

# Cyberbullying on the Internet and Mobile Phones among Thai Youth

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This study deals with Thai youths' use of the internet and mobile phones. Parameters included interests, duration of use, and abuse by means of the Internet and mobile phone, involving both cyberbullying perpetration and victimisation, in the form of threats, sexual solicitation, and harassment. We draw the random sample from three main geographical areas of Thailand: The West (rural area), Bangkok (metropolitan area) and the South (Muslim area). Two schools in each area were randomly sampled, which together included 1305 participants; 763 were female (58.5%). The main results indicate that Thai youths' use of the internet is moderate compared with international figures. While females use the internet and mobile phones to a higher extent than males, males are more likely to be cyberbullies and be cyberbullied on the net. Even though the participants from the Southern Muslim area use the internet and mobile phones less than in the other two regions, they experience abuse much more frequently. The theoretical contribution of this article to the field is the recognition of the family characteristics' influence on the cyberbullying of youth, and the strengthening of the ecological theory applicable to the explanation of the cyberbullying phenomenon.

**Key words:** *Cyberbullying, Victimsation, Internet violence, Phone violence, Youth.*

## Introduction

Technological innovation in the form of the internet and mobile phones is used pervasively among youth and is an integral part of their daily social life. Thai youth are the Asia Pacific region's most avid mobile media users, speaking on a mobile phone at a rate of twice the regional average, and having a higher than average number of social network contacts.

According to Thailand National Statistical Office (2016) there were 57,000,000 internet users (representing 82.2% of the population) at mid-year, 2019 in Thailand; from these, the age group between 15-24 years used the internet most, at 91.4%. One-fourth of the adolescents used the Internet every day and spent at least 2 hours, 20 minutes online and approximately six to seven hours on either smart phone, internet or television media. The interactive means of communication carry the risk of cyberbullying and victimisation.

### **The Cyberbullying Phenomenon**

Cyberbullying is a growing area of concern for adolescents, parents and educators. Cyberbullying is defined as the aggression that is intentionally and repeatedly carried out via mobile phones and the internet, against a person who is not be able to easily defend him/herself (Kowalski et al., 2014). Cyberbullying can take different forms due to the methods and content. In Thailand, research categorised cyberbullying into five characteristics: 1) gossip or insult, 2) slander, 3) negative imposture of others, 4) confidential information spreading and, 5) removal or blockage of others on cyberspace (Sittichai & Tudkuea, 2017) while those in Europe see cyberbullying as an action of which the contents include flaming (online verbal fights); online harassment; cyber stalking (online intimidation/harassment): denigration (put-downs); masquerade (pretending to be someone else to send/post material to damage someone); outing (sharing embarrassing information or images of someone); exclusion (from an online group); putting up false profiles; and distributing personal material against someone's wishes (Smith & Steffgen, 2013). The question as to whether cyberbullying is different from traditional bullying is debated in the literature. Cyberbullying, when compared with traditional bullying, has a unique characteristic with respect to publicity, the bully's anonymity, lower levels of direct feedback, decreased time and space limit, and a lower level of supervision which can lead to considerable psychological distress and negative school experiences among the victims (Hinduja & Patchin, 2015).

Previous studies found substantial overlap between the present cyberbullying and traditional bullying, with regard to the importance of preventative approaches that addresses both modes of victimisation. Wegge, Vandebosch and Eggermont (2014) claim that since the victims often face the same perpetrators both offline and online, cyberbullying is then an extension of traditional bullying.

### **Overlap between Cyberbullies and Cyberbullied**

Several studies indicate that cyberbullied youth are the perpetrators of cyberbullying. Thus, Schultze-Krumbholza et al. (2015), who studied this in six European countries, found a substantial overlap between perpetration and victimisation in cyberbullying of youth. They

also found that different countries revealed different findings; Greece and Poland had the highest odds for involvement as a *perpetrator*, while Italy showed the highest and Germany the lowest odds for an individual being a *bully-victim*. In Thailand, Ojanen et al. (2015) studied both online and offline the bullies and the bullied among Thai youth, and suggest that the victims were over ten times as likely to also be the perpetrators within the same context (online or offline), and vice versa; and that those who perpetrated or were victimised in one context were 2.6–2.7 times as likely to have the same role in the other context.

### **Correlates of Cyberbullying**

Gender difference on the internet and for mobile phone violence are indicated in the literature. Studies find gender differences in cyberbullying; males are more likely to be victimised in traditional bullying than females (Huang & Chou, 2010), while females are more likely to be victimised in cyberbullying than males (Ortega et al., 2009). However, males were more likely than females to engage in cyberbullying when they had been previously bullied online. Repeated victimisation in traditional bullying increased the risk of cyberbullying perpetration among females (Zsila, Urbán, Griffiths & Demetrovics, 2019). In Thailand, Ojanen's (2015) findings indicate that the Thai male participants were more likely than the Thai female participants to perpetrate violence/harassment and to be victimised both online and offline. It was suggested that it is likely to do with the norms of masculinity and femininity. It is found that bullying decreases with the increasing age (Wachs et al., 2015). Yet Schultze-Krumbholza et al. (2015) found a higher cyberbullying involvement with increasing age, which they claim may be related to improved media-related skills, higher probabilities of being equipped with the respective technology, but also less parental monitoring of media-related activities with increasing age. Peer and family relationships have always been a crucial variable in psychological and sociological theories, but the emergence of cyberbullying has emphasised its importance. Peers may legitimise and define violence as the normal and non-deviant behaviour, by providing ideological and informational support for such behaviours (Silverman & Williamson, 1997). Regarding cyber bullying, peers may affect bullying by supporting some behaviours and serving as role models. Thus, O'Neill and Dinh (2015) found that cyber victims had lower levels of peer attachment than cyberbullies and uninvolved adolescents. Moreover, they also found that peer attachment is also negatively related to face-to-face bullying, cyberbullying, and victimisation by both types of bullying. In Thailand, Laeheem, Kuning, McNeil and Besag (2009) studied bullying in primary schools in southern Thailand, finding that bullying was significantly associated with age, and also to experiencing family physical abuse.

