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The Critical Role of Media Literacy in Health Education

A research and evidence review

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Introduction

In the last several years, prompted by a rise in awareness about inaccurate or dangerously misleading information spreading on social media, there has been an increasing interest in teaching critical thinking skills around media content to students. Largely these media literacy skills are taught in the context of civics, social science, and current events to middle and high school students as teachers themselves develop professionally to prepare for instruction needed in our digital age.

However, studying and teaching about media use, and critical thinking skills around both the physical and emotional health impacts of prolonged screen media use is becoming increasingly relevant in today's society. Learning about health impacts of media use and conscious use of media, including social media, is emerging as a crucial element of media literacy education in the health education classroom and through other child and student health support services.

The Youth Mental Health and Safety Crisis

One area of increasing concern in our culture is the rising level of anxiety and depression, eating disorders, as well as online abuse and sexual harassment affecting young people, many of these affecting girls especially, and LGBTQ+ youth.¹ In fact the U.S. Surgeon General has stated that "mental health is the defining public health crisis of our time." ²

While there are many factors at play, the increased time young people spend onscreen and online is a contributing factor to a rise in youth mental health conditions. Social media's commercially driven landscape of repetitive and calculated imagery and messages driven by algorithms, and a constant fueling of comparison, envy and FOMO, contribute to widespread insecurities and emotional well-being challenges for youth.³ The prevalence of cyberbullying and sexual harassment contribute to young people today facing significant and increased risks to their emotional health and well-being, as well as their physical health and school performance.⁴



AI and the ability to create highly realistic false images ("deep fakes") increases the potential for abuse and humiliation that is a very real and dangerous risk for severe mental health problems especially among youth.

The digital world also presents dangers from predators, readily available drugs and weapons, content promoting anorexia, cutting, and suicide, as well as peer pressure to engage in dangerous online "challenges" which may involve choking or other potentially lethal behavior.

Physical Health Effects of Prolonged Screen Media Use

Numerous studies have shown that increased internet and social media use has a significant association with poor sleep quality in young people.⁵ Using social media on phones, laptops and tablets at night before bed as many teens do is linked with poor quality sleep. This means it takes longer to fall asleep and children and teens end up getting fewer hours of sleep every night.

One in five young people say they wake up during the night to check messages on social media, leading them to feel constantly tired at school, and sleep deficiency is also associated with increased risk for mental health disorders such as depression. ⁶

Research also shows that using a smartphone or tablet for long periods in a typical manner can cause an abnormally curved spine and neck, and eye strain, and excessive screen media use is associated with hypertension in children and teens.⁷ In addition, some evidence suggests long-term screen media use may be associated with inflammatory reactions in the body, health conditions related to lack of exercise, and other negative health conditions.^{8,9}



Evidence Supports Teaching Media Literacy to Improve Health and Safety Outcomes

Media literacy education addresses how we use all media, including digital platforms and communication technology of all kinds, and develops an understanding of the systems in which media messages are created and consumed. *Media literacy* refers to a person's ability to access, analyze, evaluate, create and take action with all forms of media, including the ability to assess accuracy and credibility of information, and recognize bias, stereotypes, representation, and the lack of inclusion in media messages. Media messages and systems include movies, music videos and lyrics, video games, websites, advertisements, news in print, TV, and radio, content (images, text and video) posted on social media platforms –including content created with AI and driven by algorithms – virtual reality apps, and surveillance systems.

Media literacy education encompasses the skills leading to digital citizenship and internet or online safety, which includes teaching appropriate, responsible, ethical, healthy and safe online behavior, and cyberbullying prevention. It also encompasses addressing the physical and emotional health impacts of media use, and the conscious, balanced use of media that aligns with an individuals' goals for their health and well-being, referred to as *digital wellness*.

Learning general media literacy critical thinking skills supports improved health literacy, or the ability to evaluate and utilize health news and information effectively.¹⁰ This is often referred to as *health* media literacy and is an important component of health education.

There are numerous examples of how teaching media literacy's critical thinking skills around specific health and wellness topics has been shown to be effective in shaping healthier behaviors in young people.



