Psycho-Situational Path Model of Ambidextrous Preparation for Quality Aging in College Students

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Abstract

During the period of old age, everyone wishes to have good quality of living. However, only the ones who have been well-prepared at the younger age could make this wish comes true. This study aims at investigating the psychosocial antecedents of the preparation of quality aging based on ambidextrous approach. Samples were 489 undergraduate students. Path analysis with latent model revealed a good fit. The findings revealed that psychological latent trait (future orientation and self-control, need for achievement, mental health, and core self-evaluation) and situational latent variable (perceived modeling, social support, and social norm) directly affected the preparation for quality aging (present quality of life, knowledge acquisition, and knowledge usage) via the psychological latent state R^2 of 0.606 latent (attitude towards preparation, and locus of control of preparation) with the. Discussion and implications are offered.

Keywords: Quality Aging, Ambidextrous Behavior, SEM

1. Introduction

World aging population are rapidly increasing. In general, it would increase from 963 millions in 2017 to 2080 millions in 2050 which could be more than 100% of acceleration rate. The same trend is forecasted in Thailand. Two years ago, there are about 11.1 millions Thai elderly (16.73%) [1]. It is projected that by the year 2036, it could increase to 30.0% of the population [2].

It is normally admitted that numerous persons got struggles in many aspects when become near old, such as technology [3]. Good quality of living is one of everyone's top wishes for the final period of life. To make this wish come true, early preparation is one of the keys. In order to success in life such as a good career, becoming famous athlete or singer, a person has to get well preparation and continues active until the goal is achieved [4].

Back to the basic question of what causes a young person to behave and get into an appropriate habit at present to ensure future successful aging. One of several strategies for success and survival of organizations could be used for individual in this preparation, that is ambidextrous strategy in terms of exploration and exploitation [5]. Thus, this study aims at investigating the pathways from the psychological characteristics and situational factors as the antecedents of the preparations of quality aging in undergraduate students (or young adults) forty or more years awaits them.

2. Literature Review

The interactionism model [6] was employed as a conceptual framework of this study which suggested the directions of the relationships among several types of independent variables and the dependent variables.

2.1 Preparation for Quality Aging: Variables and Operational Definitions

Preparation is defined by WHO [7] as an action of individual or family or community in having sufficient knowledge, training and important supplies for living. The actions of preparation can be done in several strategy.

Ambidextrous strategy in social and behavioral science has been widely known in organizational and leadership studies [5] [8]. This strategy was adopted in other fields such as environmental innovation (b), attitude change [9] and education [10] but still few studies have been found at individual level.

In current study, this strategy was used as a concept to create three dependent variables. First, the exploration strategy concept was used to create knowledge acquisition for preparing for quality aging. It involved the actions of searching, findings, studying, or observing good role model to get proper information on preparation for quality aging. Second, the exploitation concept was used to create two variables, namely, knowledge usage for preparing for quality aging, and present quality of life. These two variables involved being ready to use the obtained knowledge experience knowledge experience and lead to their application (Exploitation) which is means evaluate the new situations making decision, changing behavior or sharing the knowledge. Ambidextrous (Exploration and Exploitation) behavior in dangerous or threating events or future unavoidable conditions, such as getting old. The ambidextrous strategy can be used at present a well as ambidextrous actions for future holes. Using knowledge (Exploitation) is as a good habit at present for quality of life in health behavior and safety living.