### **The Research Setting: Thai Society**

Thai society used to observe Buddhism, which stresses the virtues of compassion, harmony,

responsibility and caring for others (Klausner, 2002), but many changes have taken place in the last few decades. In the traditional order, Thai youth were expected to respect the religion and their parents. According to gender roles, girls were ordinarily good, lovely, helpful, self-sacrificing, subordinate housewives and less ambitious than men, submissive and compliant to others' demands, especially to men and seniors (Klausner, 2002). Nonetheless, today, Thai girls have greater socioeconomic independence resulting from their participation in the labour market, and thus they have more freedom in their sexual behaviour (Sridawruang, Crozier & Pfeil, 2010).

In recent decades, Thailand has undergone a period of rapid changes concurrent with its economic prosperity, including the increase in growing urbanisation, westernisation and moderation of cultural and religious norms (Klausner, 2002). Consequently, many young and able youths leave their natal villages for the cities, where they find better education systems or work in the manufacturing industry (Vuttanont et al., 2006). Although the traditional village social network was based on kinship and extended family relations, this ongoing process has led to new social structures that have replaced the old ones, and the children of today are different in their behaviour to those previously (Vuttanont et al., 2006). Nevertheless, the family remains the central source of behavioural and ethical codes: children care for their aging parents (the majority of Thais do not have pension programs) and young people respect the older generation, especially in rural areas (Limanonda, 2010). Conservative beliefs about religion, personal conduct and sexuality are still prescribed. This coexistence of traditional and new values, norms and ways of behaving, aspirations to western gender roles and relationships, and the simultaneous attempt to retain traditional values creates a complex context for Thai adolescents, who might find themselves without clear guidelines in some situations (Vuttanont et al., 2006).

The current population of Thailand consists of 93.6% Buddhists, 5.4% Muslims, and 0.9% Christians (National Statistic Office, 2016), living in 71 provinces. The vast majority of Muslims live in three Southern provinces and are united by nationalistic militant aspirations. The tension in these Muslim-dominated provinces started in the 1960s with the rise of a significant Islamic separatist movement. During the 1980s, the violence had largely subsided under an amnesty program, but the conflict re-escalated in January 2004. Since then, the area has been suffering from ongoing extreme Islamist terror. Thai-Buddhist vigilante squads are also involved in the fighting, which includes daily attacks on the police and army as well as on other civilians, particularly teachers and those associated with the government (Askew, 2008).

### **Theoretical Background**

The ecological theory (Bronfenbrenner, 1979) explains that the family subsystems (the

microsystem), the community (the exosystem) and the macrosystem (the society), have a joint impact on how children grow up and shape their personalities and behaviours. Additionally, the behavioural theory emphasises the learning process that involves modelling from the surrounding subsystems such as family, friends, community and school (Bandura, 1986). Together, these theories are very meaningful to our study, incorporating the possible influences that, according to our understanding, shape violence and thus internet abuse rates. The ecological and behavioural theories emphasise the effects of the personal, familial, school, peer and community subsystems, and societies' influences. Another ecological theory concerning crime, the deviant place theory (Stark, 1987) emphasises the correlation between variations in neighbourhood characteristics and deviance and crime. The theory claims that youth living in disorganised neighbourhoods, "bad" or "problematic" neighbourhoods, or being exposed to dangerous places with high crime rates are at the highest risk of violence. It is these effects that we will focus upon in our study, in the attempt to learn about and explain the phenomenon and the levels of internet violence and abuse among Thai youth, emphasising the cultural difference between the Buddhist and Muslim cultures as a possible reason for abusing and being abused, and the rates in these two cultures.

## **Method**

### ***Sample***

Using a systematic sampling method, the sample was randomly drawn from three provinces of Thailand: one from Bangkok, representing the Thai population of large and urban areas, the second province was randomly chosen from those in the rural areas, and the third was randomly chosen from the country's three southern Muslim provinces. In each of the three provinces, two public high schools were randomly chosen using a systematic sampling method. This method was also used in each high school, to choose four classes at random from the seventh to tenth grades. All students who were present on the day that the questionnaires were administered were included in the study. The sample consisted of 1,305 youths: 542 (41.5%) males and 763 (58.5%) females, respectively.

### ***Procedure***

The research was based on a structured self-report questionnaire. Anonymity was assured, and the students received letters explaining the research goal as well as their right not to participate in the study. The university committee for research ethics approved the study.

## Instruments

### *Data Analysis*

We used the Mancova test to study the differences between the three provinces and between genders on the use of internet, phone and SMS, and on different types of abuse and ways of harassing others by our subjects. Multiple structural analysis was used to study the personal, familial and community characteristics related to abusing others by internet, phone and SMS. Structural equation modelling (SEM) was used to study a model of the contribution of independent variables to participants' abuse by internet, phone and SMS. Following our theoretical base, we included in the model the personal system, the family subsystem, the peer subsystem and the community subsystem. The variables we used in the model were: individual characteristics (religiosity, age, gender and grade, smoking, use of alcohol, use of light drugs, use of hard drugs; own violence at home, at school and in the community; and violence (violence at home, at school and in the community). These can be divided into categories of characteristics: family characteristics (family's economic status, father's and mother's education, parents' religiosity, family structure, father's and mother's work status). Peer characteristics (friends' work, carry weapons, use alcohol or drugs, volunteer, are verbally abusive, force sex).

## Results

It is found that the participants in the southern province and their parents were more religiously observant and family size was larger. The parents were less educated, the family income was lower, and families were more intact (see Table 1).

