

# Effects of different coffee recipes on mental health performance in community adults

<b>Submission date</b> 14/10/2022	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 11/11/2022	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 07/11/2022	<b>Condition category</b> Mental and Behavioural Disorders	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Coffee is good for health as known worldwide, and the smell of coffee aroma and the mixture of a number of bio-natural compounds such as antioxidant polyphenols can alleviate participants' depression symptoms in some studies. Darker roasted coffee beans have a stronger coffee aroma and fewer polyphenols. The aim of this study is to determine the effects of different coffee recipes on mental health performance in adults.

### Who can participate?

Healthy working adults aged over 22 years

### What does the study involve?

Participants are randomly allocated into two equal groups. Group A drinks Recipe A coffee and Group B drinks Recipe B coffee (200 ml before noon three times a week for 12 weeks).

### What are the possible benefits and risks of participating?

By participating in this study, participants get free three drip coffee bags a week for 3 months. Completing an online survey related to mental health may be distressing. Participants can pause to drink the coffee beverages during the study or withdraw entirely if they wish.

### Where is the study run from?

1. National Association of Small & Medium Enterprise, R. O. C. (Taiwan)
2. Chiayi Campus of Chang Gung University of Science and Technology (Taiwan)
3. Chi Mei Medical Center (Taiwan)

### When is the study starting and how long is it expected to run for?

April 2020 to March 2021

### Who is funding the study?

This study/project is funded by the Chronic Diseases and Health Promotion Research Center, Chang Gung University of Science, Chiayi Campus of Chang Gung University of Science and Technology (CGUST) (Taiwan)

Who is the main contact?  
Dr Chia-Hsiu Chang  
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## Contact information

### Type(s)

Principal investigator

### Contact name

Dr Chia-Hsiu Chang

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## Additional identifiers

### Clinical Trials Information System (CTIS)

Nil known

### ClinicalTrials.gov (NCT)

Nil known

### Protocol serial number

Nil known

## Study information

### Scientific Title

Effects of different coffee recipes on mental health performance in community adults

### Acronym

CGA

### Study objectives

1. Caffeine and chlorogenic acid levels are an effective energy booster that can improve mental health performance in adults
2. Trigonelline can also improve the mental health performance of adults

### Ethics approval required

Old ethics approval format

**Ethics approval(s)**

Approved 10/07/2020, Chang Gung Medical Foundation Institutional Review Board (No. 199, Dunhua N. Rd., Songshan Dist., 105 Taipei City, Taiwan (R.O.C.); +886-33196200#3716; yijiun@cgmh.org.tw), ref: 202000636A3D001

**Study design**

Multicenter interventional double-blind randomized controlled trial

**Primary study design**

Interventional

**Study type(s)**

Prevention

**Health condition(s) or problem(s) studied**

Mental health

**Interventions**

Participants were randomly allocated into two equal groups through a random lottery by researchers.

Group A ingested Recipe A 200 ml coffee drink with 5 g dark roasted Ethiopian coffee beans (Arabica Variety: Original) mixed with 5 g light roasted Colombian Arabica coffee beans (Arabica Variety: Bourbon and Typica).

Group B ingested Recipe B 200ml coffee drink with 4 g dark roasted Ethiopian coffee beans mixed with 6 g light roasted Colombian coffee beans.

The Short Portable Mental Status Questionnaire (SPMSQ) was used to measure cognitive status for all participants, and the 5-item Brief Symptom Rating Scale (5-BSRS) was used to evaluate the difference between baseline and post-test for mental health performance in 58 adults.

The coffee beans in the study were roasted by a roaster who was certificated by the Specialty Coffee Association of America. After grinding, two recipes of coffee beans were packaged in drip bags. All the participants were required to obey the process as follows: pouring 200 ml 97°C hot water into the coffee drip bags with a cup and having coffee beverages three times a week before 12:00 at noon for 12 weeks.

**Intervention Type**

Other

**Primary outcome(s)**

1. Cognitive status measured using SPMSQ at pretest (baseline) and posttest (12 weeks later)
2. Mental health assessed using 5-BSRS at pretest (baseline) and posttest (12 weeks later)

**Key secondary outcome(s)**

1. Coffee content of caffeine, 4-O-caffeoylquinic acid, chlorogenic acid (CGA), 5-O-caffeoylquinic acid, and trigonelline measured using high-performance liquid chromatography (HPLC) at posttest (12 weeks later)
2. Coffee content of 1-methyl-2-pyrrolidone, CNMP, 2,5-dimethylpyrazine measured using gas chromatography at posttest (12 weeks later)

**Completion date**

01/03/2021

## Eligibility

**Key inclusion criteria**

1. Willing to sign a written participant consent form
2. Male and female subjects currently working
3. Normal SPMSQ test
4. Men and women over the age of 22 years

**Participant type(s)**

Healthy volunteer

**Healthy volunteers allowed**

No

**Age group**

Adult

**Sex**

All

**Total final enrolment**

58

**Key exclusion criteria**

1. Pregnant women or patients with osteoporosis
2. Major surgery within 14 days
3. Currently suffering from disease and in the acute phase

**Date of first enrolment**

20/08/2020

**Date of final enrolment**

21/08/2020

## Locations

**Countries of recruitment**

Taiwan

**Study participating centre**

Chiayi Campus of Chang Gung University of Science and Technology

No.2, Sec. W.

Jiapu Rd

Puzi City  
Taiwan  
61363

**Study participating centre**

**National Association of Small & Medium Enterprise, R. O. C.**

6F., No. 95, Sec. 2

Roosevelt Rd

Da'an Dist

Taipei City

Taiwan

10646

**Study participating centre**

**Chi Mei Medical Center**

No.901, Zhonghua Rd

Yongkang Dist

Tainan City

Taiwan

71004

## **Sponsor information**

**Organisation**

Chang Gung University of Science and Technology

**ROR**

<https://ror.org/009knm296>

## **Funder(s)**

**Funder type**

University/education

**Funder Name**

Chronic Diseases and Health Promotion Research Center, Chang Gung University of Science and Technology

# Results and Publications

## Individual participant data (IPD) sharing plan

After the primary results have been published, the individual participant data (IPD) and associated documentation, including the protocol and statistical analysis data, will be prepared to be shared with other researchers. The people who request access to the IPD will be reviewed by all researchers following the CGUST policy on data sharing. Please contact Dr Chia-Hsiu Chang (chchang01@mail.cgust.edu.tw) for general project enquiries and participant-level data. We can offer the data approved by the participants and delinked personal data after the article has been published for 3 years.

## IPD sharing plan summary

Available on request

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes