

Antecedents And Consequences Of Coronavirus Disease 2019 Protection Behavior In The Society Of Juveniles In Northern Region

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Abstract

This research studied comparative relationship based on the basic conceptual framework from the theory of interactionism with objectives to indicate key predictors and volume of prediction of psychological traits, and situations related to the Behavior of Coronavirus Disease 2019 protection in the society and to examine risk groups and seek protective factors. The samples in this study included 600 juveniles who were randomly selected with multi-stage sampling method. The multiple regression analysis demonstrated that psychological traits, situations and psychological states could be employed to predict the Behavior of Coronavirus Disease 2019 protection in the society in the combined group for 57.50%. The essential predictors in a descending way including good attitude towards the Coronavirus Disease 2019 protection, health literacy, exemplification of Coronavirus Disease 2019 protection from parents, implantation on Coronavirus Disease 2019 protection from educational institutions, internal locus of control for disease protection, love-reasoned child rearing practice and future Orientation and Self-control for Coronavirus Disease 2019 protection, with beta value of .31, .17, .17, .16, .12, .11, .08, respectively. The risk groups were male juveniles and residents in their own home. The present study, result indicates a guideline for protective development to support better Behavior of Coronavirus Disease 2019 protection for government, private and public sectors.

Keyword: Psychological trait, Situation, Behavior of Coronavirus Disease 2019 protection, Juvenile

INTRODUCTION

“Coronavirus Disease 2019” first appeared in Wuhan, People’s Republic of China in December 2019. The People’s Republic of China reported to the World Health Organization, and there was an official declaration on 31 December 2019 about this disease. The outbreak of Coronavirus Disease 2019 is extensive and rapid. The World Health Organization then announced that this disease

was the “international emergency” on 30 January 2020, and declared the pandemic on 11 March 2020. For Thailand, the arrival of this disease was officially announced on 13 January 2020 when a patient was first detected outside China. After that, it turned panicking and alarming all over the world (Chokwiwat, 2020).

Implanting juveniles to have Behavior of Coronavirus Disease 2019 protection in the

society by reducing risky behaviors shall start from “inside-out blasting” by constructing knowledge and learning from situations, raising awareness, and building up good attitude for the juveniles to be ready for changes. The important thing is having protective behavior including 1) self-observing whether he/she has a fever or body temperature more than 37.5 Celsius Degree that seeing a doctor is recommended, 2) wearing a cloth or sanitary mask all the time, and abstaining from removing the mask without necessary cause, and social distancing for at least 1 meter, 3) washing hands with soap and water or alcohol gel to always be clean, 4) avoiding contact with face, eye, mouth and nose, and when returning home, clothes changing and bathing should be done immediately and 5 complying with the strict measures (Health Department, 2021).

The researcher is thus interested in studying the Behavior of Coronavirus Disease 2019 protection in the society in favor of planning for protection and indicating key predictors and prediction volume of psychological traits and situations, and identifying a risk group. The research findings can be employed as a guideline for determining a protective measure and leading to experimental research for psychological trait and skill training among juveniles. This would bring about the self-protection from Coronavirus Disease 2019 in a right and proper manner.

RESEARCH OBJECTIVES

1. To indicate key predictors and prediction volume of psychological traits and situations involved with Behavior of Coronavirus Disease 2019 protection in the society of juveniles.

2. To study a risk group and seek factors of Behavior of Coronavirus Disease 2019 protection in the society among juveniles.

LITERATURE VEIEW

This research is conducted based on the Interactionism model of Magnusson and Endler (1977) to seek Antecedents of Behavior of Coronavirus Disease 2019 protection in the society. There are 4 aspects including 1) situational factors, 2) psychological traits, 3) joint cause from interaction of situations and psychological traits that a person in encountering with effect on personal behavior (Mechanical interaction) and 4) Psychological states or Organismic interaction. These will be exercised to define the scope of variables and relation among variables in this study.

Behavior of Coronavirus Disease 2019 protection in the society: Meaning and measurement

From current situations and living way of juveniles who need to travel to different places such as a school, university, department store, cinema, public places or government offices or do activities in group where a number of people gather, the juveniles are likely to be easily contacted with and spreading germs (Department of Health, 2021). This is because juveniles meet and do activities with a lot of people in various places. Therefore, they should have Behavior of Coronavirus Disease 2019 protection in the society including 1) self-observing whether he/she has a fever, and abstaining from visiting places and seeing a doctor, 2) wearing a sanitary mask all the time and social distancing for at least 1 meter, 3) washing hands with soap and water or alcohol gel 4) strictly complying with the measures, and 5) in case of returning from risk area in past 14 days, abstaining from joining any activity (Department of Health, 2021)

Behavior of Coronavirus Disease 2019 protection in the society in this research means implementing measures in the society and protection when entering public places, as well as social distancing. This includes 4 components: 1) disregard of social measure, 2) safety from risk areas, 2) compliance with

social measures and 4) protection from places, which will be measured by a tool created by the researcher containing sentences with 6 scales from “absolutely true” to “absolutely false”

