RGC Ref. No.:

UGC/FDS16/H01/20

(please insert ref. above)

RESEARCH GRANTS COUNCIL
COMPETITIVE RESEARCH FUNDING SCHEMES FOR
THE LOCAL SELF-FINANCING DEGREE SECTOR

FACULTY DEVELOPMENT SCHEME (FDS)

Completion Report
(for completed projects only)

<table>
<tr><td><i>Submission Deadlines</i><i>:</i></td><td>1.</td><td><i>Auditor's report with unspent balance, if any: within six months of the approved project completion date.</i></td></tr>
<tr><td></td><td>2.</td><td><i>Completion report: within 12 months of the approved project completion date.</i></td></tr>
</table>

Part A: The Project and Investigator(s)

1. **Project Title**

   Transitions across productive engagement patterns in late adulthood: Antecedents and

   consequences

2. **Investigator(s) and Academic Department(s) / Unit(s) Involved**

Research Team	Name / Post	Unit / Department / Institution
Principal Investigator	Dr. Vera HAU Chui Luen, Assistant Professor	School of Arts and Social Sciences, Hong Kong Metropolitan University
Co-Investigator(s)	Dr CHENG Grand Hak-land, Senior Research Psychologist	Ministry of Social and Family Development, Singapore
	Dr YEUNG Dannii Yuen-lan, Associate Professor	Department of Social and Behavioural Sciences, City University of Hong Kong
	Dr CHEUNG Ho Nam, Assistant Professor	Department of Social Work and Social Administration, The University of Hong Kong
	Dr CHAN Darius Kwan-shing, Associate Professor	Department of Psychology, The Chinese University of Hong Kong
Others		

3. Project Duration

	Original	Revised	Date of RGC / Institution Approval (*must be quoted*)
Project Start Date	1 January 2021		
Project Completion Date	30 April 2023		
Duration (*in month*)	28 months		
Deadline for Submission of Completion Report	30 April 2024		

4.4 Please attach photo(s) of acknowledgement of RGC-funded facilities / equipment.

Part B: The Final Report

5. Project Objectives

5.1 Objectives as per original application

1. To use latent transition analysis (LTA) to identify prevalent patterns of productive engagement at two time points, and document the transitions across these patterns over time.
2. To examine the impact of transitions across productive engagement patterns on positive and negative psychological well-being.
3. To identify the antecedents, in terms of human, social, and cultural capital, of transitions across productive engagement patterns.

5.2 Revised objectives

Date of approval from the RGC: N/A

Reasons for the change: N/A

5.3 Realisation of the objectives
(Maximum 1 page; please state how and to what extent the project objectives have been achieved; give reasons for under-achievements and outline attempts to overcome problems, if any)

The three project objectives are 100% achieved. Measures have been taken to enable this realization.

A reviewer has suggested us to recruit more participants to buffer against possible exclusion and wastage, and to increase the power of analyses up to at least .90. We thus re-targeted to recruit around 1200 participants (increased from 660 as stated in the proposal) for the Time 1 survey. Assuming a retention rate of 67%, we expected about 800 of the 1200 Time 1 participants to respond to the Time 2 survey and form the final analytical sample. A sample size of 800 is necessary for the analyses with a power level of over .90 and an alpha level of .05.

At Time 1 of the study (year 2021), against the COVID-19 pandemic and unfavorable social ambience, it was very difficult to recruit participants and collect data from the community. We observed that when using household addresses from the Census and Statistics Department, the response rate was below 8.5%. The use of 5000 household addresses from the Census and Statistics Department (as stated in the proposal) was unlikely to lead to 1200 participants. Therefore, we adopted additional recruitment methods including convenience sampling and online advertisement.

Online advertisement was very efficient. 745 individuals registered in two days, after which we stopped online advertisement and focused on the use of household addresses. In the end, the 3500 household addresses used resulted in 289 participants (8.3% response rate). Furthermore, convenience sampling brought about 189 participants. Altogether, we have recruited 1223 participants at Time 1. With 3 cases showing irregular response patterns being removed, the Time 1 sample included 1220 individuals.

In year 2022, we successfully contacted and invited 807 participants (66% retention rate) to respond to the Time 2 survey. Overall, we have attended to the reviewer's concerns and obtained a sufficient sample to address the project objectives.