2.2 Psychological States Relates to Preparation for Quality Aging : mediator variables

In this study, two psychological states were in focused. Attitudes toward preparation was based on three aspects, namely, cognitive, affective, and behavioral intention [11]. Attitude was found to be significantly related to several desired behaviors including inquiring behavior [12] and academic oriented behavior

[13]. Locus of control in terms of state variable based on Rotter's theory [14] was positively related to undergraduate behaviors, such as locus of control of study and absorption behavior in studying [15], locus of control in conducting research and research performance [16]. Thus, attitudes and internal locus of control on health and safety are expected to be the important antecedents of preparation related behavior. In addition, these variables are expected to mediate between personality traits and situational variables, on the one hand, and the preparation behavior on the other hand. These hypotheses obtain strong support from the research results based on the theory of reasoned actions [17] and the Thai psychological theory of moral and work behavior [18]

2.3 Situation Relates to Preparation for Quality Aging

There were three situational factors in this study. First, role modeling is one of the important external factors. According to Bandura's Social Learning Theory which indicates that, most of the learning process of desirable behaviors comes from observing the exemplars. Several previous studies also revealed the congruent findings that having good role model or social influence related to many desirable behaviors, e.g., preparing for study behavior [19] and technology usage [20]. Second, social support from significant others in terms of emotional, informational, and material support is also another important factors [21] [22]. Previous studies found that social support was positively and significantly related to desirable behaviors in undergraduate students, e.g., study engagement behavior [23], buying behavior [24]. Third, expectation from others, as social norm, is another vital factor affecting behavior. In undergraduate students, it was found that social norm has effect on many behaviors, e.g., social media responsible communication behavior [25]

2.4 Psychological Trait Relates to Preparation for Quality Aging

In this study, four psychological traits were investigated as the antecedent of the preparation of quality aging. First, future orientation and self-control, based on [26], involves individual's ability to project the positive and negative consequences of his or her own actions, and one's controllability to achieve goal as planned. Previous studies revealed the positive relationship between this psychological trait and its desirable behaviors [27] [28], especially exploration and exploitation [29]. Secondly, individuals with high need for achievement [30] usually set high standard, put more efforts, and do not easily give up in doing to achieve the goal. Thus, it can be hypothesized that need for achievement is positively related to preparation of quality aging. Thirdly, mental health is one of the psychological characteristics reflecting important abilities, such as, learning, managing, and maintaining good relationships with others. Mental health persons tend to have effect on quality of life of college students (e.g. [31]). Finally, core self-evaluation persons tend to think positively, have high confidence and high self-esteem [32]. In previous studies, core self-evaluation was related to life satisfaction (e.g. [33]; [34]) which leads to quality of life.

3. Research Methodology

3.1 Samples

Five hundred undergraduate students in junior level from three universities in Thailand were asked to filled out questionnaires. Only completed data from 489 undergraduate students were used. Of these numbers, there were 134 male students (27.40%) and 355 female students (72.60%) with the average age of 21 years, average allowance of 5,045 Baths (≈ USD 180) per month.

3.2 Measures

The four groups of variables in this study. Most of the variables were measured in the form of summated rating. Each measure consisted of 7-15 items. Each single item was accompanied by 6-point rating scale ranging from "absolutely true" to "absolutely not true". Item discrimination (t-ratio) and item-total correlation reflecting item quality, and test's confirmatory factor analysis reflecting construct validity, as well as, reliability for each measure were presented in Table 1.

The first group was dependent variable group of preparation for quality aging. It consisted of three variables based on ambidexterity approach [35] [36], namely 1) Present quality of life (QL) referred to four important dimensions of quality of life (physical, mental, social and environmental) (e.g., [37]; [38]). 2) Knowledge acquisition (KA) defined as student's exploration or searching for information to prepare oneself for good quality living, e.g., searching for information on health eating, how to co-living with others, how to lower stress, how to set environment for better living. And 3) Knowledge usage (KU) involved the exploitation of acquired knowledge of solving health problems, quality living.

