: Identify variations in the relationship between social media use and mental health outcomes by demographic characteristics, such as race, sex, disability status, age, and among sexual and gender minorities

Aim 5: Identify perceived benefits of social media including learning and social connection.

A team at the UNM Prevention Research Center (PRC) proposes a project that directly addresses a gap in knowledge regarding adolescent social media use and exposures and their effect on adolescent mental health in New Mexico. This project is significant as it fills a need for clearer understanding of this complex relationship between social media use and mental health. The proposal is innovative as it creates a unique, novel dataset with preliminary data about New Mexico adolescents. Results are expected to have an important positive impact by contributing to understanding about associations between social media use and mental health outcomes among young people, and can inform education programs, campaigns, and policy. Notably, inquiries from the New Mexico Public Education Department (NMPED) and New Mexico Department of Health (NMDOH) seeking information to inform adolescent health programs and policy applications precipitated the development of this proposal.

II. BACKGROUND AND SIGNIFICANCE

Mental health problems among adolescents have been declared an epidemic in America (Shim, Szilagyi, & Perrin, 2022). The American Academy of Pediatrics, American Academy of Child and Adolescent Psychiatry, and the Children's Hospital Association declared a state of emergency in 2020 (American Academy of Pediatrics, 2020). According to a CDC report of aggregated surveillance systems, including the National Health Interview Survey, National Survey of Children's Health, and Youth Risk Behavior Survey, the nationwide prevalence of persistent sad and hopeless feelings among high school students in 2019 was 36.7%, with Major Depression among children ages 12-17 following close behind at 20.9%. In addition, recent years have seen similarly alarming rates of current anxiety (11.4%) and suicide ideation (18.8%) among 12-17-year-olds (Bitsko et al., 2022). In New Mexico, 19% of New Mexicans aged 12-17 had a major depressive episode in 2018/19; 40% in the same age group had persistent feelings of sadness of hopelessness. Twenge et al. (2019) found that rates of major depressive episodes increased 52% between 2005 and 2017 among 12-17-year-olds nationally. Notably, rates of mental health problems are unequally distributed along demographic lines, particularly gender. Among 14-18-year-olds, girls have roughly twice the prevalence of suicide ideation compared to boys (24.1% vs 13.3%). Disparities in suicide ideation and attempts also exist in New Mexico, with 80% more girls experiencing persistent feelings of sadness and hopelessness (New Mexico Office of Policy and Accountability, 2022).

Commented [CAF1]: Jeremy - need citation for this in text and added to the end. APA format.

Many theories have emerged to explain these increases and disparities in adolescent mental health concerns, including some that posit an association between social media use and mental health problems. A 2018 paper by Kelly et al. found a positive association between time spent using social media and a number of factors associated with depression in adolescents, including self-esteem issues, poor sleep, and online harassment. Further, a large cohort study utilizing data out of the United Kingdom and United States found heavy users of social media (5+ hours per day) to be twice as likely to have attempted suicide, while light users (less than 1 hour per day) had higher scores of wellbeing on the Warwick-Edinburgh Mental Wellbeing Scale (Twenge & Campbell, 2019). Additionally, anxiety has been found to be positively associated with the number of social media platforms a person utilizes. Primack et al. (2017) found that people who utilized 7-11 platforms were three times more likely to report symptoms of anxiety than those who only utilized fewer than 3 platforms.

Despite the well-established associations between increased social media use and increased prevalence of anxiety and depressive symptoms, there is no consensus about whether or how social media use affects adolescent mental health. Some scholars, such as Andrew Przybylski and colleagues (2017, 2020), posit that the relationship between social media and mental health problems follows a curvilinear path, rather than a linear one. Przybylski proposes a "goldilocks" zone, in which mental health improves with social media use to a certain point, then becomes worse after that point. Additional evidence to support this hypothesis is

