THE EXPLOSIVE RISE IN CYBERBULLYING BEHAVIOR AND ONLINE VICTIMIZATION RATES AMONG UNIVERSITY STUDENTS IN ATHENS AND THE ROLE OF FORCED CONFINEMENT DUE TO THE COVID-19 PANDEMIC

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Abstract

The study focuses on the role of forced confinement in the findings of the May 2020 survey which was conducted in the midst of the Covid-19 pandemic and was applied to a sample of 160 students at the National Technical University of Athens. The research purpose was to test the impact of the pandemic to the cyberbullying phenomenon and the victimization of young people in Greece in the light of Robert Agnew's General Strain Theory (GST). The findings indicate a dramatic increase and highlight a very strong interface between cyberbullying and victimization of young people and the presence of both, oppressive and stressful situations, as well as negative feelings of anger, shame and insecurity, suggested by Agnew's theory. Additionally, the evaluation of the findings revealed an enhanced connection between cyberbullying and victimization and the conditions of forced confinement, imposed due to the rapid spread of the pandemic. The conclusion drawn from this specific finding is that coercion combined with the already burdensome, oppressive and stressful environment, students live in, are very likely to have led to the dramatic increase of the cyberbullying and online victimization rates, found by the survey. The study, which includes 15

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illustration graphs of the research key results, is completed with some cautionary notes on methodological issues, as well as suggestions and conclusive thoughts.

Keywords university students cyberbullying, online victimization, Robert Agnew's General Strain Theory (GST), Pandemic Covid-19, forced confinement, insecurity, anger, oppression, coercion, online anonymity.

Introduction

In the last decade, cyberbullying rates among University students in Britain and the United States of America had a small range from 3,7 % (Bauman & Newman, 2013:27) to 7%[2] (Cowie, 2013:167-170), while 18,5% of students admit that they suffered online victimization. During 2011, Greece was included 4th from the bottom in the list of European countries with the highest concentration of cyberbullying cases among children aged 9 to 16 years, given that a percentage of 4% of online bullying children was recorded, compared to the corresponding percentage of 6% shown by the whole of Europe (Livingstone, 2011). However, a survey conducted in 2010, on a large sample of 528 Greek high schools, identified a striking increase of the cyberbullying phenomenon: as it recorded that 17% of students received obscene and offensive e-mails, 9% received threatening messages, 7,7% received intimidating online messages, 14% received sexual online messages, 6,8% received blackmail online messages and 12% of students were victimized by defamation through text messages online (Artinopoulou et al., 2010). While in 2013, a correspondingly significant presence of cases of victimized students by intimidating e-mails with offensive and sexual content was reported by another research among Greek university students (Antoniadou & Kokkinos, 2013:138-169). Furthermore, the findings of a research, conducted in 2014 and aiming to record the dimensions and form of victimization of Internet users and the levels of their (in)security on a sample of students of Greek universities and technological institutes show that a percentage of 20.6% of the students state that they were repeatedly (2-5 times) victimized mostly by theft of personal data (31,9%) and secondly by threat/cyberbullying (20,5%), while the female gender of victims (21%) prevails over the male gender (19,6%) (Zarafonitou et al., 2014:24). More recently and specifically in 2019, the findings of another study aiming to present the dimensions of the online sexual harassment, among Greek universities' students from both theoretical and technological departments, suggest that the majority of victims (39,2%) have been repeatedly victimized, while the most common means to online sexual harassment is

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[2] It is noted that according to the specific research study 79% of the students were victimized by the other students, while the remaining 21% of the students were bullied by members of the university staff (Cowie, 2013:167-170).

via social media (facebook, twitter, instagram) at a rate of 58,7%[3], as well as that gender plays an important role in the correlation with feelings of (in)security of online victims, since women feel safe at a rate of 53% and men feel safe at a rate of 70%, (Zarafonitou et al., 2019).

Given the above evidence, according to which the cyberbullying phenomenon and the victimization of young people appears to be prevalent in Greece, the oppressive environment, following the implementation of strict protective measures of social distance and personal isolation, after the spread of the Covid-19 pandemic, was considered to be an appropriate wider context for exploring the impact of the pandemic to these phenomena. For this purpose, the conduction of a new survey was decided and Robert Agnew's General Strain Theory (GST) was chosen as a theoretical framework for the causal explanation. The reason for this choice is that GST is based on the social-psychological level, that is, it focuses on the individual and his or her immediate environment, as well as, explicitly on negative relationships with others (Agnew, 1992:48).

As a field for research a prominent higher school of education was selected, namely, the National Technical University of Athens (NTUA), at a period of time (from 31st of May 2020 until the 3rd of July 2020), when the restrictions of mandatory confinement, social distance and isolation due to the coronavirus pandemic, were already enforced. Most specifically, it was decided that the research will be carried out by self-completing an online structured questionnaire, which was addressed to the students of the aforementioned University. Given the extraordinary conditions of Covid-19 quarantine, it was estimated that the completion of the questionnaire would not last more than 45 minutes up to one hour and, moreover, the students had the choice to save the questionnaires on their computers and return them completed in due time.

The study

(a) Objective

The purpose of the survey was to study the nature and size of cyberbullying and student victimization among university students in Athens and the role of online anonymity, as well as to identify the sources of strain most likely to be associated with cyberbullying victimization, within the theoretical framework of Agnew's General Strain Theory (Agnew, 1992:50). In addition, an attempt was made to identify other causal factors contributing to student cyberbullying derived from racial or socio-economic diversity and ethnic origin of the perpetrators and victims and examine the determinants and relation between cyberbullying and victimization.

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[3]While, online victimization via text messages represent 28,8% and via chat-rooms, 11,5% (Zarafonitou et al., 2019).

(b) Methodology

Due to the exceptional circumstances that prevailed throughout the study, after the spread of the Covid-19 coronavirus and the consequent need for exclusive online communication with the students interviewed, the research was carried out by completing online a structured questionnaire. As part of the research, 160 students at the School of Civil Engineering of the National Technical University of Athens were asked for their personal views on cyberbullying and peers victimization. The relevant questionnaire included 69 closed-ended questions drawn from the theoretical framework of the General Strain Theory. A total of 160 e-mails were sent electronically to an equal number of NTUA students, with 2 intermediate electronic reminders, while within a period of 33 days, from 31st of May 2020 until 3rd of July 2020, 63 self-completed questionnaires were collected consecutively and constituted the sample basis of the survey (Papathanasopoulou, 2021:192).

In order to test the theoretical claims of Agnew's theory concerning the strong dependence of delinquent behavior on the presence of negative and stressful situations, as well as tense relationships and emotions in the case of cyberbullying and online victimization, 4 hypotheses were formulated which aimed to examine the presence of 20 different sources of general strain (Papathanasopoulou, 2021:63). Specifically, the questions asked to the students referred to learning difficulties, presence of coercion and oppression, psychological pressure and tension, long stay at the university, low grades, lack of positive stimuli, presence of negative feelings of injustice, anger and insecurity, removal or lack of positive contact with family, students or parents foreign citizenship-social stigma, threat of loss or actual loss of student rights, student misconduct, threat of imposition or actual imposition of a student sentence and low individual or family socio-economic level.

In particular, the 1st hypothesis refers to the link between forms of strain introduced by GST and involvement in cyberbullying and argues that the higher the levels of intensity, such as failure or prevention of achieving positive value goals, loss of positive stimuli and presence of stimuli with negative value, students experience, the more likely they are to engage in cyberbullying behavior. The 2nd hypothesis deals with the interrelationship between victimization and tense situations (especially cyberbullying) and argues that the more students experience the strain of cyberbullying, the more likely they are to engage in cyberbullying than students with lower levels of the specific form of strain. The 3rd hypothesis refers to the link between cyberbullying and victimization with the degree of online anonymity and argues that the more students' online anonymity is insured, the greater the increase of cyberbullying and victimization incidents. The 4th hypothesis refers to the link between cyberbullying and victimization with low individual and family socio-economic level of students, deals with the tension stemming from the unsatisfactory socio-economic level, which, according to Agnew, creates feelings of inferiority and insecurity among young people leading them to choose illegal "escapes" from socio-economic problems. Furthermore, as Agnew

argues the lower the socio-economic status of students, the greater the likelihood that they will engage in cyberbullying or become victims online (Agnew, 1992:73-74).

(c) Field of study

The National Technical University of Athens (NTUA) was selected as the field of application of the study and in particular the convenient sample of 160 students of the School of Civil Engineering. The choice of conducting the study on a sample of university students was prompted by the observed unique exclusivity of students in experiencing cumulatively stressful situations that strengthen their sense of insecurity and mental anxiety. Such common strained situations are the unforgivable and tensed atmosphere of examinations, the physical and mental separation from family, the forced necessity of cohabitation with peers of different socio-economic and cultural level, the obligation of managing a personal financial budget, the effort to socialize and make new friends and the anxiety of finding a job after graduation. Unquestionably the students' contact with all these sources of negative emotions and situations makes university life one of the most important testing periods for young people. These difficulties can certainly motivate the student and lead him to take effective action, but regrettably this is not always the case.

