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Participating in religious activities and adolescents' self-esteem: empirical evidence from buddhist adolescents in Thailand

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ABSTRACT

This paper aims at quantifying the relationship between participating in Buddhist religious activities and Buddhist adolescents' self-esteem. It uses Thailand as a case study as Buddhism is the predominant religion of this country. Using ordered-probit regression models with a national survey of 1,648 Thai Buddhist adolescents, our results show that participating in Buddhist religious activities that involved maintaining mindfulness, including prayer and meditation, is found to have a statistically positive relationship with higher self-esteem among Buddhist adolescents in Thailand. Participating in relaxed and not-too-strictly regulated activities is found to have a statistically positive relationship with higher self-esteem of adolescents as well. Therefore, governments and related agencies should initiate policies that encourage adolescents to participate more in these types of activities. Integrating activities related to mindfulness development in a school setting, such as homeroom or after-school programmes, can be one of the best options.

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Self-Esteem; adolescents; buddhist Religious Activities; family Supports; prosocial Behaviour

Introduction

Adolescence is a life stage during which new experiences and knowledge are introduced to young people from both family and society (Antaramian et al., 2008). Adolescents, especially, need to feel accepted by their surrounding society. This perceived level of acceptance can affect their mental state and personality. One of the most important parameters for assessing an adolescent's mental state is self-esteem. Therefore, adolescent self-esteem is an ongoing topic of academic interest.

There exists abundant research on adolescent self-esteem from many perspectives. For example, in terms of educational benefits, researchers have found a statistically positive relationship between self-esteem and adolescents' academic performance (Arshad et al., 2015; Booth & Gerard, 2011; Lane et al., 2004; Martin et al., 2005). In addition, adolescents with high self-esteem also display greater ability in problem-solving, which is one of the important factors that can bolster academic performance which in turn can increase academic achievement overall (Afari et al., 2012; Pullmann & Allik, 2008).

On the other hand, adolescents with low self-esteem have to cope with many negative outcomes. For example, Ngo et al. (2020) found that adolescents with low self-esteem experience higher levels of mental disorders such as anxiety or depression. Fanaj et al. (2015) examined adolescents between the ages of 11–20 years and found that adolescents with low self-esteem felt a higher sense of despair than those with higher self-esteem. Adolescents with low self-esteem also suffered more from poor mental and physical health and had higher levels of criminal behaviour during adulthood (Trzesniewski et al., 2006).

Previous research identified a number of factors affecting adolescent self-esteem. One of the most important factors consists of variables related to 'family factors.' For example, Ümme (2015) studied a sample group of 342 students and found that the higher mother's educational level and family income significantly increased the level of students' self-esteem while the father's level of education and students' gender did not. Parenting style is another important factor influencing adolescent self-esteem. One study examined 80 pairs of students and mothers and found that mothers with a lot of stress seemed to lower the self-esteem of their children (Ajilchi et al., 2013). Another study found that adolescents whose parents felt responsible as parents and concentrated on raising them were more likely to have higher self-esteem (Vatankhah et al., 2013). However, adolescents who reported that their parents were overprotective reported lower implicit self-esteem (DeHart et al., 2006).

In addition to family factors and parenting, social factors outside the family also influence adolescent self-esteem, especially peers and teachers. Ikiz and Cakar (2010), for example, examined a sample of 163 female students and 94 male students in Turkey and found that social support from peers and teachers had a significant positive effect on self-esteem. The determination of self-esteem among teenagers is most likely affected by their activities. For example, adolescents who took part in volunteer activities seemed to have higher levels of self-esteem (Bang et al., 2020). Moreover, participating in sports activities is also found to be related to higher self-esteem (Babiss & Gangwisch, 2009; Bowker, 2006). And adolescents who spent more time playing team sports were found to have higher self-esteem than individuals who played individual sports, since participating in team sports seems to create acceptance among their peers, and thereby increases their self-esteem (Slutzky & Simpkins, 2009).

It was also found that, besides typical activities that adolescents typically engage in (going out at night with friends, using the internet, reading books, playing music, etc.), activities related to religion can also affect adolescents' self-esteem (Sinha et al., 2007). Research has found that participation in religious activities can help adolescents avoid risk-taking behaviours such as smoking, alcohol use, sexual activity, and marijuana consumption. A study of Christian adolescents participating in church praying found that regular praying was negatively associated with use of tobacco, alcohol, marijuana, cocaine, methamphetamines, and other drugs (Fletcher & Kumar, 2014). Furthermore, researchers have found a link between religious participation and a reduction in depression (Braam & Koenig, 2019; Desrosiers & Miller, 2007). And adolescents who attended church had less depression and stronger personal spirituality (Kang & Romo, 2011; Urberg & Demir, 2004).

Although the studies cited above document the role of religious participation on adolescent behaviour, to our knowledge there are no studies investigating the effects of religious participation on adolescents' self-esteem. Furthermore, the majority of studies so far have been conducted mainly in Western countries, in which Christianity is the main religion. But Christianity has activities that differ from those of other religions (e.g. Islam or Buddhism). Therefore, specific activities found within other religions should be studied to determine their potential effects on adolescent self-esteem.