**Table 1:** Sample Characteristics

| Variables                        | Sample<br>1305     | Bangkok<br>568 (43.5%) | Rural<br>424 (32.5%) | South<br>313 (24.8%) |
|----------------------------------|--------------------|------------------------|----------------------|----------------------|
| Gender:                          |                    |                        |                      |                      |
| Male                             | 542 (41.5%)        | 252 (44.4%)            | 171 (40.3%)          | 119 (38.0%)          |
| Female                           | 763 (58.5%)        | 316 (55.6%)            | 253 (59.7%)          | 194 (62%)            |
| Age<br>((years*12)+(months))/12. | 14.23<br>S.D.=1.15 | 14.24<br>S.D.=1.09     | 14.06<br>S.D.=1.07   | 14.59<br>S.D.=1.33   |
| Religiosity*                     |                    |                        |                      |                      |
| Never                            | 965 (74.6%)        | 547 (97%)              | 418 (99.1%)          | 10 (3.2%)            |
| Seldom                           | 9 (.7%)            | 7 (1.2%)               | 1 (.2%)              | 23 (7.3%)            |
| Often                            | 319 (24.7%)        | 9 (1.6%)               | 3 (.7%)              | 46 (14.7%)           |
| Regularly                        | 1 (.1%)            | 1 (0.2%)               | 0                    | 221 (70.6%)          |
| Working Status:                  |                    |                        |                      |                      |
| Works                            | 89 (6.8%)          | 32 (5.6%)              | 25 (5.9%)            | 32 (10.2%)           |
| Does not work                    | 1216 (93.2%)       | 536 (94.4%)            | 399 (94.1%)          | 281 (89.8%)          |

|                                       |                         |             |             |             |             |
|---------------------------------------|-------------------------|-------------|-------------|-------------|-------------|
| Number of siblings**                  | 0                       | 245 (18.8%) | 135 (23.8%) | 97 (22.9%)  | 13 (4.2%)   |
|                                       | 1-2                     | 763 (58.5%) | 380 (65.2%) | 297 (70.0%) | 96 (30.6%)  |
|                                       | 3-4                     | 182 (13.9%) | 59 (10.4%)  | 23 (5.4%)   | 99 (31.6%)  |
|                                       | 5-6                     | 79 (6%)     | 4 (.8%)     | 5 (1.1%)    | 70 (22.3%)  |
|                                       | 7 or more               | 37 (2.8%)   | 0           | 2 (.2%)     | 35 (11.2%)  |
| Parents perform religious practices** | Never                   | 14 (1.1%)   | 6 (1.1%)    | 4 (.9%)     | 4 (1.3%)    |
|                                       | Seldom                  | 219 (16.8%) | 129 (22.7%) | 84 (19.8%)  | 6 (1.9%)    |
|                                       | Sometimes               | 385 (29.5%) | 202 (35.6%) | 169 (39.9%) | 14 (4.5%)   |
|                                       | Often                   | 332 (25.4%) | 176 (31%)   | 122(28.8%)  | 34 (10.9%)  |
|                                       | Regularly               | 355 (27.2%) | 55 (9.7%)   | 45 (10.6%)  | 255 (81.5%) |
| Family income**                       | Less than 8,000 baht    | 371 (28.6%) | 62 (10.9%)  | 116 (27.4%) | 193 (61.9%) |
|                                       | 8001-16,000 baht        | 483 (37.2%) | 215 (37.9%) | 193 (45.6%) | 75 (24.4%)  |
|                                       | 16001-24000 baht        | 205 (15.8)  | 135 (23.8%) | 50 (11.8%)  | 20 (6.5%)   |
|                                       | 24001-32000 baht        | 88 (6.8%)   | 64 (11.3%)  | 20 (4.7%)   | 4 (1.3%)    |
|                                       | 32001-40000 baht        | 109 (8.4%)  | 39 (10.4%)  | 38 (9%)     | 12 (3.9%)   |
|                                       | More than 40001 baht    | 41 (3.2%)   | 32 (5.6%)   | 6 (1.4%)    | 3 (1.0%)    |
| Father's education**                  | Primary school or lower | 491 (39.1%) | 148 (26.8%) | 210 (51.5%) | 133 (45.1%) |
|                                       | High school             | 431 (34.3%) | 185 (3.5%)  | 135 (33.1%) | 111 (37.6%) |
|                                       | Vocational              | 157 (12.5%) | 111 (20.1%) | 32 (7.8%)   | 14 (4.7%)   |
|                                       | Bachelor's degree       | 108 (8.6%)  | 75 (13.6%)  | 21 (5.1%)   | 12 (4.1%)   |
|                                       | Master's or higher      | 31 (2.5%)   | 18 (3.3%)   | 3 (.7%)     | 10 (3.4%)   |
|                                       | Other                   | 37 (2.9%)   | 15 (2.7%)   | 7 (1.7%)    | 15 (5.1%)   |
| Mother's education**                  | Primary school or lower | 513 (40.1%) | 186 (33%)   | 203 (48.6%) | 124 (41.5%) |
|                                       | High school             | 459 (35.9%) | 182 (32.3%) | 146(34.9%)  | 131 (43.8%) |
|                                       | Vocational              | 153 (12%)   | 100 (17.8%) | 34 (8.1%)   | 19 (6.4%)   |
|                                       | Bachelor's degree       | 105 (8.2%)  | 70 (12.4%)  | 26 (6.2%)   | 9 (3.0%)    |
|                                       | Master's or higher      | 22 (1.7%)   | 14 (2.5%)   | 5 (1.2%)    | 3 (1.0%)    |
|                                       | Other                   | 28 (2.2%)   | 11 (2.0%)   | 4 (1.0%)    | 13 (4.3%)   |

\* P<.05 \*\* p<.001

It is also found that 64.6% of participants used the internet (including 57.1% of the males and 70.0% of the females), and 5.4% had been threatened (including 8.1% of the males and 3.5% of the females). This results contradict the international findings in which the girls are much more cyberbullied than the males (Zsila et al., 2019; O'Neill & Dinh, 2015; Wachs et al., 2015). Further, in this current study 8.3% had threatened others on the internet (including 13.7% of the males and 4.3% of the females), again a difference from the international figures in which females are more cyberbullies than males (Wachs et al. 2015). Additionally,

4.9% of those in the study had been sexually solicited (including 7.4% of the males and 3.1% of the females), 7.1% had sexually solicited others on the internet (including 15.6% of the males and 5.4% of the females), 12.1% had been harassed (including 14.0% of the males and 10.7% of the females) and 9.7% had harassed others on the internet (including 12.6% of the males and 3.1% of the females). The lower cyberbullying and being cyberbullied rates as a female results are probably from the traditional way girls are raised in Thailand. This interpretation coincides with the social role theory (Archer, 2006), proposing that one reason that women and men conform with gender stereotypes is because they act in accordance with their social roles, which are often segregated along gender lines.