Critical thinking around media use has been shown to be an effective form of protection from the mindsets that lead to eating disorders, poor body image, low self-esteem and depression. Numerous studies show how learning which includes deconstructing media images and messages, including understanding the business models and strategies that cause images to be delivered to users, and the techniques used to "perfect" images, helps young people understand how and why negative emotions can be triggered and sustained by certain media content.¹¹ Research supports encouraging students to discuss various positive and negative emotions and values, how they are engaged by certain media content and habits, and promote educated self-regulation.¹²

Media literacy-infused sex education is emerging as an effective intervention in disrupting attitudes that promote gender-based and relationship violence and abuse; it is also effective in promoting positive sexual decisionmaking including delay.

Media is often referred to as the No. 1 sex educator for young people. While the urge to understand and explore is natural and expected in youth, young people don't always have comprehensive sex education in their schools and may not receive sexual information and guidance at home, depending on the choice of the schools and the parents/caregivers, respectively. Even if they do, sexually explicit media is increasingly accessible to younger and younger children, including unrealistic portrayals of sex and sexuality, and those that include abusive and violent images of sexual activity.

Sexual education curriculum teaching students basic principles of media literacy, including evaluating the source of images and messages, the gender and racial perspectives that may be encompassed and reflected in media, the economic principles of commercial media creation, and the techniques used to alter images and deliver media content, have been shown to change students attitudes about healthy and unhealthy relationships, making them less tolerant of gender-based violence and abusive relationships.¹³ [It should be noted that viewing explicit material is **not** a part of this curriculum.]



Research also demonstrates that students using media literacy in the context of sex education were more likely to have a cautious, reasoned approach addressing sex, more likely to consult a trusted adult in their decision-making, and more likely to resist peer pressure to have sex, than those who had not taken this curriculum.¹⁴

Media literacy education has been shown to change attitudes and decision-making about substance abuse for more positive outcomes.

Popular media often glamourizes or minimizes the harmful effects of drug, alcohol, and tobacco/vaping use. In addition, embedded product placement in movies, videos, games, and other media may further influence young people's acceptance of or desire for using alcohol, drugs or other substances. Studies show that when health education curriculum uses media literacy techniques to help students decode media messages, they report being more aware of their own attitudes toward substance use, and more likely to report healthier intentions around avoiding substance abuse.¹⁵ Other research has

shown that curriculum using media literacy in tobacco prevention education is more effective than curriculum that does not.¹⁶

Media literacy education has been shown to change attitudes and behaviors around anger management and violence.

Violence in the media, including movies, TV, and videogames, has been the subject of concern for decades. While the issue of whether media violence actually causes violence in real life to occur is a complex one, there is evidence that learning to evaluate violence in the media through media literacy skills can lead to a change in attitude about violence as an acceptable form of behavior.¹⁷



Media literacy education has been shown to change attitudes and decision-making about healthy food choices.

The consumption of high-sugar drinks, and highly processed food or junk food is rampant in the U.S., and responsible in part for the increase in various health conditions in young people and into adulthood including obesity and diabetes. Advertising of junk food, soda and other high-sugar drinks, especially through product placement and celebrity and influencer endorsements, is a multi-billion dollar industry, and has demonstrated effectiveness in influencing young people's dietary choices.¹⁸ However, when young people learn to be aware of the techniques and power of food and drink marketing with media literacy critical thinking tools, many in fact make healthier decisions about their own diet.¹⁹

Media literacy education has been shown to be a factor in reducing excessive or problematic video gaming.

Video gaming may be an enjoyable, even social, pastime, but in some cases can cause significant problems including compulsive addictive behavior and associated sleep deprivation, isolation, depression/anxiety, even visual and auditory hallucinations. However, increasing awareness of healthy media use through media literacy education has had a demonstrated effect on promoting more self-awareness around problematic gaming behaviors and more balanced healthy use of gaming platforms.²⁰

Learning media literacy skills is associated with increased psychological well-being.

While there is much anecdotal evidence suggesting positive mental and emotional health outcomes with students learning media literacy especially including digital wellness concepts, research demonstrates a correlation between this type of media literacy education and better mental health.²¹



Media literacy education including digital citizenship, safety, and wellness education changes and improves young people's online habits.