Situation factors and Behavior of Coronavirus Disease 2019 protection in the society

Environment is another important factor affecting personal thoughts and action. To process the document in this regard, it is necessary to examine such variable group containing 4 factors including 1) *exemplification of Coronavirus Disease 2019 protection from parents* from the Social Cognitive Learning Theory (Bandura, 1997). It was stated that the social cognitive learning comprised attentional processes, retention processes, production processes and Incentive and Motivation. According to the theory of Bandura, it indicates that juveniles imitate desirable behaviors from parents. 2) *Implantation on Coronavirus Disease 2019 protection from an educational institution*: the school’s environment means anything in the school around learners including environment inside and outside a classroom, an abstract and concrete items. These directly affect learning as well as any processes with influence on people in the school and effect on students’ negative and positive development (Boonkwang, 2008; Kaewfai, 2013). 3) *instance from media about Coronavirus Disease 2019 protection* means a process to convey or transmit meanings between persons in a form of need, desire, feeling, thought, knowledge and experience from a person to another person (Lapirattanakul, 2003). 4) *Love-reasoned child rearing practice* means providing affection, support, care, and generosity in both physical and verbal manner, and recognition of punishment or rewarding, and reasonable action that suits behaviors of

children and situations, that is no emotion-based action (Bhanthumnavin, 2013)

Psychological traits and Behavior of Coronavirus Disease 2019 protection in the society

From the interactionism model mentioning the psychological traits and involvement with desirable behavior of people in different groups, the literature review in this matter relates to the study of 4 factors in such group including 1) *Future Orientation and Self-control for Coronavirus Disease 2019 protection* which means ability to foresee consequence of current action and ability to be patient as well as 1) self-awareness, 2) systematic planning for behavioral adjustment and 3) self-control (Therese & Mahoney, 1974; Bhanthumnavin, 2010) in order that they are not contacted with the germs or do not spread the germs to others. 2) *Moral disengagement concerning COVID-19 protection* means an accusation after bad action and refusal of responsibility (Bhanthumnavin, 2017). 3) *Emotional quotient* means ability to manage environment and pressure with direct impact on mental health leading a person to success in life (Bar-On, 1997) and rationalizing, problem solving, and perception of emotions, feelings and understanding of anything involved with emotions (Mayer et al., 2000). 4) *Internal locus of control for Coronavirus Disease 2019 protection* means a belief that consequences a person is encountering are from his/her own action without coincidence or control by others. It is not external Locus of Control but the internal Locus of Control, and it is a belief that a person can control or protect him/herself from Coronavirus Disease 2019 by his/her own (Rotter, 1966; Bhanthumnavin, 2010)

Psychological states and Behavior of Coronavirus Disease 2019 protection in the society

Psychological states consist of 1) *good attitude towards Behavior of Coronavirus Disease 2019 protection* which means positive and negative evaluation of a person with an action or decision whether it is favorable or hostile to such action (Ajzen & Fishbein, 1980). This includes 3 components: cognitive component, affective component, and action tendency component) and 2) *Health literacy* which means personal ability or skill to access and understand health data with interlocution (Department of Health, 2017) and personal

ability to read and understand meanings, vocabularies, concepts and contents related to health (Baker, 2006).

Biosocial background

General information of juveniles includes sex, residence, protection equipment, knowledge about COVID-19 vaccination, family member with COVID-19 infection, notification of COVID-19 infection, ATK testing and confidence with the vaccines.