Most participants used the internet for their emails (99.2%), Facebook (99.3%), Twitter (98.9%), finding information (99.4%), school work (99.5%), watching movies (99.6%), chatting (99.3%), watching pornography (99.3%), following the news (98.2%), playing games (66.5%), drawing, watching cartoons and much more (37.2%). Thus, the percentage of internet use by youth in Thailand is moderate compared to the international figures from the Centre for the Digital Future (2018). Additionally, from those studied, 24.64% did not use a mobile phone, 75.4% did (67.1% males and 81% females), again a lower use than from international figures (Zsila et al., 2019; Hinduja & Patchin, 2015). Among the participants, 51.4% used their phone up to three hours a day, 5.6% for three to eight hours a day, and 3.8% more than ten hours a day. Mobile phone use for more than four hours a day was higher among males (52.4%) than females (50.4%). Phones were used for internet connection by 63.3%, speaking with their family by 82.6%, speaking with friends by 85.2% and text messaging by 66.6%. Phones were used for other purposes such as taking pictures, listening to music, playing games, and recording, by 30.1% respectively.

### **Internet and Mobile Phone Victimization by Province and Gender**

The MANCOVA test was utilised to reveal the differences in using the internet, speaking on the phone and text messaging among the provinces and between genders. The MANCOVA test enabled us to control for the significant differences among the provinces on fathers' and mothers' education and family income, which were lower in the Muslim provinces.

### **Internet Victimization by Province and Gender**

On the victimisation on the internet scale, the MANCOVA test indicated a significant overall effect (Wilks' Lambda =.365,  $F(4,1295)=563.54$ ,  $p<.0001$ ,  $\eta^2=.635$ ). Significant overall effect was observed on Province (Wilks' Lambda =.934,  $F(8,2592)=11.30$ ,  $p<.0001$ ,  $\eta^2=.034$ ) and on Gender (Wilks' Lambda =.961,  $F(4,1295)=13.07$ ,  $p<.0001$ ,  $\eta^2=.039$ ). Overall interaction effects were observed (Wilks' Lambda =.978  $F(8,2590)=3.65$ ,  $p<.0001$ ,  $\eta^2=.011$ ).



Interaction effects were indicated on Experienced Threats on the Internet ( $F(2,1298) = 13.68$ ,  $p < .0001$ ,  $\eta^2 = .021$ ). The Southern province and males' higher mean scores caused these interaction effects. Univariate main effects were observed on province on the Experienced Sexual Solicitation on the Internet variable ( $F(2,1298) = 6.12$ ,  $p < .002$ ,  $\eta^2 = .009$ ), and on Been Harassed ( $F(2,1298) = 8.28$ ,  $p < .0001$ ,  $\eta^2 = .013$ ) (see Table 2).

Univariate main effects were observed on Gender for Experienced Sexual Solicitation on the Internet ( $F(1,1298) = 14.99$ ,  $p < .0001$ ,  $\eta^2 = .011$ ) and for Experienced Harassment on the Internet ( $F(1,1298) = 5.24$ ,  $p < .022$ ,  $\eta^2 = .004$ ).

**Table 2:** MANCOVA Results and Means and Standard Deviations of Using Internet and Phone and Being Threatened, Sexually Solicited and Harassed by Province and Gender.

(<sup>a</sup>Province differences based on MANCOVA  $P < .001$ . <sup>b</sup> Gender Differences based on MANCOVA tests  $P < .001$ . <sup>c</sup> Mean scores. <sup>d</sup> Standard Deviation. <sup>e</sup> Significant differences among provinces based on MANOVA Scheffe post hoc tests.)

| Means and SD of Using the Internet and Being Threatened, Sexually Solicited and Harassed by Province and Gender. |                              |        |                                     |        |   |        |                                   |        |   |        |   |        |                                       |        |
|--|------------------------------|--------|-------------------------------------|--------|---|--------|-----------------------------------|--------|---|--------|---|--------|---------------------------------------|--------|
|  | Use of Internet <sup>a</sup> |        | Threatened by Internet <sup>a</sup> |        | Sexually Solicited by Internet <sup>a</sup> |        | Harassed by Internet <sup>a</sup> |        |   |        |   |        |                                       |        |
| Gender   | Male <sup>b</sup>            | Female | Male <sup>b</sup>                   | Female | Male <sup>b</sup>                           | Female | Male <sup>b</sup>                 | Female |   |        |   |        |                                       |        |
| Province   | .57                          | .70    | .08                                 | .03    | .07   | .03    | .14                               | .11    |   |        |   |        |                                       |        |
| Bangkok (1)  | .49                          | .46    | .27                                 | .18    | .26   | .17    | .35                               | .31    |   |        |   |        |                                       |        |
| Rural (2)  | .61 <sup>c</sup>             | .76    | .07                                 | .06    | .07   | .04    | .15                               | .15    |   |        |   |        |                                       |        |
| South (3)  | .49 <sup>d</sup>             | .43    | .26                                 | .43    | .25   | .19    | .35                               | .36    |   |        |   |        |                                       |        |
| Differences <sup>f</sup>   | 3 < 1 & 2                    |        | 1 & 3 > 2                           |        | 3 > 2                                       |        | 1 & 3 > 2                         |        |   |        |   |        |                                       |        |
| Means and SD of Using the Phone/SMS and Being Threatened, Sexually Solicited, & Harassed by Province and Gender. |                              |        |                                     |        |   |        |                                   |        |   |        |   |        |                                       |        |
|  | Use of Phone <sup>a</sup>    |        | Threatened by Phone <sup>a</sup>    |        | Sexually Solicited by Phone <sup>a</sup>    |        | Harassed by Phone <sup>a</sup>    |        | Threatened by Text Message <sup>a</sup> |        | Sexually Solicited by Text Message <sup>a</sup> |        | Harassed by Text Message <sup>a</sup> |        |
| Gender   | Male <sup>b</sup>            | Female | Male <sup>b</sup>                   | Female | Male <sup>b</sup>                           | Female | Male                              | Female | Male <sup>b</sup>                       | Female | Male <sup>b</sup>                               | Female | Male <sup>b</sup>                     | Female |
|  | .67 <sup>c</sup>             | .81    | .08                                 | .06    | .07   | .04    | .09                               | .04    | .09                                     | .04    | .06   | .03    | .09                                   | .05    |
| Bangkok (1)  | .47 <sup>d</sup>             | .39    | .29                                 | .25    | .25   | .19    | .29                               | .20    | .29                                     | .20    | .24   | .17    | .29                                   | .22    |
| Rural (2)  | .69                          | .88    | .05                                 | .07    | .03   | .03    | .05                               | .13    | .06                                     | .06    | .04   | .03    | .05                                   | .07    |
| South (3)  | .46                          | .32    | .22                                 | .25    | .18   | .17    | .21                               | .33    | .24                                     | .24    | .20   | .17    | .26                                   | .25    |
| Differences <sup>e</sup>   | 3 < 1 & 2                    |        | 3 > 1 & 2                           |        | 3 > 1 & 2                                   |        | 3 > 1 & 2                         |        | 3 > 2                                   |        | 3 > 1 & 2                                       |        | 3 > 2                                 |        |