Table 1. Item and measurement quality

Measure		No. of items	Range of t-raito	Reliability (α)	Confirmatory Factory Analysis						
					χ^2	df	p-value (p>0.05)	RMSEA (≤0.06)	CFI (≥0.95)	TLI (≥0.95)	SRMR (≤0.08)
1.	Present quality of life* (QL)	16	2.77-5.49	0.65	71.76	87	0.88	0.00	1.00	1.12	0.06
2.	Knowledge acquisition* (KA)	12	2.73-5.79	0.69	28.39	38	0.87	0.00	1.00	1.09	0.06
3.	Knowledge usage (KU)	9	2.17-4.96	0.65	22.62	22	0.42	0.01	0.99	0.99	0.05
4.	Attitude towards preparation* (AP)	12	4.94-8.52	0.84	56.84	47	0.15	0.04	0.97	0.95	0.06
5.	Locus of control of preparation* (LP)	9	2.86-6.90	0.67	17.78	17	0.40	0.02	0.99	0.98	0.08
6.	Perceived modeling* (PM)	14	4.46-8.48	0.81	73.40	63	0.17	0.04	0.97	0.96	0.07
7.	Social support* (SS)	15	2.45-8.52	0.71	46.10	44	0.38	0.02	0.99	0.99	0.79
8.	Social norm* (SN)	7	2.78-4.85	0.68	10.30	11	0.50	0.00	1.00	1.01	0.40
9.	Future orientation and self-control (FS)	11	3.82-7.05	0.70	50.30	39	0.10	0.05	0.95	0.93	0.07
10.	Need for achievement (nAch)	12	2.88-7.68	0.75	48.58	47	0.40	0.01	0.99	0.99	0.06
11.	Mental health (MH)	12	5.45-8.68	0.86	41.10	44	0.59	0.00	1.00	1.01	0.05
12.	Core self-evaluation (CSE)	12	2.02-3.24	0.79	37.68	40	0.57	0.00	1.00	1.01	0.07

Note: * Constructed or adapted by the researcher.

nicely to other. The second group was psychological state. It consisted of two variables, namely, 1) Attitudes toward preparation (AP) referred to three dimensions of cognitive, affective, and behavioral intention [39] [40] of preparation for quality aging. And 2) Locus of control of preparation (LP), based on Rotter [41] defined as the belief of internal locus of control in exploring and exploiting knowledge for preparation for quality aging.

The third group was situational factor. It consisted of three variables, namely, 1) Perceived modeling (PM) referred to the recognition of actions from significant other (e.g., family members, relatives, friends) for self-care for preparation for quality aging (e.g., eating healthy food, concerning of physical and place hygiene). 2) Social support (SS) referred to the report of receiving emotional, informational, and material support from significant others to reinforce the preparation for quality aging. And 3) Social norm defined as the perception of what significant others (e.g., celebrities, senior students, superstars) accept to do, think what should be done, or being a role model for preparation for quality aging (e.g., practice yoga regularly, refrain from drinking too much alcohol, live their life dangerously).

The final group was psychological trait. It consisted of four variables, namely, 1) Future orientation [42] and self-control [43] (FS) referred to ability to foresee what will happen according to one's act, and self-regulation. 2) Need for achievement (nAch) referred to McClelland's theory of motivation [44]. 3) Mental health (MH) defined as displaying low stress, and emotional stability. And 4) Core self-evaluation based on [45]. of self-esteem, generalized self-efficacy, neuroticism, and locus of control.

3.3 Data Collection and Criteria for Path Analysis

Junior undergraduate students in universities were asked to answer questionnaires during January to March 2019. Questionnaires were tried out with another similar group of 100 university students in Early January 2019. To investigate the direct and indirect influences of the antecedents of preparation for quality aging, path analysis were performed. The fitted model should meet at least three out of five of the following criteria, i.e, 1) The chi-square test of model fit (χ^2) should not be significant [46]. 2) The Root Mean Square Error of Approximation (RMSEA) should be less than 0.50 [47]. 3) The Comparative Fit Index (CFI) should more than 0.95 [48]. 4) The Tucker-Lewis Index (TLI) should be moving toward 1.00 [49]. and 5) the Standardized Root Mean Square Residual (SRMR) should be less than 0.50 [50].