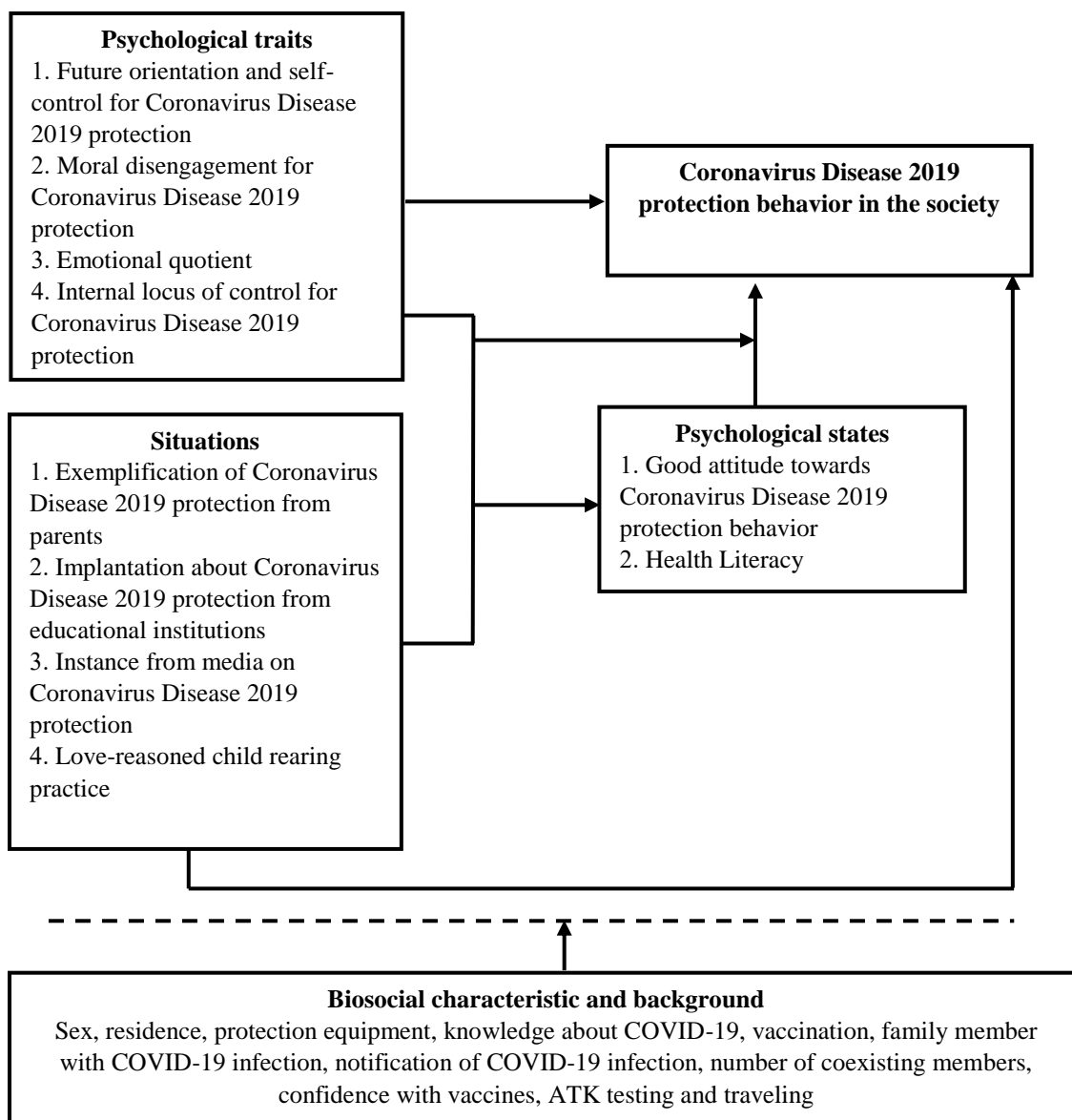


Figure 1.1: Conceptual framework and relation of variables in the research

RESEARCH HOPOTHESIS

The 3rd set of predictors contain the 1st predictor set of psychological traits including 4 factors: 1) future orientation and self-control for Coronavirus Disease 2019 protection, 2) Moral disengagement concerning COVID-19 protection, 3) emotional quotient and 4) internal locus of control regarding Coronavirus Disease 2019 protection, and the situation set containing 1) exemplification of Coronavirus Disease 2019 protection from parents, 2) training and implantation about Coronavirus Disease 2019 protection from educational institutions, 3) instance from media concerning Coronavirus Disease 2019 protection and 4) Love-reasoned child rearing practice. The 2nd set of predictors is psychological states including 2 factors: 1) good attitude towards the Behavior of Coronavirus Disease 2019 protection and 2) health literacy. These 10 factors can be used to predict the Behavior of Coronavirus Disease 2019 protection in the society better than only predictors from either the 1st set or 2nd set for at least 5%

RESEARCH MEHTHODOLOGY

The samples for analysis of Antecedents of psychological traits and situations of Behavior of Coronavirus Disease 2019 protection in the society include juveniles from 1) 3 provinces: Uttaradit, Phrae, Nan, 2) 3 districts: Thong Saeng Khan District, Wang Chin District, and Mueang Nan District, 3) 3 sub-district: Nam Phee Sub-district, Mae Phung Sub-district and Nai Wiang Sub-district, totaling 600 persons with following detail

1st step: to select provinces for sampling, the researcher considers provinces where the samples are at high risk of being infected by Coronavirus Disease 2019, and the treatment is limited in various aspects including Uttaradit, Phrae and Nan. Then, the researcher randomly selects samples in the districts of these provinces. *2nd step: district selection,* from the 1st step, the researcher randomly selects a district from each province including 3 districts: Thong

Saeng Khan District, Wang Chin District, and Mueang Nan

District. The 3rd step is to select sub-district. The researcher randomly selects a sub-district from each district including Nam Phee sub-district, Mae Phung Sub-district, and Nai Wiang Sub-district. The 43th step is to select juveniles by employing the quota sampling method from 3 sub-districts, and in each of which, 200 persons are selected, totaling 600 male and female samples. After that, the researcher randomly selects the samples whose age is ranged from 15-25 years.

There are 11 forms used as the research instrument with following details. The *Behavior of Coronavirus Disease 2019 protection* form containing Behavior of Coronavirus Disease 2019 protection in the society which includes the measurement form for *psychological traits* in 4 aspects: future Orientation and Self-control concerning Coronavirus Disease 2019 protection, Moral disengagement concerning COVID-19 protection, emotional quotient and internal locus of control for Coronavirus Disease 2019 protection. The measurement form for *situations* includes 4 aspects which are exemplification of Coronavirus Disease 2019 protection from parents, the implantation on Coronavirus Disease 2019 protection from educational institutions, instance from media on Coronavirus Disease 2019 protection and Love-reasoned child rearing practice. The measurement form for *psychological states* includes 2 aspects: good attitude towards Coronavirus Disease 2019 protection and health literacy.

The researcher creates and develops the measurement form in accordance with concepts and theories of the factor groups on Behavior of Coronavirus Disease 2019 protection including psychological traits, situations and psychological states. First, experts who specialize in social development, public health and behavioral science validate the contents, and then the form is entered in a pilot study with 120 samples for quality analysis by employing 2 types of statistics including 1) item discrimination and 2)

item total correlation. The inclusion criteria are $t \geq 2.00$ and $r \geq 0.20$.

Data collection: the researcher surveys the area and collect data from 3 provinces by distributing a questionnaire to each sample which contains 11 measurement forms. After that, the procedures are enumerated and an instruction is given with consent from the samples in completing the questionnaire in 1 hour. After that, the researcher gathers and verifies the questionnaire, totaling 600 sets.

In this study, the researcher performs multiple regression analysis: MRA with enter and stepwise method and various predictors in predicting an item at a time with the difference of percentile prediction at 5%

ETHICAL CONSIDERATIONS

This research was approved by the Ethical Committee of the Uttaradit Rajabhat University, Thailand on June 25, 2021 (URU-REC No. 037/64)

FINDINGS

The prediction of Behavior of Coronavirus Disease 2019 protection in the society with psychological traits, situations and psychological states as the predictors

When the score of Behavior of Coronavirus Disease 2019 protection in the society is processed with enter and stepwise multiple regression analysis, with the 1st set of predictors including psychological traits and situations with 8 predictors: 1) Future Orientation and Self-control regarding Coronavirus Disease 2019 protection, 2) Moral disengagement concerning COVID-19 protection, 3) emotional quotient, 4) internal locus of control for disease prevention, 5) exemplification of Coronavirus Disease 2019 protection from parents, 6) implantation about Coronavirus Disease 2019 protection from educational institutions, 7) instance from media on Coronavirus Disease 2019 protection and Love-reasoned child rearing practice. The 2nd set of predictors is related to

psychological states including 2 predictors: 1) good attitude towards Coronavirus Disease 2019 protection and 2) health literacy. The 3rd set of predictor is involved with psychological traits, situations and psychological states including 10 predictors: 1) future orientation and self-control for Coronavirus Disease 2019 protection, 2) Moral disengagement concerning COVID-19 protection, 3) emotional quotient, 4) internal locus of control regarding Coronavirus Disease 2019 protection, 5) exemplification of Coronavirus Disease 2019 protection from parents, 6) implantation about Coronavirus Disease 2019 protection from educational institutions, 7) instance from media on Coronavirus Disease 2019 protection, 8) Love-reasoned child rearing practice, 9) good attitude towards Coronavirus Disease 2019 protection and 10) health literacy.

The result of analysis in combined group (Table 1) was found that psychological traits and situations of the 8 factors could be employed to predict the Behavior of Coronavirus Disease 2019 protection in the society for 51.30%. The priority of these predictors in a descending way was exemplification of Coronavirus Disease 2019 protection from parents, implantation about Coronavirus Disease 2019 protection from educational institutions, internal locus of control for disease prevention, love-reasoned child rearing practice, future Orientation and Self-control for Coronavirus Disease 2019 protection, emotional quotient and moral disengagement concerning COVID-19 protection with Beta Value .21, .20, .18, .17, .13, .11, and .10 respectively. The result of analysis of 18 subgroups (Table 1) revealed that psychological traits and situations of the 8 factors could be exercised to make the most prediction. That is, ATK testing twice a month could predict for 66.50%, and the order of key predictors in a descending manner was exemplification concerning Coronavirus Disease 2019 protection from parents, internal locus of control regarding Coronavirus Disease 2019 protection, future Orientation and Self-control for Coronavirus Disease 2019 protection, love-reasoned child

rearing practice, moral disengagement concerning COVID-19 protection and implantation about Coronavirus Disease 2019 protection from educational institutions with Beta Value .25, .24, .20, .18, .17, .11, respectively.

