The longitudinal influence of parent–child relationships and depression on cyber delinquency in South Korean adolescents: A latent growth curve model

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ABSTRACT

The purpose of this study is to longitudinally verify the influence of parent–child relationships and depression on adolescent cyber delinquency. Analyses were conducted on panel data of elementary school students from the Youth and Children Data Archive from 2004 to 2008. The results first indicated that the number of adolescents who commit cyber delinquency increases rapidly as their grade rises, with a peak increase occurring in the second grade in middle school (15 years old). In addition, the analysis of the intercept and ratio of change of cyber delinquency confirmed a difference between individuals in the experience on cyber delinquency. Third, the analysis of the factors potentially influencing the developmental process of cyber delinquency indicated that the intercept of the parent–child relationship and depression showed a significant influence. It was further shown that among variables related to the ratio of change in cyber delinquency, the ratio of change for the parent–child relationship and for depression both had a significant influence.

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1. Introduction

In accordance with the rapid development of information technology among OECD member countries, the Internet access rate per family in Korea has reached 80% or more, in line with nations such as The Netherlands, Denmark, Sweden, and Norway (OECD, 2010). Moreover, the Internet use rate for teenagers is approximately 99.9%, suggesting that almost all adolescents in South Korea are using the Internet (The Korea Internet and Security Agency, 2010). This is important because the Internet provides adolescents an open channel through which they can vent pressures related to school, family, and friends (Suler, 2000). Further, by not exposing age, sex, social status, or physical, psychological, and social identities, cyberspace provides an opportunity for adolescent activities that maintain anonymity (Cheon, 2000; Hong & Kim, 2011). Accordingly, cyberspace has become the medium for a new teenage culture.

However, the influence of the Internet can be not only positive but also negative, depending on users' intentions; in particular, it can be a platform for escapism and cyber delinquency (Jonson & Miller, 1998, June). This is particularly the case in Korea, where the incidence of juvenile delinquency in cyberspace is rapidly increasing every year. According to Korea's Cyber Police Agency, cyber delinquency by adolescents accounts for 19.5% (23,966 cases) of cyber delinquency in 2010. Despite the seriousness of the problem, there is a lack of empirical studies in cyberspace. Existing studies on cyber delinquency also focus mainly on middle or high school students despite the increasing need to focus on elementary school cyber delinquency.

Keeping in mind the point that cyber-delinquency possesses supernational characteristics, its definition must have a rather inclusive and general meaning that can be applied across borders. Understanding of the concept of delinquency should therefore precede definition of cyber-delinquency. In general, delinquency, as a super-ordinate concept in the broad context, is a comprehensive criminal terminology used to describe the crimes committed by adolescents. In fact, criminologists especially use the term delinquency instead of crime when considering the misdeeds conducted by adolescents (Lee & Ahn, 2005). Delinquency, in general, includes the norms violated by adolescents, and it also covers diverse misconduct handled by the Children's Welfare Law. It can also be seen as the broad concept that includes the following five concepts in the field of criminology: crime, deviance, offense, sin, and vice. From this perspective, cyber-delinquency can be seen as cyber-crime committed by adolescents who violate the laws of cyberspace, as well as a variety of problematic behaviors, acts of deviation, and improper conduct unfit for the adolescents' status within the context of a multi-dimensional concept. Henceforth, cyber-delinquency separates itself from cyber-crime, which stands as a standard of important conduct, and works as the super-ordinate concept containing it.

If a person who committed crime on cyberspace is an adult, the term cyber-crime is used. In contrast, cyber-delinquency refers to the criminal acts as well as acts of delinquency committed by adolescents. Treating cyber-delinquency as Internet-crime may be allowable. However due to the fact that Internet-crime does not include the crime that does not utilize the Internet as the medium, the term cyber-delinquency is more typically used in the broad context.

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However, the term cyber-delinquency, which refers to the acts of delinquency on cyberspace, as primarily mentioned in this research, is not used universally. This is due to the fact that the problem associated with delinquent acts of adolescents has been rapidly growing with the help of the development of electronic information technology, and also that research into cyber-delinquency has not been frequently conducted. Nevertheless, taking all of the information covered in the study into account, cyber-delinquency indicates all types of delinquent acts or crimes committed by adolescents on cyber space and can also be defined to include many problematic behaviors and acts of deviance in addition to cyber-crime that go against the law.

Cyber delinquency activities include criminal acts violating laws such as hacking, virus infringement, and use of false resident registration numbers as well as an act generally recognized as delinquent such as searching for pornography, obscene and violent chatting, and illegal copying of software (Han, 2001; Hong & Kim, 2011; Jo & Yang, 2001). Therefore, by applying this concept in a broad sense, adolescent cyber-delinquency is defined as all associated acts of crime and delinquency committed by adolescents in and around cyber space.

