

# *Opportunities and Risks of using social media data to intervene and prevent youth violence*

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- Contextual Background
  - Opportunities of Using Social Media Analytics
  - Risks and Ethical Considerations
  - Questions for Discussion

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# Contextual Background

# Scope and Impact of Youth Violence

Youth violence encompasses a range of harmful behaviors among individuals aged 10-24, including bullying, physical fights, and severe assaults that can lead to injury or death.

**Emotional Impact:** Leads to long-term trauma and fear within communities.

**Economic Costs:** Incurs significant healthcare, law enforcement, and community welfare expenses.

**Educational Disruption:** Affects school attendance and performance, influencing both victims and perpetrators.

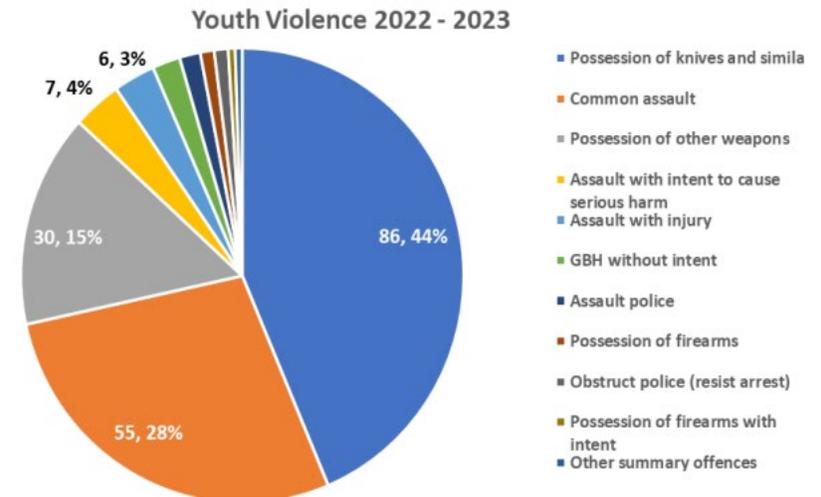


Image Source: Croydon Youth Safety Plan 2023-26

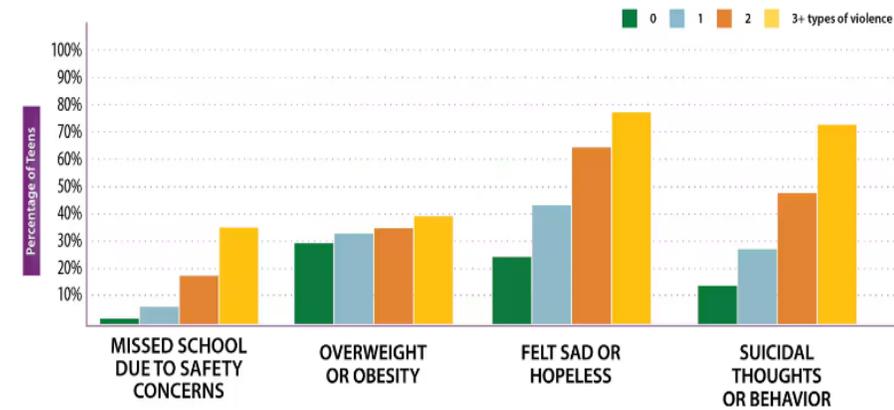


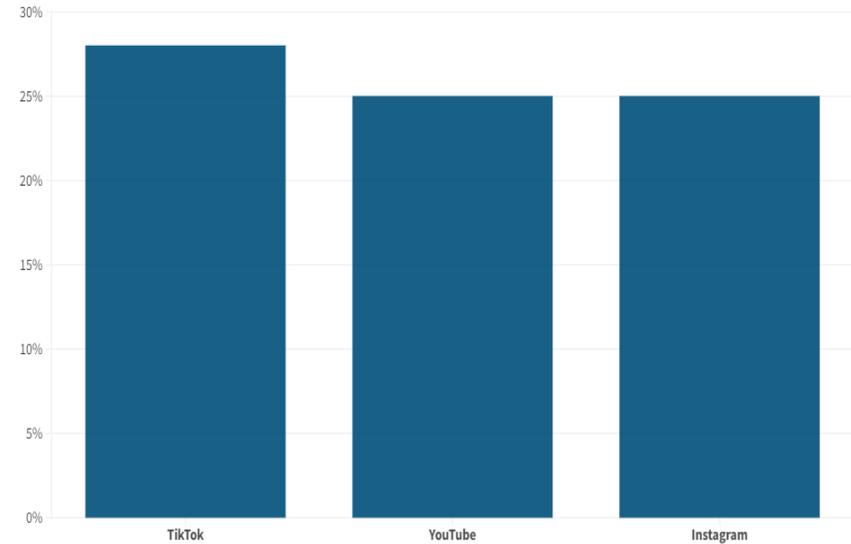
Image Source: Violence Impacts Teen's Lives, [www.cdc.gov](http://www.cdc.gov)

# Relevance and Ubiquity of Social Media Among Youth

Approximately 95% of teens have access to a smartphone, with nearly 90% actively using social media platforms like Instagram, Snapchat, and TikTok.

- **Primary Communication Channels:** Social media is a central hub for peer interactions and expression among youth.
- **Influence on Behavior:** Platforms significantly influence youth behaviors and societal norms.

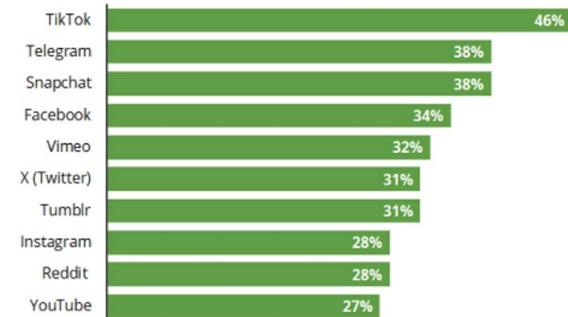
Most popular social sites with 12 to 15-year-olds



Source: Ofcom

Image Source: Ofcom

Proportion of UK teens seeing real-world violence on social media - by platform



Source: Youth Endowment Fund; base = 7,574 teenage children in United Kingdom

Image Source:

<https://www.mediapost.com/publications/article/391013/most-uk-teens-have-seen-real-violence-on-social-me.html>

# Social Media Analytics

Social media analytics involves collecting and analyzing data from social media platforms to identify trends, patterns, and behaviours.

