The University of Hong Kong

Department of Psychology

7th Departmental Research Postgraduate Symposium

Oral Presentations-Abstracts

May 7, 2021 (Friday)

Via Zoom Meeting

Oral Presentation: *#O1*
Name of Student: *CHOI Ho Fung, Hugo (MPhil/Y2)*
Name of Primary Supervisor: *Dr Sing Hang CHEUNG*
Name of Co-supervisor: *Dr Esther Yuet Ying LAU (EdUHK)*

Classes of sleep trajectories and their neurocognitive outcomes

Introduction: In modern times, sleep is often treated as a distraction from our work and entertainment. Combined with various daily hassles and pollutions in the environment, almost half the world is overshadowed by poor sleep quality. Numerous studies in the previous two decades have well-documented the significance of sleep towards neurocognitive functioning. Metacognition, a construct that has seen rising popularity in recent years, however, has received only limited attention in its relationship with sleep. Previous studies tapping into the field have only featured short-term, acute sleep deprivation paradigms, and thus have limited generalisability to the chronic poor sleep quality much of the world is facing. *Methods:* Three hundred emerging or young adult who have participated in a previous longitudinal sleep study will first be distributed an actigraphy to collect objective sleep data, before being invited to our lab to complete a series of cognitive tests. The sleep data in prior waves of the longitudinal study will be able to provide trajectory data that allows for comparisons of neurocognitive outcomes between different trajectory classes. *Conclusion:* The findings of this study will provide important insight as to the potential effects of long-term poor sleep quality, as well as enriching the literature on metacognition.

The role of top-down and bottom-up factors in facilitating threat-related perceptual decision-making

To survive, human beings need to *detect* the presence of threats quickly and accurately. Threat detection relies on perceptual decision-making (PDM). The PDM process requires the brain to efficiently extract the threat-related signal from noise. Previous research has highlighted bottom-up perceptual prioritization (i.e., driven by exogenous threatening stimuli) and a neural pathway for fast and automatic processing of threat-related sensory information. Basic (non-affective) cognitive and neuroscience research has shown that top-down endogenous factors such as attention and expectation that are in place *before* stimulus-encounter can impact perception. This position has been supported by affective neuroscience research, showing that threat-related perceptual decision-making (TRPDM), both behavioral and neural, is enhanced when top-down attention is directed towards threatening stimuli compared to neutral stimuli. However, it remains unclear *how* top-down threat-related attention differentially modulates bottom-up processing of signals from threatening versus non-threatening stimuli. This is an important research question as TRPDM occurs frequently in familiar contexts where environmental cues inform expectations of certain stimuli over others, directing top-down attention and potentially enhancing bottom-up stimuli processing. Thus, this research aims to examine the impact of top-down threat-related attention and bottom-up stimulus features on TRPDM.

This research will examine the effects of manipulating top-down threat-related attention in TRPDM using emotional face stimuli. Two stimuli-related factors will be manipulated. First, face stimuli comprising 3 emotion categories (happy, fearful and neutral) with 5 emotion values (EV) spanning very fearful, mildly fearful, neutral, mildly happy and very happy will be presented. Second, stimuli of each EV will be further processed to create three spatial frequency (SF) versions of images: unfiltered broad-(BSF), low- (LSF) and high-spatial frequency (HSF). Using a two-alternative-forced choice (2AFC) design, participants will make a perceptual decision (yes/no) to determine if the image that is briefly presented is "fearful or not" in a fear-attention block, "neutral or not" in a neutral-attention block and "happy or not" in a happy-attention block, while accuracy and response time measures are recorded. Importantly, this "A or not A" design can facilitate emotion-oriented-attention to a single facial expression category for TRPDM. Signal Detection Theory and Drift Diffusion Modelling will be applied to compute parameters to explain how top-down attention and bottom-up stimulus factors interact in TRPDM.

This research aims to improve our understanding about a critical survival skill in humans and its potential impact on mental disorders associated with maladaptive responses to TRPDM, such as in anxiety disorders.

