

CO-DESIGNING INTERIOR ENVIRONMENT FOR YOUTH AND CHILDREN DURING COVID-19 PANDEMIC

AN EMPIRICAL STUDY TO EMPOWER ECONOMICALLY DISADVANTAGED
FAMILIES

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AGENDA

- Research background
- Objectives
- Methodology
- Data collection & analysis
- Research findings & conclusions
- Discussion & recommendations

RESEARCH BACKGROUND

- Wealth disparity as a well-acknowledged social issue in Hong Kong
- 209,700 of 7.4 million citizens living in extremely small sub-divided units (SDUs)
- Median per capita floor area of accommodation was **5.3 m²**
- Median monthly household income = **\$13,500**
- Median rent = **\$4,500** (rent to income ratio = 31.8%)
- Average household size = 2.3
- 27.6% household without independent kitchen
- **18.1%** of the total SDU population are children < age of 15 [HK population 11.8%)
- **39.4%** are young to middle-aged persons (age between 25 – 44) (HK population 28.1%)



Source:

Thematic Report: Persons Living in Subdivided Units (Census and Statistics Department 2018)

RESEARCH BACKGROUND

- Home interior environment plays a significant role in children's development
- Poor housing condition brings negative impact on physical health, cognitive development and academic performance
- Other studies show
 - Association of children and youth's health and psychological problems with adverse and crowded living environment
 - Correlation between sub-standard living environment with poor school performance, lower educational attainment, a higher chance of unemployment and continual poverty
- During COVID-19 pandemic, school suspension added extra challenges to economically disadvantaged children with less resources of home schooling/distance learning



OBJECTIVES

- Aim to find the impact of co-designing interior environment for children and youth living in SDUs during COVID-19 pandemic
- Hypothesis: Participatory experience in interior design can



Empower youth and families to implement change on their immediate home environment



Improves students' learning motivation and academic performance, especially during school suspension



Minimize the feeling of social alienation



METHODOLOGY

- **Research Team and Project Moderators**
Teaching staff and students from THEi with specialties in product design, interior design and architecture
- **Facilitators**
Social workers from Caritas Community Centre and local primary school teachers
- **Participant Group**
15 interested SDU families with children and youth from age 6 to 15 in the local school curriculum
- **Project Duration**
January – September 2020



METHODOLOGY

- Stage 1: Formulation of research agendas and stakeholders engagement
- Stage 2: Collaborative co-design creation via dialogue-labs method
- Stage 3: Execution of the bespoke furniture in-situ
- Stage 4: Development and discussion on end products (furniture & interior layouts)
- Stage 5: Reflective process based on satisfaction survey and interview feedbacks