4. Results

Intercorrelation matrix and basic statistics of the variables in this study were shown in Table 2. The correlation coefficients among the variables ranged between 0.119 ($p<.01$) to 0.692 ($p<.01$)

Table 2. Intercorrelation matrix and basic statistics (N=489)

	Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1	QL	64.91	7.30	1											
2	KA	51.00	6.69	.490**	1										
3	KU	39.17	5.26	.389**	.692**	1									
4	AP	50.51	8.03	.252**	.439**	.394**	1								
5	LP	33.15	7.16	.328**	.316**	.180**	.450**	1							
6	nAch	51.56	6.75	.242**	.461**	.429**	.505**	.318**	1						
7	FS	48.74	7.48	.223**	.375**	.395**	.580**	.331**	.648**	1					
8	MH	40.67	10.49	.389**	.208**	.125**	.227**	.468**	.119**	.197**	1				
9	CSE	48.30	7.32	.461**	.427**	.328**	.422**	.445**	.554**	.508**	.533**	1			
10	PM	52.84	9.46	.339**	.294**	.210**	.304**	.339**	.291**	.295**	.267**	.382**	1		
11	SS	59.25	9.15	.341**	.319**	.267**	.502**	.434**	.430**	.442**	.283**	.474**	.422**	1	
12	SN	27.74	5.31	.246**	.182**	.152**	.405**	.427**	.412**	.447**	.210**	.364**	.319**	.548**	1

Note * p<.05, ** p<.01

The results from path analysis (Figure 1) revealed the good fit findings (χ^2 = 34.704, df = 26, p-value = 0.1182, RMSEA = 0.026, CFI = 0.996, TLI = 0.991 and SRMR = 0.028). The results (Table 3) indicated that the psychological trait and situational latent variables directly affected the preparation for quality aging latent variable, as well as indirectly affected via psychological state latent variable. Furthermore, it was found the additional path between the psychological trait latent variable to the situational latent variable.