Since the studies mentioned above generally also relied primarily on surveys taken within a particular group or a particular area (such as a city or a school), to differentiate itself from previous studies, this study aims to investigate whether participation in Buddhist activities can affect adolescents' self-esteem. To do so, we use nationally representative data collected in Thailand as a case study for a typical Buddhist country. According to Thailand's National Statistical Office, around 94% of the Thai population are Buddhists, followed by Muslims (4.9%) and Christians (1.1%). Thailand therefore constitutes a perfect case study for examining how participation in Buddhist activities affects adolescents' self-esteem.

According to a 2018 survey from Thailand's National Statistical Office, Thai adolescents were among the population that participated in Buddhist religious activities. For example, around 75.9% of Thai citizens participated in praying. However, this number had decreased from 87.8% in 2014. In addition, there were as many as 91.9% of Thai citizens who had given alms to Buddhist monks. But, similarly, this was a decrease from 92.9% in 2014. On the other hand, around 55.2% of Thai citizens reported abiding by Buddhist precepts, which represents an increase from the 20.8% reported in 2014. However, if these religious activities are classified by age group, we find that adolescents tend to participate less than do their older cohorts. To identify impacts on adolescents' self-esteem, we also aim to include other variables, such as age, gender, education, occupation, region, municipality,

marital status, and typical adolescent activities (going out at night, using the internet, playing music, reading books, etc.). Variables related to family support and prosocial behaviours are also taken into account.

This research paper consists of five sections. The next section will describe other empirical studies that explain the benefits of participating in Buddhist religious activities on adolescent self-esteem. The third section explains the data and variables used in our study. The fourth section describes the models and results used to quantify impacts of Buddhist religious activities on self-esteem among Thai adolescents. The fifth section provides the conclusion and some policy recommendations.

Benefits from participating in buddhism: literature review

According to Tloczynski and Fritzsche (2002), engaging in Buddhist religious activities has an effects adolescent self-esteem in different ways. Buddhist activities include meditation, prayer, observing the precepts, and making merit. Basically, Buddhism focuses on meditation and mindfulness activities (Amihai & Kozhevnikov, 2015; Ariyabuddhiphongs, 2009). Since Buddhists are taught to respect teachers and specifically to respect parents. They also perceive the emancipatory role of education and are thus able to handle stress from studying. These benefits are found to be related to meditation and scripture reading but are inversely related to temple attendance (Thanissaro, 2018).

The benefits of meditation and mindfulness activities in adolescents have been illustrated by many studies. For instance, mindfulness exercises resulted in students having lower levels of moral superiority and better emotional and behavioural control; they also resulted in better brain memory (Sanger et al., 2018). These results correspond to the study of Quach et al. (2016), who found that adolescents practicing meditation had significantly better brain memory. In addition, practicing meditation can help reduce adolescent depression and anxiety (Beauchemin et al., 2008; Thanissaro, 2018). Meditation also helps students enhance their academic and psychosocial strengths as well as improve self-regulation capacities and coping abilities (Lin & Mai, 2016; Rosaen & Benn, 2006; Wisner et al., 2010). Moreover, meditation was associated with significant improvements in self-esteem, including school adjustment (Emavardhana & Tori, 1997; Lee & Yoo, 2013).

Besides meditation, prayer and making merit are also among the most important Buddhist activities. Previous studies found that students who regularly pray exhibited significantly higher efficiency in solving problems and maintained higher levels of consciousness than students who did not pray, as well as having reduced stress and anxiety (Troyer et al., 2012; Whittington & Scher, 2010). In addition, adolescents who engaged in merit-making also showed higher self-esteem (Kwan et al., 2009).

In terms of merit-making, Surana and Lomas (2014) found that giving money increased life satisfaction and self-esteem – such charity thus benefiting not only the recipient but also the donor. Similarly, Pholphirul (2015) studied Buddhists in Thailand and found that religious giving in the Buddhist way (such as offering food and other donations to Buddhist monks) helped increased happiness among Thai Buddhists. Regularly giving to monks led to the highest happiness level, perhaps since Buddhism permeates Thai society and dedicating offerings to monks is believed to provide great merit. In addition, when making offerings to monks, donors usually do so randomly at a temple, which suggests that making merit at a temple also leads to higher level of happiness.

Nevertheless, the existing studies do not address direct impacts of religious participation on adolescents' self-esteem. Except for Pholphirul (2015), the research cited above did not use datasets that were collected from countries where Buddhism is the primary religion. Our study, therefore, will emphasize datasets collected in Thailand, where Buddhism is the main religion. Analysis of the dataset is described in the next section.

Data analysis

This study uses secondary data from the 2018 Survey on Conditions of Society, and Culture and Mental Health conducted by Thailand's National Statistical Office. This survey contains data from

1,648 Buddhist adolescents 13–24 years old. Since our research attempts to investigate the relationship between Buddhist adolescents' self-esteem and their religious participation, variables on self-esteem are self-reported and categorized into three levels: 1 = Low, 2 = Medium, 3 = High. Other Buddhism-related activities are also categorized into three levels: 1 = Never, 2 = Sometimes, 3 = Often. We also include other controlled variables such as socioeconomic variables (region, municipal area, gender, education, occupation, marital status), family support, prosocial behaviour, and other activities.

Table 1 displays our tabulation of socioeconomic variables and shows that Thai adolescents living in the southern region seem to have the highest level of self-esteem, with an average of 2.0. In contrast, adolescents living in the capital city of Bangkok and the highly urban central region reported the lowest levels of self-esteem, with average scores of 1.97 and 1.95, respectively. Our tabulation shows that gender does not seem to affect the level of self-esteem. We also found that adolescents with low levels of education had the highest levels of self-esteem, with an average score of 2.16, and that unemployed adolescents had higher levels of self-esteem than did their employed peers, with scores of 2.01 and 1.98, respectively. Moreover, adolescents who were single reported higher levels of self-esteem than did those who were married or divorced.