Finally, it is noted that an additional reason for choosing the university field was the fact that, despite the increasing incidence of cyberbullying on campus, the number of research studies conducted to investigate this issue is relatively small, worldwide.

(d) Theoretical framework

The study on the cyberbullying phenomenon among students, follows the sociological criminal approach, since the aim was to focus on examining the presence of individual characteristics, situations and elements that structure and socialize a student, and at the same time compose the personality of either a cyber-bully or that, of an online victim. The framework of Agnew's General Strain Theory for the causal approach of cyberbullying and victimization was further chosen, as cyberbullying phenomenon itself stems from the very concept of social structure, and is essentially born through the intense situations experienced by young people, that are included in the explanatory positions of the theory in question.

As is well known, Agnew built his integrated[4] theory of strain, enriching previous criminological causal approaches focusing on situations of anomie and strain and in particular Merton's theory of strain, with new categories and forms of strain (Merton,

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[4] According to Kranidioti, the criteria for the development of a "good theory" dictate to an integrated theory to extend the unification of its explanatory function beyond the level - usually the individual – and to increase its breadth and semantic content in order to include additional explanatory factors of another theory, at the macro or micro social level (Kranidioti, 2006:103).

1938:672-682). As a matter of fact, he focused on negative interpersonal relationships, arguing that strains and stressful situations in general, increase the likelihood of negative emotions such as anger, insecurity, sadness, anxiety and despair. These emotions, as Agnew suggests, create intense pressure on the individual and push him into corrective action, with crime being one of the most likely reactions. In his view, crime can work either as a method of reducing stress, as in the case of theft of a desired object, or as a method of seeking revenge or relieving negative emotions, as in the case of illicit drug use (Agnew, 2001:319-361). Since 2000, a remarkably high number of research studies have shown the strong dynamic of GST, by highlighting that several of the forms of strain identified by Agnew are indeed strongly associated with delinquent behavior, especially juvenile delinquency (Hoffmann & Miller, 1998, 83-110, Aseltine et al., 2000:256-275, Mazerolle, 1998:65-91 and Piquero et al., 2000:449-484).

Taking into consideration that cyberbullying can be described as a negative action that involves provoking or intending to cause pain, harm or discomfort to a peer and is committed mainly by juvenile or young offenders, there is no doubt that it constitutes a criminal phenomenon that mainly focuses on aggressive youth behavior. The ominous, in recent years, international outbreak of cyberbullying in the student world, highlights the large percentage of negative emotions of anger and barbaric, brutal, cruel, inhuman even, behavior that young people can, under certain circumstances, display to each other, as well as how nightmarish the life of a victimized student can be, without his family or teachers even knowing it.

Consequently, the fact that juvenile delinquency is involved almost exclusively in cyberbullying led to the choice of the theoretical framework of GST in order to achieve the study goal of assessing the interdependence that develops between cyberbullying behavior and online victimization and incidents of student strain, as stressful events, forced situations and negative emotions (Agnew, 1992:59).

In particular, the description of the profile of the "perpetrator" and especially the "victim-perpetrator" of cyberbullying, suggests that these individuals accumulate negative emotional burden, experience stressful personal relationships, as well as tension, coercion and oppression at the individual level and at the same time display a host of negative individual characteristics (Ybarra & Mitchell 2004:319-336, Andreou, 2000:49-56, Olweus, 1994:1171-1190, Haynie et al., 2003:45-61).

Finally, it is noted that the age factor of the sample of students, that is their young age is another additional reason for choosing to apply the theoretical framework of GST, given that is widely recognized as an intensive structural theory of crime justification that is mainly applied to juvenile delinquency (Agnew, 2001:319-361).

Restrictions of the research processes

The study is subject to the limitation of the scope of its conclusions imposed by the non-randomness of the student sample. In addition, the disproportion of gender distribution of the sample of 63 students, given the fact of the male predominance in the majority of the sample (36 men, while only 27 women) and the inability of applying a statistical process that can simultaneously control the two-way relationship of the research variables restrict the ability of drawing generalized research conclusions (Papathanasopoulou, 2020:198).

Furthermore, and given that the survey was conducted in the midst of the Covid-19 and during the restrictive measures taken to address the coronavirus pandemic, an exclusive online communication with the sample of students was mandatory due to the exceptional conditions of quarantine and social distance. This specific fact inevitably led to the revelation of the students' identity as soon as they send the completed questionnaires attached to their reply, from their personal electronic address (IP address)[5], which was already known to the researcher. Consequently, and in relation to the specific procedural stage of collecting the completed questionnaires, the principle of senders' anonymity could not be followed, since the researcher had the opportunity to acknowledge the identity of each sender.

Given the existing possibility of influencing the answers, the above mentioned procedural deviation from anonymity had been communicated to the students as soon as the questionnaire was firstly sent. However, the high rates of cyberbullying and victimization recorded by the responses supports the view that, as a result, it appears that the students were not affected by the issue (Papathanasopoulou, 2020:82).

Brief evaluation of the survey conclusions

(a) High rates of cyberbullying and online victimization

Contrary to the above mentioned previous research findings (see introduction), the analysis of the obtained students' answers led to identifying a completely opposite overall effect size for cyberbullying and online victimization of young people. In point of fact, the evaluation of the survey findings, conducted in an environment of forced confinement due to the Covid-19 pandemic, showed remarkably high rates of student

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[5] It is noted that the "IP address" or "Internet Protocol address" is a unique number that identifies devices on a network of computers that use the Internet Protocol standard for mutual identification and communication. Furthermore, an IP address can be considered the equivalent of a home address or a phone number (VoIP) for a computer or other Internet-enabled devise, and is unique to each computer (Ganiaris, 2020:463).

cyberbullying and cyber victimization (Graph I (a)) and suggested the most common cyberbullying behaviors among students (Graph I(b)).
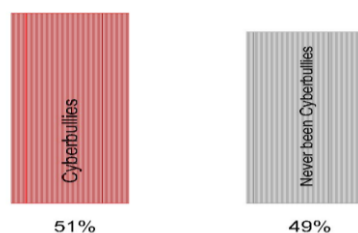

Graph I (a). Cyberbullying Behavior: Measurement of the cyberbullying phenomenon: Illustration of the measurement of the cyberbullying phenomenon, which shows that 32 students of a total of 63 students surveyed, that is a percentage of 51% of the sample, stated that they had committed cyberbullying behaviors.
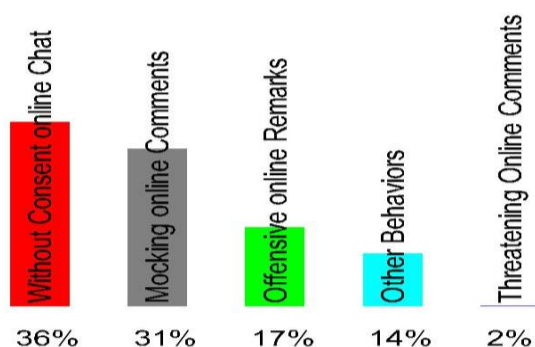
Graph I(b). Most common cyber bullying behaviors: Illustration of the most common cyberbullying behaviors, that is without consent online chat at a rate of 36%, posting mocking comments on social networks at a rate of 31%, offensive online verbal remarks and video posts at a rate of 17%, other cyberbullying behaviors at a rate of 14% and the rarest cyber bullying behavior, that is posting threatening comments online at a rate of only 2%.

Furthermore, the findings showed a strong dependence of cyberbullying on the basic sources of strain, suggested by General Strain Theory (Graph II).
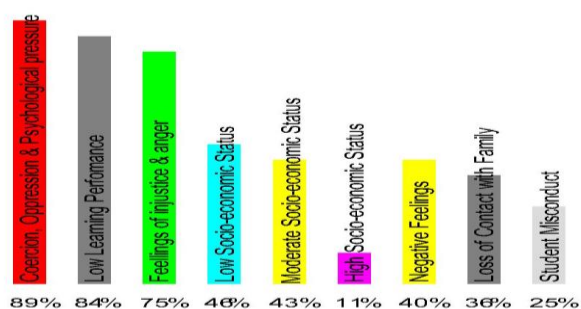
Graph II. Interface of Cyberbullying with Sources of General Strain:

i. Clustering of adverse events, application of cumulative coercion and psychological pressure: Illustration of very strong, almost absolute at a rate of 89% correlation of cyberbullying with the suggested by GST source of strain resulting from clustering of adverse events, that is from the application of cumulative coercion and psychological pressure on students.