Juvenile delinquents are those whose adaptation to conflicts and situational stresses arising in a transitional developmental process from childhood to adulthood results in deep conflicts with parents, psychological problems such as anxiety and depression, and behavioral problems, including drug use or antisocial actions (Larson, Coy, & Collins, 1998; Lyons, 2004). The present study aims to approach adolescent cyber delinquency by focusing on these universal characteristics of juvenile delinquents. Theories of delinquency that reflect the characteristics of juvenile delinquents include strain theory (Agnew, 1992) and social bonding theory (Hirschi, 1969). Agnew (1992) suggests in his strain theory that all strains that adolescents experience in daily life can become the cause of their delinquency. The typical strains are thought to result from marital discord between parents and conflicts with friends. Moreover, as such strains in daily life generate negative emotions such as depression, they can cause delinquency. The social bonding theory proposed by Hirschi (1969) further suggests that social bonding relations of adolescents–that is, relationships with parents and a peer group–are a critical factor in delinquency. This approach specifically suggests that those who have close ties with parents fear that delinquent acts will disappoint them. Accordingly, adolescents who are not attached to their parents are more likely to commit delinquent acts, including violation (Cemkovich & Giordano, 1987).

Unlike traditional offline delinquency, many different situations in cyberspace afford adolescent anonymity; consequently, they feel free to violate social norms, unlike in the real world. Given the limited applicability of the above theories, which aim to explain delinquency in the real world, rather than the cyber world, theories of cyber delinquency are comparatively unconstrained and require empirical verification.

In particular, existing studies report a close correlation between parent–child relationships and depression with cyber delinquency. First, parent–child relationships are closely related to adolescent delinquency, thus potentially explaining cyber delinquency. In cases where parent–child relationships are associated with negative qualities, adolescents may become depressed and commit delinquent acts in cyberspace (Kwon, 2005; Han, 2001; Kim, 2009). In addition, Satir suggests that in a family where parents communicate with their children in an unclear and doubly tying communication form, parents may have a low level of self-worth and use children for their own values. In such cases, adolescents are predisposed to adjustment disorders, including delinquency or mental health problems (Barnes & Olson, 1985; Choi & Hong, 1997).

Importantly, though depression and delinquency are commonly found adjustment disorders with a high comorbidity (Wolff & Ollendick, 2006), Beyers and Loeber (2003), examining the developmental relation between depression and delinquency, showed that depression predicts an increase in delinquency, while delinquency did not predict an increase in depression. This suggests that depression precedes delinquency.

In the light of these results, this study provides a longitudinal evaluation of the kinds of influences parent–child relationships and individually internalized problems (including depression) have on adolescent cyber delinquency. This work builds on the results of many earlier studies, including those on the strain theory and social bonding theory. This study specifically aims to intensively examine (1) how cyber delinquency changes over time, (2) the kinds of influences parent–child relationships have on changes in cyber delinquency over time, (3) the kinds of influences parent–child relationships have on changes in depression over time, and (4) the kinds of influences depression has on changes in cyber delinquency over time.

2. Method

2.1. Source data

The data in this study were from the Korean Youth Panel Survey provided by the National Youth Policy Institute. The National Youth Policy Institute conducted a tracing survey about living conditions, including potential job selection, future career set-up and preparation, deviant behaviors, and participation in leisure, as a method of forecasting panel survey data, targeting the same adolescents from the nation's elementary school students in the fourth grade (from 2004 to 2008). The basic principle of the Korean Youth Panel Survey (KYPS)'s longitudinal study model was a multiple-point prospective panel design, in which the same sample is surveyed at three or more different points in time. In order to compensate for participants who dropped out and maintain the representability of the sample, cross-sectional and longitudinal weights were used, instead of replacing the sample with other ones. The target schools were randomly sampled by calculating the population rate in 12 national areas–the capital of Korea, 5 metropolitan cities, and other provinces–in a stratified multi-stage cluster sampling (Lee & Baek, 2005). The specific sample numbers for each year were 2844 (male: 1524, female: 1320) for the first year, 2707 (male: 1450, female: 1257) for the second year, 2836 (male: 1518, female 1318) for the third year, 2511 (male: 1329, female: 1182) for the fourth year, and 2448 (male: 1393, female: 1145) for the fifth year. The Korean Youth Panel Survey included various kinds of information about adolescents and families. It also had an advantage in that it is easy to generalize the analyzing results appropriate for the Korean conditions as the survey is composed targeting the elementary school students in fourth grade in the nation. All data were used in this research for the purpose of verifying cyber-delinquency committed by adolescents according to the passage of time, the relationship between parents and children, and changes in depression.

2.2. Measuring tool

2.2.1. Cyber delinquency

Adolescent cyber delinquency in this study refers to general crimes and delinquent acts committed by adolescents mainly in cyberspace. Cyber-delinquency was defined in this study by the number of cyber-delinquent acts committed by an individual adolescent. In each question, students answered whether they had had the given experience (scored as 1) or not (scored as 0) (Table 1). Higher average scores imply a more severe level of cyber delinquency.

2.2.2. Parent–child relationships

The parent–child relationship was measured through six questions about attachment to parents and four questions about parental supervision (Table 2). Attachment between parents and children