5.4   Summary of objectives addressed to date

Objectives *(as per 5.1/5.2 above)*	Addressed *(please tick)*	Percentage Achieved *(please estimate)*
1. To u latent transition analysis (LTA) to identify prevalent patterns of productive engagement at two time points, and document the transitions across these patterns over time.	✓	100%
2. To xamine the impact of transitions across productive engagement patterns on positive and negative psychological well-being.	✓	100%
3. To id tify the antecedents, in terms of human, social, and cultural capital, of transitions across productive engagement patterns.	✓	100%

6. Research Outcome

6.1 Major findings and research outcome
(Maximum 1 page; please make reference to Part C where necessary)

Objective 1 is to identify prevalent patterns of productive engagement at two time points (one year apart) and reveal the transitions across these patterns over time. We adopted latent transition analysis with random intercepts (RI-LTA), with longitudinal measurement invariance applied, to analyze eight productive activities at Time 1 and Time 2 (N=807): employment, volunteering (formal, informal), caregiving (for spouse, parents [in-law], grandchildren), housework support to children, and life-long learning. RI-LTA identified four prevalent productive engagement patterns at both Time 1 and Time 2. The patterns were labelled as *Employed / Housework* (HW) *support to children*, *Volunteer / Learn / Spousal caregiving* (CG), *Spousal CG / HW support to children*, and *Low activity*. 95% of the participants maintained their productive engagement patterns over time – *Sustained Employed / HW support to children* (n=145, 18.0%), *Sustained Volunteer / Learn / Spousal CG* (n=57, 7.1%), *Sustained Spousal CG / HW support to children* (n=299, 37.1%), *Sustained Low activity* (n=263, 32.6%). Other transition types each merely involved ≤ 10 participants (≤ 1.2%) and were not considered in the subsequent regression analyses (Objectives 2 and 3).

Objective 2 concerns the relation of transitions across productive engagement patterns with psychological well-being (depressive symptomatology, loneliness, life satisfaction, meaning in life, personal mastery). We regressed each Time 2 well-being variable on the prevalent transition types (*Sustained Employed / HW support to children*, *Sustained Volunteer / Learn / Spousal CG*, *Sustained Spousal CG / HW support to children*, *Sustained Low activity*). 15 variables assessed at Time 1 (baseline) – the respective well-being variable, age, gender, education level, perceived financial adequacy, chronic conditions, functional limitations, self-rated health, marital status, living alone, presence of parents (in-law), children and grandchildren, strength of social networks and religious belief – were controlled for. With *Sustained Low activity* as the reference group, regression showed that sustained productive engagement patterns did not differ on depressive symptomatology ($ps \geq$ .114) and life satisfaction ($ps \geq$ .175). On the other hand, *Sustained Spousal CG / HW support to children* related to lower loneliness (b= -.12, p= .011). *Sustained Volunteer / Learn / Spousal CG* was associated with higher levels of meaning in life (b= .21, p= .009) and personal mastery (b= .20, p= .036). Overall, sustained engagement in productive activities could entail better psychological well-being.

Objective 3 concerns the antecedents, in terms of human, social, and cultural capital, of transitions across productive engagement patterns. We conducted multinomial logistic regression with *Sustained Low activity* as the reference group, and age and gender as controlling variables. Living alone (less social capital) predicted *Sustained Spousal CG / HW support to children* (RRR= .09, p= .028). Social capital also played a pivotal role in *Sustained Employed / HW support to children*, with living alone (RRR= .06, p< .001), presence of grandchildren (RRR= 2.18, p= .011), and presence of living parents (RRR= 2.32, p= .005) as significant factors. Those who were married tended not to show *Sustained Employed / HW support to children* (RRR= .41, p= .006). A possible account is that HW support to children is shared by the spouse. Individuals who had a stronger social network (more social capital) (RRR= 1.60, p= .007) and religious belief (more cultural capital) (RRR= 3.11, p= .001) tended to exhibit *Sustained Volunteer / Learn / Spousal CG*. Those who had chronic conditions (less human capital) also showed a higher likelihood of *Sustained Volunteer / Learn / Spousal CG* (RRR= 2.15, p= .041). A possible reason is that individuals with poor health receive care from the spouse, and they reciprocate and show care to the spouse. In any event, human, social, and cultural capital could account for sustained engagement in productive activities.

6.2   Potential for further development of the research and the proposed course of action
(Maximum half a page)

The present study revealed four productive engagement patterns. Of the 16 possible transitions across them, the four sustained patterns (i.e., no transition) accounted for 95% of the participants. The remaining 12 transition types (e.g., Employed / HW support to children -to- Low activity) each merely involved ≤ 1.2% of participants (n≤ 10). Due to their small cell sizes, we could not examine the antecedents and consequences of these 12 transition types.