***Tools and Techniques:***  
Incorporates advanced techniques like natural language processing and sentiment analysis to interpret online interactions.

***Application to Youth Violence:***  
Enables monitoring of communication patterns that may predict harmful behaviours, offering opportunities for early intervention.



Image Source: Faster Capital

# Opportunities of Using Social Media Analytics

# Early Detection of Violent Behaviours

Social media analytics enable the early detection of potential violent behaviours or distress among youth by monitoring digital footprints.

- ***Language Changes:*** Analyzing shifts in tone, language, and frequency of posts that may indicate aggression or distress. For example:
  - ✓ *Increased Use of Negative or Aggressive Language:* Analytics might flag a teen's posts if they suddenly start using more profanity or aggressive language than usual, indicating potential anger or distress.
  - ✓ *Shifts from Positive to Negative Sentiments:* Tools that assess sentiment analysis might notice a shift from generally positive or neutral posts to predominantly negative ones, which can signal emotional changes.

# Early Detection of Violent Behaviours

- ***Interaction Patterns:*** Observing changes in how youths interact with peers, such as increasing isolation or aggression towards others. For example:
  - ✓ ***Reduction in Positive Interactions:*** If a normally sociable young person starts to receive or initiate fewer likes, comments, or shares, it might suggest feelings of isolation or withdrawal.
  - ✓ ***Increased Conflictual Interactions:*** An increase in arguments or hostile exchanges in comment sections of a youth's posts could be a sign of growing frustration or aggression.
- ***Posting Patterns:*** Identifying unusual posting times or rapid increases in activity that could signal underlying issues. For example:
  - ✓ ***Nighttime Posting:*** An increase in social media activity during late-night hours might indicate insomnia or anxiety, which are often associated with stress or depression.
  - ✓ ***Rapid Succession of Posts:*** If a young person begins posting very frequently or erratically, it might indicate impulsivity or emotional distress, which can be a precursor to more serious issues.

