Original Article

The Relationship between Psychological Capital and Ethical Behavior in one Secondary School Students

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Objective: To study the relationship between Psychological Capital and Ethical behavior, and to identify which Psychological Capital components that predicts Ethical behavior in secondary school students.

Materials and Methods: The sample group included 387 students at one Secondary School. The data collection instrument was the questionnaires which consisted of 3 parts; a Student's general questionnaire, the Thai Psychological Capital Inventory, and the Ethical Behavior Questionnaire. The statistics used to analyze data were frequency, percentage, mean, standard deviation [SD], independent samples t-test, one-way ANOVA, Pearson's product-moment correlation coefficient and Stepwise multiple regression analysis.

Results: The present study found the levels of Psychological Capital, in Psychological Capital components were moderately high. The results of comparing Ethical behaviors based on gender found female students had higher Ethical behavior than male students with a statistical significance at the 0.001 level and the results of comparing Ethical behavior based on class levels found that students who studied at different class levels did not have different Ethical behavior. In addition, the Psychological Capital and Psychological Capital components were positively related to Ethical behavior at a moderate level with a statistical significance at a the 0.001 level. The Psychological Capital components such as Optimism, Self-efficacy and Resilience could predict the Ethical behavior of secondary school students by 29%. The correlation coefficient is 0.538 and the standard error of estimate is $\pm$7.857.

Conclusion: Psychological Capital was positively related to Ethical behavior and three Psychological Capital components including Optimism, Self-efficacy and Resilience can predict the Ethical behavior of secondary school students by 29%. Therefore, promoting and supporting these components can be a method by which there can be an increase and help develop Ethical behavior in secondary school students.

Keywords: Psychological capital, Ethical behavior, Secondary school student

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The science and technology are rapidly changing; consequently, this may be the greatest threat to children and youths in adapting themselves, and it compels Thai society to face the crisis of morals and ethics, which are continually declining. Therefore, a good society can be developed by nurturing people to adapt to societal norms. This is related to morality and ethics[1-3].

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Children and youths are at the best period of life to develop morality and ethics, which will develop them into a person who behaves appropriately[4]. Therefore, family and educational institutions should be responsible for teaching and developing morality and ethics in children and youths[5]. On the other hand, the work by Wiratchai and Tungcharoenkul in 2008 showed that students who were considered in a high-risk group should be helped urgently[6]. In particular, secondary school students in the age of adolescence were also changing in many ways had a tendency to behave inappropriately; this can lead to many serious problems that eventually result in mental illnesses, which could affect their quality of life and adaptation

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to living with others in society. So, it is the necessary to improve and help them overcome these problems[7,8]. Positive Psychology is a modern concept that focuses on the individual's mental strength. It enhances the good quality of life and also prevents the mental illnesses which may occur in the future[9]. Psychological Capital can be the primary factor that supports the strength of human mental health[10].

Under these circumstances, to create a peaceful society, one should begin with people who behave well and appropriately. Psychological Capital can help people in good mental health contribute and serve as a model for desirable behavior. According to the study of Psychological Capital in Thailand, it was found that psychological capital was positively related to Leadership[11], Study strategies[12], and Public-mindedness[13]. Therefore, this researcher's interest is to study the relationship between Psychological Capital and its components that may predict Ethical behavior in secondary school students. The purpose of such research could be to return the basic information to schools and related organizations. It is useful to encourage, improve and develop students into good quality citizens.

Objective

The present study was comprised of 4 objectives within this sample group, 1) To explore the level of Psychological Capital and exhibited Ethical behavior, 2) To compare Ethical behavior based on gender and class levels, 3) To study the relationship between Psychological Capital and Ethical behavior and 4) To study the Psychological Capital components that can predict Ethical behavior.

Materials and Methods

Study population

The study population included secondary school students from Hatyaiwittayalaisomboonkul kanya School which had 3,761 students [14] by using the simple random sampling. The sample size was calculated using the following formula by Phattharayuttawat[15], in case of a known or an estimated population number, but unknown the proportion of population.

$$n_{pm} = \frac{NZ^2}{4NE^2 + Z^2}$$

By n_{pm} = number of sample size for approximate *p*-value in case of highest deviation ($p = 0.05$, $r = 1 - \alpha$) with error less than E.

N = all the number of member in target population (N = 3,761)

Z = value of normal curve at area under the normal distribution ($^{\alpha}/_{2}$); the normal value = $1 - \alpha$

E = error size; the research determined E = 0.05 (confidential interval = 95%, Z = 1.96)

So

$$n_{pm} = \frac{(3,761)(1.96)^2}{4(3,761)(0.05)^2 + (1.96)^2}$$

= 349 samples

There were 349 samples but the researchers added approximately 10% in case of loss of samples and incompleteness of the questionnaires that could afflict more than 5% of all items, so this study included 390 students, and divided the sample into 6 class levels by calculating the proportion.