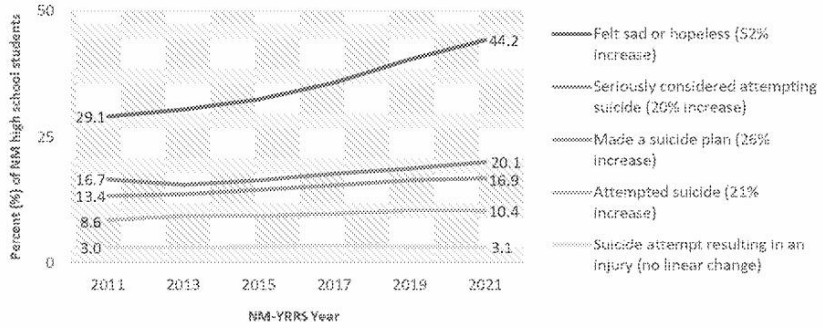
reported in Przybylski & Weinstein (2017) and Przybylski et al. (2020). Jonathan Haidt has assembled an extensive, open-source list of studies on the relationship between social media use and youth mental health, and Haidt's list is extensive in terms of both supporting and rejecting the relationship (Haidt & Twenge, ongoing). There is an urgent need to collect data that will help explain these associations and explicate the underlying mechanisms driving these associations.

III. PRELIMINARY DATA

Through its long-term partnership with the New Mexico Department of Health (NMDOH) and New Mexico Public Education Department (NMPED), the UNM PRC research team has access to preliminary 2021 New Mexico Youth Risk and Resiliency Survey (NM-YRRS) data, as well as historical data from 2001 through 2019. Part of the CDC's Youth Risk Behavior Surveillance System, the NM-YRRS has been conducted in New Mexico for over 20 years. The PRC team conducted preliminary analyses to obtain prevalence data on outcomes of interest. With the exception of a single question from NM-YRRS about time spent playing video games and using social media asked from 2009 to 2019, the PRC team has been unable to find preliminary data about social media use among New Mexico youth, specifically. Therefore, this proposal presents national data from Pew Research Center and Common-Sense Media.

a. *Prevalence of Outcomes of Interest*
The prevalence of mental health outcomes of interest – including past-year sadness and hopelessness lasting 2+ weeks, serious consideration of suicide, making a suicide plan, and attempting suicide – have increased over the past decade among New Mexico high school students (see Figure 1). Mental health concerns among New Mexico high school students are disproportionately higher among certain subpopulations, especially girls. In 2021, New Mexico high school girls were nearly three times as likely as boys to experience sadness and hopelessness, twice as likely to seriously consider attempting suicide, and twice as likely to attempt suicide (NM-YRRS, 2021, unpublished data).

Figure 1. Mental health indicators, New Mexico Youth Risk and Resiliency Survey, Grades 9-12, 2011-2021



b. *Prevalence of Exposures (Social media use)*
Use of screen-based entertainment by youth has grown substantially both nationally and in New Mexico. The percent of New Mexico high school students who played video or computer games or used a computer for three or more hours per day more than doubled from 2009 (21.0%) to 2019 (43.1%) (Source: NM-YRRS, 2019). In 2021, the average entertainment screen use for U.S. teens aged 13 to 18 was 8.39 hours per day (Rideout,

Peebles, Mann & Robb, 2022). In 2022, almost all (97.0%) of U.S. teens (ages 13 to 17) report using internet daily and almost half of those these teens report they use the internet almost constantly (Pew Research, 2022). In 2021, two thirds (67.0%) of U.S. teens (ages 13 to 18) used social media on the day prior to survey administration with an average use of 1.27 hours on that day (Source: Common Sense Media, 2022). Popular social media sites among U.S. teens (ages 12 to 17) included Instagram (57%), Snapchat (49%), and Facebook (30%) (Source: Common Sense Media, 2022). In 2022, about one in five U.S. teens (ages 13 to 17) (19%) reported they watch YouTube "Almost Constantly" (Vogels, Gelles-Watnick & Massarat, 2022). National estimates from both Pew Research and Common Sense Media indicate Black and Hispanic youth spend more time on internet media including Youtube, TikTok, and Instagram than White peers (Rideout et al., 2022; Vogels et al., 2022).

c. *Prevalence of Covariates*

Representative data on young people's experiences while using social media are not readily available, however, recent investigative journalism has identified several specific risks youth now face online. A New York Times investigation linked 45 suicide deaths to a specific website where youth and adults could meet to discuss strategies to attempt suicide and encourage others to follow through with suicide attempts. In addition to the 45 confirmed deaths, the New York Times found over 500 "good bye" threads (more than two per week) of individuals planning how and when the individuals would end their lives (Twohey & Dance, 2021). Twitch.com, a social media website where people can watch live video streams, has allowed online casino gambling streams for audiences of all ages including online casinos operated from nations without consumer protection laws and that rely on cryptocurrency to operate on the platform since 2018. The platform announced in September, 2022, that gambling streams on the platform would be limited to casinos hosted in nations with sufficient consumer protections and for sports betting only as of October, 2022. Twitch has an estimated 31 million visitors a day, 75% of whom are between the ages of 16 and 34. (Grayson, 2022).