Research is called for studying the antecedents and consequences of these 12 transition types, of which, for instance, Volunteer / Learn / Spousal CG -to- Employed / HW support to children featured a probability value of .11. The relevant studies need to include a much larger sample. Moreover, future studies should adopt a longer interval. These measures should enable these 12 transition types to be more prevalent and involve more individuals and hence, their antecedents and consequences can be examined. In this way, we can develop more knowledge of transitions across productive engagement patterns.

7.   Layman's Summary
(Describe in layman's language the nature, significance and value of the research project, in no more than 200 words)

Productive engagement, referring to people's contributions to family and society, is inherently meaningful. Against population aging, the current research aims to examine productive engagement in late adulthood. Results show that older adults are likely to sustain their productive engagement patterns (1. employment & housework support to children, 2. volunteering, lifelong learning & spousal caregiving, 3. spousal caregiving & housework support to children, or 4. lack of productive engagement) over time. Older adults living with someone and having strong social networks and religious beliefs (proxy of goodwill) tend to keep being productive, and in turn, feel less lonely, find their lives as highly meaningful and perceive more control of their lives. Overall, this study reveals prevalent productive engagement patterns, and the factors and psychological outcomes of their sustainment. Our data suggests that to promote productive behaviors as well as psychological well-being, policies and community programs need to facilitate older adults to have household members, and to help them develop close networks with relatives and friends. Civic education also needs to be in place to cultivate their idea of benevolence.

Part C: Research Output

8. **Peer-Reviewed Journal Publication(s) Arising Directly From This Research Project**
   (Please attach a copy of the publication and/or the letter of acceptance if not yet submitted in the previous progress report(s). All listed publications must acknowledge RGC's funding support by quoting the specific grant reference.)

The Latest Status of Publications				Author(s) *(denote the corresponding author with an asterisk*)*	Title and Journal / Book *(with the volume, pages and other necessary publishing details specified)*	Submitted to RGC *(indicate the year ending of the relevant progress report)*	Attached to this Report *(Yes or No)*	Acknowledged the Support of RGC *(Yes or No)*	Accessible from the Institutional Repository *(Yes or No)*
Year of Publication	Year of Acceptance *(For paper accepted but not yet published)*	Under Review	Under Preparation *(optional)*						
		✔		Dr H N Cheung*, Dr Grand H.-L. Cheng, Dr Dannii Y. Yeung , Dr Vera Hau. C.-L, and Dr Stepen C. Y. Chan	Self-compassion across the patterns of productive engagement in Hong Kong older adults and their mental health consequences in *Mindfulness*	No	Yes [Attachment 1]	Yes	Yes
			✔	Dr H N Cheung, Dr Grand H.-L, Dr Vera Hau. C.-L	A network model of self-compassion in Hong Kong elderly population	No	Yes [Attachment 2]	Yes	Yes

9. **Recognized International Conference(s) In Which Paper(s) Related To This Research Project Was / Were Delivered**
   (Please attach a copy of each conference abstract)

Month / Year / Place	Title	Conference Name	Submitted to RGC *(indicate the year ending of the relevant progress report)*	Attached to this Report *(Yes or No)*	Acknowledged the Support of RGC *(Yes or No)*	Accessible from the Institutional Repository *(Yes or No)*

10. Whether Research Experience And New Knowledge Has Been Transferred / Has Contributed To Teaching And Learning
(Please elaborate)

N/A

11. Student(s) Trained
(Please attach a copy of the title page of the thesis)

Name	Degree Registered for	Date of Registration	Date of Thesis Submission / Graduation
N/A			

12. Other Impact
(e.g. award of patents or prizes, collaboration with other research institutions, technology transfer, teaching enhancement, etc.)

The current Project laid a good foundation and track record for the subsequent funded project on Hong Kong elderly women by Vera Ruttonjee Desai Charitable Fund (funded in December 2023), "Empowering EM elderly with life story-A compassion-based life review intervention", HKD 1,2400,91, PI-Dr Amy Cheung. The new project further enhanced the linkage between self-compassion and depression in Hong Kong elderly by implementing a compassion-based intervention in collaboration with the UK and other local universities.

13. Statistics on Research Outputs

	Peer-reviewed Journal Publications	Conference Papers	Scholarly Books, Monographs and Chapters	Patents Awarded	Other Research Outputs (please specify)	
					Type	No.
No. of outputs arising directly from this research project	2					

14. Public Access Of Completion Report
(Please specify the information, if any, that cannot be provided for public access and give the reasons.)

Information that Cannot Be Provided for Public Access	Reasons