ii. Low learning performance: Illustration of very strong, almost absolute at a rate of 84% correlation of cyberbullying with the suggested by GST source of strain resulting from low learning performance.

iii. Feelings of injustice and anger: Illustration of very strong at a rate of 75% correlation of cyberbullying with the suggested by GST source of strain resulting from Feelings of injustice and anger.

iv. Low personal and family socio-economic level of students: Illustration of strong at a rate of 46% correlation of cyberbullying with the suggested by GST presence of negative stimulus resulting from low personal and family socio-economic level.

v. Moderate and high personal and family socio-economic level of students: Illustration of equally strong at a rate of 43% correlation of cyberbullying with moderate personal and family socio-economic profile, as well as very small at 11% correlation of cyberbullying with high personal and family socio-economic profile.

vi. Refusal to provide additional clarifications to the researcher: Illustration of partial at a rate of 40% (average of 2 to 3) correlation of cyberbullying with the suggested by GST presence of negative stimulus resulting from the refusal to provide additional clarifications to the researcher.

vii. Loss of direct contact with family: Illustration of partial at a rate of 36% (average of 2 to 1) correlation of cyberbullying with the loss of the direct contact with family (positive stimulus) as well as with the presence of the negative stimulus, resulting from moving away from family home.

viii. Student misconduct, threat of enforcement or actual enforcement of a student penalty, threat of loss or actual loss of a student right: Illustration of small at a rate of 25% correlation of cyberbullying with the suggested by GST source of strain resulting from student misconduct, threat of enforcement or actual enforcement of a student penalty, threat of loss or actual loss of a student right.

In addition, regarding the connection of individual factors with Cyberbullying involvement, the results highlighted the significant role of the age factor of 20-25 years and led to the conclusion that cyberbullying among students increases with the student age, as it displays an increase over the period of 20-25 years and decreases reaching maturity after the 25th year of age. In addition, the data support the conclusive thesis that cyberbullying and cyber victimization are more a male matter than a female one while a strong correlation of the phenomenon was recorded with the moderate university grade category of "very good" (Graph VII).
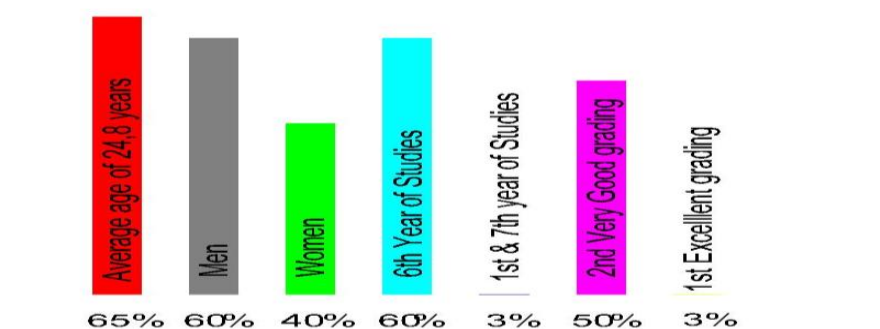
**Graph VII.** Connection of individual factors with Cyberbullying involvement:

i. Age category: Illustration of the strong interface at a rate of 65% of cyberbullying behavior with the age category of 20-25 years and in particular with the average age of 24,8 years.

ii. Gender: Illustration of the correlation between cyber bullying behavior with the gender factor, which shows that males are 60% more likely to commit cyberbullying than women who represent a lower percentage of 40% of cyber bullies.

iii. Year of University studies: Illustration of the strong interface at a rate of 60% of cyberbullying behavior with the 6th year of university studies, while cyber bullying interfaces very weakly at a rate of 3% with the 1th and 7th year of university studies, respectively.

iv. University grades: Illustration of the strong interface at a rate of 50% of cyberbullying behavior with the 2nd (very good) university-grading category, while cyberbullying interfaces very weakly at a rate of 3% with the 1st (excellent) university-grading category.

