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Investigating the impact of eQuoo (a mental health support app) on college students in England

Submission date
02/02/2024

Recruitment status
Stopped

Registration date
05/02/2024

Overall study status
Stopped

Last Edited
03/03/2025

Condition category
Mental and Behavioural Disorders

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

Plain English summary of protocol

Background and study aims:
Almost half of people will at some point in their lives experience a mental health disorder but only about a third will access effective care. The majority of mental disorders (over two thirds) first develop in childhood and adolescence and commonly persist into adulthood. It is therefore important that we develop interventions which are accessible to the large numbers of people who would benefit from this support. There are a number of psychological, physical, social and genetic factors which increase the likelihood of developing a mental disorder and how severe and long-lasting it is. Effective psychological interventions exist but as noted above access is limited. Digital interventions, particularly for less severe disorders, are recommended by NICE and have the potential to increase access to care.
We know relatively little about the effectiveness of interventions developed for adolescents. We do know though that younger individuals tend to drop out of treatment more often than individuals who are older. This suggests we need to develop interventions which are more accessible for young people and are more likely to help them continue with the intervention. Digital interventions have shown promise in decreasing depression and anxiety (equivalent to face-to-face therapy). However, smartphone interventions (via apps) have high attrition rates (43%-99%). One way to address this is 'gamification' where the therapeutic features of an intervention are delivered in a game format, which has been shown to increase engagement, especially in younger people. The intervention to be tested is eQuoo, based on well-validated theory and practice which uses interventions originally designed to be delivered face-to-face in game format. It has received thousands of downloads and has been tested in a University College London (UCL)-led study with a university population and shown to be effective at improving mental health and resilience. It attained a top score by ORCHA, a leading health app assessment platform working with the NHS library, and has been determined to be safe and attractive enough to appeal to the student population. It has been used in commercial settings by companies to support their staff (e.g., Bosch and Inmarsat) who have a large employee body under the age of 30 with universally positive feedback. The general study aim is: To what extent does the use of a gamified mental health app (eQuoo) improve mental health and wellbeing in a college-aged sample over time?

Who can participate?
Students aged 16 years or older who are enrolled in one of the 14 colleges managed by Activate Learning and NCG. Participants must be 'Gillick competent'.

What does the study involve?
Participants complete a brief online survey to understand more about their mental health and wellbeing and are invited to download the eQuoo app on a phone from either the App or Play store (depending on the device). About an hour's usage is encouraged after installation, and then a minimum of 1 hour per week over the following 6 weeks. Although participants can use eQuoo as much or as little as they like, the app is restricted to learning three skills per 24-hour period (there is a notification about this within the app). This is to encourage a paced approach to engaging with the skills. Participants are free to continue using eQuoo after the initial 6-week period. After 2, 4, and 6 weeks after commencing the project, participants will be requested to complete the online survey again. This will also take place at 3 and 6 months, and 1 year after starting participation. There are different forms of data sharing that participation involves: (1) self-reported data about mental health and wellbeing that will be provided as a result of completing the online surveys; (2) grades and attendance data shared with the research team at the end of the year by the college; and (3) gender and progress within the eQuoo app (i.e., the number of skills completed and when they were completed), which are automatically stored on the app servers which the research team will have access to. Please note that all data will be stored confidentially.

What are the possible benefits and risks of participating?
Participation will help us to understand more about levels of mental health and wellbeing over the academic year and how the use of mental health games like eQuoo can impact levels of mental health and wellbeing, as well as other student outcomes, like grades and attendance. Furthermore, because eQuoo is designed to support mental health and wellbeing, participants may experience an improvement in how they feel as a result of their participation. For instance, a reduction in feelings of worry or low mood. eQuoo is a widely used app and we do not anticipate any disadvantages or risks from using it. However, in the survey, participants may find some questions prompt discomfort or distress. For instance, we ask about the possible presence of depression symptoms over the past 2 weeks, and reflecting on how an individual may have felt during this time it may make them feel uncomfortable or remind them of bad experiences. The researchers have provided contact details at the start and end of the questionnaire (and within the app) about who a participant can reach out to, should they feel uncomfortable and wish to speak with someone.

Where is the study run from?
One of the 14 colleges managed by Activate Learning and NCG.

When is the study starting and how long is it expected to run for?
July 2023 to February 2025

Who is funding the study?
1. PsycApps (owners of eQuoo) (UK)
2. Activate Learning (UK)
3. NCG (UK)

Who is the main contact?
Philip Jefferies, philip@psycapps.com

Contact information

Type(s)
Principal investigator

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Additional identifiers

Protocol serial number
0002

Study information

Scientific Title
Gamified mental health support for young people: a cluster randomized controlled trial

Study objectives
Primarily, it is anticipated that users of the eQuoo app will experience improvements in self-reported levels of mental health, wellbeing, and resilience. Specifically, this will be reflected in

improvements in depression and anxiety symptoms, and subjective wellbeing and resilience scores. The researchers will also capture eating disorder behaviours, attendance and attainment data, and will examine whether these will improve as a result of the use of eQuoo.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 01/02/2024, Activate Learning Research Ethics Committee (Oxpens Rd, Oxford, OX1 1SA, United Kingdom; +44 (0)800 612 6008; researchethics@activatelearning.ac.uk), ref: 001