## Phone and Text Messaging Victimization by Province and Gender

On the Victimization by Phone scale, the MANCOVA test indicated a significant overall effect (Wilks' Lambda =.252,  $F(7,1289)=546.74$ ,  $p<.0001$ ,  $\eta^2=.748$ ). Significant overall effect was observed on Province (Wilks' Lambda =.881  $F(14,2580)=11.30$ ,  $p<.0001$ ,  $\eta^2=.062$ ) and on Gender (Wilks' Lambda =.947,  $F(7,1289)=10.24$   $p<.0001$ ,  $\eta^2=.053$ ). Overall interaction effects were observed (Wilks' Lambda =.957,  $F(14,2578)=4.06$ ,  $p<.0001$ ,  $\eta^2=.022$ ). Interaction effects of Experienced Victimization by Phone on Province and Gender were observed for the Experienced Threats ( $F(2,1295) = 7.24$ ,  $p<.001$ ,  $\eta^2=.016$ ), Experienced Sexual Solicitation ( $F(2,1295) = 10.41$ ,  $p<.0001$ ,  $\eta^2=.016$ ), and Experienced Harassment ( $F(2,1295) = 13.17$ ,  $p<.0001$ ,  $\eta^2=.020$ ) variables. Higher mean scores of the southern province and the males caused all interaction effects.

### Text Messaging

Interaction univariate main effects of Province and Gender were observed for Experienced Threats by Text Messaging ( $F(2,1295) = 16.83$ ,  $p<.0001$ ,  $\eta^2=.025$ ), for Experienced Sexual Solicitation by Text Messaging ( $F(2,1295) = 9.56$ ,  $p<.0001$ ,  $\eta^2=.015$ ), and for Experienced Harassment by Text Messaging ( $F(2,1295) = 13.15$ ,  $p<.0001$ ,  $\eta^2=.020$ ). Higher mean scores of the southern province and the males caused all interaction effects.

### Threatening, Harassing, and Sexual Solicitation of Others on the Internet

On the Threatened Others on the Internet scale, the MANCOVA test indicated a significant overall effect (Wilks' Lambda =.103,  $F(3,1263)=3708.34$ ,  $p<.0001$ ,  $\eta^2=.897$ ). Significant overall effect was observed on Province (Wilks' Lambda =.959,  $F(6,2546)=9.07$ ,  $p<.0001$ ,  $\eta^2=.021$ ) and on Gender (Wilks' Lambda =.961,  $F(3,1273)=17.06$ ,  $p<.0001$ ,  $\eta^2=.039$ ).

Univariate main effects were observed on Province on Threatening others on the Internet ( $F(2,1275) = 18.59$ ,  $p<.0001$ ,  $\eta^2=.035$ ) and on Gender ( $F(1,1275)=34.61$ ,  $p<.0001$ ,  $\eta^2=.026$ ). Univariate main effects were observed on province on Harassing others on the Internet ( $F(2,1275) = 23.21$ ,  $p<.0001$ ,  $\eta^2=.035$ ), and on Gender ( $F(1,1275) = 34.96$ ,  $p<.0001$ ,  $\eta^2=.027$ ).

Univariate main effects were observed on province on Own Sexual Solicitation on the Internet ( $F(2,1275) = 12.45$ ,  $p<.0001$ ,  $\eta^2=.019$ ), and on Gender ( $F(1,1275) = 41.89$ ,  $p<.0001$ ,  $\eta^2=.032$ ) (see Table 3).

### **Threatening and Harassing Others by Phone**

On the Threatening Others by Phone scale, the MANCOVA test indicated a significant overall effect (Wilks' Lambda =.128,  $F(21,205)=4092.30$ ,  $p<.0001$ ,  $\eta^2 =.872$ ). Significant overall effect was observed on Province (Wilks' Lambda =.951,  $F(6,2406)=15.37$ ,  $p<.0001$ ,  $\eta^2 =.025$ ) and on Gender (Wilks' Lambda =.960,  $F(2,1205)=24.89$ ,  $p<.0001$ ,  $\eta^2 =.040$ ). Overall interaction effects were observed (Wilks' Lambda =.984,  $F(4,2410)=4.87$ ,  $p<.001$ ,  $\eta^2=.008$ ). Interaction effects were observed on Province and Gender on Threatening Others by Phone ( $F(2,1206) = 7.25$ ,  $p<.001$ ,  $\eta^2=.012$ ). This interaction effect resulted from the higher mean scores of the southern province and the males (see Table 3).

Interaction effects were observed on Province and Gender on Harassing Others by Phone ( $F(2,1206) = 7.79$ ,  $p<.0001$ ,  $\eta^2=.013$ ). This interaction effect resulted from the higher mean scores of the province and the males (See Table 3).