Regarding the connection of socio-economic status with cyber bullying involvement, the findings suggest that cyber bullying is more closely related at a rate of 46% with low socio-economic level of the perpetrators, while relates weakly at a rate of 43% with moderate socio-economic level of the perpetrators and even more weakly at a rate of 11% with high socio-economic level of the perpetrators. (Graph VIV(a)).
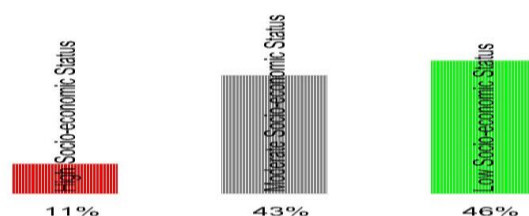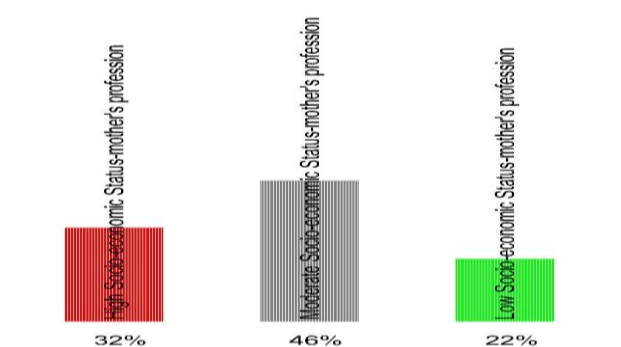

Graph VIV(a). Connection of Low socio-economic status with Cyberbullying involvement: Illustration of the strongest interface of cyberbullying at a rate of 46% with low socio-economic level of the perpetrators, while cyberbullying interfaces weakly at a rate of 43% with moderate socio-economic level of the perpetrators and even more weakly at a rate of 11% with high socio-economic level of the perpetrators.

With reference to the connection of socio-economic (in relation to the father's profession) family profile of the students involved in cyberbullying the findings suggest that cyberbullying is more closely related at a rate of 46% with high socio-economic (in relation to the father's profession) profile of the perpetrator's family, while relates weakly at a rate of 42% with moderate socio-economic profile of the perpetrator's family, and shows even more weaker interface at a rate of 12% with high socio-economic profile of the perpetrator's family (Graph VIV(b)).
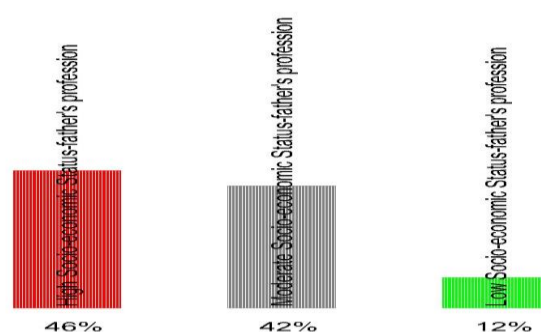
Graph VIV(b). Connection of high socio-economic (in relation to the father's profession) family profile of the students involved in cyberbullying: Illustration of the strongest interface of cyberbullying at a rate of 46% with high socio-economic (in relation to the father's profession) profile of the perpetrator's family, while cyberbullying shows weaker interface at a rate of 42% with moderate socio-economic profile of the perpetrator's family, and shows even more weaker interface at a rate of 12% with high socio-economic profile of the perpetrator's family.

As for the connection of socio-economic (in relation to the mother's profession) family profile of the students involved in cyberbullying the findings suggest that cyberbullying is more closely related at a rate of 46% with moderate socio-economic (in relation to the mother's profession) profile of the perpetrator's family, while relates weakly at a rate of 32% with high socio-economic profile of the perpetrator's family, and even more weaker interface at a rate of 22% with low socio-economic profile of the perpetrator's family (Graph VIV(c)).


Graph VIV(c). Connection of moderate socio-economic (in relation to the mother's profession) family profile of the students involved in cyberbullying: Illustration of the strongest interface of cyberbullying at a rate of 46% with moderate socio-economic (in relation to the mother's profession) profile of the perpetrator's family, while cyberbullying shows weaker interface at a rate of 32% with high socio-economic profile of the perpetrator's family, and even more weaker interface at a rate of 22% with low socio-economic profile of the perpetrator's family.

(b) Strong interface between online victimization and cyberbullying phenomenon

Furthermore, the findings evaluation revealed the existence of a strong link and interdependence even, between the online victimization phenomenon and the victim's history of involvement in cyberbullying activity. At the same time the suggestion that victimization of young people can increase the chances of their future victimization, which is supported by a significant amount of research data was confirmed and evaluated as accurate (Daigle et al., 2008:1296-1313).