IV. RESEARCH DESIGN

a. *Research Objectives*

The objectives of this pilot research are to

1) provide expeditious **preliminary evidence** on this important health policy issue,
2) **inform the full-state study** sample size and item choice and
3) **demonstrate the feasibility** of the full-state study to that study's funders.

b. *Design and Methods*

Research Design: The proposed study will use a cross-sectional survey design to evaluate associations between mental health outcomes and social media use among New Mexico adolescents. We aim to conduct a self-administered, anonymous electronic survey in up to two schools during regular classroom time to gather preliminary data that will inform the larger study. This pilot study will include between 150 to 200 students attending public high schools in New Mexico.

Outcome Measures – Behavioral Health: This study uses mental health questions derived from the New Mexico Youth Risk and Resiliency Survey (NM-YRRS), the Patient Health Questionnaire (PHQ-2), and Generalized Anxiety Disorder (GAD-2) questionnaires, body image and eating behaviors items from NM-YRRS and Body Image States Scale (BISS-6), and drug and alcohol use questions from NM-YRRS. The NM-YRRS questions have been used for nearly two decades, and the PHQ-2 and GAD-2 have been widely used for many

years and have well-established reliability and validity in a number of settings (Löwe, Kroenke, & Gräfe, 2005; Plummer, Manea, Trepel & McMillan, 2016).

Independent Variable Measures – Social Media Use: Questions include items from the 2022 Pew Internet Media Questionnaire about frequency of social media use and which platforms students use. We will also use questions from the Bergen social Media Addiction Scale (BMAS), which includes questions about problematic social media use. The BMAS has also been used in different settings, and has well-established psychometric properties (Andreassen, Billieux, Griffiths, et al., 2016).

Covariates – Covariates under consideration include demographic characteristics and factors that may moderate the association between media use and mental health. Measures include demographic questions (e.g., age, grade in school, gender, etc.) from NM-YRRS, a media use motivations scale (Hou, Zhu, Tong, et al., 2020), Parent Oversight/Monitoring items from the Pew Research Center (Anderson, 2016), the Distress Tolerance Scale (DTS-short form), Maynard Media Literacy questionnaire, and the Brief Resilience Scale (Smith, Dalen, Wiggins, et al., 2008).

Questionnaire finalization – We will convene an advisory group of at least three nationally recognized subject experts (such as researchers from the Pew Research Center) and key stakeholders knowledgeable about New Mexico populations and our state-specific context (such as representatives from the Albuquerque Area Southwest Tribal Epidemiology Center, NMDOH, and NMPED) to review and finalize survey questionnaire items. These individuals will also provide feedback when we review findings and make recommendations.

c. *Statistical Analysis*

The statistical analysis will generate initial findings regarding the primary research questions and will also inform the design and implementation of the full study. Initial analysis will be performed to generate summary statistics for dependent and independent variables, covariates including demographics, and the prevalence of dependent and independent variables by covariates. We will conduct quality assurance on these data, which will indicate their suitability for further analysis as well as whether the items could be considered for the full study. This will also demonstrate the feasibility of the survey to the full-state study funders.

To evaluate associations between health outcomes and social media use, we will conduct multiple regression analysis, which will control for students' individual characteristics that could confound the relationship between social media use and outcomes. The effect sizes estimated from this analysis can be used along with the variability of variables to conduct power analysis for the full study. This power analysis will indicate the sample size required to conduct the full-state study, including the sample sizes required to conduct subgroup analysis for different groups of policy interest, such as rural students, Native students, and girls. It will also demonstrate whether there is sufficient variability in measures included to warrant their inclusion in the full-study survey.

d. *Interpretation of Results*

The PRC research team will consult with collaborators at NMDOH, NMPED and the advisory group to interpret the findings. The resulting products will be clear summaries of conclusions regarding preliminary evidence, implications for the full-state study design, and feasibility of the survey and analysis. We will disseminate the results to key collaborators and community members and will use the results to develop the full-state study.