A latent profile analysis of daily routines patterns and the links to psychiatric symptoms at the early phase of COVID-19 pandemic

Background: The unprecedent COVID-19 pandemic has largely influenced people's everyday life. The dramatic changes in major life domains may resemble the functional impairment consequential to mental disorders.

Objective: To use latent profile analysis (LPA) to identify different patterns of regularity of daily routines among Hong Kong population and to link the daily routines profiles to depression and anxiety.

Methods: A population-representative sample ($N = 4,042$) aged 15 years or older was recruited between April and August 2020 by random digit dialing. Respondents reported regularity of six universal daily routines (primary: hygiene, healthy eating, sleep; secondary: leisure activities, exercising/keeping active, socializing), depressive symptoms (9-item Patient Health Questionnaire) and anxiety symptoms (7-item Generalized Anxiety Disorder scale). LPA was conducted by Mplus 7. ANOVA and logistic regression were used to reveal the associations between daily routines profiles and psychiatric symptoms.

Results: Six distinct profiles were determined based on fit statistics and interpretability: (1) "All regular" was defined by high regularity across six daily routines (52.4%); (2) "Primary regular" was denoted by high regularity of three primary routines but low regularity of three secondary routines (31.0%); (3) "Primary and leisure" was represented by high regularity of primary routines and leisure activities but low regularity of other secondary routines (2.8%); (4) "Primary and exercising" was denoted by high regularity of primary routines and exercising/keeping active but low regularity of other secondary routines (5.8%); (5) "Hygiene regular only" was defined by high regularity of hygiene but low regularity of other five routines (5.7%); (6) "All irregular" was represented by low regularity across six daily routines (2.4%). Lower levels of psychiatric symptoms were observed among people who could maintain all regular routines (profile 1) compared to their counterparts (profiles 2-6) ($ps < .001$). People who had regular leisure activities (profile 3) exhibited lower levels of psychiatric symptoms than those in more irregular daily life patterns (profiles 2, 5, 6) ($ps < .050$). People who merely maintained regular primary routines (profile 2) showed lower levels of psychiatric symptoms than those whose daily routines were all irregular (profile 6) ($ps < .001$).

Conclusion: A considerable proportion of Hong Kong citizens did not maintain regular daily routines during the COVID-19 pandemic, which may place them at greater risk of poor mental health. The present findings provide a feasible direction for developing scalable behavioral interventions for potential mental health problems.

Oral Presentation: *#O4*

Name of Student: *TAM Tik Sum Sammi (PhD/Y1)*

Name of Primary Supervisor: *Professor Tatia LEE*

The study of resting-state networks through musical mood induction: Exploring the effects of sad mood on mood congruency and recovery in the general population

Major Depressive Disorder (MDD) is characterized by the misrepresentation and dysregulation of emotion, difficulties disengaging from self-focused attention, rumination, and negative mood-congruent thinking. Its local prevalence has doubled from 10.7% in 2014 to 19.8% in 2020, pointing towards a worrying upward trajectory. Although this has called for the examination of brain organization through network approaches to understand the neural underpinnings of MDD, the role of altered brain circuitry has yet to reach a consensus. To this end, we propose a fMRI study predicated on the *triple network model* which has gained popularity in its synthesis of the core neural networks purported to play a role in the psychopathology of psychiatric disorders (Menon, 2011). In which, the *default mode-* (DMN), *central executive-* (CEN) and *salience network* (SN) are networks which respectively subserve crucial brain functions during rest, cognitive and emotional processes. Since the literature has largely focused on current, chronic, and remitted MDD population; also with emerging evidence suggesting that psychiatric disorders are the resultant of aberrations in normal functioning, studying the natural variation in the vulnerability to depression alongside other idiosyncratic factors could be a valuable research avenue towards the detection of this debilitating disorder within the general population.

Against this background, our objective is to understand the alteration of *functional networks* by employing the *musical mood induction procedure* (MMIP; (Västfjäll, 2001), a method developed to experimentally manipulate the affective states of individuals through music listening. We aim to induce sad (vs. neutral) emotional state in participants recruited from the general population to explore how the variation in networks alteration (as correspond to variation in the vulnerability to depression) may modulate mood alteration in a mood induction paradigm. Specifically, we will investigate the functional connectivity of networks subserving 1) rest, 2) mood induction, 3) task, and 4) recovery period by comparing the connectivity between these phases, and scrutinize if the differences in connectivity are related to variances in the vulnerability to depression, among other individual differences. We hope to examine the modulating effect of affective state on networks in the context of natural variation in depression as this could elucidate the extent to which sad music is capable of triggering specific emotional and cognitive processes as a function of depressive symptoms, and whether these are related to MDD associated aberrations in brain circuitry.

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Training for Critical thinking: Using Reflective Questions as a Guide

In the era of information outbreak, we face various valid information and tremendous fake news that perpetuates our lives. With the help of social media platforms, fake news could distort election results, affect public perceptions, and shape human emotions. Not only do we need to perfect computer algorithms to reduce exposure of those fake news, but we need to equip ourselves with the ability to combat them as well. Critical thinking, which is characterized by the ability to evaluate, synthesize, analyze, and apply the newly-presented information, can be important in fake news detection. Past studies have shown that people with lower CRT(Critical Thinking Test) scores are correlated with a higher frequency of sharing misinformation online. Here we propose a critical thinking training program using questioning techniques. We design all our questions to be open-ended, aiming at guiding participants towards their self-discovery on how to manipulate and evaluate new information before coming to a conclusion. We would recruit 200 participants from the online platform Prolific, having them complete a survey. During the survey, they will be reading either a short story or a piece of critical reading related to COVID-19 vaccines. The experimental group would then be asked several reflective questions, requiring deeper thought and evaluation of the article, while the control group would be simply asked several questions on how they like the article. Manipulation check questions and in total 15 fake news assessments would be presented following the questions, where participants need to rate their accuracy and likelihood of sharing. Demographic information on age, gender, and educational level will be collected in the last stage. We hypothesize that after controlling for educational level, going through reflective questions would enable participants to show a short-term boost in critical thinking ability, thus being able to discern quality information from fake news. We also hypothesize that critical thinking ability would be domain-general, not depending on the article content they have just read. The study can be significant in the information age, such that discernment ability is essential in order not to get carried away by so-called "opinion leaders". Future studies could aim at making the training session into a long-term program in forming critical thinking habits and expanding the program to a broader audience.

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Poster Presentations-Abstracts

May 7, 2021 (Friday)

Via Zoom Meeting

Poster Presentation: *#P1*
Name of Student: *CHAN Sze Yu (MPhil/Y1)*
Name of Primary Supervisor: *Professor Zhansheng CHEN*

Internalizing objectification

Objectives: Internalizing objectification means when being objectified, people tend to internalize sexual objectification as self-objectification. Prior research manipulated the self-objectification by objectifying female participants. Once sexually objectified, women gradually internalize and objectifying observer's perspective on their own bodies, becoming preoccupied with their own physical appearance, which is called self-objectification. However, there are some conflicts among studies on being objectified and self-objectification. The first aim of current study is to examine whether being objectified will result in self-objectification. Internalizing objectification may be affected by various factors, such as social power, and cognitive resources, etc. Power plays an important role in daily social life that can be defined as an individual's capacity to control resources and influence others. The second aim to explore whether social power moderate the association between being objectified and self-objectivation.

Methods: Two hundred female participants will be recruited in study 1 and self-reported their objectifying experiences synchronously via their phones during a month. Study 2 will divide one hundred female participants into three groups: high-power, low-power and control. Each group will first experience objectification gaze (breast being gazed by males). Afterwards, three groups will be asked to recall a personal experience to manipulate their social power. High-power group will recall a situation when their power was over someone else; low-power group will recall a reverse situation; while control group will simply recall what had occurred to them on the previous day. Levels of self-objectification will be measured via corresponding scales.

