

# Ho Han Sheng

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## WORK EXPERIENCE

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### Research Assistant

Jul 2025 - Present

Research Cluster, School of Humanities and Behavioural Sciences, Singapore University of Social Sciences

- PI: A/Prof Atiqah Azhari
- Providing administrative support for research cluster and SHBS Student Research Grant Awards
- Providing research support services (e.g., research design, formal analysis, report writing) to wider School of Humanities and Behavioural Sciences faculty

### Research Assistant

Oct 2023 - Present

School of Humanities and Behavioural Sciences, Singapore University of Social Sciences

**Primary:** [Research in Psychophysiology, Quality of Life, Stress, & Time Use \(PQRST\) Lab](#)

- PI: A/Prof Emily Ortega
- Conducted data cleaning, pre-processing, and statistical analyses in R for the National Council of Social Service - Ngee Ann Kongsi (NCSS-NAK) 360 Panel Study
- Conceptualised and applied mixed graphical models for exploratory data analysis of high-dimensional datasets
- Typeset large internal reports ( $\approx 400$  pages) with  $\text{\LaTeX}$
- Unpublished results informing policy-making on: (a) gender disparities in unpaid work, (b) work-life balance and flexible work arrangements, and (c) quality of life past COVID-19
- Co-written (MOE AcRF Tier 1) grant applications

**Secondary:** [Behavioural Research and Applied Interpersonal Neuroscience \(BRAIN\) Lab](#)

- PI: A/Prof Atiqah Azhari
- Implemented pre-processing and analytical pipeline for fNIRS data in Python
- Consulting on statistical analyses for three honours capstone projects working with fMRI data
- Developing and teaching Python workshops for lab members and broader psychology student population
- Conceptualisation and formal analysis of neural synchrony through vector-autoregressive methods

**Tertiary:** [Affect, Ambivalence, & Adjustment \(AAA\) Lab](#)

- PI: Dr. Oh Yong Sheng, Vincent
- Supervision of a group research project (comprising four undergraduate volunteers) conducting secondary data analyses of SHARE-ERIC and CHARLS
- Prototyped physical slider response box for psychological experiments with Arduino microcontroller

**Quaternary:** [Bilingual Language and Thought Lab](#)

- PI: Dr. Ooi Seok Hui
- Drafting IRB applications and preregistrations
- Provide formal analysis support on Structural Equation Modelling (SEM)

## Research Intern

Jan 2023 - Jul 2023

Multimodal Neuroimaging in Neuropsychiatric Disorders Laboratory, Center for Sleep and Cognition,  
Yong Loo Lin School of Medicine, National University of Singapore

- Utilised Python and R for mixture modelling of eye-tracking data, data cleaning, and exploratory data analysis
- Conducted qualitative interviews for stimulus recall tasks and scored neurocognitive batteries

## Peer Mentor

Jan 2022 - Dec 2022

School of Science and Technology, Singapore University of Social Sciences

- Conducted weekly tutorials for MTH219: Fundamentals of Statistics and Probability and MTH220: Statistical Methods and Inference

## CONFERENCE PRESENTATIONS

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Tay, X. A., Ortega, E., Chan, Y. X. B., **Ho, H. S.**, & Tang, S. O. S. (2024, November 6–7). *Families who eat together stay together?: Examining time use of families in Singapore by family structure* [Conference presentation]. Asian Family Conference 2024, Singapore.

**Ho, H. S.**, Ortega, E., Chan, Y. X. B., Tay, X. A., & Tang, S. O. S. (2024, September 2–6). *Exploratory network modelling of complex human systems in time-use research: Results from wave 1 of the Singapore NCSS-NAK 360 Panel Study* [Conference presentation]. Conference on Complex Systems 2024, Exeter, England.

## PUBLICATIONS

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Ortega, E., Tay, X. A., **Ho, H. S.**, Chan, Y. X. B., Cheok, S. Z. M., & Tang, S. O. S. (2024, November 7). *NCSS-NAK 360 Panel Research: Wave 1 report* [Unpublished internal report]. National Council of Social Service.

Azhari, A., Rai, A., **Ho, H. S.**, Jegathisan, A., Gill, S., Norfor, N., & Chen, Z. (2025). *Inter-brain synchrony between undergraduate students during a naturalistic online seminar predicted greater relational satisfaction and task performance* [Manuscript submitted for publication]. School of Humanities and Behavioural Sciences, Singapore University of Social Sciences.

Ortega, E., Tay, X. A., Shu, H., Lee, W. P. R., Chan, Y. X. B., **Ho, H. S.**, & Tang, S. O. S. (2025). *Gender differences in how we spend our time: A Singapore perspective* [Manuscript in preparation]. School of Humanities and Behavioural Sciences, Singapore University of Social Sciences.

Ortega, E., Tay, X. A., **Ho, H. S.**, Tang, S. O. S., & Chan, Y. X. B. (2025a, March 21). *NCSS-NAK 360 Panel Study: Wave 2 report* [Unpublished internal report]. National Council of Social Service.

Ortega, E., Tay, X. A., **Ho, H. S.**, Tang, S. O. S., & Chan, Y. X. B. (2025b, May 30). *NCSS-NAK 360 Panel Study: Wave 3 report* [Unpublished internal report]. National Council of Social Service.

**Ho, H. S.** & Ortega, E. (2025). *A network psychometrics approach to analysing heart rate variability* [Manuscript in preparation]. School of Humanities and Behavioural Sciences, Singapore University of Social Sciences.

# PROJECTS

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## **Alleviating the Biopsychosocial Components of Prejudice in Adults and Youth**

**Ongoing**

- Named collaborator (PI: Dr Oh Yong Sheng, Vincent)
- Grant proposal slated to submit in 2026
- Responsible for developing experimental protocol integrating psychophysiological measures, continuous self-reported emotions, and neuroimaging apparatus
- Responsible for conducting formal analysis of intensive longitudinal data with network psychometrics, vector-autoregressive models, and GIMME
- Project aims to take a multi-componential biopsychosocial approach to understanding prejudice towards diverse groups such as the elderly, immigrants, and racial minorities, as well as an experimental test of the efficacy of three interventions that mitigate the development of prejudice when individuals are exposed to prejudicial content

## **The Heart of the Matter: Profiling Heart Rate Variability and Stress of University Students**

**Ongoing**

- Named collaborator (PI: A/Prof Emily Ortega)
- Devised intensive longitudinal, experience sampling design with continuous wearable measurement ([TechDoctor](#)) integration.
- Devised planned-missingness, anchor-item design for reducing respondent burden
- Project aims to investigate the stress differences between full-time and part-time students during high-stakes examination periods, the role of physiological metrics and daily emotional states in predicting stress levels, and tipping points in academic integrity

## **Binlingual Networks**

**Ongoing**

- Lead investigator (Co-PI: Dr. Ooi Seok Hui)
- IRB application drafting
- Devised cross-sectional survey and experimental procedure for collection of bilingualism-related measures
- Conceptualised and responsible for formal analysis of bilingual constructs with network analytic methods

## **Linguistic distance and bilingual executive control**

**Ongoing**

- PI: Dr. Ooi Seok Hui
- Drafting pre-registration of secondary data analysis
- Conceptualised and responsible for formal analysis with network analytic methods
- Project aims to: (a) conceptualise linguistic distance as a latent factor and (b) examine its effects on executive control

## **Psychophysiological and Temporal Dynamics of Mixed Emotions**

**Ongoing**

- Honours capstone project (Co-Supervisors: A/Prof Emily Ortega; Dr. Oh Yong Sheng, Vincent)
- Integrated psychophysiological measures (EmotiBit), continuous self-reported valence (via game controller), cognitive appraisals, and video stimuli in PsychoPy experiment
- Developing idiographic, dynamical models of emotional experiences with TV-VAR
- Comparing (in)variance in emotional conditions with INIT and group-level similarity via mlVAR and GIMME

## **Effectiveness of Heart Rate Variability Biofeedback Training on Patients Undergoing Cardiac Rehabilitation (HRV-CARE)** **Ongoing**

- Conceptualised longitudinal panel research design for randomised control trial
- Devised Structural Equation Modelling (SEM) and Generalised Network Psychometrics analysis plan to examine multimodal psychophysiological and behavioural measures
- Integrated wearable data collection platforms ([TechDoctor](#)) to capture continuous change in biomarkers across study duration

## **Experiences with Quantitative Methods in the Undergraduate Psychology Curriculum** **Ongoing**

- Extension of independent research submitted for PSY455: Qualitative Methods
- Phenomenological study on psychology undergraduates' experiences learning quantitative methods
- Results informing redesign of quantitative modules at SUSS
- Implemented [OpenAI's Whisper](#) for transcription and QualCoder for analysis

## **Timing of Help and Future Motivation: The Role of Self-Efficacy in Singapore's Academic Context** **Jan 2025 - Apr 2025**

- Group research project under PSY405: Applied Research in Social Psychology
- Devised mathematical specifications for hypotheses
- Conceptualised project research design and experimental procedures
- Conducted formal analysis (through R) with ANCOVA in a Latent Change Score specification for modelling mediation in a two-instance, pretest-posttest experimental design
- Wrote and interpreted statistical results through an SEM framework

## **Mental Wellness Toolkit @ North West CDC** **2022 – 2023**

- Conducted literature review on stress
- Authored sections on stress and coping strategies

## **PsyConnect Statistics Support Group** **May 2022 – present**

- Founded and coordinated a peer-run statistics consulting platform for SUSS Psychology students

## **so you want to leaRn** **Dec 2025**

- Development and teaching of an introductory R programming workshop for SUSS Psychology students

## **AWARDS & HONOURS**

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### **Student Travel Award, Singapore University of Social Sciences** **2024**

- $\approx$  \$4700
- For contributed talk “Exploratory Network Modelling of Complex Human Systems in Time-Use Research: Results from Wave 1 of the Singapore NCSS-NAK 360 Panel Study” at Conference on Complex Systems 2024

### **Dean's List, Singapore University of Social Sciences** **2024**

- For excellent performance in the BSc Psychology programme
- Academic accomplishments indicating attainment of a high level of competence and self-discipline

- SUSS Community Impact Award**, Singapore University of Social Sciences

2023
- For “Mental Wellness Toolkit @ North West CDC”
  - Recognises and spotlights the positive impact of SUSS students’ collaborative efforts within the community

SKILLS

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Tools

Programming Languages

ℒ<sup>A</sup>T<sub>E</sub>X, Git, PsychoPy, [EmotiBit](#), Arduino, [QualCoder](#), SPSS, Qualtrics

R, Python

EDUCATION

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**Professional Certificate in Network Psychometrics for Behavioural and Social Scientists**

Aug 2024

National University of Singapore

**Bachelor of Science (Honours), Psychology**

2020 - present

Singapore University of Social Sciences