It is noted that the measurement of the internet victimization phenomenon, shows that 32 students out of a total of 63 students surveyed, that is a percentage of 51%, state that they had suffered online victimization, while a smaller percentage of 49% of students state that they had never suffered online victimization (Graph III(a)), and suggests that a parallel occurrence of Cyberbullying and student online Victimization exists as a large

percentage of 75% of students state that they committed cyberbullying and in the same time they suffered online victimization, while only a small percentage of 25% of students state that they are either only perpetrators or only victims (Graph III(b)).
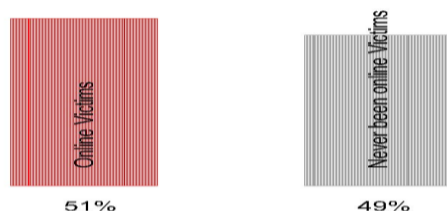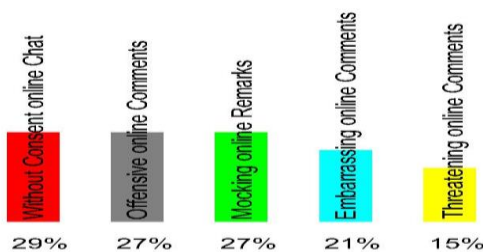

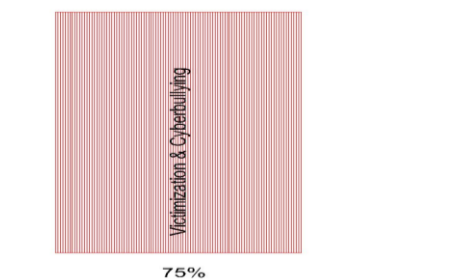**Graph III(a).** Illustration of the Internet victimization phenomenon
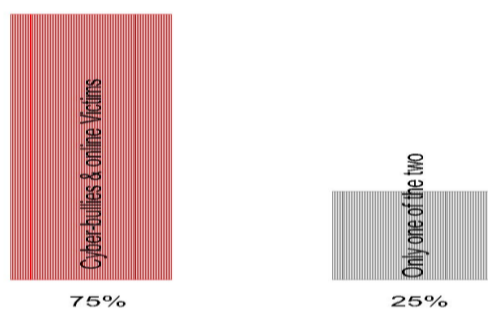
Graph III(b). Illustration of a parallel occurrence of Cyberbullying and student online Victimization

With reference to the frequency of occurrence of Student Victimization, the findings suggest that the most frequently occurring cases of online victimization, is without consent online chat at a rate of 29%, offensive comments on social networks at a rate of 27%, online mocking comments at a rate of 27%, embarrassing verbal comments and photos on social networks at a rate of 21% and online threatening or bitter comments at a rate of 15% (Graph III(c)).


Graph III(c). Illustration of the frequency of occurrence of Student Victimization

Moreover, the findings suggest a dynamic interface between cyberbullying and victimization and more specifically an interdependence between online victimization and cyber bullying as sources of General Strain (Graph IV).


Graph IV. Illustration of the very strong interdependence at a rate of 75% between online victimization and cyber bullying, as sources of General Strain, respectively.

With regard to the comparative interface between cyber bullying and online victimization the findings suggest a high percentage of 75% of cyber-bullies who suffered online victimization, while only a small percentage of 25% of cyber-bullies didn't suffered victimization (Graph V(a)).
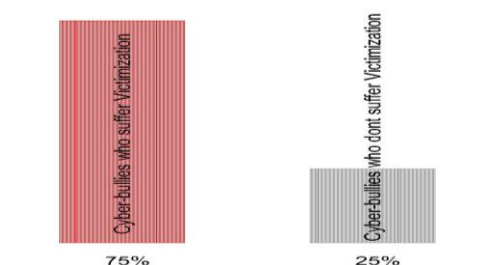
Graph V(a). Illustration of the comparative interface between Cyber bullying and online Victimization.

As far as the involvement of cyber-victims in cyber bullying the findings show a high percentage of 75% of cyber-victims who engage in cyber bullying towards their peers, while only a small percentage of 25% of cyber-victims have never been involved in cyber bullying (Graph V(b)).
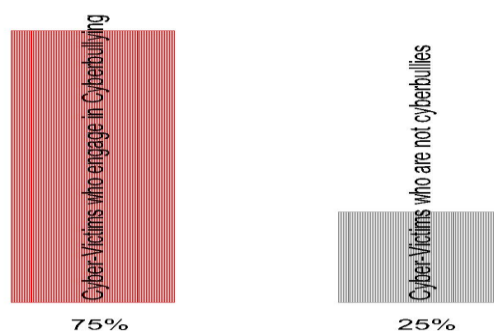
Graph V(b). Illustration of the Involvement of cyber victims in cyber bullying

Finally, it is noted that the collected data, support Agnew's view on this issue, as he specifically suggests that peer abuse is particularly prevalent and widespread at a young age and has unpredictable and very often a devastating effect on victims (Agnew, 2006:72). As a matter of fact, several notable research studies are compatible with this position, given that they as well describe in black colors the widespread and extremely adverse effects of cyberbullying and its close interdependence with the phenomenon of young people victimization (Olweus et al., 1999:16 and Agatson et al., 2008:59-60).