In a recent survey of high school students receiving an evidence-based media literacy program focused on digital wellness and safety principles, an overwhelming majority (87.5%) of the students reported changing their online habits and behaviors to align with more positive health objectives after the program.²²

Health Expert Recommendations

In May 2023, the U.S. Surgeon General issued an advisory on youth mental health and social media use. The report was based on current scientific research, finding among other things that youth who spend more than 3 hours a day on social media [most teens spend an average of 3.5 hours day] face double the risk of depression and anxiety.²³

Recommendations from the Surgeon General's advisory included that policymakers should "Support the development, implementation, and evaluation of digital and media literacy curricula in schools and within academic standards." The report states: "Digital and media literacy provides children and educators with digital skills to strengthen digital resilience, or the ability to recognize, manage, and recover from online risks (e.g.cyberbullying and other forms of online harassment and abuse, as well as excessive social media use)."²⁴

Also in May 2023, the American Psychological Association issued a health advisory on social media use in adolescence. One of their recommendations stated: "Adolescents' social media use should be preceded by training in social media literacy to ensure that users have developed psychologically-informed competencies and skills that will maximize the chances for balanced, safe, and meaningful social media use."²⁵



Education and child development experts also say it is imperative to begin media literacy education in early childhood years as it lays the foundation for children being media literate throughout life; schools should integrate age-appropriate media literacy education beginning in early elementary grades.²⁶

Community Support: Parents and Teachers, and Students

In general, educators believe teaching students media literacy and digital wellness is needed, though they sometimes lack the confidence, training, and institutional support to do so. In one study, 91% of pre-service teachers agreed media literacy or digital citizenship is an important element of school curriculum.²⁷ However in that study teachers also reported they don't believe media literacy education is prioritized enough by administrators and policymakers, and is not adequately addressed in their training.²⁸

In addition, a 2022 survey of a cross section of U.S. adults showed that a large majority – 84% – believe in the importance of teaching media literacy to K-12 students.²⁹

Furthermore, and very importantly, young people themselves believe they should be taught media literacy skills including digital wellness to stay safe and healthy using digital media. A survey of teens published in 2022 showed participants believed middle school and high school students should receive media literacy education, including online safety and digital wellness, and that this education should be collaborative, with students being able to discuss their views and experiences.³⁰

It is also apparent from documented (and anecdotal) classroom experience that students often find classes teaching media literacy skills highly engaging, more so than classes in the same subject not including those skills.³¹



Conclusion

Media Literacy Now, and its allied individuals and organizations, supports the expansion of teaching media literacy – including digital wellness – as a key part of preventative measures to address the state of behavioral health disorders and other health and safety issues that affect young people in our digital age.

It is imperative to evaluate where our educational policies can be changed and improved with regard to this critical area of learning and teaching and begin now to make those changes including:

- statutory changes in state education law;
- updating national professional standards for health educators;
- updating state departments of education standards or frameworks in health education; sharing best teaching practices in the field;
- providing professional development and other training resources for educators and school health personnel, and
- other ways of ensuring that these critical learning areas for youth are prioritized.

Improving and modernizing health and safety education for students is our shared responsibility as policymakers, administrators, teachers and school health personnel, advocates, parents, caregivers, and students themselves. We cannot ignore the impact – both positive and potentially negative – digital life has on young people, or overlook the urgent need to empower students to use technology safely, responsibly, and with their very best health outcomes in mind.