**Table 3:** MANCOVA Results and Means and Standard Deviations of Threatening, Harassing and Sexually Soliciting Others by Province and Gender

| Means and SD of Threatening, Harassing and Sexually Soliciting Others by Province and Gender. |                                       |             |                                    |             |  |             |                                   |             |                                 |             |  |             |  |             |
|---|---------------------------------------|-------------|------------------------------------|-------------|--|-------------|-----------------------------------|-------------|---------------------------------|-------------|--|-------------|--|-------------|
|   | Threatening by Internet <sup>a</sup>  |             | Harassing by Internet <sup>a</sup> |             | Sexually Soliciting by Internet <sup>a</sup> |             | Threatening by Phone <sup>a</sup> |             | Harassing by Phone <sup>a</sup> |             | Threatening by Text Message <sup>a</sup> |             | Harassing by Text Message <sup>a</sup> |             |
| Gender  | Male <sup>b</sup>                     | Female      | Male <sup>b</sup>                  | Female      | Male <sup>b</sup>                            | Female      | Male <sup>b</sup>                 | Female      | Male <sup>b</sup>               | Female      | Male <sup>b</sup>                        | Female      | Male <sup>b</sup>                      | Female      |
| Sample  | 1.18 <sup>c</sup><br>.54 <sup>d</sup> | 1.05<br>.29 | 1.22<br>.61                        | 1.07<br>.34 | 1.18<br>.58                                  | 1.03<br>.24 | 1.21<br>.62 <sup>d</sup>          | 1.06<br>.31 | 1.21<br>.60                     | 1.05<br>.31 | 1.18<br>.55                              | 1.06<br>.32 | 1.18<br>.59                            | 1.06<br>.33 |
| Bangkok (1)   | 1.14<br>.41                           | 1.02<br>.14 | 1.21<br>.56                        | 1.03<br>.20 | 1.16<br>.53                                  | 1.01<br>.11 | 1.17<br>.56                       | 1.04<br>.20 | 1.20<br>.61                     | 1.03<br>.20 | 1.15<br>.48                              | 1.03<br>.19 | 1.13<br>.51                            | 1.05<br>.25 |
| Rural (2)   | 1.13<br>.39                           | 1.04<br>.23 | 1.12<br>.34                        | 1.03<br>.31 | 1.13<br>.40                                  | 1.03<br>.19 | 1.13<br>.38                       | 1.05<br>.27 | 1.07<br>.25                     | 1.02<br>.17 | 1.14<br>.45                              | 1.05<br>.26 | 1.11<br>.35                            | 1.04<br>.22 |
| South (3)   | 1.35<br>.85                           | 1.13<br>.48 | 1.37<br>.82                        | 1.19<br>.58 | 1.28<br>.74                                  | 1.10<br>.41 | 1.43<br>.90                       | 1.12<br>.48 | 1.44<br>.82                     | 1.15<br>.53 | 1.32<br>.79                              | 1.13<br>.51 | 1.43<br>.91                            | 1.15<br>.51 |
| Differences <sup>e</sup>  | 3 > 1 & 2                             |             | 3 > 1 & 2                          |             | 3 > 1 & 2                                    |             | 3 > 1 & 2                         |             | 3 > 1 & 2                       |             | 3 > 1 & 2                                |             | 3 > 1 & 2                              |             |

a

Province differences based on MANCOVA  $P < .001$ . <sup>b</sup> Gender Differences based on MANCOVA tests  $P < .001$ . <sup>c</sup> Mean scores. <sup>d</sup> Standard Deviation. <sup>e</sup> Significant differences among provinces, based on MANOVA Scheffe post hoc tests.

### **Threatening and Harassing Others by Text Messaging**

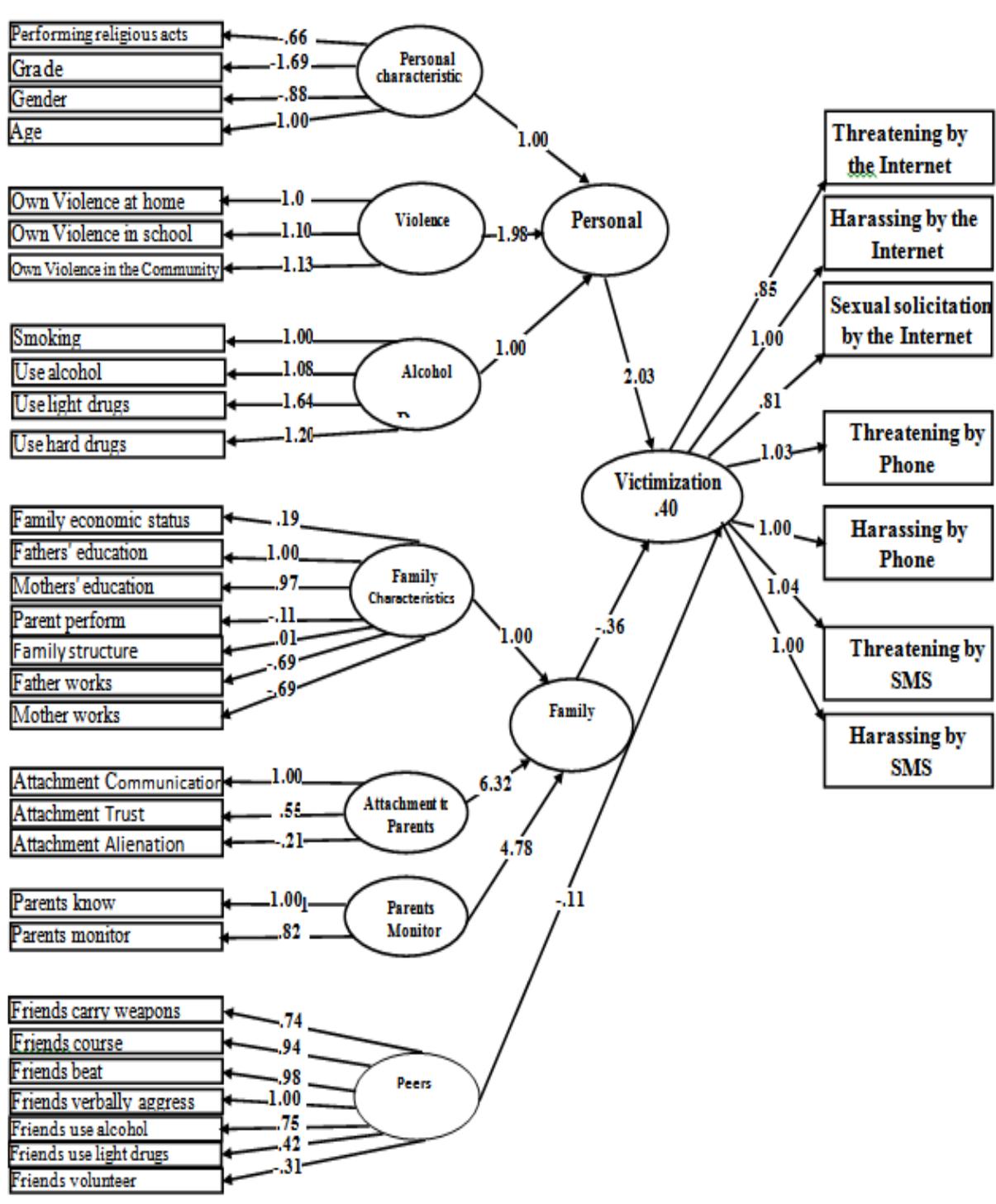
On the Threatening Others by Text Messaging scale, the MANCOVA test indicated a significant overall effect (Wilks' Lambda =.133,  $F(2,1275)=4154.46$ ,  $p<.0001$ ,  $\eta^2=.867$ ). Significant overall effect was observed on Province (Wilks' Lambda =.958,  $F(4,2550)=13.66$ ,  $p<.0001$ ,  $\eta^2=.021$ ) and on Gender (Wilks' Lambda =.972,  $F(2,1275)=18.27$ ,  $p<.0001$ ,  $\eta^2=.028$ ). Overall interaction effects were observed (Wilks' Lambda =.986,  $F(4,2550)=4.49$ ,  $p<.001$ ,  $\eta^2=.007$ ).