DATA COLLECTION & ANALYSIS

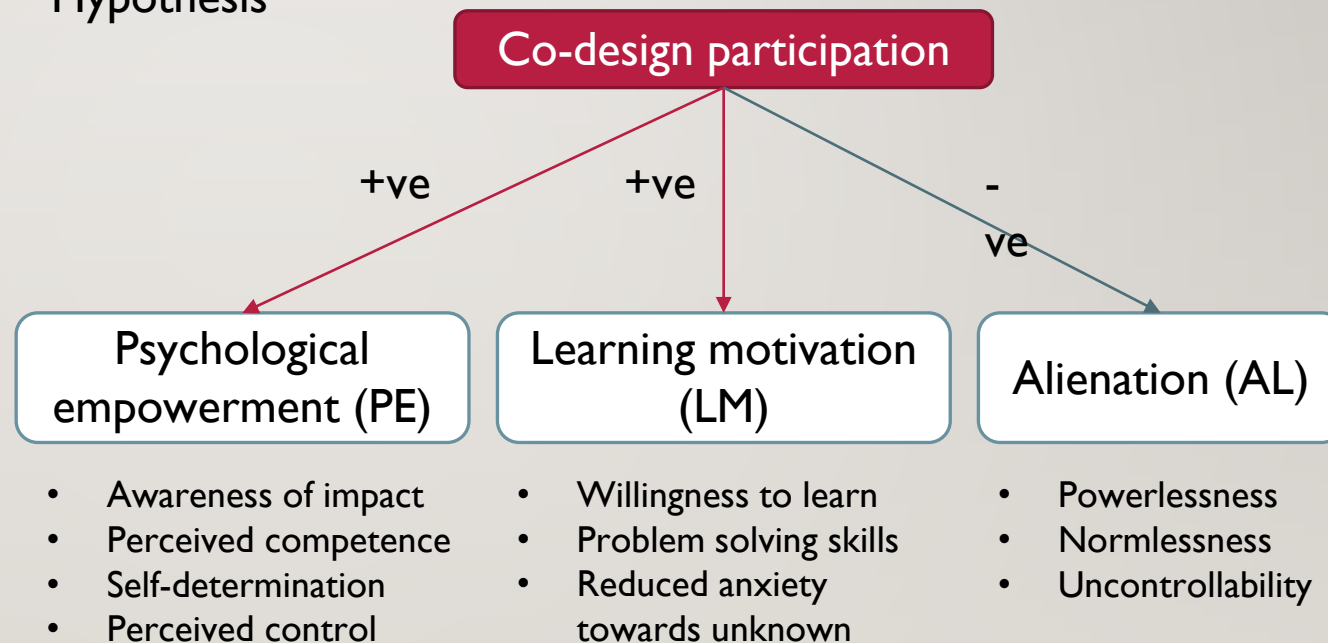
- Sample size

207 completed paper and pencil self-administrated questionnaires (5-point Likert scale) from 90 co-design project participants and 117 community stakeholders with similar socio-economic background

- Statistical method

Ordinary least square (OLS) regression to test the relationship of co-design participation with psychological empowerment (PE), learning motivation (LM) and alienation (AL)