The result of analysis in the combined group (Table 1), psychological states of both factors could predict the Behavior of Coronavirus Disease 2019 protection in the society for 48.00%. The order of key predictors was good attitude towards Behavior of Coronavirus Disease 2019 protection and health literacy with Beta Value .52, and .32. Meanwhile, the analysis result in 18 subgroups (Table 1) indicated that psychological states of 2 factors could predict the most. That is, ATK testing twice a month could predict for 61.90%, and the order of key predictor in a descending manner was good attitude towards Coronavirus Disease 2019 protection and Health literacy with beta value .55, and .38.

The analysis in combined group (Table 1) indicated that psychological traits, situations and psychological states of the 10 factors could predict Behavior of Coronavirus Disease 2019 protection in the society for 57.50%. The descending order of key predictors included good attitude towards Behavior of Coronavirus Disease 2019 protection, health literacy exemplification of Coronavirus Disease 2019 protection from parents, implantation about Coronavirus Disease 2019 protection from educational institutions, internal locus of control for Coronavirus Disease 2019 protection, love-reasoned child rearing practice and future Orientation and Self-control regarding Coronavirus Disease 2019 protection with beta value of .31, .17, .17, .16, .12, .11, and .08 respectively.

The analysis in 18 subgroups (Table 1) revealed that psychological traits, situations, and psychological states consisted of 10 predictors with highest prediction volume. That is, ATK testing twice a month could predict for 70.60%, and the order of key predictors in a descending manner was good attitude towards Behavior of

Coronavirus Disease 2019 protection, exemplification of Disease 2019 protection from parents, health literacy, love-reasoned child rearing practice, emotional quotient, and internal locus of control for Coronavirus Disease 2019 protection with beta value of .34, .22, .18, .14, .13, and .11, respectively.

Result of three-way ANOVA of variables in psychological traits, situations, and psychological states and Behavior of Coronavirus Disease 2019 protection in the society based on key biosocial background.

The result of three-way ANOVA of Behavior of Coronavirus Disease 2019 protection in the society by different sex, residence and protection equipment from three-way ANOVA revealed that the Behavior of Coronavirus Disease 2019 protection in the society was not variant according to interaction between independent variables for 3 and 2 factors at a time. However, Behavior of Coronavirus Disease 2019 protection in the society was variant by level of each independent variable (Table 2 and Table 3) including 1) sex, that when considering the mean of groups divided by level of independent variables, the female juveniles had more Behavior of Coronavirus Disease 2019 protection than male juveniles, and 2) residence, that according to the mean of groups categorized by level of this independent variable, the juveniles who stayed in other places had more Behavior of Coronavirus Disease 2019 protection in the society than those who stayed at their own home.

Table 1: Prediction of Behavior of Coronavirus Disease 2019 protection in the society with psychological traits, situations, and psychological states as the predictors

Group	Number	Set 1: psychological traits and situations (1-8)			Set 2: psychological states (9-10)			Set 3: psychological traits, situations, and psychological states (1-10)			% difference
		% prediction	predictor	Beta Value	% prediction	predictor	Beta Value	% prediction	predictor	Beta Value	% prediction
Total	600	51.30	5,6,4,8,1,3,2	.21,.20,.18,.17,.13,.11,.10	48.00	9,10	.52,.32	57.50	9,10,5,6,4,8,1	.31,.17,.17,.16,.12,.11,.08	6.20*
Male	306	64.50	6,8,5,7,3	.34,.23,.20,.19,.13	59.70	9,10	.55,.38	69.40	9,6,8,10,5,7,1	.32,.24,.19,.18,.18,.10,.09	5.00*
Female	294	41.70	1,4,8,5,2	.24,.24,.20,.20,.14	36.50	9,10	.51,.24	47.30	9,5,4,1,1,0,3,2	.30,.16,.16,.15,.11,.11,.10	5.60*
Own house	200	57.30	8,6,5,7	.40,.31,.21,.13	49.30	9,10	.48,.39	59.70	8,6,5,9,1,0	.25,.23,.22,.20,.20	2.40
Other residences	400	50.00	5,4,6,2,3,1	.22,.22,.19,.17,.15,.14	48.00	9,10	.55,.27	58.00	9,4,5,6,2,10,3	.35,.15,.15,.15,.14,.10,.09	8.00*
Sufficient protection equipment	403	58.70	8,6,5,4,3	.33,.27,.26,.16,.10	47.10	9,10	.54,.28	61.40	8,6,9,5,4,10	.24,.23,.22,.21,.13,.12	2.70
Insufficient protection equipment	197	45.20	1,3,7,5	.36,.20,.17,.15	50.50	9,10	.48,.40	56.10	9,10,1,4	.36,.29,.23,.15	10.90*
Knowledge about COVID-19 on online media	452	45.50	4,6,5,1,8,2	.21,.20,.19,.17,.17,.16,.14	43.00	9,10	.53,.27	52.50	9,4,6,5,2,8,10	.34,.15,.13,.12,.12,.11,.11	7.00*
Knowledge about COVID-19 on publications	148	57.80	8,6,5,7	.37,.29,.26,.16	54.30	10,9	.48,.39	64.90	10,8,6,9,5,2	.37,.26,.21,.20,.19,-.19	7.10*
2 doses of vaccination	408	45.40	5,1,6,2,4,8	.23,.20,.19,.17,.17,.13	47.70	9,10	.54,.31	54.80	9,10,5,6,4,2,1	.37,.18,.17,.12,.11,.11,.08	9.40*

