Plan Overview

A Data Management Plan created using DMP Tool

DMP ID: https://doi.org/10.48321/D1NM1F

Title: The Effect of Horticultural Activity on Reducing Depressive Levels on Youth in Hong Kong

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Funder: Self-funding

Template: CUHK Data Management Plan Template

Project abstract:

Background: Depression symptoms and associated illnesses are the major reason for disability-adjusted life years among youth. Previous meta-analyses and systematic reviews showed horticultural activity is effective among the older population but its effects among youth is uncertain. Methods: This is a randomized controlled trial for 108 youths with depression symptoms. Inclusion criteria are youth between 15 and 24 years old with a self-reported Patient Health Questionnaire-9 (PHQ-9) score between 5 and 19. Recruitment takes place through flyers distribution outside secondary schools, poster promotion, online recruitment through social media and mass emails to university students. The subjects are randomized in a 1:1 ratio into a standardized weekly horticultural program for 4 weeks or no intervention. The primary outcome is depressive level measured by PHQ-9 while secondary outcomes are anxiety, self-esteem, and quality of life level. Data will be collected before treatment, post-treatment, and one-month post-treatment. Discussion: This research will provide data on the effectiveness and feasibility of using horticultural activity to reduce youth depressive levels and discuss its future applicability to a larger clinical trial.

Start date: 09-01-2023

End date: 04-30-2024

Last modified: 07-08-2024

Copyright information:

The Effect of Horticultural Activity on Reducing Depressive Levels on Youth in Hong Kong

Data Collection

Will you create or collect data in your study?

- Yes

If yes, by what means will you create or collect the data?

- Experiment
- Survey

The data will be collected by questionnaires distributed to the participants, including participants' demographic data questionnaire, Patient Health Questionnaire-9, Generalized Anxiety Disorder-7, Rosenberg Self-Esteem Scale and EQ-5D-5L, patient demographic data and participants' participation rate (attendance).

Photos will be taken by the researcher during the intervention about the progress of the intervention.

All questionnaires are the same as the version submitted to and approved by the Joint CUHK-NTEC Clinical Research Ethics Committee.

What type of data will you create or collect?

- Numeric
- Image

Numeric data includes the score patient obtained from the questionnaires: Patient Health Questionnaire-9, Generalized Anxiety Disorder-7, Rosenberg Self-Esteem Scale and EQ-5D-5L, patient demographic data and participants' participation rate (attendance)

Image data includes photos taken during the intervention about the progress of the intervention.

What are the data formats?

- Tabular - .xlsx
- Image - .jpg
- Text - .docx

Graphic data will be in Image - .jpg format.

Numeric data will be in Tabular - .xlsx format.

Text data will be in Text - .docx format.

How will the data be organized?

Questionnaires collected will be labelled according to the timepoints of collection to ensure they will not be mixed up, i.e. T0/T1/T2 to indicate it is collected before intervention, after intervention or one month after intervention. Questionnaires for the intervention group are labelled as HG, while the control group questionnaires are labelled as

CG. Therefore, a questionnaire from the intervention group collected one month after the intervention will be labelled as "HGT2" and stored in a folder specified for it.

All questionnaires will also be scanned to create an electronic version and stored in a password-protected computer, USB drive and cloud storage. All electronic version uses the same labelling system as the paper version.

Graphic data, i.e. photos taken during the research, will also be stored in password-protected computer, USB drive and cloud storage in a separate folder. Graphic data will be labelled according to the time and date of creation in the format of YYYYMMDDHHMM. For exmaple, a photo taken on 11th December, 2023 16:37 will be labelled as 202312111637.

Storage and Backup

How will the data be backed up?

- On desktop / laptop
- Cloud storage
- On external harddisk

The researcher will be responsible for backup and backup will be done weekly on Mondays. The data storage standard will be complied with ISO 27001.

One copy of the data will be stored in a password protected computer only accessible by the researcher.

On copy of the data will be stored in google drive, which is password protected, and only accessible by the researcher.

One copy of the data will be stored in a password protected USB drive, which is stored in a locked locker.

How will the data be recovered in the event of an incident?

- By secondary backup

Lost data will be recovered by a secondary backup. The need for data recovery will be checked bi-weekly on Monday.

Selection and Preservation

How will you decide what data to be kept or destroyed?

- By contractual requirement

All data will be destroyed after 5 years of completing the research.

How long will the data be retained and preserved?