References:

(1) CDC report shows concerning increases in sadness and exposure to violence among teen girls and LGBQ+ youth especially:

https://www.cdc.gov/nchhstp/newsroom/fact-sheets/healthy-youth/sadness-and-violence-among-te en-girls-and-LGBQ-youth-factsheet.html#:~:text=3%20in%205%20girls%20felt,performance%2C%2 0and%20other%20severe%20consequences

(2) <u>https://www.uclahealth.org/news/column-us-surgeon-general-loneliness-heart-growing-mental</u>

(3) Social Media & Youth Mental Health, U.S. Surgeon General Advisory (May 2023) <u>https://tinyurl.com/np86xe7r</u>

(4) U.S. Department. Of Health and Human Services,

https://www.stopbullying.gov/blog/2019/10/25/effects-bullying-mental-health, accessed Nov.2023; see also Hinduja, S. & Patchin, J. W. (2023). Cyberbullying Identification, Prevention, and Response. Cyberbullying Research Center, <u>www.cyberbullying.org</u>

(5) Woods HC, Scott H. #Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. J Adolesc. 2016 Aug;51:41-9. doi: 10.1016/j.adolescence.2016.05.008. Epub 2016 Jun 10. PMID: 27294324, https://pubmed.ncbi.nlm.nih.gov/27294324/;

Xanidid, N. Brignell, C. The association between the use of social network sites, sleep and cognitive function during the day, Computers in Human Behavior, Vol 55, part A (2016)

http://www.sciencedirect.com/science/article/pii/S0747563215301357;

Sally Power, Chris Taylor & Kim Horton (2017) Sleepless in school? The social dimensions of young people's bedtime rest and routines, Journal of Youth Studies, 20:8, 945-958, DOI:

10.1080/13676261.2016.1273522,

https://www.tandfonline.com/doi/full/10.1080/13676261.2016.1273522



6) Power, S., et al (2017)

(7) B Badr BEA, Rawash YZ, Owida HA, De Fazio R, Visconti P., Social Media Devices' Influence on User Neck Pain during the COVID-19 Pandemic: Collaborating Vertebral-GLCM Extracted Features with a Decision Tree. J Imaging. 2023 Jan 8;9(1):14. doi: 10.3390/jimaging9010014. PMID: 36662112; PMCID: PMC9867361

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9867361/#:~:text=During%20the%20browsing%20ro utine%2C%20users,%2C%20neck%2C%20and%20eye%20fatigue.;

Ganne P, Najeeb S, Chaitanya G, Sharma A, Krishnappa NC. Digital Eye Strain Epidemic amid COVID-19 Pandemic - A Cross-sectional Survey. Ophthalmic Epidemiol. 2021 Aug;28(4):285-292. doi: 10.1080/09286586.2020.1862243. Epub 2020 Dec 28. PMID:

33369521.<u>https://pubmed.ncbi.nlm.nih.gov/33369521/;</u>

Farhangi, M.A., Fathi Azar, E., Manzouri, A. *et al.* Prolonged screen watching behavior is associated with high blood pressure among children and adolescents: a systematic review and dose–response meta-analysis. *J Health Popul Nutr* 42, 89 (2023). <u>https://doi.org/10.1186/s41043-023-00437-8</u>

(8) Lee DS, Jiang T, Crocker J, Way BM. Social Media Use and Its Link to Physical Health Indicators. Cyberpsychol Behav Soc Netw. 2022 Feb;25(2):87-93. doi: 10.1089/cyber.2021.0188. Epub 2022 Jan 12. PMID: 35021894; PMCID: PMC8864418. https://pubmed.ncbi.nlm.nih.gov/35021894/

(9) We acknowledge that social media use has definite health and well being benefits as well as potential harms; young people report increased connection emotional support, finding positive health info, and using specific digital interventions to promote health, fitness, relaxation and safety, via apps and other media. For purposes of this paper–promoting prevention education–we focus on areas where further education is needed.



(10) P. Parandeh Afshar, F. Keshavarz, M. Dehghan; (2022) Health Literacy and Media Literacy: Is There Any Relation? Community Health Equity Research & Policy Volume 42, Issue 2 <u>https://journals.sagepub.com/doi/abs/10.1177/0272684X20972642?journalCode=qchb</u>

(11) Kurz, M., Rosendahl, J., Rodeck, J. et al. School-Based Interventions Improve Body Image and Media Literacy in Youth: A Systematic Review and Meta-Analysis. J Primary Prevent 43, 5–23 (2022). https://doi.org/10.1007/s10935-021-00660-1 ;

McLean SA, Wertheim EH, Masters J, Paxton SJ. A pilot evaluation of a social media literacy intervention to reduce risk factors for eating disorders. Int J Eat Disord. 2017 Jul;50(7):847-851. doi: 10.1002/eat.22708. Epub 2017 Mar 28. PMID: 28370321, <u>https://pubmed.ncbi.nlm.nih.gov/28370321/</u> Matthews, H. (2016). The Effect of Media Literacy Training on the Self- Esteem and Body-Satisfaction Among Fifth Grade Girls, Walden University. Levine, M. (2016) Media Literacy as an Effective and Promising Form of Eating Disorders Prevention. Eating Disorders Resource Catalogue, <u>https://www.edcatalogue.com/media-literacy-as-an-effective-and-promising-form-of-eating-disord</u> <u>ers-prevention/</u>; Wade, T. D., Davidson, S., & O'Dea, J. A. (2003). Preliminary controlled evaluation of a school-based media literacy program and self-esteem program for reducing eating disorder risk

of a school-based media literacy program and self-esteem program for reducing eating disorder risk factors. International Journal of Eating Disorders, 33(4), 371-383,

https://onlinelibrary.wiley.com/doi/abs/10.1002/eat.10136

see also Thai, H., Davis, C. G., Mahboob, W., Perry, S., Adams, A., & Goldfield, G. S. (2023). Reducing Social Media Use Improves Appearance and Weight Esteem in Youth With Emotional Distress. Psychology of Popular Media. 10.1037/ppm0000460; <u>https://psycnet.apa.org/record/2023-48778-001</u>

(12) <u>https://digitalthriving.gse.harvard.edu/resources#values;</u> used in "My Values and Tech" Lesson Plan, Commonsense Media,

https://www.commonsense.org/education/digital-citizenship/lesson/my-values-tech



(13) Scull, T.M., Dodson, C.V., Geller, J.G. et al., A Media Literacy Education Approach to High School Sexual Health Education: Immediate Effects of Media Aware on Adolescents' Media, Sexual Health, and Communication Outcomes, J Youth Adolescence 51, 708–723 (2022).

https://doi.org/10.1007/s10964-021-01567-0

https://link.springer.com/article/10.1007/s10964-021-01567-0;

E. Rothman, N.Daley, J. Adler, (2020) A Pornography Literacy Program for Adolescents, Am J Public Health. 2020 February; 110(2): 154–156, <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6951388/</u> **Note**: Students are *not* shown pornography in these curricula.

(14) Bruce E. Pinkleton, Erica Weintraub Austin, Yi-Chun "Yvonnes" Chen & Marilyn Cohen, (2012) The Role of Media Literacy in Shaping Adolescents' Understanding of and Responses to Sexual Portrayals in Mass Media, Journal of Health Communication, 17:4, 460-476, DOI: 10.1080/10810730.2011.63577,

https://www.tandfonline.com/doi/full/10.1080/10810730.2011.635770; ; see also Scull, T.M (2022)

(15) J. Kupersmidt (2012), Improving Media Message Interpretation Processing Skills to Promote Healthy Decision Making About Substance Use: The Effects of the Middle School Media Ready Curriculum, Journal of Health Communication, Vol.17 Issue 5, <u>https://www.tandfonline.com/doi/full/10.1080/10810730.2011.635769</u>

(16) Primack BA, Douglas EL, Land SR, Miller E, Fine MJ. Comparison of media literacy and usual education to prevent tobacco use: a cluster-randomized trial. J Sch Health. 2014 Feb;84(2):106-15. doi: 10.1111/josh.12130. PMID: 25099425; PMCID: PMC4126196.<u>https://pubmed.ncbi.nlm.nih.gov/25099425/</u>

(17) Flashpoint: An Innovative Media Literacy Intervention for High-Risk Adolescents, <u>https://www.ojp.gov/ncjrs/virtual-library/abstracts/flashpoint-innovative-media-literacy-interventio</u> <u>n-high-risk</u>, cited in J.Moore, N.Dechillo, B.Nicholson, A. Genovese, S.Sladen, Juvenile and Family Court Journal, Volume: 51 Issue: 2 (Spring 2000)