Univariate main effects were observed on Province on Threatening Others by Text Messaging ( $F(2,1276) = 27.01$ ,  $p<.0001$ ,  $\eta^2=.041$ ) and on Gender ( $F(1,1276)=31.53$ ,  $p<.0001$ ,  $\eta^2=.024$ ). Interaction effects were observed on Province and Gender on Harassing Others by Text Messaging ( $F(2,1276) = 7.52$ ,  $p<.001$ ,  $\eta^2=.012$ ). This interaction effect resulted from the higher mean scores of the southern province and the males (see Table 3).

To study the relationships among the independent variables and the cyber victimisation rates, we used an SEM. Following the stated correlates of cyberbullying, our model proposed that cyber victimisation rates could be predicted by students' personal characteristics, family characteristics, attached to parent and parent monitoring, peer characteristics, and violent experiences in the family, in the school and in the community (see Figure 1).

The model produced the following fit results: A Structural Equation Model of cyber victimisation on the Internet, Phone and SMS. Sample size $\approx$ 1305;  $\chi^2(df=618) = 3336.44$ ,  $p<.001$ . NFI=0.85; IFI=0.87; CFI=0.87; RMSEA=0.058 ( $0.056 < RMSEA < 0.060$ ). The fit indices indicate that the model fits the data well.

**Figure 1.** A Structural Equation Model of cyber victimisation on the Internet, Phone and SMS. Sample size≈1305;  $\chi^2(df=618) = 3336.44, p<.001$ . NFI=0.85; IFI=0.87; CFI=0.87; RMSEA=0.058 ( $0.056 < RMSEA < 0.060$ ).



## **Discussion**

The present study dealt with the internet and the mobile phone use and the abuse among Thai youth, including experiencing abuse and victimising others in the form of threats, sexual solicitation, and harassment. Our main results indicate that Thai youth use the internet to a moderate extent when compared with the international figures, and that differences in internet victimisation and abuse of others were observed among the provinces and between the genders, with the highest mean scores shown in the southern Muslim provinces and among males.

### **Differences in Internet Use and Abuse by Youth**

The finding that Thai youth use the internet to a lesser extent than the youth in other countries might be explained by the country's lower economic status, coupled with the possible lower appreciation of the need and power of this device, especially in the remote rural areas of Thailand. As internet abuse results from excessive internet use, the lower level of abuse was to be expected in rural areas. Thai youth use the internet extensively for many reasons including email, Facebook, Twitter, finding information, school work, and much more, which indicates its significance in their lives. Aside from the time dedicated to this medium, the variety of programs being used indicates the versatility of the internet today, and its ability to meet the needs and satisfy the desires of the youth of Thailand. Moreover, higher accessibility and use of internet might help youth from the remote areas to integrate into the changing society. Nonetheless, as well as providing new means of communication, the internet encourages less direct contact. Many of today's youth prefer to communicate with friends via text messages or through online social networking sites such as Facebook. This has certain advantages, such as allowing the sender enough thinking time to word a proper message, either to individuals or groups, but the lack of direct communication can lead to less intimate relationships.

### **Gender Differences among Youth in Internet and Mobile Phone Use**

It is found that although males use the internet and mobile phones less than females, except for the experienced harassment by phone variable, which indicated no gender differences, males had higher mean scores than females on all other victimisation variables. These findings were supported in Thailand by Sitichai and Smith (2017), who found that among Thai youth aged 14 to 17 years male students were more likely to be victims, especially cyber victims. This result contradicts with the international systematic reviews by which the results for females are much higher than the males on being cyberbullies and being cyberbullied (Gustafsson, 2017). As our result was prevalent in the three areas under study, it can be explained by the gender roles and behaviours in Thailand, which are still influenced by the

traditional patriarchal social order. This is particularly relevant in the southern areas, where the traditional Muslim way of life is prevalent, and has some influence on mobile phone use and text messaging in the area. The females in the southern areas probably have less freedom and therefore less opportunity to speak on the mobile phones and send text messages compared with females in other areas of Thailand. To this we might add that the low economic status of the southern region under study probably contributes to their lower ability to purchase and use internet and mobile phone services.

With greater accessibility to the internet and mobile phone connections, to faster internet and mobile phone systems, more accessible computer and phone storage capacities as well as the expected increase in the use of these communication systems, we might face higher rates of victimisation and abuse within the youth in the future. New ways of abusing youth might also be developed. Given the situation in the South, we are unable to make any recommendations, but hope that these results will be made known to the country's policy makers and citizens, so that the efforts will be made to ease the tension, thus improving the children's environment and providing them with better prospects for the future.