Protection of human subjects

The protocols were approved by Siriraj Institutional review broad of the Faculty of Medicine Siriraj Hospital, Mahidol University, and this study was permitted by the director of Hatyaiwittayalaisomboon kulkanya School.

Measurements

The data collection instruments were three questionnaires:

1) A Student's general questionnaire: a check-list about gender and class level of students.

2) Thai Psychological Capital Inventory (TPCI) which was developed by Tuntatead[16], contained 53 items with 5 rating scales from "1" which indicated "extremely disagree" with a message to "5" which indicated "extremely agree" with a message. After we finished the data collection, we analyzed the reliability of the questionnaire, using Cronbach's alpha (α) coefficient, and it was 0.942. Interpretation of scores can be classified as follows;

4.21 to 5.00 classified as very high
3.41 to 4.20 classified as moderately high
2.61 to 3.40 classified as fair
1.81 to 2.60 classified as moderately low
1.00 to 1.80 classified as very low

3) Ethical behavior questionnaire was developed by the researcher. This questionnaire contained 49 items with 5 rating scales from "Rarely" which scores "1" that showed student's disagreed with a message because they rarely do it, to "Usually" which

scores "5" that showed student's who agree with a message because they usually do it. The content validity was analyzed by using Index of Objective Congruence (IOC). After the data collection process, then the analysis for the reliability of the questionnaire, using Cronbach's alpha (α) coefficient was conducted, scored 0.922.

Interpretation of scores can be classified as follows;

4.50 to 5.00 classified as very high
3.50 to 4.49 classified as moderately high
2.50 to 3.49 classified as fair
1.50 to 2.49 classified as moderately low
1.00 to 1.49 classified as very low

Statistics

The statistical methods used in this study were 1) percentage, mean and standard deviation (SD) to described characteristics of sample group which is gender and class level, 2) Independence sample t-test was used to compare Ethical behavior based on gender, 3) One-way ANOVA was used to compare Ethical behavior based on class level, 4) Pearson's product-moment correlation coefficient was used to investigate the relationship between Psychological Capital and Ethical behavior and 5) Stepwise multiple regression analysis was used to investigate Psychological Capital components that predict Ethical behavior.

Ethical consideration

This study was conducted with the approval of the Siriraj Institutional Review Board (SIRB), Faculty of Medicine, Siriraj Hospital, Mahidol University; S435/2015.

Results

There were 387 students (99.33%) who completed questionnaires. This group consisted of 148 male students (38.2%) and 239 female students (61.2%). There were 80 students of 7th grade class (20.7%), 80 students of 8th grade class (20.7%), 79 students of 9th grade class (20.4%), 50 students of 10th grade class (12.9%), 50 students of 11th grade class (12.9%), and 48 students of 12th grade class (12.4%).

1) The level of Psychological Capital and Ethical behavior.

The level of Psychological Capital and its components was demonstrated in Table 1 of the 387 participants. The results found that the total level of Psychological Capital was moderately high ($3.41 \leq$ Mean ≤ 4.20). In addition, in Table 1 demonstrated the level of Ethical behavior which showed that the participants had moderately high levels ($3.50 \leq$ Mean ≤ 4.49).

2) Comparison of Ethical behavior within the sample group based on personal factors: gender and class level.

Table 1. The level of Psychological Capital, Psychological Capital components and Ethical behavior of the sample group

Characteristics	Min-Max	Mean	SD	Level
Psychological capital	1.98 to 4.85	3.90	0.42	Moderately high
Hope	1.60 to 4.87	3.69	0.51	Moderately high
Self-efficacy	2.06 to 4.76	3.81	0.48	Moderately high
Resilience	1.67 to 5.00	4.10	0.46	Moderately high
Optimism	1.67 to 5.00	4.18	0.52	Moderately high
Ethical behavior	2.49 to 4.80	3.99	0.39	Moderately high

Table 2. Comparison Ethical behavior of the sample group based on personal factors; gender

Gender	n	Ethical behavior		t	*p*-value
		Mean	SD		
Male	148	3.81	0.40	4.675***	<0.001
Female	239	4.06	0.37		

*** *p*-value <0.001

Table 3. The comparing means of Ethical behavior of class levels of the sample group

Class level	n	Ethical behavior		F	*p*-value
		Mean	SD		
7th grade	80	4.06	0.39	2.175	0.56
8th grade	80	4.05	0.42		
9th grade	79	3.96	0.39		
10th grade	50	3.88	0.36		
11th grade	50	4.02	0.40		
12th grade	48	3.93	0.31		

p-value <0.05

As seen in Table 2, it indicated that female students displayed higher level of Ethical behavior than male students with statistical significance at a 0.001 level.

