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The effect of social media on academic performance, mental health and sleep

Submission date
11/02/2021

Recruitment status
No longer recruiting

Registration date
23/03/2021

Overall study status
Completed

Last Edited
01/04/2021

Condition category
Mental and Behavioural Disorders

[X] Prospectively registered
[X] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] Record updated in last year

Plain English summary of protocol

Background and study aims
Increasing social media use has shown a correlation between social media use and decreased mental health among young people. Eight systematic reviews published to date have reported a correlation between increased screen time and decreased mental health. There is also evidence that suggests that excessive internet use is correlated with poorer sleep. Correlations between social media use and decreased mental health have primarily been investigated using cross-sectional designs, therefore no study to date has established the direction of these associations. A feasibility randomized control trial (RCT) design in which one group of participants is allocated, at random, to having social media access blocked and another to continuing using social media as usual, may be able to shed some light on whether it is feasible to undertake a larger study to test the effect of social media use restriction on mental health sleep and academic grades.

Who can participate?
Undergraduate and postgraduate students above the age of 18 years who are active social media users

What does the study involve?
Approximately 50% of participants will be required to disconnect from their social media (Facebook, TikTok, Instagram, Twitter and Snapchat) for 4 weeks. The remaining 50% will continue using their social media as usual. Social media use, academic grades, sleep and mental health will be measured before and after the intervention.

What are the benefits and risks of participating?
The benefits of participating are gaining a better understanding of their mental health, sleep and social media use.
Risks: none

Where is the study run from?
King's College London (UK)

When is the study starting and how long is it expected to run from?
February 2021 to September 2021

Who is funding the study?
Investigator initiated and funded

Who is the main contact?
Miss Lea Yerevanian, lea.yerevanian@kcl.ac.uk

Contact information

Type(s)
Scientific

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Additional identifiers

Study information

Scientific Title
The effect of Social Media on Academic performance, Mental health and Sleep. Nested feasibility randomized controlled trial

Acronym
SMAMS

Study objectives
1. Participants will be able to adhere to 1 month off social media
2. Participants who are active users of social media will have higher stress levels than non-active users
3. Individuals who are active social media users have lower academic grades than non-active users of social media.
4. Participants who are active users of social media have less sleep quality and less sleep duration than non-active users
5. Individuals who are active users of social media have lower self-esteem, and poorer mental health than individuals who do not use social media
6. Individuals who are active users of social media have less steps than those individuals who do not use social media
7. For the initial feasibility study: 80% of participants randomized to the “no social media use” arm will be able to entirely avoid using social media for 4 weeks

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approval pending, King’s College London Ethics Board (Waterloo Campus, 57 Waterloo Road London, SE1 8WA, UK; no telephone number provided; rec@kcl.ac.uk)

Primary study design
Interventional

Study design
Multicenter feasibility randomized control trial

Study type(s)
Quality of life

Health condition(s) or problem(s) studied
Mental health in undergraduate and postgraduate students who use social media

Interventions
Randomization will take place after the baseline research assessment. Randomization will be carried out at an individual level, at a 1:1 ratio and will be stratified by university using a non-deterministic minimization algorithm. It will not be possible to mask the participants to whether they are using social media or not. All study investigators will be unmasked. University tutors marking students' assignments will be unaware of the students' allocation to either the experimental or the control arm.

A feasibility RCT will be conducted to establish whether blocking access to social media has an impact on mental health/well-being, self-esteem, academic achievement, sleep quality and sleep duration; and to estimate the sizes of any of these effects on social media. Participants will be recruited using online recruitment strategies such as placing adverts on social media platforms and through university student group channels. The participants will be randomly allocated to deactivate all their social media accounts for one month or continue using their social media accounts as usual (blocking vs exposure). Baseline outcome measures will be completed following consent using the GAD-7 and the Rosenberg Self-Esteem questionnaire to measure mental health and self-esteem, grades will be collected, and sleep quality will be measured via the Pittsburgh Sleep Quality Index (T1). Stress will be measured via a validated mobile app named Kenkou: Stress Guide. All participants will be followed up after 1 month, and the five outcomes will be measured using the same method as at baseline (T2). In addition, the number of steps participants make every day will be measured.

Intervention Type
Behavioural

Primary outcome(s)
Use of social media for a period of one month. This will be measured via weekly screenshots looking at social media screen time for a period of 4 weeks.

Key secondary outcome(s)
1. Overall mental health measured using GAD7 and The Warwick-Edinburgh Mental Well-being Scale at T1 (baseline) and T2
2. Self-esteem measured using the Rosenberg Self-Esteem Scale at T1 (baseline) and T2 (one month after randomization)
3. Steps/physical activity measured using screenshots from the Health mobile application at T1 (baseline) and T2 (one month after randomization)
4. Sleep duration and quality measured using the Pittsburgh Sleep Index at T1 (baseline) and T2 (one month after randomization)
5. Course grades measured using self-report at T1 (baseline) and T2 (one month after

randomization)
6. Stress measured via a validated mobile app named Kenkou: Stress Guide at T1 (baseline) and T2

Completion date
30/09/2021

Eligibility

Key inclusion criteria
Aged 18 years or above, undergraduate and postgraduate students who are active users of social media

Participant type(s)
Healthy volunteer

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 Years

Sex
All

Key exclusion criteria
Individuals taking any sedatives or sleep medication

Date of first enrolment
30/03/2021

Date of final enrolment
30/08/2021

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
King’s College London
Institute of Psychology, Psychiatry and Neuroscience (IoPPN)
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University College London
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Sponsor information

Organisation
King's College London

ROR
https://ror.org/0220mzb33

Funder(s)

Funder type
Other

Funder Name
Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request. Continuous and discrete variables, consent will be taken from participants, the data will be stored on OneDrive (KCL), data will be anonymized from the beginning of the study.

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?

Participant information sheet	version v1	05/02/2021	01/04/2021	No	Yes
Protocol file	version v1	05/02/2021	01/04/2021	No	No