More than 2 doses of vaccination	192	61.9 0	6,8,4, 3,5	.27,.27,.22,.1 8,.14	47.7 0	9,10	.44,. 36	64.20	6,8,4,10, 3,5	.24,.22,.21,.19,.1 3,.12	2.30
Family members with COVID-19 infection	120	32.2 0	3,6,5	.34,.24,.22	30.5 0	9,10	.42,. 28	38.90	9,3,6,5	.30,.27,.20,.16	6.70*
Family members without COVID-19 infection	480	55.1 0	8,4,6, 5,1,2, 7	.20,.20,.19,.1 6,.16,.12, .08	51.1 0	9,10	.53,. 33	60.80	9,10,5,6,4,8, 1	.31,.17,.15,.15,.1 4,.14,.08	5.70*
Notification of COVID-19-infected parents	362	55.1 0	6,8,5, 3,4	.33,.31,.18,.1 4,.12	42.5 0	9,10	.46,. 36	57.20	6,8,9,10, 5,4	.29,.23,.17,.17,.1 6,.10	2.10
Notification of COVID-19 patients	238	49.4 0	5,4,1, 2,6	.26,.23,.22,.2 2,.14	56.9 0	9,10	.63,. 24	61.70	9,5,10,3, 4	.51,.17,.14,.12,.1 0	12.30*
3 times of ATK a month	240	19.1 0	6,5	.40,.15	18.2 0	9,10	.35,. 20	25.40	6,9,10	.30,.28.14	6.30*
2 times of ATK a month	360	66.5 0	5,4,1, 8,2,6	.25,.24,.20,18 ,17,11	61.9 0	9,10	.55,. 38	70.60	9,5,10,8, 3,4	.34,.22,.18,.14,.1 3,.11	4.10
Doubt with vaccine	206	52.2 0	6,8,4,5 ,1	.29,.28,.19,.1 5,.14	49.7 0	9,10	.50,. 33	57.00	9,6,10,1, 4,5	.31,.20,.18,.16,.1 3,.10	4.80
Confidence with vaccine	394	51.1 0	5,3,4, 6,2,8	.25,.24,.18,.1 6,.15,.12	46.6 0	9,10	.52,. 32	57.70	9,5,10,3, 4,6,2	.32,.20,.16,.15,.1 3,.13,.10	6.60*

Remark Every beta value is significant at 0.05 with *difference less than 5% of the predictor. Remark: 1.Future Orientation and Self-control for Coronavirus Disease 2019 protection, 2. Moral disengagement from Coronavirus Disease 2019 protection, 3. Emotional quotient, 4.internal locus of control for Coronavirus Disease 2019 protection, 5. Exemplification of Coronavirus Disease 2019 protection from parents, 6. Implantation regarding Coronavirus Disease 2019 protection from educational institutions, 7. Instance from media for Coronavirus Disease 2019 protection, 8. love-reasoned child rearing practice, 9. Good attitude towards Behavior of Coronavirus Disease 2019 protection and 10.Health literacy

Table 2: Three-way ANOVA of Behavior of Coronavirus Disease 2019 protection in the society by sex, residence, and protective equipment

Group	Number	F Value						
		Sex	Residence	Protective equipment	AxB	AxC	BxC	AxBxC
		A	B	C				
Behavior of Coronavirus Disease 2019 protection in the society	600	3.89*	6.93**	3.18	0.07	0.10	3.24	0.38

Remark: **p<0.01 *p<0.05

Table 3: mean score analysis by dependent variables compared with independent variables

Group	independent variables	Mean score comparison of dependent variables			
		Group type	Mean	95% confidence Interval	
				Lower Bound	Upper Bound
Behavior of Coronavirus Disease 2019 protection in the society	Sex	Male	55.72	54.655	56.781
		Female	57.29	56.143	58.431
	Residence	Their own house	55.456	54.173	56.739
		Other places	57.550	56.659	58.440

CONCLUSION AND DISCUSSION

The data analysis in this research demonstrates that the hypothesis is proved. That is, the psychological traits, situations, and psychological states are used to jointly predict Behavior of Coronavirus Disease 2019 protection in the society more than any predictor from only one group for at least 5%. This result is found in the combined group and in some sub-groups including males, females, other residences, insufficient protective equipment, knowledge about COVID-19 on online media, knowledge about COVID-19 in publications, 2 doses of vaccination, family members infected with COVID-19, family members without COVID-19 infection, notification of COVID-19 patients, at least 3 ATK tests a month, and confidence with the vaccines. Good attitude towards Behavior of Coronavirus Disease 2019 protection, health literacy, exemplification of Coronavirus Disease 2019 protection from parents, implantation about

Coronavirus Disease 2019 protection from educational institutions, internal locus of control on Coronavirus Disease 2019 protection, love-reasoned child rearing practice and future Orientation and Self-control for Coronavirus Disease 2019 protection are important in a descending way, respectively.

Previous studies revealed that good attitude towards Behavior of Coronavirus Disease 2019 protection was a crucial predictor. For example, the research of Detsuwannachai (2022) found that attitude towards Coronavirus Disease 2019 protection was the most important predictor of Behavior of Coronavirus Disease 2019 protection. This was in accordance with the concept of Fishbein & Ajzen (1977) who explained that attitude affected personal expression, and meanwhile, expressive behavior had impact on personal attitude because attitude was related to what a person thinks, feels and needs to do something. Regarding health literacy,

it was in line with the study of Luewanit et al. (2020) demonstrating that health literacy in term of communication for Coronavirus Disease 2019 protection was the most vital predictor of health literacy and living in a New-Normal way to protect oneself from Coronavirus Disease 2019. The study of Detsuwannachai (2022) found that perception of risk of infection was the second important predictor of Behavior of Coronavirus Disease 2019 protection while the work of Chanpaeng (2021) revealed that perception of potential risk and perception of benefits could be employed to predict the Behavior of Coronavirus Disease 2019 protection, which was ability or skill of juveniles to access and understand the health data in order to protect themselves from Coronavirus Disease 2019. Exemplification of Coronavirus Disease 2019 protection from parents was in agreement with the research of Sakdaphat (2021) finding that the factor of exemplification from a family was the 3rd crucial predictor of Behavior of Coronavirus Disease 2019 protection. Meanwhile, Boonthan et al. (2021) stated that interpersonal influence was the second significant predictor of health promotion for Coronavirus Disease 2019 protection. It is obvious that good examples from persons could enable the juveniles to protect themselves from the disease. Internal locus of control related to Coronavirus Disease 2019 protection corresponded to the study of Boonthan et al. (2021) that perception of self-competency was the most dominant predictor of health promotion behavior for Coronavirus Disease 2019 protection. The juveniles believed that if they had a correct, cautious and thorough method of self-protection, they would be less infected from Coronavirus Disease 2019. The future orientation and self-control pertaining to Coronavirus Disease 2019 protection was in line with the study of Sakdaphat (2021), stating that the future orientation and self-control was the 6th important predictor of Behavior of Coronavirus Disease 2019 protection. The juveniles realized this

matter and had a good plan, and they controlled themselves for Coronavirus Disease 2019 protection.

SUGGESTIONS

1. Every authority such as the Ministry of Education, the Ministry of Public Health, schools, universities, communities, sub-district administrative organizations, sub-district municipality as well as families should cooperate and integrate works in providing training courses for juveniles in order to develop the Behavior of Coronavirus Disease 2019 protection in the society. They should be educated, and promoted with good attitude through activities related to psychological traits, situations, and psychological states. This includes good attitude toward Behavior of Coronavirus Disease 2019 protection, health literacy, exemplification of Coronavirus Disease 2019 from parents, implantation about Coronavirus Disease 2019 from education institutions, internal locus of control pertaining to Coronavirus Disease 2019 protection, love-reasoned child rearing practice and future Orientation and Self-control for Coronavirus Disease 2019 protection.

2. The findings in this research reveal that juveniles had low Behavior of Coronavirus Disease 2019 protection in the society, and they should be top priority for further development in order that they would comprehend more about the Behavior of Coronavirus Disease 2019 protection. This includes male juveniles and those who stay in their house who should be developed and trained as follows. For male juveniles, protective factors that should be added include good attitude towards Behavior of Coronavirus Disease 2019 protection, training and implantation regarding Coronavirus Disease 2019 protection from educational institutions, love-reasoned child rearing practice, health literacy, witnessing a good model of Coronavirus Disease 2019 protection from parents, perception of ideas from media in relation with Coronavirus Disease 2019 protection, future orientation and Self-control about Coronavirus

Disease 2019 protection. Speaking of the juveniles who stay in their own house, protective factors that should be increased are love-reasoned child rearing practice, training and implantation pertaining to Coronavirus Disease 2019 from educational institutions, realizing a good model of Coronavirus Disease 2019 protection from parents, good attitude towards Behavior of Coronavirus Disease 2019 protection and Health literacy.

3. Training courses related to psychological traits, situations and psychological states should be provided in order to develop suitable behavior of the Coronavirus Disease 2019 protection in the society. Furthermore, experimental research should be conducted for assessing these training courses.

REFERENCE

1. Ajzen, I. & Fishbein, M. (1980). *Understanding Attitude and Predicting Social Behavior*. New Jersey: Predice-Hall.
2. Bandura, A. (1997). *Self-Efficacy*. New York: W.H. Freeman.
3. Baker, D.W. (2006). The meaning and the measure of health literacy. *Journal of general internal medicine*, 21(8), 878-883.
4. Bar-On, R. (1997). *The emotional quotient inventory (EQ-i): Technical manual*. Toronto: Multi-Health Systems.
5. Bhanthumnavin. (2010). *Evidence-based theory and findings in psycho-behavioral science for research and development of individual and society*. Bangkok. National Institute of development Administration.
6. Bhanthumnavin. (2013). Research for Development and Validation of Research Moral Disengagement. *Journal of Behavioral Science*, 23(2), 117-137.
7. Bhanthumnavin. (2013). *Antecedent of Mindful Risk-Taking Behavior in Secondary School Students: A Path Analytic Approach*. Bangkok: National Research Council of Thailand.
8. Boonkwang, S. (2008). *Study of Teacher's Satisfaction with Environment in Primary Educational Institutions in Wichianburi District, under Phetchabun Office of educational Service Area 3*. (M.A., Mahasarakham University. (In Thai)
9. Bunthan, W., Thipsut, T., Turongrueng, S., Rungrueng, J., Chuseethong, R., Kramunrot, N & Mungluang, K. (2021). Factors Affecting the Health Promoting Behaviors to Coronavirus Disease 2019 (COVID-19) Infecting Prevention of the First-year Students in Huachiew Chalermprakiet University. *HCU Journal*, 25(2), 168-179.
10. Chokwiwat, W. (2020). *Liao Lang Lae Na*. Bangkok: OS Printing House.
11. Dejsuwannachai. (2021). Knowledge, Attitude and Preventive Behavior toward COVID-19 among grade 10-12 students in Bangkok. *INSTITUTE FOR URBAN DISEASE CONTROL AND PREVENTION JOURNAL*, 6(2), 1-15.
12. Department of Health. (2017). Conceptual Model of Health Literacy. Retrieved from <http://planing.anamai.moph.go.th/mian.php>.
13. Department of Health. (2021). *Guideline of Practice on Public Health for Prevention of Coronavirus Disease 2019 (COVID-19) outbreak*. (1st ed.). Bangkok Metropolis: Ministry of public Health.
14. Fishbein, M., & Ajzen, I. (1977). Attitude-Behavior Relations: A Theoretical Analysis and Review of Empirical Research. *Psychological Bulletin*, 84(5), 888-918.

15. Intarapanich, T., Daungseethong, S., Sontugn, S. & Bunkrung, A. (2021). Factors influencing Chanhunbamphen School students' learning ability in abnormal situations induced by the Coronavirus 2019 (Covid-19) epidemic. *Journal of Science and Technology, Rajabhat Maha Sarakham University*, 1-19.
16. Kaewfai. (2013). *The Environment that Support Participatory to Learning of Ban Nakor School, Nongkhai Primary Educational Service Area Office 1*. (M.A., Mahasarakham Rajabhat University.
17. Lapidattanakul. (2003). *Public Relation*. Bangkok: Chulalongkorn University.
18. Luevanich, C., Sungthong, J., Jitjamnong, A., Pichaikan, S., Tantiwiboonchai, N., Sianglam, A., Boontawee, C. & Soptokmad, R. (2020). Health Literacy and New Normal Among Phuket Province Residents Towards COVID-19 Prevention. *Journal of Nursing and Health Sciences*, 14(3), 73-88.
19. Mayer, J.D., Salovey, P., & Caruso, D.R. (2000). *Models of emotional intelligence*. New York: Cambridge.
20. Punpromthada, A. (2021). *Predicting COVID-19 Related Preventive Behaviors Using Three Psycho-Social Models in Undergraduate Student*. (Ph.D., National Institute of Development Administration.
21. Prongrommarat, J. (2018). THE CAUSAL VARIABLE INFLUENCING THE ADIS PREVENTION BEHAVIOR OF SECONDARY SCHOOL STUDENTS IN NAKHON RATCHASIMA PROVINCE. *NRRU Community Research Journal*, 12(2), 52-62.
22. Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological monographs: General and applied*, 80(1), 1-28.
23. Sakdapat, N. (2021). Psychosocial Factors Related to the COVID-19 Prevention Behaviors of Undergraduate Students. *Warasan Phuettikammasat*, 27(2), 39-62.
24. Siritwiphark, N. & Lertprasopsuk, N. (2018). The Behavior of People in Drug Prevention in Talad Krathum Baen, Krathum Baen, Samut Sakhon Province. *Silpakorn Educational Research Journal*, 10(1), 367-378.
25. Thoresen, C.E. & Mahoney, M.J. (1974). *Behavior self-control*. New York: Holt McDougal, Rinehart and Winston.
26. Wangsom, W., Intarakamhang, U. & Ekpanyaskul, C. (2018). Social and intelligent aspects to predict the health care behavior among patients at risk of ischemic stroke. *J Med Health Sci*, 25(2), 82-96.