Table 2 presents results for participants' perception of family support they received, classified into three levels (never, sometimes, and often). Adolescents were asked whether: 1) parents support their education, 2) they feel safe with their family, 3) parents set good examples, 4) they are encouraged by parents to do whatever they want, 5) they can share feelings with their family, 6) they can express their love towards their family, 7) they share religious thoughts with their family, 8) they spend time together with their family at home, 9) they can spend time together with their family outside the home, 10) they

Table 1. Average level of Thai adolescents' self-esteem classified by socioeconomic factors.

Region	Mean	S.D.	Observations	Percent
Bangkok	1.97	0.56	101	6.13
Central	1.95	0.51	443	26.88
Northeast	2.03	0.49	511	31.01
Northern	2.01	0.51	380	23.06
Southern	2.07	0.48	213	12.92
Total	2.01	0.51	1,648	100.00
Municipal area				
Outside municipal area	1.99	0.51	640	38.83
Within municipal area	2.02	0.50	1,008	61.17
Total	2.01	0.51	1,648	100.00
Gender				
Female	2.01	0.50	855	51.88
Male	1.99	0.51	793	48.12
Total	2.00	0.51	1,648	100.00
Education				
Uneducated	2.16	0.47	25	1.52
Primary school	1.99	0.52	993	60.25
High school	2.02	0.48	551	33.43
University	2.05	0.53	79	4.80
Total	2.06	0.50	1,648	100.00
Occupation				
Employed	1.98	0.51	533	37.14
Unemployed	2.01	0.50	902	62.86
Total	2.00	0.51	1,435	100.00
Marital status				
Divorced	1.92	0.64	13	0.79
Married	1.96	0.53	263	15.96
Single	2.01	0.50	1,372	83.25
Total	1.96	0.56	1,648	100.00

Source: Authors' own calculation. Data from the 2018 Survey on Conditions of Society, and Culture and Mental Health conducted by the Thailand National Statistical Office.

Table 2. Average level of thai adolescents' self-esteem classified by parental support.

Parents strongly support your education	Mean	S.D.	Observations	Percent
Never	1.86	0.52	120	15.34
Sometimes	1.97	0.47	232	29.66
Often	2.03	0.51	430	55
Total	1.95	0.50	782	100
Feeling safe with family				
Never	1.97	0.49	30	3.84
Sometimes	1.90	0.53	192	24.55
Often	2.01	0.49	560	71.61
Total	1.96	0.50	782	100
Parents set a good example				
Never	1.89	0.53	35	4.48
Sometimes	1.97	0.55	202	25.83
Often	2.00	0.48	545	69.69
Total	1.95	0.52	782	100
Encouraged by parents to do whatever you want				
Never	1.97	0.57	62	7.93
Sometimes	1.97	0.50	339	43.35
Often	2.00	0.50	381	48.72
Total	1.98	0.52	782	100
Exchanging feelings in your family				
Never	2.01	0.49	129	16.5
Sometimes	1.95	0.5	373	47.7
Often	2.02	0.51	280	35.8
Total	1.99	0.5	782	100
Expressing love in your family				
Never	1.97	0.44	88	11.25
Sometimes	1.95	0.52	301	38.49
Often	2.02	0.50	393	50.26
Total	1.98	0.49	782	100
Bringing religious thoughts to your family				
Never	1.94	0.46	67	8.57
Sometimes	1.95	0.50	356	45.52
Often	2.03	0.52	359	45.91
Total	1.97	0.49	782	100
Spending time with your family at home				
Never	1.96	0.56	114	14.58
Sometimes	1.99	0.49	339	43.35
Often	1.99	0.50	329	42.07
Total	1.98	0.52	782	100
Spending time with your family outside				
Never	1.97	0.50	276	35.29
Sometimes	1.99	0.49	365	46.68
Often	1.99	0.54	141	18.03
Total	1.98	0.51	782	100
Help solve problems together				
Never	1.94	0.53	226	28.9
Sometimes	1.99	0.46	361	46.16
Often	2.03	0.55	195	24.94
Total	1.99	0.51	782	100
Having some conflicts with family				
Never	1.98	0.50	673	86.06
Sometimes	2.03	0.52	87	11.13
Often	1.95	0.49	22	2.81
Total	1.99	0.50	782	100
Being responsible on your own				
Never	1.96	0.57	128	16.37
Sometimes	1.98	0.47	309	39.51
Often	2.00	0.51	345	44.12
Total	1.98	0.52	782	100
Participate in events together with family				
Never	1.96	0.49	569	72.76
Sometimes	2.07	0.53	159	20.33
Often	2.02	0.57	54	6.91
Total	2.02	0.53	782	100

Source: Authors' own calculation. Data from the 2018 Survey on Conditions of Society, and Culture and Mental Health conducted by the Thailand National Statistical Office.

can solve problems together, 11) they have some conflicts with their family, 12) they are allowed to be responsible on their own, and 13) they participate in events together with their family.

Our tabulation in Table 2 shows that the highest levels of self-esteem were found among Buddhist Thai adolescents whose parents provide them an education, who share religion with the family, and who can solve problems with the family. On the other hand, the lowest levels of self-esteem (1.86 on average) were found among adolescents whose family never supported their education. In addition, adolescents who felt their parents never set a good example, never solved problems together with them, and never let them be responsible on their own showed low levels of self-esteem, with average scores of 1.89, 1.94, and 1.96, respectively.

Table 3 shows the tabulation of average levels of Thai adolescents' self-esteem classified by prosocial behaviours. Those prosocial behaviours include whether they: 1) help others, 2) repay others, 3) forgive others' mistakes, 4) volunteer, and 5) donate. The survey also asked how often (never, sometimes, or often) those adolescents perform such actions. Our tabulation shows that adolescents who donate regularly have the highest levels of self-esteem, with an average score of 2.11. Those who participate in volunteer activities show a low level of self-esteem, with an average score of 1.98. And Thai adolescents who never help others, or never forgive also show low levels of self-esteem, with average scores of 1.85 and 1.58, respectively.

Table 4 shows results regarding general activities and events that adolescents typically engage in. Those activities include: 1) loafing, 2) going out at night, 3) gambling, 4) sleeping late and waking up late, 5) playing video games, 6) using the internet, 7) reading books, 8) doing housework, 9) exercising, 10) playing music, 11) participating in social events, and 12) visiting museums. The survey also asks how often (never, sometimes, or often) those adolescents engage in such activities. Our tabulation shows that Thai adolescents who play music regularly have the highest self-esteem with an average score of 2.14. Interestingly, we found that adolescents who regularly go out at night had the highest level of self-esteem, at 2.13. We found no prominent effects of loafing, sleeping late and waking up late, and using the internet.

Table 3. Average level of Thai adolescents' self-esteem classified by prosocial behaviours.

Helping others	Mean	S.D.	Observations	Percent
Never	1.85	0.38	13	1.67
Sometimes	1.97	0.49	380	48.59
Often	2.01	0.52	389	49.74
Total	1.94	0.46	782	100
Repaying				
Never	2.00	0.00	3	0.38
Sometimes	1.95	0.52	146	18.67
Often	1.99	0.5	633	80.95
Total	1.98	0.34	782	100
Forgiveness				
Never	1.58	0.51	12	1.53
Sometimes	1.96	0.48	308	39.39
Often	2.01	0.51	462	59.08
Total	1.85	0.5	782	100
Volunteering				
Never	1.95	0.49	329	45.95
Sometimes	2.04	0.49	334	46.65
Often	1.98	0.57	53	7.4
Total	1.99	0.52	716	100
Donations				
Never	1.96	0.5	180	23.02
Sometimes	1.98	0.49	556	71.1
Often	2.11	0.64	46	5.88
Total	2.02	0.54	782	100

Source: Authors' own calculation. Data from the 2018 Survey on Conditions of Society, and Culture and Mental Health conducted by the Thailand National Statistical Office.

Table 4. Average level of thai adolescents' self-esteem classified by general activities.

Loafing	Mean	S.D.	Observations	Percent
Never	2.02	0.49	849	51.64
Sometimes	1.99	0.52	767	46.65
Often	2.00	0.61	28	1.71
Total	2.00	0.54	1,644	100
Night out				
Never	2.01	0.49	1,072	65.25
Sometimes	2.00	0.52	555	33.78
Often	2.13	0.62	16	0.97
Total	2.05	0.54	1,643	100
Gambling				
Never	2.02	0.50	1,425	87.32
Sometimes	1.91	0.52	192	11.76
Often	1.87	0.52	15	0.92
Total	1.93	0.51	1,632	100
Sleeping late, waking up late				
Never	1.99	0.49	422	25.65
Sometimes	2.01	0.50	1,115	67.78
Often	1.98	0.55	108	6.57
Total	1.99	0.51	1,645	100
Playing video games				
Never	2.00	0.45	338	20.63
Sometimes	2.00	0.52	987	60.26
Often	2.04	0.49	313	19.11
Total	2.01	0.49	1,638	100
Using the internet				
Never	1.97	0.46	108	6.58
Sometimes	1.99	0.51	477	29.09
Often	2.01	0.51	1,055	64.33
Total	1.99	0.49	1,640	100
Reading books				
Never	1.93	0.49	271	16.47
Sometimes	2.02	0.51	871	65.41
Often	2.02	0.49	499	18.12
Total	1.99	0.50	1,641	100
Doing housework				
Never	1.99	0.48	67	4.08
Sometimes	1.98	0.50	749	45.56
Often	2.02	0.50	828	50.36
Total	2.00	0.49	1,644	100
Exercising				
Never	1.96	0.50	271	16.47
Sometimes	2.00	0.50	1,076	65.41
Often	2.04	0.50	298	18.12
Total	2.00	0.50	1,645	100
Playing music				
Never	1.99	0.51	734	44.92
Sometimes	2.00	0.5	814	49.82
Often	2.13	0.48	86	5.26
Total	2.04	0.5	1,634	100
Participating in social events				
Never	1.97	0.49	549	33.87
Sometimes	2.02	0.51	944	58.24
Often	2.01	0.52	128	7.89
Total	2.00	0.51	1,621	100
Visiting museums				
Never	1.97	0.5	713	44.53
Sometimes	2.03	0.5	846	52.84
Often	2.00	0.49	42	2.63
Total	2.00	0.5	1,601	100

Source: Authors' own calculation. Data from the 2018 Survey on Conditions of Society, and Culture and Mental Health conducted by the Thailand National Statistical Office.