- 5 years

Where will the data be preserved?

- CUHK Research Data Repository

Will the data repository charge for depositing data?

- No

Data Sharing

Will you share the data created or collected in the study?

- No

How will potential users find out about your data?

- Others

The data will not be shared due to the participants did not consent to share data.

Documentation and Metadata

What documentation and metadata will be provided to help others discover and understand the data?

- readme.txt

What metadata standard will be used?

- Dublin Core
- Data Documentation Initiative (DDI)

The CUHK Research Data Repository which adopts Dublin Core and Data Documentation Initiative (DDI) metadata standards will be used.

Ethics and Legal Compliance

Will human participants be involved in your study?

- Yes

If yes, how will you protect the identity of participants, if necessary?

- Anonymize identity
- Formal written consents

All data will be anonymized by using codes to represent participants, all particpants shown in photos will be blurred (Whole body blurred, including clothes).

Will you request participants' consent for data preservation and sharing?

- Yes

What are the risks to data security?

- Confidential data

Anonymization of data will be done to protect data privacy. All data will be anonymized by using codes to represent participants, all particpants shown in photos will be blurred (Whole body blurred, including clothes).

How will confidential or sensitive data be handled to ensure it is stored and transferred securely?

- Password-protected

Who own(s) the data generated in your study?

- Data creator

How will the data be licensed for reuse?

- Others

The data will not be shared due to the participants did not consent to share or reuse raw data.

Are there any restrictions on the reuse of secondary data that were created by others?

- No

Responsibilities and Resources

Who will be responsible for the data management activity?

- Data manager
- Principal investigator
- Data creator

Will additional specialist expertise (or training for existing staff) be required to deliver your data management plan?

- No

Do you require hardware or software which is additional or exceptional to existing institutional provision?

- Yes

If yes, what hardware or software will you need?

The software IBM SPSS 28.0 (version 28.0, IBM Corp., New York, NY, United States) will be used.

Microsoft Excel will be used.

Planned Research Outputs

Dataset - "Depressive level"

The depressive levels of the participants will be collected by Patient Health Questionnaire-9. The data is collected at three timepoints, namely pre-intervention and post-intervention and one month post-intervention.

Dataset - "Anxiety Level"

The anxiety levels of the participants will be collected by The Generalized Anxiety Disorder-7 (GAD-7) Chinese version. The data is collected at three timepoints, namely pre-intervention and post-intervention and one month post-intervention.

Dataset - "Quality of life"

The quality of life levels of the participants will be collected by the Chinese version of the EuroQol 5 Dimension 5 Level (EQ-5D-5L) questionnaire. The data is collected at three timepoints, namely pre-intervention and post-intervention and one month post-intervention.

Dataset - "Self-esteem"

The self-esteem levels of the participants will be collected by The Chinese version of the Rosenberg Self-Esteem Scale. The data is collected at three timepoints, namely pre-intervention and post-intervention and one month post-intervention.

Image - "Photos of the intervention group"

Photos are taken during te intervention

Dataset - "Demogrphic data "

Demographic data of participants are collected by questionnaires

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Planned research output details

Title	Type	Anticipated release date	Initial access level	Intended repository(ies)	Anticipated file size	License	Metadata standard(s)	May contain sensitive data?	May contain PII?
Depressive level	Dataset	2025-06-29	Closed	CUHK Research Data Repository	5 MB	Creative Commons Attribution Non Commercial Share Alike 4.0 International	None specified	No	No
Anxiety Level	Dataset	2025-06-29	Closed	CUHK Research Data Repository	5 MB	Creative Commons Attribution Non Commercial Share Alike 4.0 International	None specified	No	No
Quality of life	Dataset	2025-06-29	Closed	CUHK Research Data Repository	5 MB	Creative Commons Attribution Non Commercial Share Alike 4.0 International	None specified	No	No
Self-esteem	Dataset	2025-06-29	Closed	CUHK Research Data Repository	5 MB	Creative Commons Attribution Non Commercial Share Alike 4.0 International	None specified	No	No
Photos of the intervention group	Image	2025-06-29	Closed	CUHK Research Data Repository	20 MB	Creative Commons Attribution Non Commercial Share Alike 4.0 International	None specified	No	No
Demogrphic data	Dataset	2025-06-29	Closed	CUHK Research Data Repository	5 MB	Creative Commons Attribution Non Commercial Share Alike 4.0 International	None specified	No	Yes