Hypothesis: 1) Sexually objectifying women leads women to objectify themselves in both laboratory and real-life contexts. 2) Power also moderates the association. When power is relatively low, females are more likely to internalize others' judgement about appearance.

Implication & Application: It is a colossal challenge to prevent and treat self-objectification in girls and women. The findings of current study provide hints on the intervention strategies. The efforts to deal with these challenges should raise consciousness using interventions grounded in feminist, gestalt, cognitive–behavioral, and interpersonal theory.

Keywords: internalizing objectification; self-objectification; cognitive resources.

Poster Presentation: *#P2*

Name of Student: *HUNG Wing Yiu (MPhil/Y1)*

Name of Primary Supervisor: *Dr Winnie CHAN*

The relation between Spontaneous Focusing on Numerosity (SFON) and mathematical performance in children

Spontaneous Focusing on Numerosity (SFON) refers to the ability to self-initiatively focus on numerosity in the surrounding. Children with high SFON tendency pay more attention on numerosity without explicit guidance of others. Research found that preschooler's SFON is associated with different aspects of mathematic performance, such as cardinality understanding, arithmetic skills and object counting. It can also predict children's later mathematical achievement, after controlling for their nonverbal IQ and verbal comprehension. However, few studies to date have explored the mechanism behind the relation between SFON and children's mathematical performance.

The present study aims to explore the factors which contribute to the relation between preschooler's SFON and their symbolic number and arithmetic development. Previous studies have suggested that non-symbolic and mapping skills may play a role in relating SFON and children's mathematical performance. In the present study, we will further clarify whether non-symbolic and mapping skills indeed play a mediator role in explaining the relation between SFON and difference domains of early mathematical skills including number comparison, arithmetic tests, and counting. 200 children aged 4-5 will be assessed for their SFON tendency, mapping skills, enumeration skill, symbolic and non-symbolic comparison, and arithmetic skills. Digit span and listening comprehension will be included to control for children's working memory and verbal skills. It is predicted that 1) SFON would positively correlate with children's mathematical performance after controlling for age, verbal skills and working memory; 2) the relation between SFON and mathematical performance would be explained by individual differences in children's ability in non-symbolic and mapping skills. The findings will help us better understand how the early tendency to focus on numerosity is related with children's mathematical skills.

Poster Presentation: *#P3*
Name of Student: *KWAN Hong Wang, Denis (PhD/Y1)*
Name of Primary Supervisor: *Dr Kathy SHUM*

The Effectiveness and Underlying Mechanisms of
Parent Management Training and Mindful Parenting Programme

Given the importance of parenting in child development, various parent management trainings (PMT) have been developed to educate parents on effective behavioural management strategies in parenting. Studies have shown that PMT leads to increase in positive parenting behaviours, improvement in parent-child relationship, and reduction in parental stress and child behavioural problems. Despite ample evidence on the effectiveness of PMT, there is relatively less research that examines the mechanism underlying the effectiveness of PMT. Research findings also suggest that PMT is less effective for parents with poor emotional competence as they may encounter difficulties in applying the newly acquired skills in the heat of the moment.

In recent decades, mindfulness-based parenting interventions have been developed. For instance, the Mindful Parenting (MP) programme was found to be effective in promoting positive mother-child interactions, reducing parental stress, child behavioural problems and parental emotional reactivity. Nevertheless, the underlying mechanism of the MP program is less known.

The two types of parenting interventions apparently yield similar positive results but their underlying mechanisms are yet to be explored. The current study aims to compare the treatment outcomes of PMT and MP, examine the underlying mechanisms of PMT and MP, and explore for whom PMT and MP are more effective.