On the other hand, those who gambled regularly had noticeably low levels of self-esteem, with an average score of only 1.87.

Table 5 shows the tabulation of the average level of adolescents' self-esteem related to religious participation. The survey asked how often (never, sometimes, or often) Thai adolescents also participated in Buddhist religious activities. Those activities are: 1) prayer, 2) meriting, 3) listening to sermons, 4) observing the precepts, 5) meditation. Our tabulation results show that adolescents who prayed regularly had the highest level of self-esteem, with an average score of 2.06, while those who never prayed had the lowest (1.99). Adolescents who never observed the Buddhist precepts had high levels of self-esteem, with an average score of 2.02. Surprisingly, we found that adolescents who made merit regularly and who had meditated regularly had self-esteem scores of only 1.94 for both activities. Adolescents who listened to sermons regularly and those who never listened to sermons had similar self-esteem levels, with average scores of 2.00 and 1.97 respectively.

From the statistical analysis above, we cannot make definitive conclusions about the effects of these variables on self-esteem because the tabulation does not control for other important variables, such as the socioeconomic variables of gender, education, age, and location. Levels of parental support, prosocial behaviour, and typical adolescent activities should also be taken into account. Otherwise, our tabulation shows biased results. Moreover, our analysis needs more statistical testing to ensure its confidence level. Therefore, in the next section, we will employ the econometrics technique to solve the bias problems due to the absence of a control variable and build credibility by explaining statistical relationships.

Econometrics estimations

As mentioned in the previous section, this section aims to quantify impacts of the participation in Buddhist activities by controlling for other variables such as socioeconomic variables, family support variables, prosocial behaviour variables, and other general activities on the self-esteem of Buddhist adolescents in Thailand. We can estimate via the following model.

Table 5. Average level of thai adolescents' self-esteem classified by buddhist religious activities.

Prayer	Mean	S.D.	Observations	Percent
Never	1.99	0.50	491	37.65
Sometimes	2.00	0.51	598	45.86
Often	2.06	0.49	215	16.49
Total	2.02	0.50	1,304	100
Making merit				
Never	2.01	0.48	187	17.98
Sometimes	2.01	0.52	758	72.88
Often	1.94	0.50	95	9.14
Total	1.99	0.50	1,040	100
Listening to sermon				
Never	1.97	0.5	537	48.69
Sometimes	2.00	0.52	557	50.5
Often	2.00	0.50	9	0.81
Total	1.99	0.51	1,103	100
Observing precepts				
Never	2.02	0.51	891	63.19
Sometimes	1.98	0.50	384	27.23
Often	1.95	0.54	135	9.58
Total	1.98	0.52	1,410	100
Meditating				
Never	1.99	0.50	971	68.77
Sometimes	2.03	0.52	405	28.68
Often	1.94	0.58	36	2.55
Total	1.99	0.53	1,412	100

Source: Authors' own calculation. Data from the 2018 Survey on Conditions of Society, and Culture and Mental Health conducted by the Thailand National Statistical Office.

$$\text{Self - esteem} = \alpha + \beta_1(\text{Religion Participation}) + \beta_2(\text{Other Activities}) \\ + + \delta(\text{Parental Support}) + \theta(\text{Prosocial}) + \gamma(\text{Control Variables}) + \varepsilon$$

The dependent variable (*Self-esteem*) is the individual adolescent's self-esteem which is measured according to three scales: 1 = less, 2 = medium, and 3 = high. Thus, our estimation uses the 'ordered probit regression' to quantify the impacts. Religious Participation variables are all dummy variables to determine how frequently Thai adolescents have been participating in praying, merit-making, listening to sermons, observing Buddhist precepts, and meditating. Variables related to other activities are also dummy variables to determine how frequently Thai adolescents have been loafing, going out at night, gambling, sleeping late and waking up late, playing video games, using the internet, reading books, doing housework, and exercising.

As shown in [Table 6](#), our estimations employ six models. Model 1 uses only socioeconomic variables: age, region, municipal area, gender, occupation, and marital status. Model 2 consists of controlled socioeconomic variables from Model 1

and adds family support variables. Model 3 also consists of controlled socioeconomic variables as in Model 1 but adds variables related to prosocial behaviours. Model 4, too, consists of controlled socioeconomic variables from Model 1 and adds general activities that adolescents typically do. Similarly, Model 5 consists of controlled socioeconomic variables from Model 1 and adds participation in Buddhist activities. Finally, Model 6 contains all variables: controlled socioeconomic variables, family support variables, prosocial behaviour variables, general activities variables, and participation in Buddhist activities variables.

As shown in [Table 6](#), our order-probit model estimations show that Thai Buddhist adolescents living in the southern and northeast regions seem to have statistically higher levels of self-esteem than those living in Bangkok Capital City (who are used as the reference group). It can therefore be concluded that adolescents in urban environments seem to have lower self-esteem than those living in less-urban areas. In addition, adolescents with lower levels of education are found to have higher levels of self-esteem. Data show that those who graduated from high school seem to have lower levels of self-esteem compared to those who did not. However, no statistically significant effects were found regarding age, municipal area, gender, occupation, or marital status.

Another significant relationship was discovered between adolescent self-esteem and family support. For example, receiving educational support from parents shows a positive relationship with self-esteem. Moreover, the result from regressions indicates that joint problem-solving within the family has a statistically positive effect on adolescent self-esteem. We also found that adolescents who participate in family events and are encouraged by parents to do what they want seem to have greater self-esteem. This result is not surprising and is quite consistent with findings of studies from Pérez-Fuentes et al. (2019), Ajilchi et al. (2013), and Vatankhah et al. (2013).

Another interesting discovery is that prosocial behaviour of forgiveness seems to have a positive relationship with adolescent self-esteem. However, we do not find statistically significant relationships with other prosocial behaviours. This resonates with a previous recent study that found volunteering not to have any effect on adolescent self-esteem (Bang et al., 2020).

Regarding typical adolescent activities, we found that gambling seems to have a statistically negative relationship with adolescent self-esteem. This result is consistent with a study by Ho (2016). Our analysis also shows that participating in more relaxed and not-too-strictly regulated behaviours such as sleeping late and waking up late and going out at night seems to increase adolescent self-esteem. In addition, general activities such as playing music also have a statistically positive effect on self-esteem, as noted previously by Shayan et al. (2011).

Most importantly, we found that participation in Buddhist religious activities can play an important role in increasing adolescent self-esteem. For example, our order-probit regressions show that Buddhist adolescents who often participate in prayer have higher levels of self-esteem. This finding is consistent with previous research that found prayer to have a positive effect on stress reduction and

Table 6. Order-probit estimation of thai adolescent's self-esteem with socioeconomic factors, parental support, prosocial behaviours, general activities, and religious activities.

Variables	1	2	3	4	5	6
Socioeconomic controlled variables						
Age	-0.007 (0.017)	0.006 (0.018)	-0.023 (0.024)	-0.019 (0.026)	-0.034 (0.025)	0.024 (0.045)
Region (Ref: Bangkok)						
Central	0.048 (0.142)	0.046 (0.148)	0.301 (0.190)	0.026 (0.202)	0.036 (0.183)	0.509 (0.333)
Northern	0.102 (0.145)	0.142 (0.152)	0.164 (0.195)	0.217 (0.201)	0.138 (0.186)	0.351 (0.341)
Northeast	0.202 (0.142)	0.233 (0.149)	0.400** (0.191)	0.278 (0.195)	0.292 (0.181)	0.627* (0.334)
Southern	0.285* (0.156)	0.301* (0.164)	0.477** (0.211)	0.349 (0.214)	0.287 (0.199)	1.017a (0.365)
Municipal area (Ref: Within municipal area)						
Outside municipal area	-0.040 (0.070)	-0.040 (0.074)	-0.077 (0.102)	-0.117 (0.114)	-0.114 (0.111)	-0.222 (0.204)
Gender (Ref: Male)						
Female	0.046 (0.068)	0.004 (0.080)	0.019 (0.105)	0.112 (0.102)	0.062 (0.100)	-0.251 (0.211)
Education (Ref: Uneducated)						
Primary school	-0.504* (0.299)	-0.689** (0.329)	-0.502 (0.325)	-1.033 (0.718)	-0.845 (0.730)	-0.634 (0.852)
High school	-0.426 (0.299)	-0.663** (0.333)	-0.261 (0.328)	-0.883 (0.716)	-0.623 (0.728)	-0.468 (0.843)
University	-0.307 (0.329)	-0.578 (0.365)	0.037 (0.398)	-0.846 (0.743)	-0.628 (0.750)	0.206 (0.932)
Occupation (Ref: Unemployed)						
Employed	-0.006 (0.084)	0.032 (0.091)	0.137 (0.116)	-0.089 (0.128)	0.062 (0.125)	0.186 (0.221)
Marital status (Ref: Divorced)						
Single	0.170 (0.337)	0.301 (0.359)	-0.100 (0.445)	-0.061 (0.603)	-0.409 (0.555)	-0.568 (0.918)
Married	0.059 (0.339)	0.277 (0.361)	-0.222 (0.447)	-0.006 (0.605)	-0.313 (0.555)	-0.560 (0.921)
Parent Support Variables						
Parents strongly support your education (Ref: Never)						
Sometimes	-	0.320** (0.158)	-	-	-	0.653** (0.282)
Often	-	0.315* (0.171)	-	-	-	0.859a (0.315)
Feeling safe with your family (Ref: Never)						
Sometimes	-	-0.287 (0.275)	-	-	-	-0.261 (0.434)
Often	-	0.007 (0.284)	-	-	-	0.124 (0.444)
Parents set a good example (Ref: Never)						
Sometimes	-	0.359 (0.300)	-	-	-	0.519 (0.552)
Often	-	0.277 (0.311)	-	-	-	0.530 (0.578)
Encouraged by parents to do whatever you want (Ref: Never)						
Sometimes	-	-0.320 (0.232)	-	-	-	-0.699* (0.400)
Often	-	-0.399 (0.250)	-	-	-	-0.816* (0.446)
Exchange feelings with your family (Ref: Never)						
Sometimes	-	-0.158 (0.150)	-	-	-	-0.156 (0.276)

(Continued)

Table 6. (Continued).