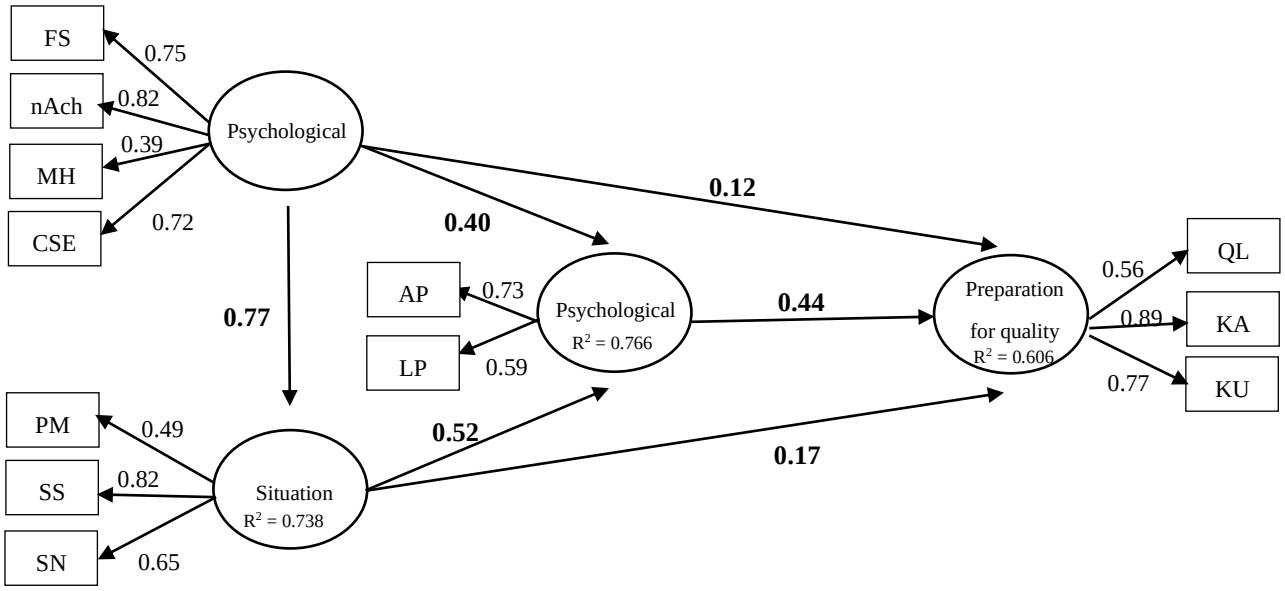

Figure 1. Latent path model of preparation of quality aging in undergraduate university students
Note: all coefficients are significant.

Table 3. Direct and indirect effects of psychological traits, situational factors, and psychological states on preparation for quality aging

Antecedent latent variables		Outcome latent variables								
		Situation			Psychological state			Preparation for Quality Aging		
		TE	DE	IE	TE	DE	IE	TE	DE	IE
Psychological state	b	-	-	-	-	-	-	0.310	0.310	-
	S.E.	-	-	-	-	-	-	0.000	0.000	-
	β	-	-	-	-	-	-	0.443	0.443	-
Trait	b	0.651	0.651	-	0.519	0.423	0.096	0.455	0.092	0.363
	S.E.	0.072	0.072	-	0.551	0.119	0.432	0.073	0.047	0.026
	β	0.779	0.779	-	0.830	0.421	0.409	0.615	0.124	0.491
Situation	b	-	-	-	0.664	0.664	-	0.356	0.150	0.206
	S.E.	-	-	-	0.147	0.147	-	0.046	0.000	0.046
	β	-	-	-	0.562	0.562	-	0.4.3	0.170	0.233
	R^2	0.738			0.766			0.606		

5. Conclusions, Discussion and Recommendations

The findings from this study supported the Interactionism model of Endler and Magnusson [51]. Furthermore, it was found the direct effect from psychological trait latent variable to situational latent variable which the original model did not indicate. Many recent studies in Thailand found this similar result [52] [53] [54]. This accumulating same finding from many studies suggested and confirmed that situational factor could play as mediating role between psychological characteristics and psychological states, as well as, between psychological characteristics and behaviors.

It should be appointed out that "situational variables" (PM,SS,SN) were self-report measures. Both real conditions as well as the perception or awareness of the respondents can be expected to come into play. The standardize coefficients in each measurement model show that need for achievement is the strongest psychological trait, while social support represented situational factor. Attitude towards preparing for quality aging is a strong contributes of mediator. The measurement model of the "preparation for quality aging" was contributed the most by "knowledge acquisition (or exploration of knowledge). On the other hand, the variance of the preparation for quality aging was accounted for 60.60% by "psychological state" or mediator more than by the "trait" or the "situation" latent variables.

According to the measurement model for preparation for quality aging in undergraduate students, it was found that KA had the highest factor loading, followed by the factor loading of KU. The least factor loading was QL. These similar findings of the first two highest loading was in the recent study using variables from

ambidexterity approach [55]. Foreign studies [56] [57] were also found the positive relationship between motivation and ambidexterity. SS from family and peers was the highest loading of situational factors that directly and indirectly affect the preparation for quality aging latent. Numerous previous studies indicated that SS was related to desired helping behaviors [52].

Based on the findings in this study, the immediate action is to persuade these undergraduate students to be aware, more concern, and ready to seek for new and advanced information for use their current informational and resources for better current quality of life. Furthermore, need for achievement, and social support should be promoted in these students to increase the desired behaviors.

For future studies, the multigroup of this model comparing students in various biosocial background, e.g. living-non-living with elderly students, high-low GPA students, and science vs. social science major students, could yield valuable body of knowledge for preparing these young generation for future quality aging.

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