Social media and public health interventions: a systematic review of evaluation methods

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Social media usage

% of U.S. adults who use at least one social media site, by age

Among the users of each social media site, the % who use that site with the following frequencies:

- Facebook
- Instagram
- Twitter
- Pinterest
- LinkedIn

(PEW Research Centre)

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Methods

- Social media health interventions
- Social media as defined by:
  - “…Internet-based applications… creation and exchange of user generated content.” (Kaplan & Haenlein, 2010)
- Clinical populations excluded
- Methodological and evaluative approaches

- Articles identified through database search
  (PubMed, Embase, MEDLINE, PsycINFO, Web of Science)
  n=9984
- Articles after duplicates removed n=7221
- Abstracts screened n=7221
  Excluded studies: irrelevant abstracts n=7186
- Full texts assessed for eligibility n=35
  Excluded studies:
  Descriptive article/protocol n=8
  Intervention not delivered through social media n=4
  Clinical population n=1
- Articles included in analysis n=22
Study characteristics

- Majority individual-level interventions (63.6%)
- Health behaviour:
  - Sexual health (31.8%)
  - Physical activity (22.7%)
  - Smoking cessation (18.2%)
  - Alcohol consumption (9.1%)
  - Prenatal health, food safety, sugary drinks, weight loss
- Population:
  - Youth and young adults (73.3%)
  - White/Caucasian (81.8%)
  - Tertiary level education (75%)
Intervention approaches

- Majority uncontrolled in design (54.5%)
- All controlled studies were individual-level
  - Majority control groups non-social media based (9/10)
- All studies used SM for content delivery
  - Only 77% used SM in evaluation
  - 50% used SM in recruitment
- Facebook most used platform (n=19)
• Behaviour change techniques
  – BCT taxonomy (v1) of 93 hierarchically clustered techniques (Michie et al. 2013)
  – 81.8% studies employed identifiable BCTs
Evaluation and outcomes

• Primary outcome:
  – Health behaviour (45.5%)
  – Feasibility, engagement and reach (40.9%)
  – Knowledge and attitudes (13.6%)

• SM process measures:
  – Evaluated by 77% of studies
  – Platform specific

• No studies measured social network data
  – 2 studies employed snowballing recruitment method
Conclusions

- Social media (SM) useful for disseminating health information and providing social support
- Majority of studies missing “social” aspect of SM
- SM process measures being used in evaluation
  - But what do these mean?
- Traditional research approaches cannot simply be adapted to SM
- Major design, evaluation and ethical considerations are required
- Approaches to SM interventions require refining and standardisation
Thank you for listening

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