Variables	1	2	3	4	5	6
Often	-	-0.026	-	-	-	0.085
	-	(0.173)	-	-	-	(0.317)
Expressing love in your family (Ref: Never)						
Sometimes	-	-0.139	-	-	-	-0.125
	-	(0.184)	-	-	-	(0.315)
Often	-	-0.143	-	-	-	0.007
	-	(0.203)	-	-	-	(0.359)
Expressing religious thoughts to your family (Ref: Never)						
Sometimes	-	0.066	-	-	-	0.308
	-	(0.203)	-	-	-	(0.344)
Often	-	0.245	-	-	-	0.437
	-	(0.220)	-	-	-	(0.386)
Spending time with your family at home (Ref: Never)						
Sometimes	-	-0.026	-	-	-	0.131
	-	(0.167)	-	-	-	(0.279)
Often	-	-0.134	-	-	-	-0.241
	-	(0.185)	-	-	-	(0.319)
Spending time with your family outside (Ref: Never)						
Sometimes	-	-0.084	-	-	-	-0.081
	-	(0.121)	-	-	-	(0.211)
Often	-	-0.135	-	-	-	-0.230
	-	(0.177)	-	-	-	(0.302)
Helping solve problems together (Ref: Never)						
Sometimes	-	0.162	-	-	-	-0.183
	-	(0.130)	-	-	-	(0.235)
Often	-	0.272*	-	-	-	0.028
	-	(0.165)	-	-	-	(0.299)
Having some conflicts with family (Ref: Never)						
Sometimes	-	0.049	-	-	-	-0.023
	-	(0.153)	-	-	-	(0.262)
Often	-	-0.085	-	-	-	-0.834
	-	(0.285)	-	-	-	(0.517)
Being responsible on your own (Ref: Never)						
Sometimes	-	-0.090	-	-	-	0.007
	-	(0.153)	-	-	-	(0.264)
Often	-	-0.118	-	-	-	0.049
	-	(0.166)	-	-	-	(0.296)
Participating in events together with family (Ref: Never)						
Sometimes	-	0.236*	-	-	-	0.376*
	-	(0.123)	-	-	-	(0.226)
Often	-	-0.014	-	-	-	-0.207
	-	(0.206)	-	-	-	(0.423)
Prosocial Behaviour Variables						
Helping others (Ref: Never)						
Sometimes	-	-	0.376	-	-	-0.435
	-	-	(0.438)	-	-	(0.948)
Often	-	-	0.402	-	-	-0.366
	-	-	(0.445)	-	-	(0.964)
Repaying (Ref: Never)						
Sometimes	-	-	-0.430	-	-	0.008
	-	-	(0.809)	-	-	(1.504)
Often	-	-	-0.403	-	-	0.100
	-	-	(0.806)	-	-	(1.505)
Forgiveness (Ref: Never)						
Sometimes	-	-	1.027**	-	-	1.942a
	-	-	(0.425)	-	-	(0.689)
Often	-	-	1.096a	-	-	1.568**
	-	-	(0.424)	-	-	(0.694)
Volunteering (Ref: Never)						

(Continued)

Table 6. (Continued).

Variables	1	2	3	4	5	6
Sometimes	-	-	0.144	-	-	-0.062
	-	-	(0.109)	-	-	(0.204)
Often	-	-	-0.085	-	-	-0.418
	-	-	(0.211)	-	-	(0.460)
Donating (Ref: Never)						
Sometimes	-	-	-0.096	-	-	-0.364*
	-	-	(0.126)	-	-	(0.221)
Often	-	-	0.225	-	-	-0.374
	-	-	(0.232)	-	-	(0.443)
General Activities Variables						
Loafing (Ref: Never)						
Sometimes	-	-	-	-0.137	-	-0.030
	-	-	-	(0.084)	-	(0.220)
Often	-	-	-	-0.419	-	-0.746
	-	-	-	(0.303)	-	(0.686)
Going out at night (Ref: Never)						
Sometimes	-	-	-	0.047	-	-0.022
	-	-	-	(0.087)	-	(0.211)
Often	-	-	-	0.672*	-	0.685
	-	-	-	(0.406)	-	(0.764)
Gambling (Ref: Never)						
Sometimes	-	-	-	-0.274a	-	-0.842a
	-	-	-	(0.106)	-	(0.230)
Often	-	-	-	-0.159	-	0.683
	-	-	-	(0.364)	-	(0.973)
Sleeping late and waking up late (Ref: Never)						
Sometimes	-	-	-	0.154*	-	0.519**
	-	-	-	(0.088)	-	(0.229)
Often	-	-	-	-0.013	-	-0.043
	-	-	-	(0.161)	-	(0.346)
Playing video games (Ref: Never)						
Sometimes	-	-	-	-0.040	-	-0.345
	-	-	-	(0.097)	-	(0.268)
Often	-	-	-	0.145	-	-0.409
	-	-	-	(0.126)	-	(0.325)
Using the internet (Ref: Never)						
Sometimes	-	-	-	0.121	-	0.045
	-	-	-	(0.169)	-	(0.462)
Often	-	-	-	0.141	-	-0.011
	-	-	-	(0.166)	-	(0.463)
Reading books (Ref: Never)						
Sometimes	-	-	-	0.130	-	0.057
	-	-	-	(0.106)	-	(0.279)
Often	-	-	-	-0.008	-	-0.053
	-	-	-	(0.134)	-	(0.367)
Doing housework (Ref: Never)						
Sometimes	-	-	-	-0.090	-	-0.484
	-	-	-	(0.192)	-	(0.477)
Often	-	-	-	0.022	-	0.086
	-	-	-	(0.195)	-	(0.502)
Exercising (Ref: Never)						
Sometimes	-	-	-	0.088	-	-0.061
	-	-	-	(0.106)	-	(0.268)
Often	-	-	-	0.137	-	-0.088
	-	-	-	(0.143)	-	(0.377)
Playing music (Ref: Never)						
Sometimes	-	-	-	-0.059	-	0.064
	-	-	-	(0.080)	-	(0.229)
Often	-	-	-	0.304*	-	0.314

(Continued)

Table 6. (Continued).