(18) Critchlow N, Bauld L, Thomas C, Hooper L, Vohra J. Awareness of marketing for high fat, salt or sugar foods, and the association with higher weekly consumption among adolescents: a rejoinder to the UK government's consultations on marketing regulation. Public Health Nutr. 2020 Oct;23(14):2637-2646. doi: 10.1017/S1368980020000075. Epub 2020 May 21. Erratum in: Public Health Nutr. 2021 Sep;24(13):4371-4375. PMID: 32434618; PMCID: PMC7116036. https://pubmed.ncbi.nlm.nih.gov/32434618/

(19) Center for Media Literacy, "CML Pilots Media Literacy Unit for Obesity, Nutrition Education"(2005),<u>https://www.medialit.org/reading-room/cml-pilots-media-literacy-unit-obesity-n</u> <u>utrition-education</u>; Grassi, E., Evans, A., Ranjit, N, Dalla Pria, S.; Using a mixed-methods approach to measure impact of a school-based nutrition and media education intervention study on fruit and vegetable intake of Italian children, J.Public Health Nutrition -1(11):1-12, Feb.(2016) <u>https://www.researchgate.net/publication/293796314_Using_a_mixed-methods_approach_to_measur</u> <u>e_impact_of_a_school-based_nutrition_and_media_education_intervention_study_on_fruit_and_veget</u> <u>able_intake_of_Italian_children;</u>

(20) Walther B, Hanewinkel R, Morgenstern M. Effects of a brief school-based media literacy intervention on digital media use in adolescents: cluster randomized controlled trial. Cyberpsychol Behav Soc Netw. 2014 Sep;17(9):616-23. doi: 10.1089/cyber.2014.0173. Epub 2014 Aug 15. PMID: 25126888. https://pubmed.ncbi.nlm.nih.gov/25126888/

(21) Bahramian E, Mazaheri MA, Hasanzadeh A. The relationship between media literacy and psychological well-being in adolescent girls in Semirom city. J Educ Health Promot. 2018 Nov 27;7:148. doi: 10.4103/jehp.jehp_41_18. PMID: 30596120; PMCID: PMC6282480, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6282480/#:~:text=Media%20literacy%20was%20sign ificantly%20correlated,0.218%2C%20P%20%3C%200.05)

(22) Healthy Screen Habits Workshop Survey (2023), www.healthyscreenhabits.org



(23),(24) Social Media & Youth Mental Health, U.S. Surgeon General Advisory (May 2023) <u>https://tinyurl.com/np86xe7r</u>

(25) Health Advisory on Social Media Use and Adolescence: American Psychological Association (APA), May 10th 2023, (Recommendation #9) https://www.apa.org/topics/social-media-internet/health-advisory-adolescent-social-media-use

(26) Herdzina, J. & Lauricella, A. R. (2020). Media Literacy in Early Childhood Report. Chicago, IL. Technology in Early Childhood (TEC) Center, Erikson Institute, p.8, <u>https://www.erikson.edu/wp-content/uploads/2021/06/TEC-MediaLiteracy-Report.pdf</u>

(27) S. Gretter and A. Yadav, What Do Preservice Teachers Think about Teaching Media Literacy? An Exploratory Study Using the Theory of Planned Behavior, Journal of Media Literacy Education (2018) 10(1), 104 -123, https://digitalcommons.uri.edu/cgi/viewcontent.cgi?article=1267&context=jmle

(28) *ibid*

(29) <u>https://medialiteracynow.org/nationalsurvey2022/</u>

(30) "Generation Z and Media Literacy: Young people's perceptions of media literacy education", Alana Evans Powers, Masters Thesis, Syracuse University, August 2022, <u>https://surface.syr.edu/thesis/692/</u>

(31) Brian A. Primack, MD, PhD, Associate Professor at the University of Pittsburgh School of Medicine discusses why a media literacy program aiming to prevent teen smoking was more effective than a control program not using media literacy skills for students. <u>https://marketingmediachildhood.com/2014/05/07/why-do-students-find-media-literacy-courses-m</u> <u>ore-engaging-than-other-programs/</u>