V. TIME TABLE

Kelly will add

VI. STRATEGY FOR FUTURE FUNDING

We were invited to submit a proposal to NMPED as part of a competitive grant process to undertake the full-state study, and we expect a decision on that proposal before the end of 2022. If NMPED funds that proposal, we need to field the survey in the spring of 2023 before school gets out. The feasibility of the full-state study depends on the execution of the pilot study proposed here for two reasons. First, we will not have time to conduct the preliminary studies needed for the full-state study between the time the study is funded and the end of the school year—we need to be ready to field the survey when the project is awarded. Second, it will raise the likelihood that NMPED funds the full-state study if the pilot study has been undertaken. This is because they will have more confidence that the full-state study is low risk: we will have demonstrated that the design is feasible and that we have adequate sample sizes and survey items with enough variability for statistical identification.

If NMPED does not fund the full-state study, we have identified other organizations to which we will submit the full-state study. These include the W.K. Kellogg Foundation (which has recently funded other UNM PRC projects), the Robert Wood Johnson Foundation, and the Pew Charitable Trusts. Members of the PRC research team have successfully obtained funding from these organizations in the past. These are extremely competitive grant applications, and the pilot study will significantly increase the likelihood that we get funded by these organizations.

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AWSM Questionnaire (draft – to be entered in REDCap)

Commented [1]: General Suggestions/Comments:

Dylan has suggested we keep an eye on dropoff rates/issues due to the survey's length. In total, students will be responding to 117 different items (including questions which ask about multiple things, such as Q13).

Commented [2]: _Marked as resolved_

Commented [3]: _Re-opened_

Thank you for participating in the Adolescent Wellness and Social Media (AWSM) Survey! This survey asks questions about you, your social media use, and your mental health. For example, we will ask you how often you use social media and which sites you use most often. We will also ask you about how often your mental health has been not good. The information you give will be used to understand young people's media use and mental health in New Mexico.

This is an anonymous survey. If you choose to participate, your answers will be private – no one will know how you answered the questions. The questions that ask about your background will be used only to describe the types of students completing the survey. The information will not be used to find out your name. No names will ever be known to anyone connected with this survey.

Completing this survey is voluntary. There is no penalty if you choose not to participate. Your parents should have received a letter to let them know about this survey, and giving them an opportunity to opt out.

If you choose to participate, please answer the questions based on what you really do, not what you think you are supposed to do. You can skip any questions you do not understand or you do not want to answer.

The survey takes about 30 minutes to complete.

If you agree to participate, click "Continue."

DEMOGRAPHIC QUESTIONS

(Derived from NM-YRRRS)

1. How old are you?
    a. 10 years old or younger
    b. 11 years old
    c. 12 years old
    d. 13 years old
    e. 14 years old
    f. 15 years old
    g. 16 years old
    h. 17 years old
    i. 18 years old or older
2. What is your gender?
    a. Female
    b. Male
    c. Non-binary
    d. Some other gender: _____
3. In what grade are you?
    a. 6th grade
    b. 7th grade
    c. 8th grade
    d. 9th grade
    e. 10th grade

f. 11th grade

g. 12th grade

h. Ungraded or other grade

4. Which of the following groups best describes you? (choose all that apply)

a. American Indian or Alaska Native

b. Asian

c. Black or African American

d. Hispanic or Latino

e. Native Hawaiian or other Pacific Islander

f. White

g. Other race: _____

4-1. [BRANCHING LOGIC if 4=Yes] What group do you feel best describes your Hispanic or Latino ethnicity, heritage, or culture? [select all that apply]

a. Spanish or Spanish heritage

b. Mexican or Mexican heritage

c. Central American (for example, Honduran, Guatemalan, Salvadoran, Nicaraguan, Panamanian, or Costa Rican)

d. South American (for example, Venezuelan, Chilean, Colombian, or Brazilian)

e. Puerto Rican

f. Cuban

g. Other Hispanic or Latino: _____

5. What is the highest level of schooling your mother completed?

a. Completed 8th grade or less

b. Some high school

c. Completed high school

d. Some college

e. Completed college

f. Graduate or professional school

g. Not sure

6. What is the highest level of schooling your father completed?

a. Completed 8th grade or less

b. Some high school

c. Completed high school

d. Some college

e. Completed college

f. Graduate or professional school

g. Not sure

7. Which of the following best describes you?

a. Heterosexual (straight)

b. Gay or lesbian

c. Bisexual

d. I describe my sexual identity some other way

e. I am not sure about my sexual identity (questioning)

f. I do not know what this question is asking

8. Do you have any **physical disabilities or long-term health problems?** Count things such as being deaf, hard-of-hearing; blind, or visually impaired; difficulty walking or climbing stairs; or difficulty dressing or bathing. (Long-term means 6 months or longer)

a. Yes

b. No

c. I don't know

9. Do you have any **learning or developmental disabilities?** Count things such as ADHD, dyslexia, or autism spectrum disorder.

a. Yes

b. No

c. I don't know

SOCIAL MEDIA USE QUESTIONS

(Derived from: 2022 Pew Internet Media Questionnaire; Common Sense Media Census)

Commented [4]: Dylan's Assessment: Q10-Q18 and Q25 have some overlapping measures (streaming and playing video games). My opinion is that we may not need both of these however, for a pilot test I can see value in including both to see how students answer them and which is more useful for our purposes to select questions for a larger sample?

10. At home, do you have access to… [Answer choices: **1** Yes, I do; **0** No, I do not]

a. A smartphone

b. A desktop or laptop computer

c. A tablet

d. A gaming console

e. High-speed wireless internet (WiFi)

11. 9-1. [BRANCHING LOGIC if 8=a] Do you have a wireless data plan?

a. Yes, with *limited* data

b. Yes, with *unlimited* data

c. No

d. I don't know

12. How often do you use the Internet, either on a computer, tablet, or cellphone?

Commented [5]: Dylan expressed a desire to bring the answer choices for Questions 12-24, 27-39, and Q40 more in line with each other. Answer choices are very similar, so we could go either way and probably still have parity.

a. Never

b. Rarely

c. Sometimes

d. Often

e. Frequently

f. Almost constantly

13. How often do you use each of the following apps or sites [0 Never; 1 Rarely; 2 Sometimes; 3 Often; 4 Frequently; 5 Almost constantly]

a. Instagram

b. Facebook

c. Snapchat

d. Twitter

e. YouTube

f. TikTok

g. Twitch

h. Tumblr

i. Reddit

j. WhatsApp

k. Discord

l. Some other app or site: _____

11-1. [PIPING – Which app do you use the most often? *select one]

11-2. [PIPING – Which app do you use the 2nd most often? *select one]

14. How often do you **create content** for online apps? (Count things like videos, blog posts, stories, or other content – NOT FOR SCHOOL)

a. Never

b. Rarely

c. Sometimes

d. Often

e. Frequently

f. Almost constantly

15. How often do you **share other people's content** using online apps?

a. Never

b. Rarely

c. Sometimes

d. Often

e. Frequently

f. Almost constantly

16. How often do you use video streaming sites or services? (Count services like Hulu, Netflix, Disney+, Vudu, Amazon Prime)

a. Never

b. Rarely

c. Sometimes

d. Often

e. Frequently

f. Almost constantly

17. How often do you play online video games on a console, computer, or mobile device?

a. Never

b. Rarely

c. Sometimes

d. Often

e. Frequently

f. Almost constantly

18. How often do you play video games on a mobile device like a smartphone or tablet?

a. Never

b. Rarely

c. Sometimes

d. Often

e. Frequently

f. Almost constantly

***Jeremy will look into what questions are important in this survey and its context.

Social Media Addiction Scale - Derived from the Bergen Social Media Addiction Scale – see Duradoni, M., Innocenti, F., & Guazzini, A. (2020). Well-being and social media: A systematic review of Bergen addiction scales. Future Internet, 12(2), 24.

19. I spend a lot of time thinking about social media or planning how to use it.

a. Never

b. Rarely

c. Sometimes

d. Often

e. Frequently

f. Almost constantly

20. I feel an urge to use social media more and more.

a. Never

b. Rarely

c. Sometimes

d. Often

e. Frequently

f. Almost constantly

21. I use social media in order to forget about personal problems

a. Never

b. Rarely

c. Sometimes

d. Often

e. Frequently

f. Almost constantly

22. I have tried to cut down on the use of social media without success

a. Never

b. Rarely

c. Sometimes

d. Often

e. Frequently

f. Almost constantly

23. I become restless or troubled if I am prohibited from using social media

a. Never

b. Rarely

c. Sometimes

d. Often

e. Frequently

f. Almost constantly

24. I use social media so much that it has had a negative impact on my studies

a. Never

b. Rarely

c. Sometimes

d. Often

e. Frequently

f. Almost constantly

26. During the past 30 days on how many days did you look at pornographic material online?

a. 0 days

b. 1-2 days

c. 3-5 days

d. 6-9 days

e. 10-19 days

f. 20-29 days

g. All 30 days

Kelly add four questions about sexting from the Delaware 2017 YRBS.

MEDIA USE MOTIVATIONS (Uses & Gratifications)

Motivations grid adapted from Hou, J., Zhu, Y., Tong, J., Ndasauka, Y., & Fang, X. (2020). Preparation of multi-motive grid questionnaire for social networking sites use. *PloS one, 15*(5), e0233205.

(0 = never, 1 = rarely, 2 = sometimes, 3 = frequently, 4 = almost always)

I use social media…

27. To search for the latest information about others and know about friends' recent status updates

28. For entertainment

29. To share my ideas and feelings

30. To follow other people, celebrities, or organizations I'm interested in

31. To keep up with trends and avoid being out-of-date

32. To confide in others and get advice

33. To rest and relax

34. To express my own attitudes and opinions

35. To access useful knowledge and information

36. To keep in touch with my friends

37. To keep in touch with family members

38. To access the latest news

39. To pass time

MENTAL HEALTH

(Derived from YRRS)

40. During the past 30 days, how often was your mental health not good? (Poor mental health includes stress, anxiety, and depression.)

A Never

B Rarely

C Sometimes

D Most of the time

E Always

41. During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?

A Yes

1B No

Commented [6]: Dylan's assessment: Q41 and Q43 - These questions are asking different things and using different time frames but definately overlap in what they capture. I think from a data analysis/comparing results to existing statewide data perspective it is nice to have both, but I do wonder if the benefits of removing a question and improving readability would merit excluding one of these (I'd probably suggest losing the sad or hopeless YRRS question if it were my opinion alone).

From Patient Health Questionnaire (PHQ-2) see Richardson, L.P., Rockhill, C., Russo, J.E., Grossman, D.C., Richards, J., McCarty, C., McCauley, E. and Katon, W., 2010. Evaluation of the PHQ-2 as a brief screen for detecting major depression among adolescents. Pediatrics, 125(5), pp.e1097-e1103.

Over the last 2 weeks, how often have you been bothered by the following problems? (0 = not at all, 1 = several days, 2 = more than half the days, 3 = nearly every day)

42. Little interest of pleasure in doing things

43. Feeling down, depressed or hopeless

From Generalized Anxiety Disorder (GAD-2) see Kroenke, K., Spitzer, R. L., Williams, J. B., Monahan, P. O., & Löwe, B. (2007). Anxiety disorders in primary care: prevalence, impairment, comorbidity, and detection. *Annals of internal medicine*, *146*(5), 317-325.

Over the last 2 weeks, how often have you been bothered by the following problems? (0 = not at all, 1 = several days, 2 = more than half the days, 3 = nearly every day)

44. Feeling nervous, anxious, or on edge

45. Not being able to stop or control worrying

Non-suicidal Self Injury (NSSI) from NM-YRRS

46. During the past 12 months, how many times did you do something to purposely hurt yourself without wanting to die, such as cutting or burning yourself on purpose?

a. 0 times

b. 1 time

c. 2 or 3 times

d. 4 or 5 times

e. 6 or more times

Suicide ideation and attempts from NM-YRRS

47. During the past 12 months, did you ever seriously consider attempting suicide?

a. Yes

b. No

48. During the past 12 months, how many times did you actually attempt suicide?

c. 0 times

d. 1 time

e. 2 or 3 times

f. 4 or 5 times

g. 6 or more times

Mental health counseling

49. During the past 12 months, did you receive treatment or counseling from a private therapist, psychologist, psychiatrist, social worker, or counselor for emotional or behavioral problems?

a. Yes

b. No

50. Think about the last time you visited a private therapist, psychologist, psychiatrist, social worker, or counselor to receive treatment or counseling for emotional or behavioral problems. What was the reason for your visit? (check all that apply)

c. You thought about killing yourself

d. You felt depressed

e. You felt very afraid and tense

f. You were breaking rules and "acting out"

g. You had eating problems

h. Other reason: _____

BODY IMAGE AND EATING BEHAVIORS

(Derived from YRRS & Puglia, D. R., (2017). Social Media Use and Its Impact on Body Image: The Effects of Body Comparison Tendency, Motivation for Social Media Use, and Social Media Platform on Body Esteem in Young Women. University of North Carolina at Chapel Hill.

55. How do you describe your weight?

a. Very underweight

b. Slightly underweight

c. About the right weight

d. Slightly overweight

e. Very overweight

56. Which of the following are you trying to do about your weight?

f. Lose weight

g. Gain weight

h. Stay the same weight

i. I am not trying to do anything about my weight

57. Have you ever gone without eating for 24 hours or more (also called fasting) to lose weight or to keep from gaining weight?

j. Yes

k. No

58. Have you ever vomited or taken laxatives to lose weight or to keep from gaining weight?

l. Yes

m. No

59. Have you ever taken any diet pills, supplements, powders, or liquids without a doctor's advice to lose weight or to keep from gaining weight?

n. Yes

o. No

60. Do you ever use social media to look at 'thinspiration' (images that help encourage weight loss)?

p. Yes

q. No

r. Sometimes

61. Would you say that food dominates your life?

s. Yes

t. No

Cash, T. F., (2012). Body Image Assessments: BISS. Doy Images Research Consulting. [HYPERLINK "http://www.body-images.com/assessments/biss.html" \h]

In the past 24 hours…

63. . …how satisfied did you feel with your physical appearance? (BISS1)

w. Very dissatisfied.

x. Somewhat dissatisfied.

y. Neutral

z. Somewhat satisfied.

aa. Very satisfied.

64. . …how satisfied did you feel with your body size and shape? (BISS2)

bb. Very dissatisfied.

cc. Somewhat dissatisfied.

dd. Neutral

ee. Somewhat satisfied.

ff. Very satisfied.

65. . … how satisfied did you feel with your weight? (BISS3)

gg. Very dissatisfied.

hh. Somewhat dissatisfied.

ii. Neutral

jj. Somewhat satisfied.

kk. Very satisfied.

66. . … how did you feel your looks compared to usual? (BISS4)

ll. Much worse.

mm. Somewhat worse.

nn. Neutral

oo. Somewhat better.

pp. Much better.

BULLYING

Derived from YRRS

The next question asks about bullying. Bullying is when 1 or more people tease, threaten, spread rumors about, or hurt another person over and over again. It is not bullying when 2 people of about the same strength or power argue or fight or tease each other in a friendly way.

67. Have you ever been electronically bullied? (Count being bullied through texting, Instagram, Twitter, or other social media.)

qq. Yes

rr. No

68. Have you ever electronically bullied another person?

ss. Yes

tt. No

Alcohol, Tobacco and other Drug use

Derived from YRRS

69. During the past 30 days, on how many days did you…

	0 days	1-2 days	3-5 days	6-9 days	10-19 days	20-29 days	All 30 days

Have at least one drink of alcohol, other than a few sips?							
Smoke cigarettes?							
Use an electronic vapor product? (Count things such as JUUL, Vuse, Blu, or other e-cigarettes, vapes, and vape pens)							

70. During the past 30 days, how many times did you…

	0 times	1 or 2 times	3-9 times	10-19 times	20-39 times	40 or more times
Take prescription pain medicine without a doctor's prescription or differently than how a doctor told you to use it? (Count things such as codeine, Vicodin, OxyContin, Hydrocodone, and Percocet)						
Use any form of cocaine, including powder, crack, or freebase?						
Use heroin (also called smack or junk)?						