### **Differences among Socio-Cultural Context**

The Southern Muslim region of Thailand had far higher abuse mean scores on the internet and mobile phones than the other two regions under study; even though the youth in the South use internet and phones to a lesser extent than in the other two regions, they showed higher levels of abuse of others on the internet and by mobile phone. Based on the assumption that the source and target of these types of communication is, in most cases, youth from the social milieu or even friends of the youth under study, this result can be explained by the turbulent environment in which they live. The violence rates in this area, including violence among youth, is very high—much higher than in the other parts of Thailand (Sherer and Sherer, 2014). This violent behaviour spreads to Thai youths' use of the internet and mobile phones. Like any other source of communication, the internet and the use of mobile phones enables the use of threats, sexual solicitation and harassment, and to some extent, facilitates these activities, given that the source of these communications is sometimes unknown.

These results lend support to the ecological theory (Bronfenbrenner, 1979), which explains that the effects of the macrosystem, consisting of broader societal characteristics, that directly and indirectly affect the individual—in this case, legitimising violence and leading to higher rates of internet and phone abuse among youth in the southern part of Thailand. On the other hand, the behavioural theory (Bandura, 1986) emphasises that, like any other social phenomenon, children learn to behave through role modelling and adaptation. Thus, the southern youth, who face a violent atmosphere around them, adjust to these behaviours and

reflect them among other behaviours in abusing other youth over the internet and phones communications. Sykes and Matza (1967) indicate that certain cultures' justifications for the use of force and aggression provide for the emergence of violent behaviour. Therefore, more violence-supporting cultures, as we see in the southern provinces, are likely to experience a higher rate of violence. Thus, youth living in a violent society and sharing nationalistic aspirations may look upon the surrounding, meaningful fighters as role models and adopt their violent behaviours. Behaviours which are then reflected in their abuse of other youth over the internet and phone communications.

The SEM results of the personal characteristic variables effect indicate that the higher the religiosity, the last year grade and being male, lowers the victimisation rates. These results are supported by the literature. Study on religiosity and violence have shown that more religious adolescents perform lower violent acts (Sherer and Sherer, 2014). Agnich and Miyazaki (2011) found that achievement in mathematics and a wide variation between high and low scoring students significantly predicted the cross-national level of school violence. Gender had an effect on victimisation; the higher mean scores of victimisation among females is supported in the literature, for example. Thus, the recent study on systematic reviews in Europe revealed that the likelihood of becoming a cyber victim was higher for girls than boys (Gustafsson, 2017).

The family factor had a significant effect on victimisation. Higher religiosity, father and mother working, lowered victimisation, but higher economic status, higher parents' education and family structure tends to increase victimisation. Sherer and Sherer (2014) found the family factor to be insignificant in their SEM model of youth witnessing of violence in Thailand. This result may indicate the lower influence of the family in the turbulent Thai society. Many traditional beliefs and ways of life are giving way to new lifestyles (Klausner, 2002; Vuttanont et al., 2006); this is resulting in a decrease in family influence in favour of peer influence in current Thai society, especially regarding the likelihood of victimisation. Attachment to parents and parents' monitoring and control had a positive effect, lowering cyber victimisation.

Peer effects were significant. Negative behaviour of peers related to the higher victimisation rates, whereas volunteering in the community had a positive effect and was related to lower victimisation. The social learning theory (Akers & Lee, 1999) proposes that young adults are heavily influenced by their peers' perception of right or wrong and from their support of some behaviours. The routine activities theory (Cohen & Felson, 1979) emphasises that youth are more likely to become the victims of violence if they associate with or are exposed to violent peers, and if they lack peer support, guidance and guardianship. The lifestyle theory (Hindelang, Gottfredson & Garofalo, 1978) also suggests that the association with violent peers leads to victimisation.

Violence in the family, in the school and in the community is related to the higher victimisation rates. Being surrounded by violence increases the likelihood of victimisation. This result is generally supported by the literature. Kennedy (2009) found that youths who witnessed the injury of an adult family member were more likely to be beaten up in the community. Zimmerman and Messner (2010) found that the more disadvantaged the neighbourhood, the greater the exposure to violent peers. Bradshaw, Sawyer and O'Brennan (2007) found evidence of the reciprocal relation between violent victimisation in the community and peer rejection. They indicate that victimisation in the community predicted later peer rejection. In turn, peer rejection also predicted later victimisation in the community. Kelly et al. (2008) found that the levels of peer rejection, victimisation in the community and bullying by peers predicted the later peer rejection, and that victimisation by the community violence and the peer rejection are reciprocally related over time. Aside from the family's impact, our findings on the risk factors of victimisation in Thai society resemble those of western societies, which resemble youth victimisation across countries.

### **Limitations, Implications and General Recommendations**

Our study was limited by the lack of detail requested from the participants. Our questions did not address important issues such as the identity of the youths' internet and mobile phone abusers. Other limitations might be related to the level of understanding of the questions considering the cultural differences among our participants, as well as gender roles, which might have inhibited the Thai girls' answers, as well as social desirability, which might have shaped the results. Future studies should thus include a wider range of questions to cover issues that we neglected, including a qualitative part that might shed new light on this phenomenon.

Our general recommendations include the distribution of this knowledge among policy makers, teachers, parents and other social agencies who are involved in the education and provision of services to youth, with the aim of introducing supervision to help reduce these behaviours in the future. We hope that the results of the study will alert policy makers, teachers, and all those involved in the education of and provision of services to youth, and inspire them to introduce special measures to face this problem.

The theoretical contribution of this study emphasises that the use of internet and mobile phones, as well as cyberbullying and cyber victimisation via these medias, relates to youths' social systems and environment. Our results on the impact of the family characteristics and family behaviour on cyber victimisation support this conclusion. The other theoretical contribution of this study is the impact of the neighbourhood on cyber victimisation and cyberbullying. Thus, higher scores were reported on all types of cyber victimisation and cyberbullying in the southern province. Despite the fact that the youth there use the internet



and mobile phones less often than youth in the other regions under study, they still experience and perpetrate more internet and mobile phone abuse than youth in the other regions under study. Thus, we conclude that a relationship exists between the characteristics of the environment and youths' cyber victimisation and cyberbullying on the internet and mobile phones. In societies with problematic environments, manifested, for example, in high rates of violence (as is the case in the studied southern province of Thailand), we might expect higher rates of experiencing and perpetration of victimisation and cyberbullying via the internet and mobile phones.

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