Team code: TY09-7A

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Tentative Title: An Analysis of the Societal Impact of Social Media: A Review of Data Privacy, Misinformation, and Mental Health

Domain: Social Media

Subdomain: Data Privacy and Security, Fake News and Misinformation, Impact on Mental Health

Objective Description: The objective of this project is to conduct a comprehensive review of the current research on the societal impacts of social media. The study will be divided into three key subdomains: data privacy and security, the spread of fake news and misinformation, and the effects on mental health. By analyzing a selection of key academic papers, the project aims to identify and describe the primary problems, interventions, and outcomes within each subdomain. This will provide a structured overview of the challenges posed by social media and highlight potential solutions, contributing to a better understanding of the multifaceted nature of its influence.

Team Member 1 Name: KALPIT VORA

Subdomain: Data Privacy and Security

PICO 1: PAPER TITLE: A Comprehensive Study on Privacy and Security on Social Media

- **Authors of paper:** *Mohammed S. Albulayhi* and *Salim El Khediri*
- **Paper Description:** This paper addresses the significant **problem** of privacy and security vulnerabilities faced by social media users. It provides a comprehensive review of various threats, including data breaches, phishing, and the unauthorized use of personal data. The **intervention** is a detailed examination and classification of these security issues across different social media platforms. The study is a review, so there is no formal **comparison** group. The **outcome** is an in-depth understanding of the different types of threats and challenges to privacy and security on social media, providing a foundation for future research and security measures.

PICO 2: PAPER TITLE: On Privacy and Security in Social Media—A Comprehensive Study

- **Authors of paper:** *Senthil Kumar N*, Saravanakumar K, Deepa K*
- **Paper Description:** This paper focuses on the **problem** of user behavior and its contribution to privacy and security risks. It explores how a user's motivation for using

social media impacts their awareness and management of personal data. The **intervention** involves reviewing existing literature to establish the relationship between user behavior and online privacy. There is no formal **comparison**, but the paper analyzes and compares different studies and their findings on user actions and their consequences. The **outcome** provides insights into how user behavior and motivations influence their willingness to disclose personal information online.

PICO 3: PAPER TITLE: Privacy Rights and Social Media

- **Authors of paper:** *Ansari Mubashshirah Bano Izharul Haque, Siddiqui Abeer Talib*
- **Paper Description:** This paper addresses the **problem** of protecting individual privacy rights in the complex digital environment of social media. It examines the legal, ethical, and societal challenges associated with data collection and usage by social platforms. The **intervention** is a broad analysis of the current state of privacy rights in the social media domain. The paper's scope is a review, so no **comparison** is made. The **outcome** is a comprehensive understanding of the challenges to privacy rights on social media and practical considerations for safeguarding them.

PICO 4: PAPER TITLE: Social Media and Privacy: Understanding the Risks to Personal Data

- **Authors of paper:** *Omprakash Dewangan, Akanksha Mishra, Jyoti Nainani*
- **Paper Description:** This study addresses the **problem** of threats to personal data on social media in a specific geographical context. It aims to understand the risks of data breaches and identity theft and to analyze the legal frameworks in place to protect data. The **intervention** involves an examination of the current threats and a review of the existing legislation in India. There is no **comparison** group. The **outcome** is an assessment of the risks associated with social media use and the effectiveness of current legislative measures in protecting personal data.

PICO 5: PAPER TITLE: The application social media and their security

- **Authors of paper:** *Lana Kemal Ahmed 1*, Rasber Dhahir Rashid*
- **Paper Description:** This paper tackles the **problem** of security vulnerabilities within specific social media applications. It provides a detailed review of the security features and weaknesses of platforms like Facebook, X (Twitter), and Instagram. The **intervention** is a systematic review of the security mechanisms within these popular applications. There is no **comparison** between platforms, but the paper lists the security features of each one. The **outcome** is a detailed understanding of the security features and potential risks associated with popular social media platforms.