Use methamphetamines (also called speed, crystal, crank, ice, or meth)?						
Use ecstasy (also called MDMA or Molly)?						
Sniff glue, breathe the contents of aerosol spray cans, or inhale any paints or sprays to get high?						

[Physical activity question - add one]

GAMBLING Derived from YRRS

71. During the past 12 months, how many times have you gambled on a sports team, gambled when playing cards or a dice game, played one of New Mexico's lottery games, gambled on the Internet, or bet on a game of personal skill such as pool or a video game?

A 0 times

B 1 or 2 times

C 3 to 9 times

D 10 to 19 times

E 20 to 39 times

F 40 or more times

Commented [7]: Dylan's Assessment: Looking at the modified YRRS gambling question (Q71) I'm not sure this captures the issue I was personally interested in (although I'm not sure my persona interest should be weighted very high). I wonder if we could replace this questions with one that asks how much money the student/parents has spent on video games and apps in the past 30 days. I am interested in comparing mental health outcomes of youth who spend more money on these products than others. I could let this one go though and am curious if others think the existing gambling one is useful to them?

Commented [8]: I agree, I think the problem in this case is not specifically children accessing traditional gambling online, rather it is the fact that video games and social media often incorporate mechanics and transactions which take advantage of the same neurological pathways as traditional gambling does.

MEDIA LITERACY – Derived from the Maynard survey ([HYPERLINK "https://medialiteracynow.org/resources-for-teachers/" \h])

72. In class, have you ever analyzed an advertisement?

a. Yes

b. No

73. In class, have you ever discussed how the choices made by people who create media influence people's thoughts, feelings, and beliefs?

a. Yes

b. No

74. In class, have you ever discussed how media can be beneficial or harmful to your health, identity, or relationships?

uu. Yes

vv. No

75. In class, have you ever learning how to spot the differences between a news story and an opinion story

ww. Yes

xx. No

76. In class, have you ever analyzed media to identify stereotypes?

yy. Yes

zz. No

77. In class, have you ever done a research project where you had to think of questions, gather information from multiple sources, and summarize what you learned in a paper, video, presentation, etc.

aaa. Yes

bbb. No

78. In class, have you ever looked at information and thought about how your opinions and beliefs influence what you think it means?

ccc. Yes

ddd. No

79. Have you ever learned about how selling audience's attention is the way media companies make money?

eee. Yes

fff. No

80. Have you ever discussed with an adult what makes media sources more trustworthy?

ggg. Yes

Hhh. No

81. Have you ever discussed with an adult about what to share online?

iii. Yes

jjj. No

82. Have you ever discussed with an adult the balance choices of both online and offline activities?

kkk. Yes

lll. No

83. Have you ever discussed with an adult the potential risks and harms of false information online?

Mmm. Yes

nnn. No

84. Have you ever kept track of your media use?

ooo. Yes

ppp. No

PARENT OVERSIGHT/LIMITATIONS

Anderson, M. (2016). Parents, Teens, and Digital Monitoring. Pew Research Center.[HYPERLINK "https://www.pewresearch.org/internet/2016/01/07/parents-teens-and-digital-monitoring/" \h][HYPERLINK "https://www.pewresearch.org/internet/2016/01/07/parents-teens-and-digital-monitoring/" \h]

85. Has a parent or guardian checked which websites you've visited?

a. Yes

b. No

86. Has a parent or guardian checked your social media profiles?

c. Yes

d. No

87. Has a parent or guardian looked through your phone calls/messages?

e. Yes

f. No

88. Has a parent or guardian used parental controls for your online activities?

g. Yes

h. No

89. Has a parent or guardian used monitoring tools to track your location with your cell phone?

i. Yes

j. No

RESILIENCE

From Smith, Dalen, Wiggins, Tooley, Christopher and Bernard. (2008). The Brief Resilience Scale: Assessing the Ability to Bounce Back. *International Journal of Behavioral Medicine*, 15: 194-200.

1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

90. I tend to bounce back quickly after hard times
91. I have a hard time making it through stressful events (R)
92. It does not take me long to recover from a stressful event
93. It is hard for me to snap back when something bad happens (R)
94. I usually come through difficult times with little trouble
95. I tend to take a long time to get over setbacks in my life (R)