Table 3 showed that there was no different Ethical behavior between students of different class levels.

3) The relationship between Psychological Capital and Ethical behavior.

Table 4 showed that Psychological Capital is positively related to Ethical behavior at a moderate level ($0.40 \leq r \leq 0.59$)[17], with statistical significance at the 0.001 level. In addition, Psychological Capital components, such as Hope, Self-efficacy, Resilience and Optimism are positively related to Ethical behavior at a moderate level ($0.40 \leq r \leq 0.59$)[17] with a statistical significance at a 0.001 level as well.

4) Psychological Capital components that can predict Ethical behavior.

Table 5 demonstrated that there are three Psychological Capital components which are the best predictors for Ethical behavior. The first is Optimism, and the second is Self-efficacy, and the third is Resilience. They jointly predicted Ethical behavior of secondary school students by 29%. This inferred that there are approximately 71%, which are other variables or factors which can predict Ethical behavior. However, another Psychological Capital component, which is Hope, could not predict Ethical behavior of students.

Table 4. The correlation coefficient analysis to measure the correlation between Psychological Capital and Ethical behavior of the sample group

	Ethical behavior
Psychological capital	0.531***
Hope	0.427***
Self-efficacy	0.460***
Resilience	0.470***
Optimism	0.480***

*** *p*-value <0.001

Discussion

1) The level of Psychological Capital and Ethical behavior in secondary school students.

The result of this research found the level of Psychological Capital, and its components in secondary school students were moderately high. This finding agrees with Chalermrungroj[13] which showed the level of Psychological Capital in secondary school students was moderately high. In addition, the results were similar to Kantasorn[11] and Hanvanichvech[12] which showed the level of Psychological Capital in upper secondary students were moderately high as well. This may be explained by educational structures, programs, and equipment for studying, including school environment, which could promote and encourage students to think, analyze and make decisions through school activities. For those students who did well, it was defined by their behaving appropriately, and that they were reinforced, with such things as awards and praise from teachers, in both formal and informal ceremonies. In addition, these students can be good role models for other students as well[11-13]. These factors can promote students to set goals for having appropriate behavior by thinking and finding methods to succeed, including having motivation to practice. They should also believe that they have the potential to do things effectively. Although, they may have been faced with an obstacle or a difficult situation, they would redouble their efforts and not give up. In addition, they can give positive reasons to explain failures, and quickly adapt to the situation. These factors will motivate them to be

Table 5. The multiple regression analysis to find psychological capital components that can predict ethical behavior of the sample group

	b	SE (b)	Beta	t	*p*-value
Optimism	0.967	0.249	0.238	3.888***	<0.001
Self-efficacy	0.449	0.139	0.193	3.225***	0.001
Resilience	0.634	0.218	0.184	2.903**	0.004
	a = 98.682	SEE = $\pm$7.857			
	r = 0.538	R^2 = 0.290			

** *p*-value <0.01, *** *p*-value <0.001

persistent towards their goals[12,13]

In addition, the level of Ethical behavior in secondary school students was moderately high as well. According to Basic Education Standards BE 2554 (AD 2011)[18] and The Basic Education Core Curriculum BE 2551 (AD 2008)[19]; both state that students should have morality, ethics and desirable values. Therefore, the school would provide curricula that merged the contents of morality and ethics, and teachers must teach these to students consistently. In addition to teaching, training, and instilling morality and ethics in students, they should be able to learn from good role models who behave appropriately (such as parents, teachers, senior relatives, peer groups, and religious leaders), and through mass communication which can also promote the development of morality and ethics. These values resonated that of Bandura[20] who believed that moral development is the result of learning through the interaction between people and environment.

2) Comparison of Ethical behavior based on personal factors: gender and class level.

The present study found male and female students displayed different Ethical behavior. Female students displayed higher score of Ethical behavior than male students with statistical significance at the 0.001 level. This is probably because female students were more likely submissive, so they tend to obey and behave according to the teachings of their parents, teachers and senior relatives. These qualities made female students more gentle, polite, neat and disciplined[21]. However, in this study, the total of male students (38.2%) is less than the total of female students (61.2%). This may affect the Ethical behavior scores of both genders in Table 2.

From Table 3, there is no difference of Ethical behavior score between the class level. This result agreed with Kumtun[22] which found that there was no difference in Self-practice on moral, ethics and desirable values between students of different class levels. This is probably because the secondary school students are adolescents between 12 to 18 years old; it is a period that their morality and ethics are developing, and not yet consolidated[23]. In addition, all students study in the same school environment, and followed the same school discipline. Therefore, they were surrounded by similar environments including social rules and expectations from their teachers and various school's activities. Overall, they were more likely to have similar moral and ethical values as a group[24]; this is the result of education policies and standards that complied with the Ideology and Basic Principles of Education Provision[18] that every education institution should used and applied as goals or a directional framework for their curriculum, including in situation quality.