Team Member 2 Name: YASH VORA

Subdomain: Fake News And Misinformation

PICO 1: PAPER TITLE: A New Application of Social Impact in Social Media for Overcoming Fake News in Health

- **Authors of paper:** *Cristina M. Pulido, Laura Ruiz-Eugenio, and Beatriz Villarejo-Carballido*
- **Paper Description:** This paper addresses the **problem** of health-related misinformation on social media, especially concerning critical public health topics like vaccines. The **intervention** proposes leveraging the "social impact" features of social media to counter false information. The study uses a **comparison** between different types of health messages (e.g., aggressive vs. dialogue-oriented) and their effectiveness. The **outcome** is an analysis of how social media's social impact can be leveraged to counter health-related fake news and promote public health.

PICO 2: PAPER TITLE: Fake news and misinformation

- **Authors of paper***: Matthew N O Sadiku, Tochukwu P Eze, and Sarhan M Musa*
- **Paper Description:** This paper addresses the significant **problem** of fake news and misinformation spreading rapidly, primarily through social media. It provides a comprehensive overview of its types and societal impacts. The paper's **intervention** is a review of various countermeasures, including media literacy, fact-checking networks, and algorithms. It implicitly **compares** different solutions to the problem. The **outcome** is a detailed understanding of the nature of fake news and the pressing need for effective solutions to combat its harmful effects.

PICO 3: PAPER TITLE: Misinformation, Disinformation, and Fake News: Lessons from an Interdisciplinary, Systematic Literature Review

- **Authors of paper:** *Elena Broda and Jesper Stromback*
- **Paper Description:** This paper addresses the **problem** of misinformation, disinformation, and fake news by conducting a systematic literature review. The **intervention** is an interdisciplinary analysis of the prevalence and impact of false information, especially in the context of political and social events. The study's design allows for a **comparison** of findings from a wide range of academic disciplines. The **outcome** is a systematic understanding of the academic research on the topic, highlighting key concepts, themes, and methods.

PICO 4: PAPER TITLE: Psychological interventions countering misinformation in social media: A scoping review

- **Authors of paper:** *Paweł Gwiazdzinski, Aleksander B. Gundersen, Michal Piksa, Izabela Krysinska, Jonas R. Kunst, Karolina Noworyta, Agata Olejniuk, Mikołaj Morzy, Rafal Rygula, Tomi Wójtowicz and Jan Piasecki*

- **Paper Description:** This paper addresses the **problem** of online users' susceptibility to misinformation. The **intervention** is an analysis of the effectiveness of various psychological strategies (e.g., warnings, fact-checks, media literacy training) designed to combat the spread of false information. The study provides a **comparison** of different types of psychological interventions. The **outcome** is an overview of existing interventions and a set of design guidelines to maximize their effectiveness.

PICO 5: PAPER TITLE: Social Media Fake News in India

- **Authors of paper:** *Md. Sayeed Al-Zaman*
- **Paper Description:** This paper focuses on the **problem** of fake news on social media within the specific context of India. The **intervention** involves an analysis of a collection of fake news items to identify common themes, content types, and sources. The study allows for a **comparison** between different types of fake news content and sources. The **outcome** provides unique findings about the prevalence and characteristics of fake news in a specific geographic and cultural context.

Team Member 3 Name: PARAS WAGHELA

Subdomain: Impact on Mental Health

PICO 1: PAPER TITLE: Exploring adolescents' perspectives on social media and mental health and well-being

- **Authors of paper:** *Anjali Popat and Carolyn Tarrant*
- **Paper Description:** This qualitative literature review addresses the **problem** of understanding how and why social media impacts adolescent mental health. The **intervention** is an exploration of adolescents' perspectives through a review of qualitative studies. The study's design does not include a **comparison**. The **outcome** is the identification of key themes like self-expression, validation, social comparison, and exposure to bullying as they relate to mental health outcomes in adolescents.

PICO 2: PAPER TITLE: Influence of social media on mental health: a systematic review

- **Authors of paper:** *Manoj Kumar Sharma, Nisha John, and Maya Sahu*
- **Paper Description:** This paper addresses the **problem** of the influence of social media use on mental health. The **intervention** is a systematic review of multiple studies to synthesize findings. The review provides a **comparison** of studies that found positive, negative, and neutral effects of social media. The **outcome** is a comprehensive summary of findings showing the complex and far-reaching effects of social media on an individual's self-perception and mood, including a range of both positive and negative impacts.