A randomized-controlled design will be adopted. Parents of primary school students will be randomly assigned to the PMT group, the MP group, and the waitlist-control group. Both intervention programmes consist of eight weekly sessions. Participants will complete questionnaires before the programme (Time 1), immediately after programme completion (Time 2), and three months after programme completion. Measurements include parenting knowledge, parent's emotional competence, parenting behaviours, parental mindfulness, parental stress, parenting sense of competence, parent-child relationship and child behavioural problem. Qualitative data will also be obtained from the participants.

Findings in the current study will shed light on the similarities and differences in treatment outcomes of the two types of parental interventions. The study will also reveal the underlying mechanisms of the interventions. Results of the study will also inform service providers on how to match parents with the most suitable training support, thereby improving cost-effectiveness. This study is plausibly the first that examines the effects of PMT and the MP in non-clinical population, and will have important implications on parenting intervention.

Poster Presentation: *#P4*
Name of Student: *OR Kwan Nok Justin (MPhil/Y1)*
Name of Primary Supervisor: *Dr Dorita CHANG*

Effects of continuous theta-burst stimulation on stereoscopic vision

Electrical brain stimulation over the primary visual cortex has been shown to have a significant and prolonged effect on a range of visual capacities for both healthy people and individuals with visual impairment. Particularly, previous work has shown that continuous theta-burst stimulation (cTBS) of the right primary visual cortex can temporarily improve stereoacuity in adults with amblyopia. Still other work, however, has reported that cTBS over the parietal cortex produces significant deficits in stereopsis of normally-sighted individuals by attenuating early disparity responses. Here, we aim to assess the effects of cTBS over the primary visual cortex in isolation, or in combination with perceptual training (PT), on stereoscopic function of normally-sighted observers.

Stereopsis is one of the most crucial visual computations that allow an impression of depth. Depth perception is served by binocular neurons in the primary visual cortex, extending to higher areas along ventral and dorsal pathways. The dorsal visual areas, including the posterior parietal cortex and the medial temporal area, play a significant role in segmenting objects from noisy backgrounds, while the ventral cortex serves fine feature discriminations. Here, we index stereoscopic function in terms of a signal-noise task, as perceptual training on a signal-in-noise disparity task has been shown to support the broadest degree of learning that generalizes to other visual features. Moreover, previous work showing enhancements in performance following cTBS involved noise-segmentation paradigms only.

In this study, participants will be required to judge the depth position of a central target relative to a surround. Task difficulty will vary by adjusting the signal-to-noise ratio defining the number of dots that coherently define the disparity plane versus a random disparity. Participants will be randomly assigned to one of the four groups – PT alone, cTBS alone, PT-cTBS, and cTBS-PT, and stereoscopic performance will be indexed both pre- and post-manipulation. We predict that combining cTBS and PT will lead to compounded effects that benefit stereoscopic performance more than effects from either cTBS or PT alone.

Poster Presentation: *#P5*
Name of Student: *SU Michael Ronald (PhD/Y2)*
Name of Primary Supervisor: *Dr Kathy SHUM*

The effect of regulatory focus in the different stages of the creative process

Previous research has shown that promotion focused people who are driven by growth and progress are found to be more creative than prevention focused people who are motivated by security and protection. However, very few studies explored the relation between regulatory focus and creativity in the different stages of the creative process. Two studies will be conducted to investigate the above-mentioned relation in adolescents.

Study one is a correlational study that looks at the relation between regulatory focus and creativity in the idea generation and idea evaluation stages of the creative process. Two hundred and fifty senior secondary school students from a local school will be recruited. It is hypothesized that promotion focus will significantly and positively predict originality in the idea generation stage whereas prevention focus will significantly and positively predict task appropriateness in the idea evaluation stage. Originality and task appropriateness are two important components of creativity.

Study two is an experiment in which the participants will be randomly assigned into four manipulated regulatory focus groups (promotion-promotion, promotion-prevention, prevention-promotion, and prevention-prevention) in relation to the two different creative stages (idea generation and idea evaluation). One hundred and fifty senior secondary school students from another local school will be recruited. It is hypothesized that participants with promotion focus in idea generation and prevention focus in idea evaluation would score the highest in overall creativity whereas those with prevention focus in idea generation and promotion focus in idea evaluation would score the lowest.

Poster Presentation: *#P6*
Name of Student: *TONG Kong Yan Christine (PhD/Y1)*
Name of Primary Supervisor: *Dr Terry WONG*
Name of Co-supervisor: *Dr Winnie CHAN*

Investigating the cognitive correlates of Science Achievement

STEM (Science, Technology, Engineering, and Mathematics) is valued as one of the most important and fast-growing areas in education. Thus, educators are obliged to know more about the predictors of science achievement and its learning mechanisms. In Hong Kong, such research is still scarce apart from understanding the effect of medium of instruction on secondary school students' achievement (Yip, Tsang, Cheung, 2003).

In this proposal, science achievement is operationally defined as performance in a globally recognized achievement test, TIMSS 2019. The literature of science reasoning and achievement offered four candidates as cognitive predictors of science achievement, namely spatial cognitive skills (Hodgkiss et al., 2018), metacognitive beliefs and skills (Conley et al., 2004; She, Lin, & Huang, 2019) relational reasoning (Murphy, Firetto, & Greene, 2016), and reading comprehension (O'Reilly & McNamara, 2007).

Previous research has preliminarily established links between these four cognitive predictors and science achievement, yet standardized assessments were not consistently used and usually only one of these skills are investigated in those studies. Therefore, it is unclear whether these skills exert unique contribution on achievement after controlling covariates (e.g., non-verbal IQ, working memory, age, SES) and the effect of other predictors. By putting these candidate predictors in a single project, our study aims to conduct a systematic investigation on these predictors and their respective unique contribution to science achievement, to compare their relative importance, and also to explore if these factors interact with each other. Preliminary data from a pilot study will be discussed.

Three research questions will be addressed in this research project. First, we aim to identify the cognitive correlates of science achievement in Hong Kong. The second question concerns the mechanisms underlying the relation between the cognitive correlates and science achievement. The final question asks the developmental patterns of these relations across a 1-year interval. We plan to recruit 250 Cantonese-speaking Form 3 students from local secondary schools, with age ranging from 14-15 years old. These students will be recruited from schools with different bandings and different medium of instructions. Data will be collected during Summer break.

Findings from this project will be one of the first studies to inform us about the predictors of scientific achievement in Hong Kong from an individual differences perspective and will inform possible intervention strategies.

Poster Presentation: *#P7*

Name of Student: *WANG Ran Rachel (PhD/Y1)*

Name of Primary Supervisor: *Dr Shirley Li*

Barriers and Facilitators when Delivering CBT-I to Asian Adolescents

Background: Sleep disturbance is a common complaint that has been normalized and underestimated over the past decades but with high incidence rate in the general population and across different age groups. Though insomnia affects people across developmental stages, its incidence on adolescents has shown a drastic increase. Research has shown that around two-thirds of adolescents have sleep complaints and one-third of them possess a diagnosis of insomnia (Dohnt et al., 2012). However, the proportion for them to receive or actively seek for professional treatment remains low. Cognitive-Behavioral Therapy for Insomnia (CBT-I), as the primarily proposed first-line non-pharmacological intervention of primary and persistent insomnia (National Institute of Health, 2005), consistently showed a promised long-term effect when compared to medications (Riemann & Perlis, 2009). However, there were discrepancies found when delivering CBT-I to this cohort, including their high drop-out rate and low-level of assignment completion (Ringle et al., 2015). Bootzin and colleagues (2005) found that when delivering psychotherapy to adolescents, they encountered severe challenges, including adolescents' lack of motivation, commitment, and compliance. In their adolescent groups, most participants were not actively participated in the group as they were required to attend by educators and parents; therefore, their unwillingness contributed to either early drop-out or resistance to complete the therapist's assignment. However, previous studies were conducted in Western countries, we propose that there might be a cultural difference, such as individualism versus collectivism, stigma, and social expectation, may play a role affecting adolescents' treatment response in different demographic areas. Therefore, the primary aim of our current study is to find potential barriers and facilitators for Asian adolescents to attend and complete CBT-I.

Methods: In this study, we will conduct focus groups using semi-structured focus group protocols. We will recruit a group with adolescents who joined the previous therapy sessions and explore both the positive and negative experiences as well as recommendations given by participants. Each subject will participate in one focus group around 75 minutes. The Ph.D. candidate student and an intern of the Sleep Lab will co-facilitate the focus group. Each focus group will be audiotaped. The audio will be transcribed with pseudonyms. We will use the qualitative analysis software, *Dedoose*, to analyze our data. The codebook will be first created using qualitative analysis methods and implemented to *Dedoose* together with transcriptions of the focus group audio.

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Poster Presentation: *#P8*
Name of Student: *YIN Lipeng (PhD/Y1)*
Name of Primary Supervisor: *Professor Zhansheng CHEN*

Being phubbed decreases interpersonal willingness:
Mediating roles of impression formation and self-disclosure

Previous research has extensively explored the reasons of phubbing and the negative effects on individuals and on acquaintance relationships. There is a lack of causal evidence on the impact of phubbing on interpersonal relationship building and development in stranger social situations.

Based on relevant theoretical and empirical studies, we propose a model to explore how being phubbed affects phubbees' interpersonal willingness with phubbers. When being phubbed, phubbees' impression of phubbers will be formed more negatively, i.e. the impression evaluation of phubber will be lower in warmth and competence. Such negative impression evaluation from phubbees on phubbers will lead to phubbees' low level of self-disclosure and then reduce their interpersonal willingness with phubbers. In other word, we propose that there would be a causal relationship between being phubbed and phubbees' interpersonal willingness, and impression formation and self-disclosure could play chain mediating roles in such relationships.

To test our hypotheses, some correlational and experimental studies will be conducted. Some scales will be used in Study 1 to explore the correlation between being phubbed and phubbees' interpersonal willingness and to the explore chain mediating roles of impression formation (i.e., enthusiasm and competence) and self-disclosure between them. Based on Study 1, in Study 2, we aim to use a recall paradigm to provide casual evidence for the chain mediating model through a one-way between-subjects experimental design. And Study 3 will use a different being phubbed manipulation, that is, the imagination paradigm to examine the casual relationship between being phubbed and interpersonal willingness and to replicate the Study 2's findings.

The expected results of this study could provide causal evidence to support the negative effect of phubbing on the establishment of interpersonal relationships between unacquainted individuals. Besides, the results could help people become more aware of the need to reduce phubbing in social situations to reduce the negative effects. The results could also provide new ideas for intervention programs developed for individuals who have difficulties in building interpersonal relationships.

Keywords: Being phubbed, interpersonal willingness, impression formation, self-disclosure

Poster Presentation: *#P9*
Name of Student: *YU Yee Man Branda (PhD/Y1)*
Name of Primary Supervisor: *Dr Christian CHAN*

Irreconcilable political differences in families: Longitudinal survey data

Background Family is known to be important on socializing and cultivating the political ideology of an individual. However, the 2019-Anti Extradition Bill Movement caused consequential political polarization and chasms not only in the community but also within family (Youth Research Centre of the Hong Kong Federation of Youth Groups, 2019). The political stance might be an emerging theme in the parent-child conflicts, imposing additional family risk yet little known impacts in families with political incongruence (Ojeda & Hatemi, 2015; White & Rogers, 1997). Besides, the differences in endorsement of moral foundations underlying the different conceptions of an ideal society were found between the liberals in US and conservatives, along the left-right political spectrum in Italy as well as between the Pan-Green and Pan-Blue coalition in Taiwan (Battista et al., 2018; Graham et al., 2009; Hsu et al., 2019). To date, the differences in the endorsement of moral foundations are not investigated between the pro- and anti- government camps in Hong Kong. The present study aims to explore the different profiles of family vulnerability and the protective factors in Hong Kong families with political incongruence.

Method & Statistical analysis A three-wave prospective online survey, with 4-month interval, will be distributed using Qualtrics in (1) young adults aged 18-30 years OR (2) parents of the young adults from families with political incongruence (N=788, accounting for 50% attrition rate). The endorsement of moral foundations will be assessed by the Hong Kong version Moral Foundations Questionnaire. Other measures include parent-child contact and family relationship; perceived social support from different sources; political incongruity; support for violent radicalization; mental health symptoms; and sociodemographic data. The potential moderating effect and the impact of moral foundation as well as perceived social support on the progress of family adapting to the political relevant conflicts and the mental health outcomes will be examined using regression analysis, latent profile analysis, cross-lagged modeling, and latent growth curve analysis.

Discussions The present study will identify the key vulnerability and strengths in the process of adapting to the political incongruence within family. Findings will add to the existing literature by understanding the familial conflicts related to political incongruence with the perspective of moral foundations. The conceptual framework by the family resilience model of facing family risks and cultivating positive adaption (FRM; Henry et al., 2015)) will provide insights on ways to customize conflict resolving strategies and pathways to boost the family resilience.

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Eye movement pattern and consistency predict passage reading performance of English as Second Language (ESL) Learners

Although eye movements reflect cognitive processes involved in reading, whether eye movements predict passage reading performance in addition to language proficiency and general cognitive abilities remains unclear. Through Eye Movement with Hidden Markov Model (EMHMM), we discovered that an eye movement pattern involving more horizontal saccades predicted faster reading speed in addition to language proficiency and executive function. Also, higher English proficiency predicted faster reading speed through the mediation of this eye movement pattern. In contrast, reading comprehension accuracy could be predicted by a more consistent eye fixation in the beginning of reading engagement in addition to verbal working memory. This effect may be because higher fixation consistency indicates a better developed visual routine as a result of reading expertise. Thus, eye movement pattern and consistency predicted different aspects of reading performance. This finding has important implications for ways to assess or facilitate ESL learners' reading through eye movement measures.

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Training for Critical thinking: Using Reflective Questions as a Guide

In the era of information outbreak, we face various valid information and tremendous fake news that perpetuates our lives. With the help of social media platforms, fake news could distort election results, affect public perceptions, and shape human emotions. Not only do we need to perfect computer algorithms to reduce exposure of those fake news, but we need to equip ourselves with the ability to combat them as well. Critical thinking, which is characterized by the ability to evaluate, synthesize, analyze, and apply the newly-presented information, can be important in fake news detection. Past studies have shown that people with lower CRT(Critical Thinking Test) scores are correlated with a higher frequency of sharing misinformation online. Here we propose a critical thinking training program using questioning techniques. We design all our questions to be open-ended, aiming at guiding participants towards their self-discovery on how to manipulate and evaluate new information before coming to a conclusion. We would recruit 200 participants from the online platform Prolific, having them complete a survey. During the survey, they will be reading either a short story or a piece of critical reading related to COVID-19 vaccines. The experimental group would then be asked several reflective questions, requiring deeper thought and evaluation of the article, while the control group would be simply asked several questions on how they like the article. Manipulation check questions and in total 15 fake news assessments would be presented following the questions, where participants need to rate their accuracy and likelihood of sharing. Demographic information on age, gender, and educational level will be collected in the last stage. We hypothesize that after controlling for educational level, going through reflective questions would enable participants to show a short-term boost in critical thinking ability, thus being able to discern quality information from fake news. We also hypothesize that critical thinking ability would be domain-general, not depending on the article content they have just read. The study can be significant in the information age, such that discernment ability is essential in order not to get carried away by so-called "opinion leaders". Future studies could aim at making the training session into a long-term program in forming critical thinking habits and expanding the program to a broader audience.