3) The relationship between Psychological Capital and Ethical behavior.

Table 4 revealed that Psychological Capital is positively related to Ethical behavior in moderate level with statistical significance at the 0.001 level. Although, there were no previous studies on the relationship between Psychological Capital and Ethical behavior, Psychological Capital was found to be positively related to Leadership[11], Study strategies[12], and Public-mindedness[13], which were all desirable behaviors. Therefore, this means that Psychological Capital is related to other positive characteristics and behaviors.

4) Psychological Capital components that can predict Ethical behavior.

Table 5 demonstrated the three Psychological Capital components including Optimism, Self-efficacy, and Resilience were the best predictors to jointly predict Ethical behavior of secondary school students by 29.0%.

Optimism is the first Psychological Capital components that can predict Ethical behavior in secondary school students because people with Optimism will expect good things to happen. If they meet with obstacles, they would have a positive outlook

to these situations which provided them with motivation to succeed[10]. Because of these reasons, the students who displayed Optimism were more likely to exhibit Ethical behavior. It could be assumed that their good and suitable behavior, which are accepted by the society, will allow them to obtain good results, and lead them to be motivated and to behave well and to consider good and bad behavior rationally. Although these students might face obstacles or difficult situations, they were more likely to have creative, coping styles to solve them. In addition, they also believe good results that happen to them and affect their society both now and in the future are because of their autonomous and empowerment attitude[9,10]. According to Seligman[25], people with positive early childhood experiences regarding social learning and social experiences, including good physical health and calmness, can be expected to be more likely to succeed in the future.

Self-efficacy is the second Psychological Capital component that can predict Ethical behavior. Individuals with Self-efficacy believed that it is within their capabilities to manage tasks, and change difficult situations for the better. In addition, they are motivated to overcome obstacles until they succeed[9,10]. Therefore, Students with Self-efficacy tended to express Ethical behaviors because they are confident and motivated to improved and developed their own behaviors, which will lead to acceptance by others; thereby contributing to the environment of peace and harmony in society. They were more likely to choose and decide to behave in the appropriate manners which included self-control and deterred from breaking rules and social orders. Although, these students may face obstacles and failures, they would apply more effort to overcome them, because they believe that failures will provide them with motivation and have opportunity to develop their skills necessary to be successful in the future[9,10]. In the view of Bandura[20], successful people tended to have role models with similar abilities and were reinforced by awards, praises, and encourage that promoted and increased their level of self-efficacy. In addition, good environment and interpersonal relationships can influence good physical and mental health and lead to promotion of Self-efficacy in students. Likewise, Luthans et al[26] presented Self-efficacy development guideline by giving people opportunities to learn, find ways, and develop performance by ranking tasks from simple to complex by themselves, under monitored and supervised by effective trainers. They also received positive feedback to them, practiced promoting good physical health and emotional health by making effective work atmosphere. These factors will lead people to be successful.

Resilience is the third Psychological Capital components that can predict Ethical behavior. Students with Resilience who displayed Ethical behavior because they believe in morality, goodness and have a sense of responsibility that included perceiving feelings and impulses of themselves and managing them before expressing them. These represent students who understand themselves and others. Therefore, they expressed their love, empathy and altruism to others, and display appropriate and socially acceptable behavior to society. They also manage and solve problems if they meet obstacles or difficult situations with positive and creative methods until they succeed. In addition, they have social and communication skills to create good relationships with others[27]. According to Grotberg[28], Resilience is the consequences of trusting relationships with others by parenting with love, warmth in family which supports students to be autonomous. Parents and relatives can be good role models who express suitable behavior whether within institutions and communities, which are also good social support systems. These enhance mind's strength and sense of security of students. This agrees with Ruenprot[27]. Students with Resilience are satisfied and realize values and competence of themselves, including acceptance of others' feelings. By behaving appropriately, it leads them to have good interpersonal relationships. In addition, they are able to deal and solve problems and obstacles by themselves effectively. If they struggle to resolve an issue, they would adapt themselves quickly and find other ways to solve them. These make them have positive attitudes and viewpoints and have motivation to develop themselves in the future.

Conclusion

Psychological Capital was positively related to Ethical behavior and Psychological Capital components such as Optimism, Self-efficacy and Resilience which were good predictors, were able to predict the Ethical behavior of secondary school students. Therefore, promoting and supporting these components can be beneficial in promoting ethical behavior in secondary school students.

What is already known on this topic?

Psychological Capital was positively related to Ethical behavior in secondary school students.

What this study adds?

The research results suggests that promoting and supporting Optimism, Self-efficacy, and Resilience can be a method by which ethical behavior can be increased, and helped to develop in secondary school students.

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Potential conflicts of interest

None.

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