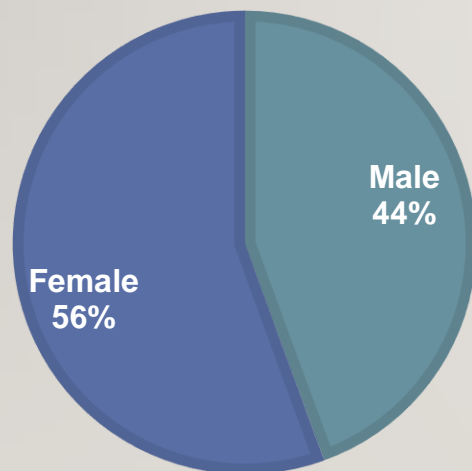
Hypothesis



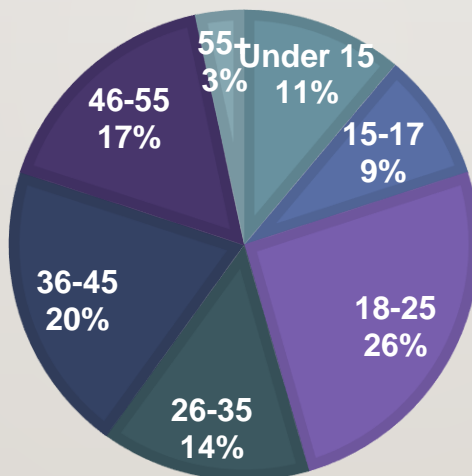
DATA COLLECTION & ANALYSIS

- Demographic distribution of the 90 co-design project participants

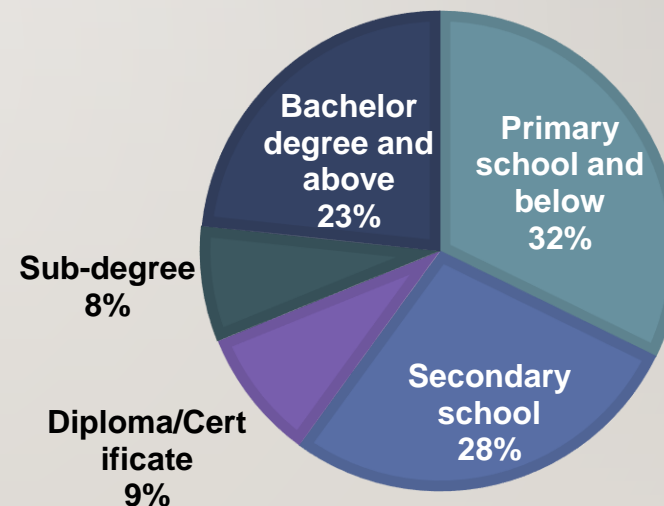
GENDER



AGE



EDUCATIONAL BACKGROUND



DATA COLLECTION & ANALYSIS

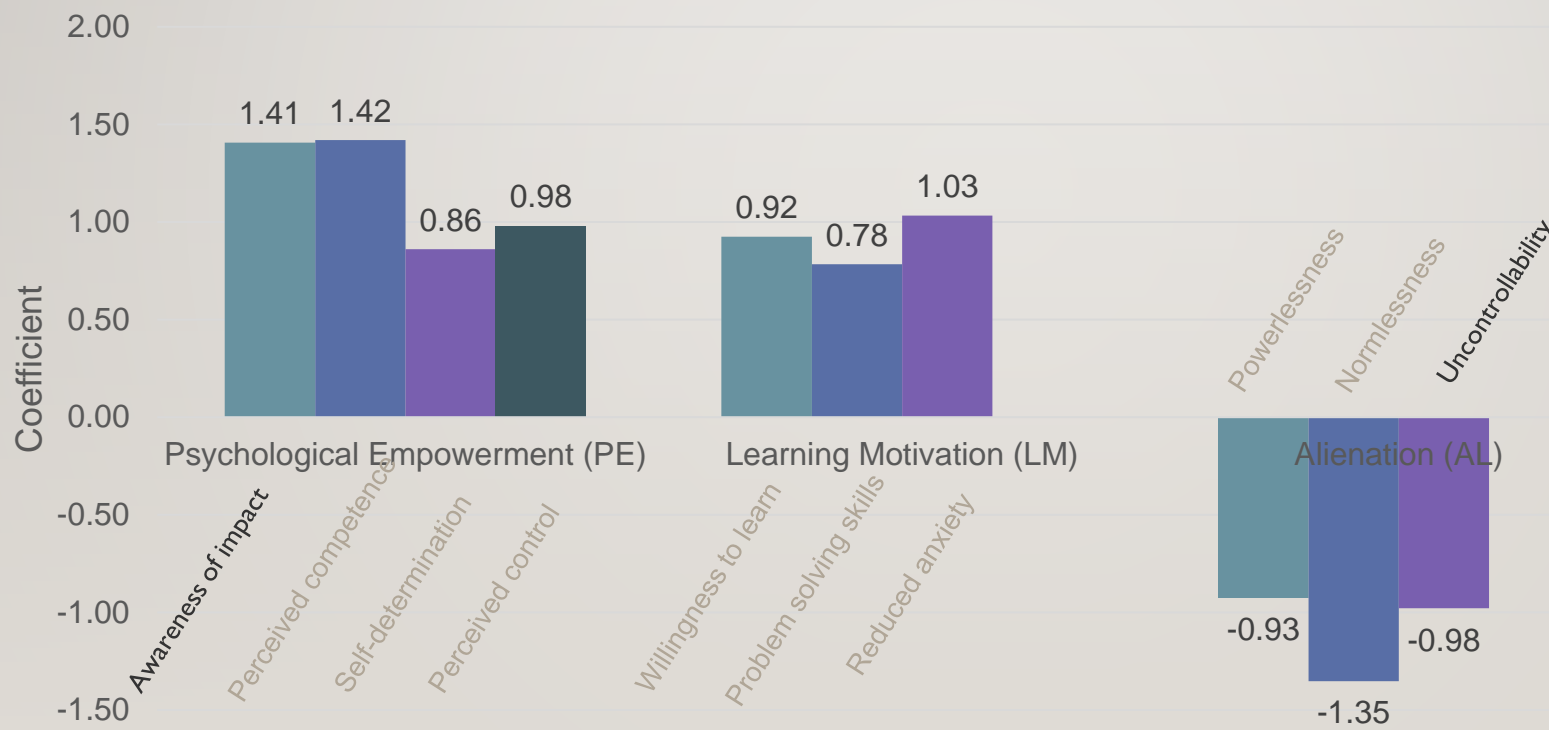
- Satisfaction level of the current living environment
 - **Over 80%** of respondents indicate that their living environment has restrained their lifestyle
 - After co-design project...
 - ✓ **90%** of participants agree that co-design has improved their living environment and life quality
 - ✓ **87.8%** of participants agree that overall work and learning efficiency has been improved
 - ✓ **37.8%** of participants tend to spend extra 0.5 hours or more per day in the renovated space of SDUs





RESEARCH FINDINGS & CONCLUSIONS

- OLS regression results of 207 survey respondents (90 project participants and 117 community residents)



- **Positive** correlation of co-design participation with PE & LM attributes
- **Negative** correlation of co-design participation with AL attributes
- All results are significant at 1% significance level ($p < 0.01$)

RESEARCH FINDINGS & CONCLUSIONS

- The regression results indicated that participatory experience in co-design project has :
 - **Positive** impact on psychological empowerment,& learning motivation
 - **Negative** impact on social alienation
- Interview feedback from the participating children, our young designers

The co-design process gave me a different experience in life. Before I was shy at school and was afraid that my classmates know that I do my homework on my bed.

Now, I have gained more self-esteem as I now feel equal with my peers in having a decent learning environment for Zoom meetings and online classes.

My performance at school has improved and I participate more and am proud to show my friends my nice desk that I was part of the design team to build it for myself...

----- Sophie, 15 years old

The experience of co-design was challenging but fun. Letting strangers in my house at first was scary but these people made my life better.

I can now have a good desk that belongs to myself and not have to share with my brothers and I can put my homework on the shelf and can have proper light to see and read.

I can focus more and I like the process of co-design, I think it is good that I was part of it....

----- Jacy, 12 years old



DISCUSSION & RECOMMENDATIONS

- The research is timely in Hong Kong to reflect how co-design could benefit children and their family members during this COVID-19 pandemic.
- Provide a clearly defined framework to actualize a co-design project in the context of Hong Kong (dialogue-labs method with clear milestones)
- Share from a quantitative perspective on how co-design impacts youth's developmental attributes
- Economically challenged families suffering from social stigma and low socioeconomic status, could be empowered via such attempt in participatory activity and further propagate impact into long-term personal development
- Potential to introduce more co-design activities into the community programmes