PICO 3: PAPER TITLE: Social Media Activities With Different Content Characteristics and Adolescent Mental Health

- **Authors of paper:** *Chia-chen Yang, PhD; Paul Hunhoff, MA; Yen Lee, PhD; Jonah Abrell, BA*.
- **Paper Description:** This cross-sectional survey study focuses on the **problem** of how different types of social media activities impact adolescent mental health. The **intervention** is a survey that gathers data on specific social media activities (e.g., passive vs. active use, intimate broadcasting). The study provides a **comparison** between different types of social media activities and their correlation with mental health outcomes. The **outcome** highlights the importance of distinguishing between different types of social media use, as some activities may be risk factors for mental health issues while others may not.

PICO 4: PAPER TITLE: The Impact of Social Media on Mental Health

- **Authors of paper:** *Nyiramana Mukamurera P*
- **Paper Description:** This paper addresses the **problem** of the widespread effects of social media on the mental health of children, adolescents, and young adults. The **intervention** is a balanced examination of both the positive and negative effects of social media use. The study provides a **comparison** between the positive effects (e.g., social support) and the negative effects (e.g., cyberbullying, social comparison). The **outcome** is a comprehensive perspective on the impact of social media, outlining risks like anxiety and depression alongside benefits like fostering social connections.

PICO 5: PAPER TITLE: The Impact of Social Media Use Interventions on Mental Well-Being

- **Authors of paper:** *Ruth Plackett, PhD; Alexandra Blyth, MSc; Patricia Schartau, MBBS, MRCGP, PhD*
- **Paper Description:** This paper addresses the **problem** of the negative impacts of social media on mental well-being and explores a solution. The **intervention** is a systematic review of different interventions designed to reduce social media use or promote mindful use. The study provides a **comparison** between different intervention types (e.g., therapy-based vs. limiting use). The **outcome** provides evidence that interventions can improve mental well-being, especially when they use therapy-based techniques.

Paper References for PICOS:

Member 1 References:

M1_01: A Comprehensive Study on Privacy and Security on Social Media:
https://www.researchgate.net/publication/357911995_A_Comprehensive_Study_on_Privacy_and_Security_on_Social_Media

M1_02: On Privacy and Security in Social Media – A Comprehensive Study:
https://www.researchgate.net/publication/301234158_On_Privacy_and_Security_in_Social_Media_-_A_Comprehensive_Study

M1_03: Privacy Rights and Social Media:
https://www.ijraset.com/research-paper/privacy-rights-and-social-media

M1_04: Social Media and Privacy: Understanding the Risks to Personal Data:
https://journal.inence.org/index.php/ijfiahm/article/view/210

M1_05: The application of social media and their security:
https://www.itm-conferences.org/articles/itmconf/pdf/2024/07/itmconf_icacs2024_01006.pdf

Member 2 References:

M2_01: A New Application of Social Impact in Social Media for Overcoming Fake News in Health: https://www.mdpi.com/1660-4601/17/7/2430

M2_02: Fake News and Misinformation:
https://ijasre.net/index.php/ijasre/article/view/1007

M2_03: Misinformation, Disinformation, and Fake News: Lessons from an Interdisciplinary, Systematic Literature Review: https://academic.oup.com/anncom/article/48/2/139/7762216

M2_04: Psychological interventions countering misinformation in social media: A scoping review: https://www.frontiersin.org/journals/psychiatry/articles/10.3389/fpsyt.2022.974782/full

M2_05: Social Media Fake News in India:
https://www.researchgate.net/publication/341725037_Social_Media_Fake_News_in_India

Member 3 References:

M3_01: Exploring adolescents' perspectives on social media and mental health and well-being:
https://pmc.ncbi.nlm.nih.gov/articles/PMC9902994/

M3_02: Influence of social media on mental health: a systematic review:
https://www.researchgate.net/publication/342757350_Influence_of_social_media_on_mental_health_a_systematic_review

M3_03: Social Media Activities With Different Content Characteristics and Adolescent Mental Health: https://www.jmir.org/2025/1/e73098

M3_04: The Impact of Social Media on Mental Health: https://www.researchgate.net/publication/390057378_The_Impact_of_Social_Media_on_Mental_Health

M3_05: The Impact of Social Media Use Interventions on Mental Well-Being: https://www.jmir.org/2023/1/e44922

Github link: https://github.com/kalpitvora11/research-practices/tree/main