Primary study design
Interventional

Study design
Cluster randomized controlled trial

Study type(s)
Prevention, Treatment, Efficacy

Health condition(s) or problem(s) studied
The mental health and wellbeing of college-aged students (16 years plus)

Interventions
Colleges were randomised to one of two groups by a member of PsycApps staff who drew the names of colleges from a bag, one at a time, alternating between their assignment to group A or B. They then tossed a coin to determine whether group A was the intervention group or the waitlist control group. This process was performed independently for each of the college groups (seven colleges in the Activate Learning college group and seven in the NCG college group). The member of staff doing this was otherwise unconnected with the research and the staff involved in the research were blinded to the assignment of the colleges (an anonymous group ID is used and the file clarifying the link between ID and condition type is held by the member of staff who did the randomisation). The assignment will be revealed when analyses are finalised.

Prior to student recruitment (of which we anticipate n ~ 10,000), colleges who have agreed to take part in the study (n=14) will be randomised to one of two groups:
Group 1 students (intervention group colleges) will be invited to download the eQuoo app.
Group 2 students (control group colleges) will form a waitlist group and will be given access to eQuoo after a 6-month period.

Group 1 students will be encouraged to download and use eQuoo on their phones. They will do this during college tutorial sessions, which will be supported by their tutor (or the member of staff normally leading the tutorial sessions), who will have received training on the contents and purpose of the app (to assist with any technical questions participants may have). Group 1 students will then be encouraged to use eQuoo for a minimum of 1 hour per week in their own time.

Intervention Type
Other

Primary outcome(s)

1. Depression symptoms measured using the Patient Health Questionnaire modified for Adolescents (PHQ-A); excluding the 9th item about self-harm
2. Anxiety symptoms measured using the General Anxiety Disorder-7 (GAD-7)
3. Resilience levels measured using the Brief Resilience Scale (BRS-P)
Measured at baseline, 2, 4, and 6 weeks, and then at 3, 6, and 12 months.

Key secondary outcome(s)
1. Eating disorder behaviours measured using Eating Disorder Examination-Questionnaire adapted for children (ChEDE-Q8) at baseline, 2, 4, and 6 weeks, and then at 3, 6, and 12 months
2. Attendance (days absent) reported at the end of the year
3. Attainment (grades) reported at the end of the year

Completion date
19/02/2025

Reason abandoned (if study stopped)
Lack of staff/facilities/resources

Eligibility

Key inclusion criteria
Aged at least 16 years old at baseline and 'Gillick competent'

Participant type(s)
Learner/student

Healthy volunteers allowed
No

Age group
Child

Lower age limit
16 Years

Upper age limit
25 Years

Sex
All

Key exclusion criteria
Does not meet the exclusion criteria

Date of first enrolment
19/02/2024

Date of final enrolment
19/03/2024

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Banbury and Bicester College
Banbury Campus
Broughton Road
Banbury
United Kingdom
OX16 9QA

Study participating centre
Bracknell and Wokingham College
Church Road
Bracknell
United Kingdom
RG12 1DJ

Study participating centre
City of Oxford College
Oxford City Centre Campus
Oxpens Road
Oxford
United Kingdom
OX1 1SA

Study participating centre
Farnham College
Morley Road
Farnham
United Kingdom
GU9 8LU

Study participating centre
Guildford College
Stoke Road
Guildford

United Kingdom
GU1 1EZ

Study participating centre
Merrist Wood College
Holly Lane
Worplesdon
Guildford
United Kingdom
GU3 3PE

Study participating centre
Reading College
Kings Road
Reading
United Kingdom
RG1 4HJ

Study participating centre
Carlisle College
Victoria Place
Carlisle
United Kingdom
CA1 1HS

Study participating centre
Kidderminster College
Market Street
Kidderminster
United Kingdom
DY10 1AB

Study participating centre
Lewisham College
Lewisham Way
London
United Kingdom
SE4 1UT

Study participating centre
Newcastle College
Scotswood Road
Newcastle Upon Tyne
United Kingdom
NE4 7SA

Study participating centre
Newcastle Sixth Form College
Westmorland Road
Newcastle-upon-tyne
United Kingdom
NE4 7SA

Study participating centre
Southwark College
25 The Cut
London
United Kingdom
SE1 8DF

Study participating centre
West Lancashire College
College Way
Skelmersdale
United Kingdom
WN8 6DX

Sponsor information

Organisation
PsycApps Ltd

Funder(s)

Funder type
Industry

Funder Name
PsycApps Ltd

Funder Name
Activate Learning

Funder Name
NCG

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study will be stored in a publicly available repository (Open Science Framework; https://osf.io/9w8zy/).
The data will include self-reported measures of mental health and wellbeing, attendance and attainment data, and basic demographics (e.g., sex). Consent will be obtained from participants.
There will not be any identifiable data included in the dataset.
The data will be uploaded/available by the conclusion of the project.
There are no restrictions on access or usage.

IPD sharing plan summary
Stored in non-publicly available repository

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes