Original article

Resilience and mental health of pre-cadet in Armed Forces Academies Preparatory School

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Abstract

Background: Psychological strength is important, especially resilience quotient and mental health. Resilience is the ability to withstand adversity and bounce back from difficult circumstances in life. Mental health holds all affective, behavioral, and cognitive of human well-being. Therefore, these factors are essential factor to improve mental state during tough situation.
Objectives: To explore the resilience level, mental health level, and association between resilience and mental health among pre-cadet students.
Methods: The current study was a cross-sectional study. The sample was 528 pre-cadet students in Armed Forces Academies Preparatory School. The instruments were a set of questionnaires that consisted of 3 parts, namely: 1) demographic questions; 2) resilience quotient questionnaires; and, 3) Thai Mental Health Indicator (TMHI-15).
Results: Most pre-cadet students had higher mental health than normal (66.7%) and a normal level of resilience (49.8%). The significantly associated factors with mental health level had 4 factors including family members ($P < 0.05$), current Grade Point Average (GPA) ($P < 0.05$), the favorable subject ($P < 0.05$), and the number of close friends who can advise in case of having trouble ($P < 0.001$). After using binary logistic regression, only the favorite subject and the number of close friends who can advise in case of having trouble can predict mental health levels. The pre-cadet students who had 10 close friends or more to advise in case of having trouble can predict an increase in mental health (OR = 2.029, $P < 0.01$) compared to the referent group. The students who prefer both subjects can predict an increase in mental health (OR = 2.046, $P < 0.05$) when compared with the pre-cadet students who dislike both subjects. The significantly associated factors with resilience level had 4 factors including holding the position of command ($P < 0.05$), family members ($P < 0.01$), the number of close friends who can advise in case of having trouble ($P < 0.001$), and having a goal of field or program to study in academic ($P < 0.05$). The number of close friends and having a goal of field or program to study in academic were factors that can predict of resilience levels. The pre-cadet students who had 10 close friends or more to advise in case of having trouble can predict an increase in resilience (OR = 2.629, $P < 0.001$) when compared with the students who had 3 close friends or below. Compared to pre-cadet students who had no field/program to study in academics, the students who had a field/program to study in academics can predict an increase on resilience (OR = 1.534, $P < 0.001$).
Conclusion: The number of close friends or peers who can advise in case of having trouble played an important role to predict both mental health and resilience level among pre-cadet students. Thus, this study can be useful in Armed Forces Academies Preparatory School for training or teaching the value of counseling to the students.

Keywords: Mental health, peers, pre-cadet student, resilience.

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During the past two years, everyone worldwide has been confronted with the COVID-19 pandemic. Thai Department of Mental Health in 2021 reported that Thai people during the pandemic had stress, depression, risk of self-harm, and having more adaptation. The adaptation revealed that Thai people had more willpower and can handle the pandemic. Family, close people, the solving problem skill, and the ability to manage their problems independently and effectively are the source of willpower.[1] The pandemic affects mental health that is related to emotional, psychological, and social well-being. It is related to their ability to cope with a stressful situation. In addition to the importance of mental health, resilience is powerful for adaptation during a stressful situation. When we are faced with adversity, misfortune, or frustration, resilience helps us to bounce back close to a healthy state.

The important factor to deal with a stressful situation is not only mental health but also resilience. Resilience correlates with a state of mental health not only directly but also indirectly through its impact on the ability to cope with stress, anxiety, frustration, sadness, and loneliness. The hard situation will encourage people to positively develope skills in the future. It helps us to survive, recover, and thrive. Thus, we should enhance both mental health and resilience early. Children and adolescents have to learn the adaptation ability when faced with severe problems, disasters, pandemics or illnesses.[2]

The Armed Forces Academies Preparatory School is a specialized educational academic that trains pre-cadet students to have 5 characteristics including armed, morality, knowledge, leadership, and good health. Academics mainly teach the science-mathematic program. Moreover, pre-cadet students are trained in army basic skills to form strengthen cohesion. [3]

The training process is strict and hard in order to train the pre-cadet students to be more patient. In the first semester of freshmen (first-year), they will confront with a tough situation that is different from the past. The freshmen are not permitted to go home within 4 - 6 weeks of the first year. Both heavily training and studying along with not being allowed to go home are factors that increase more pressure among pre-cadet students. [4] Thus, their life in the Armed Forces Academies Preparatory School is mainly involved with pre-cadet friends.

Kanthong P.[5] found that 26.4% of pre-cadet students had mental health issues. It was related to their lifestyle changes from normal and turning to strict routines that can affect psychological well-being and happiness. Since willpower played an important role during tough events, pre-cadet students might search for social or psychological support to remain their willpower. If they regain their willpower within a short time, they will maintain their well-being and mental health. This means resilience ability. Resilience is a valued factor to handle the challenge of life and can recover to maintain or regain their mental health. Resilience characteristics were associated with lower anxiety and depression symptom levels among adolescents.[6] Therefore, mental health and resilience are essential factors for pre-cadet students.

This study aimed to examine the resilience and mental health among pre-cadet students at the Armed Forces Academies Preparatory School. The results from the current study could be valuable for guiding teachers to look after the freshmen pre-cadet to step over their tough events.

Materials and methods

Subjects

A set of questionnaires were distributed to 1,668 pre-cadet students at the Armed Forces Academies Preparatory School during the academic year 2020 and the questionnaires from 528 pre-cadet students were received. Sample size from the Taro Yamane calculation was 323 subjects ensuring enough sample size. All data were collected in February to March 2021.

The subject was male aged 16 years old or more, in case of the subject aged below 18 years old should have consent from their parents. They had the ability to read, write, understand, and communicate the Thai language. All subjects gave their consent to participate in this study. The exclusion criteria were a pre-cadet student who study leave or withdraw from registration during the collecting data.

Measurements

All subjects were asked to complete a set of questionnaires by self-rating. We used the following questionnaires.

Demographic question included age, college year, graduated institute, GPAX before applied to pre-cadet, domicile, health condition, economic status, religion, parents' marital status, family members, the number of close friends who can advise in case of having trouble.

Thai Mental Health Indicator (TMHI–15) short version comprised of 15 items. [7] This was developed by the Department of Mental Health, Ministry of Public Health with Cronbach's alpha 0.70. Respondents were asked to rate their mental health such as affection, behavior, and cognition for 1 month ago. Total scores ranged between 15 - 60 points with a 4-Likert rating scale; 1 was never/not at all and 4 was the most/strongly agree. The lower mental health group had a score between 15 to 43. The score ranged from 44 - 50 was an individual with normal mental health. The higher mental health group had a score of more than 50.

The Resilience Quotient in Thai version[8] was developed by the Department of Mental Health, Ministry of Public Health with Cronbach's alpha 0.749. It comprised 20 items to evaluate individual ability on 3 facets including emotional stability, willpower, and coping skill within 3 months ago. Total scores ranged between 20 - 80 points with a 4 - Likert rating scale; 1 was not true and 4 was very true. The total score was calculated from the 20 items. The individual with a resilience quotient (RQ) score below 55 was in the lower resilience quotient group, the score ranging between 55 to 69 was a normal resilience quotient group, and the score that was higher than 69 was the higher resilience quotient group.

Statistical analysis

Descriptive and inferential statistic were analyzed by using SPSS program (version 22). The subject's characteristics were explained by the number, percentage, mean, standard deviation (SD). The Chi-square test, Pearson's correlation coefficient, and binary logistic regression were applied to analyze the inferential statistics. $P < 0.05$ was considered statistically significant.

Results

Completed data from 528 pre-cadet students were analyzed in this study. Regarding their characteristics, most of them aged 18 years old (40.2%). The majority 71.6% studying in the first year, 39.0% came from battalion no. 3, and most of all subjects had not posited on command position (95.1%).

Background factors showed 29.5% lived in Bangkok Metropolis and Vicinity, parents' marital status was cohabiting (84.1%), most of the subjects had 4 family members or more; 36.7% were the eldest child; all of their family members had no history of psychiatric diseases, and the average of family income was higher than 28,454 THB (83.1%).

Educational background, majority of 72.9% of subjects graduated from the government school (coeducation), the accumulated Grade Point Average (GPAX) before applying to pre-cadet was more than 3.5; 60.0% had current GPAX ranged from 2.5 to 3.5; mathematics was the most favorable subject among pre-cadet students (39.8%).

Regarding their life in the Armed Forces Academies Preparatory School, the most of them (92.8%) had no history of demerit; 62.1% had a field/ program to study in the Armed Forces Academic, and a number of close friends who can advise in case of having trouble was 10 persons or more.

On mental health factors, the majority 66.7% of subjects had higher mental health than normal level; 28.0% had a normal level, and a minority 5.3% had lower mental health than normal. The average mental health score was 52.5. On the other hand, resilience quotient, the majority (49.8%) had a normal level; 43.4% had higher resilience than the normal level, and the minority (6.8%) had lower resilience than the normal level. The average resilience score was 52.5 (Table 1).

Table 1. The number and percentage of mental health and resilience levels among subjects (n = 528).

Variables	N	Percentage
Mental health levels		
Higher than normal	352	66.7
Normal	148	28.0
Lower than normal	28	5.3
(Mean = 52.5, SD = 5.2)		
Resilience levels		
Higher than normal	229	43.4
Normal	263	49.8
Lower than normal	36	6.8
(Mean = 67.4, SD = 8.2)		

Resilience was evaluated from 3 facets, namely: emotional stability, willpower, and coping skill. Total score from each factor, i.e., mental health, resilience subscales, and resilience showed a significant positive correlation between moderate to high. Mental health had a positive high correlation with the resilience subscale; emotional stability ($r = 0.683$, $P < 0.001$), willpower ($r = 0.635$, $P < 0.001$), and coping skill ($r = 0.636$, $P < 0.001$), respectively. The association between mental health and resilience had a significant positive correlation ($r = 0.736$, $P < 0.001$) (Table 2).

In this study, the results showed four factors that were significantly related to mental health including the number of family members, current GPAX, favorite subjects, and the number of close friends who can advise (Table 3). As for resilience levels, 4 - related factors had found significance including having a position of command, the number of family members, the number of close friends who can advise, and having a field/program to study in the Armed Forces Academic (Table 4).

Table 2. Correlation between the scores of mental health and the facets of resilience analyzed by using The Pearson's correlation coefficient (n = 528).

Variables	1	2	3	4	5
1. Mental health	–	0.683*	0.635*	0.636*	0.736*
2. Emotional stability		–	0.661*	0.724*	0.942*
3. Willpower			–	0.653*	0.833*
4. Coping skill				–	0.868*
5. Resilience					–
Mean (SD)	52.5 (5.2)	32.7 (4.4)	17.7 (2.3)	17.0 (2.4)	67.4 (8.2)

*$P < 0.001$

Table 3. The number and percentage of general information and related factors and mental health levels analyzed by using Chi-square test (n = 528).

Characteristics	Mental health levels			*P* - value
	Higher than normal n (%)	Normal n (%)	Lower than normal n (%)	
Age (years)				
16	16 (4.5)	11 (7.4)	0 (0.0)	0.322
17	75 (21.3)	29 (19.6)	8 (28.6)	
18	150 (42.6)	52 (35.1)	10 (35.7)	
>18	111 (31.5)	56 (37.8)	10 (35.7)	
College year				
1	253 (71.9)	103 (69.6)	22 (78.6)	0.614
2	99 (28.1)	45 (30.4)	6 (21.4)	
Battalion				
1	110 (31.3)	57 (38.5)	11 (39.3)	0.470
2	74 (21.0)	33 (22.3)	6 (21.4)	
3	146 (41.5)	49 (33.1)	11 (39.3)	
4	22 (6.3)	9 (6.1)	0 (0.0)	
Having a position of command				
Yes	20 (5.7)	6 (4.1)	0 (0.0)	0.346
No	332 (94.3)	142 (95.9)	28 (100.0)	
Domicile				
Bangkok and Vicinity	100 (28.4)	48 (32.4)	8 (28.6)	0.662
Others	252 (71.6)	100 (67.6)	20 (71.4)	

Table 3. (Con) The number and percentage of general information and related factors and mental health levels analyzed by using Chi-square test (n = 528).

Characteristics	Mental health levels			*P* - value
	Higher than normal n (%)	Normal n (%)	Lower than normal n (%)	
Parents marital status				
Cohabiting	301 (85.5)	119 (80.4)	24 (85.7)	0.369
Separated	18 (5.1)	6 (4.1)	1 (3.6)	
Divorced	28 (8.0)	16 (10.8)	2 (7.1)	
Death	5 (1.4)	7 (4.7)	1 (3.6)	
Number of family members				
≤ 3	76 (21.6)	38 (25.7)	13 (46.4)	0.011*
≥ 4	276 (78.4)	110 (74.3)	15 (53.6)	
Birth orders				
The eldest child	143 (40.6)	45 (30.4)	6 (21.4)	0.129
The elder child	28 (8.0)	12 (8.1)	3 (10.7)	
The youngest child	101 (28.7)	53 (35.8)	8 (28.6)	
The only child	80 (22.7)	38 (25.7)	11 (39.3)	
Family history of psychiatric diseases				
Yes	0 (0.0)	0 (0.0)	0 (0.0)	–
No	352 (100)	148 (100)	28 (100)	
Religion				
Yes	349 (99.1)	148 (100.0)	27 (96.4)	0.127
No	3 (0.9)	0 (0.0)	1 (3.6)	
Family income (THB)				
< 28,454	60 (17.0)	25 (16.9)	4 (14.3)	0.932
> 28,454	292 (83.0)	123 (83.1)	24 (85.7)	
Previous graduated institute (Grade 10)				
Government school and all boys	42 (11.9)	25 (16.9)	2 (7.1)	0.418
Government school and coeducation	260 (73.9)	101 (68.2)	24 (85.7)	
Private school and all boys	8 (2.3)	5 (3.4)	1 (3.6)	
Private school and coeducation	42 (11.9)	17 (11.5)	1 (3.6)	
GPAX before applied to pre-cadet				
< 2.50	10 (2.8)	5 (3.4)	2 (7.1)	0.237
2.50 – 3.50	127 (36.1)	65 (43.9)	13 (46.4)	
> 3.50	215 (61.1)	78 (52.7)	13 (46.4)	
Current GPAX				
< 2.50	12 (3.5)	5 (3.4)	4 (14.2)	0.042*
2.50 - 3.50	217 (61.6)	91 (61.5)	12 (42.9)	
> 3.50	123 (34.9)	52 (35.1)	12 (42.9)	
Favorite subjects				
Mathematic	136 (38.7)	65 (43.9)	9 (32.1)	0.028*
Science	14 (4.0)	9 (6.1)	2 (7.1)	
Both	148 (42.0)	39 (26.4)	13 (46.4)	
None	54 (15.3)	35 (23.6)	4 (14.3)	
The number of close friends who can advise				
≤ 3	104 (29.5)	55 (37.1)	19 (67.9)	< 0.001*
4 - 9	108 (30.7)	47 (31.8)	6 (21.4)	
> 9	140 (39.8)	46 (31.1)	3 (10.7)	
Have a history of demerit				
No	324 (92.0)	140 (94.6)	26 (92.9)	0.602
Yes	28 (8.0)	8 (5.4)	2 (7.1)	
Have a field/program to study in Armed Forces Academic				
Yes	231 (65.6)	83 (56.1)	14 (50.0)	0.053
No	121 (34.4)	65 (43.9)	14 (50.0)	

*$P < 0.05$

Table 4. The number and percentage of general information and related factors and resilience levels analyzed by using Chi-square test (n = 528).

Characteristics	Resilience levels			*P*-value
	Higher than normal n (%)	Normal n (%)	Lower than normal n (%)	
Age (years)				
16	8 (3.5)	19 (7.2)	0 (0.0)	0.314
17	45 (19.7)	57 (21.7)	10 (27.8)	
18	94 (41.0)	104 (39.5)	14 (38.9)	
>18	82 (35.8)	83 (31.6)	12 (33.3)	
College year				
1	164 (71.6)	187 (71.1)	27 (75.0)	0.888
2	65 (28.4)	76 (28.9)	9 (25.0)	
Battalion				
1	75 (32.7)	90 (34.2)	13 (36.1)	0.763
2	46 (20.1)	58 (22.1)	9 (25.0)	
3	92 (40.2)	100 (38.0)	14 (38.9)	
4	16 (7.0)	15 (5.7)	0 (0.0)	
Having a position of command				
Yes	17 (7.4)	9 (3.4)	0 (0.0)	0.045*
No	212 (92.6)	254 (96.6)	36 (100.0)	
Domicile				
Bangkok and Vicinity	59 (25.8)	85 (32.3)	12 (33.3)	0.247
Others	170 (74.2)	178 (67.7)	24 (66.7)	
Parents marital status				
Cohabiting	195 (85.2)	220 (83.7)	29 (80.5)	0.198
Separated	10 (4.4)	13 (4.9)	2 (5.6)	
Divorced	23 (10.0)	19 (7.2)	4 (11.1)	
Death	1 (0.4)	11 (4.2)	1 (2.8)	
Number of family members				
≤ 3	51 (22.3)	59 (22.4)	17 (47.2)	0.003*
≥ 4	178 (77.7)	204 (77.6)	19 (52.8)	
Birth orders				
The eldest child	89 (38.8)	93 (35.4)	12 (33.3)	0.393
The elder child	17 (7.4)	24 (9.1)	2 (5.6)	
The youngest child	67 (29.3)	87 (33.1)	8 (22.2)	
The only child	56 (24.5)	59 (22.4)	14 (38.9)	
Family history of psychiatric diseases				
Yes	0 (0.0)	0 (0.0)	0 (0.0)	
No	229 (100.0)	263 (100.0)	36 (100.0)	
Religion				
Yes	226 (98.7)	262 (99.6)	36 (100.0)	0.427
No	3 (1.3)	1 (0.4)	0 (0.0)	
Family income (THB)				
<28,454	39 (17.0)	43 (16.3)	7 (19.4)	0.894
>28,454	190 (83.0)	220 (83.7)	29 (80.6)	
Previous graduated institute (Grade 10)				
Government school and all boys	26 (11.3)	40 (15.2)	3 (8.4)	0.282
Government school and coeducation	172 (75.1)	186 (70.7)	27 (75.0)	
Private school and all boys	5 (2.2)	6 (2.3)	3 (8.3)	
Private school and coeducation	26 (11.4)	31 (11.8)	3 (8.3)	

Table 4. (Con) The number and percentage of general information and related factors and resilience levels analyzed by using Chi-square test (n = 528).

Characteristics	Resilience levels			*P* - value
	Higher than normal n (%)	Normal n (%)	Lower than normal n (%)	
GPAX before applied to pre-cadet				
< 2.50	7 (3.1)	7 (2.7)	3 (8.3)	0.301
2.50 – 3.50	94 (41.0)	96 (36.5)	15 (41.7)	
> 3.50	128 (55.9)	160 (60.8)	18 (50.0)	
Current GPAX				
< 2.50	10 (4.4)	8 (3.0)	3 (8.3)	0.512
2.50 – 3.50	143 (62.4)	157 (59.7)	20 (55.6)	
> 3.50	76 (33.2)	98 (37.3)	13 (36.1)	
Favorite subjects				
Mathematic	95 (41.5)	103 (39.2)	12 (33.3)	0.739
Science	10 (4.4)	13 (4.9)	2 (5.6)	
Both	90 (39.3)	94 (35.7)	16 (44.4)	
None	34 (14.8)	53 (20.2)	6 (16.7)	
The number of close friends who can advise (ppl.)				
≤ 3	57 (24.9)	99 (37.7)	22 (61.1)	< 0.001*
4 - 9	66 (28.8)	90 (34.2)	5 (13.9)	
> 9	106 (46.3)	74 (28.1)	9 (25.0)	
Have a history of demerit				
No	210 (91.7)	248 (94.3)	32 (88.9)	0.347
Yes	19 (8.3)	15 (5.7)	4 (11.1)	
Have a field/program to study in Armed Forces Academic				
Yes	157 (68.6)	148 (56.3)	23 (63.9)	0.019*
No	72 (31.4)	115 (43.7)	13 (36.1)	

*$P < 0.05$

Based on these results, the number of family members and the number of close friends who can advise in case of having trouble demonstrated the important association both mental health and resilience levels.

Binary logistic regression with enter method was applied to predict the association between the related factors and dependent variables, i.e., mental health and resilience levels. The results from regression analysis found that the number of close friends who can advise in case of having trouble and the favorite subjects can predict mental health levels in a positive direction. The pre-cadet students who had 10 close friends or more to advise in case of having trouble can predict an increase in mental health (OR = 2.029, $P < 0.01$) compared with the students who had 3 close friends or below. Upon defining the pre-cadet students who dislike both mathematics and science subjects to the referent group, the students who prefer both subjects can predict an increase in mental health (OR = 2.046, $P < 0.05$) (Table 5).

Resilience results from regression analysis, the number of close friends who can advise in case of having trouble and having a field/program to study in the Armed Forces Academic can predict resilience levels with positive direction. The pre-cadet students who had 10 close friends or more to advise in case of having trouble can predict an increase in resilience (OR = 2.629, $P < 0.001$) when compared with the students who had 3 close friends or below. Compared to pre-cadet students who had no field/program to study in academics, the students who had a field/program to study in academics can predict an increase on resilience (OR = 1.534, $P < 0.001$) (Table 6).

Table 5. The prediction of the correlation between mental health and related factors analyzed by using Binary Logistic Regression (n = 528).

Variables[a]	B	SE (B)	*P* - value	Exp (B)	95% CI	
					Lower	Upper
Number of close friends			0.008			
4 - 9	0.334	0.231	0.150	1.396	0.887	2.197
> 9	0.708	0.228	0.002	2.029	1.297	3.175
Number of family members	0.380	0.216	0.079	1.462	0.957	2.234
Favorite subjects			0.030			
Mathematic	0.258	0.263	0.326	1.295	0.773	2.170
Science	- 0.101	0.466	0.829	0.904	0.363	2.253
Both	0.716	0.276	0.010	2.046	1.191	3.516
Current GPAX			0.573			
2.50 – 3.50	0.331	0.474	0.484	1.393	0.551	3.524
> 3.50	0.151	0.488	0.756	1.163	0.447	3.026
Constant	- 0.540	0.506	0.286	0.583		

[a]Variable (s) entered on step 1: Number of close friends, number of family members, favorite subjects, current GPAX.

Table 6. The prediction of the correlation between resilience and related factors analyzed by using Binary Logistic Regression (n = 528).

Variables[a]	B	SE (B)	*P - value*	Exp (B)	95% CI	
					Lower	Upper
Number of close friends			0.000			
4 - 9	0.354	0.229	0.123	1.425	0.909	2.333
> 9	0.967	0.220	0.000	2.629	1.709	4.044
Number of family members	0.201	0.214	0.349	1.222	0.803	1.861
Field/program to study in academics	0.428	0.190	0.024	1.534	1.057	2.225
Having a position of command	0.758	0.435	0.082	2.134	0.909	5.006
Constant	- 1.190	0.258	0.000	0.304		

[a]Variable (s) entered on step 1: Number of close friends, number of family members, Field/program to study in Academics, having a position of command.

Discussion

The current study explored resilience and mental health among pre-cadet students. Most of them had higher mental health than normal level according to Thitirattanachot C, *et al*.[9] Pre-cadet students had normal resilience level similar to previous studies.[10, 11] Mostly, it showed that the high school students might have normal level of resilience and higher mental health than normal level. A positive significant correlation between mental health and resilience on a high level was observed. According to Chongruksa D, and Prinyapol P.[12], the results showed that soldiers operating in the south of Thailand (3 provinces) had correlated between the hardiness of resilience subscale and mental health. Wu Q, *et al*.[13] studied young immigrants and found that resilience scores had a strong correlation with mental health. Thus, mental health and resilience influenced each other.

When we investigated the related factors to mental health levels among pre-cadet students were the number of family members, current GPAX, favorite subjects, and the number of close friends who can advise in case of having trouble. As for resilience levels, posit on the position of command, the number of family members, the number of close friends who can advise in case of having trouble, and having a field/program to study in Armed Forces Academic showed significant correlation to resilience levels. Other factors, i.e., age, college year, domicile, parent marital status, birth order, family income, previously graduated institute (Grade 10), GPAX, and history of

demerit had no correlation with mental health and resilience among pre-cadet students. But psychiatric diseases within family members and religious factors had not shown the results due to a lack number of subjects.

Age and college year factors had not related to mental health and resilience. These current results were following Kasemsuk K. and Wichainate K.[14] who investigate air force, nursing students. Their results showed no association between college year and mental health score. Mostly, the pre-cadet students had resembled age. They lived in the same environment or academics. Because Armed Forces Academies Preparatory School is a boarding school. All of them were regulated by the same strict rule. These factors might not affect their mental health levels.