Variables	1	2	3	4	5	6
	-	-	-	(0.179)	-	(0.522)
Participating in social events (Ref: Never)						
Sometimes	-	-	-	0.101 (0.093)	-	-0.034 (0.243)
Often	-	-	-	-0.139 (0.176)	-	0.437 (0.486)
Visiting museums (Ref: Never)						
Sometimes	-	-	-	0.063 (0.084)	-	0.511** (0.226)
Often	-	-	-	0.264 (0.251)	-	0.657 (0.565)
Participating in Buddhist religious activities						
Praying (Ref: Never)						
Sometimes	-	-	-	-	-0.056 (0.129)	-0.141 (0.229)
Often	-	-	-	-	0.322* (0.184)	0.475 (0.335)
Making merit (Ref: Never)						
Sometimes	-	-	-	-	-0.005 (0.136)	-0.011 (0.277)
Often	-	-	-	-	-0.271 (0.205)	-0.682* (0.386)
Listening to sermons (Ref: Never)						
Sometimes	-	-	-	-	0.027 (0.121)	-0.036 (0.217)
Often	-	-	-	-	0.377 (0.590)	5.422 (234.219)
Observing Buddhist precepts (Ref: Never)						
Sometimes	-	-	-	-	-0.091 (0.117)	-0.133 (0.205)
Often	-	-	-	-	-0.316* (0.189)	-0.927a (0.353)
Meditating (Ref: Never)						
Sometimes	-	-	-	-	0.058 (0.135)	0.502** (0.243)
Often	-	-	-	-	-0.091 (0.367)	0.151 (0.657)
Adjusted R-Square	0.00773	0.0435	0.0338	0.0256	0.0304	0.246
Observations	1,435	753	688	1,371	688	333

Source: Authors' own calculation. Standard errors in parentheses.
 $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

on building self-esteem (Tloczynski & Fritzsich, 2002). As seen in Model 6, practicing Buddhism sometimes, by comparing to never practicing, also statistically increases self-esteem among Buddhist adolescents in Thailand. This finding is also consistent with previous research that found improvement of adolescent self-esteem through meditation (Emavardhana & Tori, 1997; Lee & Yoo, 2013). Nevertheless, we found a negative relationship between observing precepts and adolescent self-esteem. This relationship merits further study.

We acknowledge that our study has some limitations. There is a potential endogeneity problem regarding the relationship between adolescent self-esteem variables and Buddhist activities. Adolescents may already have low self-esteem and therefore participate in Buddhist religious activities as a result. This problem can be solved by performing regression analysis using appropriate instrumental variables such as the frequency of participation in Buddhist activities. Another limitation is that the questionnaire did not ask about respondents' income levels. Income may be related to both self-esteem and to many variables such as participation in religious activities or

other general activities as well as prosocial behaviour such as making donations and making merit. These omitted variable problems can cause bias in our estimation. These limitations should be addressed in future studies.

Another weakness comes with the self-reporting nature of the questionnaire, particularly with regard to the self-esteem variable. Since the survey respondents' ages range from 13 to 24, it is difficult to assume that they have the same 'definition' of self-esteem. That could somehow explain why some descriptive results are not in accordance with previous research; for example, we found that volunteer activities were associated with lower self-esteem.

Conclusions and Policy Recommendations

Increasing the self-esteem of adolescents is a topic of global interest that has been studied from a variety of academic perspectives. Previous research, especially in the areas of adolescent psychology, medical science, and education, has identified various factors that should contribute to higher levels of adolescent self-esteem, such as family support, peer influences, fostering positive emotions, participation in various activities, etc. However, there are not many studies that have investigated the effects of participation in religious activities on self-esteem. This study has aimed to quantify the relationship between participation in Buddhist religious activities and Buddhist adolescents' self-esteem. Thailand was used as a case study since Buddhism is the main religion of this country.

Applying ordered-probit model regression to a national survey of Thai adolescents, we controlled for other socioeconomic variables such as gender, education level, and location. We found that participation in some Buddhist activities can help increase Thai adolescents' self-esteem. Namely, participating in Buddhist religious activities that include mindfulness activities such as prayer and meditation is found to have a statistically positive relationship with higher self-esteem. On the other hand, activities such as observing Buddhist precepts and making merit had a statistically negative impact on adolescent self-esteem.

Beyond religious activities, participating in other typical adolescent activities also affects adolescents' self-esteem. Some relaxed and not-too-strictly regulated activities such as 'going out at night with friends' and 'sleeping late and waking up late' are found to have a statistically positive relationship with higher self-esteem. However, gambling was found to have a negative relationship.

Other important factors related positively to adolescent self-esteem include family support, such as parents' educational support, family solving problems together, and family spending time together. And prosocial behaviour and positive emotions such as forgiving others had the most statistically positive relationships with adolescent self-esteem.

Since activities related to mindfulness development are found to be important factors in increasing self-esteem among Buddhist adolescents in Thailand, the government should adopt a policy to encourage adolescents to participate in religious activities and to practice meditation. Integrating activities related to mindfulness development in schools, such as encouraging students to practice mindfulness and meditation during homeroom or in after-school programmes, is recommended.

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