# Intervention Strategies Based on Analytics

Data-driven insights allow for the development of targeted intervention strategies to prevent violent outcomes effectively.

- ***Customized Outreach Programs:*** Schools and local authorities can deploy customized programs based on identified risk patterns.
  - ✓ *Tailored Educational Sessions*
  - ✓ *Targeted Counseling Services*
  - ✓ *Community Involvement Programs*
- ***Early Support Initiatives:*** Implementing support measures for at-risk youth before issues escalate.
  - ✓ *Proactive Monitoring*
  - ✓ *Early Intervention Teams*

# Enhancing Community Engagement

Social media platforms can strengthen community ties and create supportive networks, crucial in violence prevention.

- **Peer Monitoring:** Encouraging peer monitoring to foster a supportive online community environment.
- **Support Groups:** Facilitating online support groups that provide a safe space for expression and counseling.



**Image Source:** <https://www.beataddiction.com/peer-support-history-importance-and-forms/>



# Risks and Ethical Considerations

# Privacy Concerns



Utilizing social media analytics raises significant privacy concerns, particularly regarding the monitoring of individuals without explicit consent.

- **Intrusive Monitoring:** Potential for perceived or actual intrusive surveillance, impacting user trust and comfort.
- **Data Security:** Risks associated with data breaches and unauthorized access to sensitive personal information.
- **Consent Issues:** Challenges in obtaining genuine consent from youth, complicating the ethical landscape.

# Misinterpretations and Bias

Analytical tools are not free from biases, which can lead to misinterpretations and affect the accuracy of interventions.

- **Algorithmic Bias:** Risk of embedding existing societal biases into algorithms, potentially targeting or misidentifying specific groups.

- ✓ A predictive policing tool might disproportionately flag minority youth as potential offenders due to training on arrest records that reflect historical racial biases in law enforcement practices.

- **Consequences of Errors:** False positives (unnecessary intervention) and false negatives (missed interventions).

- ✓ A social media monitoring system designed to prevent school violence might interpret a student's joking comment about "destroying" opponents in a video game as a genuine threat (false positive), leading to an unnecessary suspension. Conversely, the same system might miss a cryptic message subtly indicating plans for a real fight (false negative), resulting in a missed opportunity to intervene before the situation escalates at school.

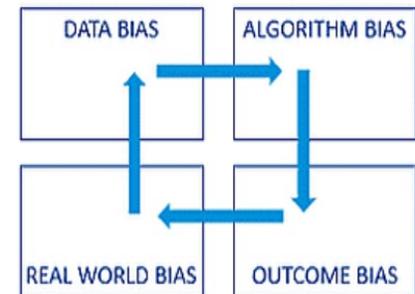


Image Source:  
Vedangvats.com



Image Source: Striking a Balance: The Role of AI and ML in Shaping Tomorrow's Cybersecurity Landscape

# Dependence on Technology

Over-reliance on technology can lead to neglect of underlying social, economic, and cultural factors that contribute to youth violence.

- ***Technological Determinism:*** The risk of assuming technology alone can solve complex social issues.
- ***Ignoring Root Causes:*** Highlight the importance of integrating technological solutions with broader social and economic policies.

# Questions for Discussion

As we consider the potential of social media analytics in preventing youth violence, I invite you to engage with these critical questions:

**1. Data Accuracy:** "How reliable is the data collected from social media, and what are the implications for research and intervention?"

**2. Ethical Frameworks:** "What ethical frameworks are currently in place, and what should be implemented to safeguard privacy and ensure fairness?"

**3. Case Studies:** "Are there any successful case studies or pilots that have effectively used social media analytics for youth violence prevention? What can we learn from them?"

**4. Future Directions:** "How do you see the role of social media analytics evolving over the next 5-10 years in the context of youth violence prevention?"



# Thank You



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