Birth order, the number of sibling members, and the number of family members were the family variables that were not related to mental health. According to Jinnawaso R.[15], family factors did not affect a student's mental health. Thoroughly, parents equally behave or give their love, caring, and attention to every child.

As for academic factors, grade and GPAX did not predicted resilience among pre-cadet students according to Sattayapuripat W. and Bunnag S.[16] Students with high achievement compared to low achievement group showed indifferent on resilience ability intellectual ability cannot predict resilience ability.

The regression results showed the number of close friends who can advise in case of having trouble can predict mental health and resilience among pre-cadet students. Therefore, the relationship with a friend was an important factor. Khantong P.[5] found that the number of close friends who can advise in case of having trouble related to first-year soldier's mental health. They were confronted with various issues, i.e., stress, trouble, pressure, life-changing, and crisis. Thus, they seek social support during tough events. Mostly, first-year soldiers chose to counsel close friends than meet a psychiatrist.[17] A good relationship with friends was an important factor to encourage resilience ability when facing a crisis.[11, 18 - 20] Thus, good classmates and positive relationships with a friend can support willpower to regain mental health and happiness in pre-cadet students.

Some students emphasize positive emotion and/or achievement to promote their well-being. The opportunity to work with friends can raise their positive feelings. The mathematics subject sometimes can influence students on anxiety, nervousness, or stress but some students like this subject. The findings demonstrated the correlation between positive emotions and greater student confidence, effort, achievement, self-regulation, and self-efficacy in mathematics.[21]

The results showed the importance of subjects that students feel like and confident in, especially mathematics. Good outcome from their favorite subjects can enhance their positive emotion, self-esteem, and well-being. This might be related to pre-cadet mental health level. Mostly pre-cadet who prefer mathematics and prefer both subjects had higher mental health than normal. The pre-cadet students who had a field/program to study in the Armed Forces Academies Preparatory School had higher resilience than normal level. Therefore, students who had their academic goals would put an effort to achieve them. Similar to Rodmanee S, *et al*.[22], psychological immunity could help them from the risk of insecurity studies. Having flexibility in learning (academic resilience) was the student's ability to handle stress and pressure from studying. The findings from Magnano P, *et al*.[23] confirm the significant role played by emotional intelligence on resilience and motivation to achievement.

Thus, a level of mental health and resilience in pre-cadet students involved with academic factors, except GPAX. Therefore, another factor that might be related to mental health and resilience in the further study was emotional quotient, academic achievement, or self-esteem.

Conclusion

The number of close friends influenced mental health and resilience when facing critical times. Moreover, favorite both mathematics and science subjects can predict mental health, and having a field/program to study in the Armed Forces Academies Preparatory School can predict resilience among pre-cadet students. Our dependent factors, mental health, and resilience had a high positive correlation. It showed that when we encourage one of the dependent variables, it will relate to each other.

The number of close friends would simultaneously increase mental health and resilience. Thus, teachers should promote a positive relationship with friends among students. Students were educated through the essentials of counseling. When their friends encounter

with crisis, they could be good consultants. Considering this factor, it played an important role in mental health and resilience among pre-cadet students. It is noteworthy that close friends increase both variables among them through a tough life.

Moving to a new environment was like a crisis that happen within temporary circumstances. Pre-cadet students must face the lifestyle change and balance themselves with the new environment, new rules, and hard training these were different from their past. It was a crisis that they should know and accept to bounce back quickly to maintain their mental health and well-being. This situation was explained by the crisis theory.[24]

The future study might investigate self-esteem, emotional quotient, resilience quotient, and mental health among the individuals related to pre-cadet students. The result from them could help academics to improve students' well-being. As for qualitative research in the future might create a program for pre-cadet students to help them adapt to the new environment. The service in the academic setting has to focus on pre-cadet students with lower mental health or resilience level than normal such as private counseling or group counseling.

Conflict of interest statement

Each of the authors has completed an ICMJE disclosure form. None of the authors declare any potential or actual relationship, activity, or interest related to the content of this article.

Data sharing statement

The present review is based on the reference cited. Further details, opinions, and interpretation are available from the corresponding authors on reasonable request.

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