(c) Online anonymity of perpetrators and victims

It was considered important to include in the context of the survey the control of the factor of individual cyber anonymity as well, given that cyberbullying as a cybercrime is effectively facilitated in its commission when combined with a high degree of the perpetrator's online anonymity. As research data showed, the negative feelings of fear and insecurity that arise when young people do not know the origin of the attacker, in combination with the lack of adequate means to deal with it, aggravate greatly the feelings of vulnerability, insecurity and general weakness of the victims (Dredge et al., 2014:287-291). After all, anonymity is without doubt, a primary factor of insecurity (Zarafonitou et al., 2014:28). However, it is noted that anonymous cyberbullying is equally disturbing to the responsible for punishment authority, as the perpetrators' anonymity makes it extremely difficult, if not impossible, to succeed in locating and punish him.

As the findings of the current study suggest, cyberbullying and victimization are highly dependent on the degree of online anonymity of both, perpetrators and victims, since 78% of cyber-bullies maintain a high degree of their online anonymity, while only 22% maintain a low degree of their online anonymity (Graph VI).
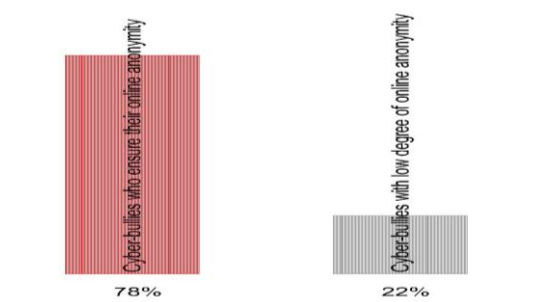
Graph VI. Cyberbullying dependence on cyber anonymity of perpetrators: Illustration of the high percentage of 78% of cyber-bullies who maintain a high degree of their online anonymity, while only 22% of cyber-bullies maintain a low degree of their online anonymity.

(d) Strong correlation between cyberbullying and online victimization with sources of strain suggested by GST

Undoubtedly, the survey data offered great support to the causal approach of the GST theory. As a matter of fact, the findings of the study added international, multicultural and social validity to General Strain Theory, as they verified the effectiveness of the predictions of the strain criminological causal approach to criminogenesis (birth of crime) and proved as true many of the basic suggestions of Agnew. In particular, the survey validated GST reasoning for cyberbullying and victimization, proving that students are subject to low level of social support, which increases their chances of responding in a deviant manner to existing strains, as they are less able to cope with the pressure in a legally acceptable way. As a matter of fact, the tensions that students face on campus are clearly greater than those experienced by other groups or sections of society, as they are indeed strongly suppressed between expectations and real achievements, while they are also prone to the accumulation of negative feelings of anger, insecurity and injustice and at the same time are subject to constant pressure and compulsion in order to perform at the highest level of learning (Agnew, 1992:50).

(e) Intense association of cyberbullying and online victimization with forced confinement due to Covid-19

The findings evaluation led to the conclusion that the forced confinement and the overly broad quarantine imposed during the pandemic is associated with the increased at a rate of 89%, recorded presence of cumulative coercion and psychological pressure of students who were involved in cyberbullying and victimization. Given the significant weight attributed by Agnew to the importance of the concept of "*adverse events clustering*" the study reached to the conclusion that oppression, coercive restrictions and feelings of insecurity, anger and isolation due to the Covid-19 pandemic has inevitably led to the above mentioned severe increase of cyberbullying and online victimization incidents among 51% of the interviewed students (Agnew, 1992:64-65).

In particular, the evaluation of data showed that, without doubt, the enforcement of compulsory social distance measures, forced quarantine and restricted living conditions was an additional factor that contaminated the, already oppressive university environment, with greater toxicity. As a result, research has shown that young people who live in oppressive conditions, such as forced confinement and at the same time engage in social relationships that divert them from their goals, exhibit behavior influenced by harmful stimuli and deprived of positive stimuli, respectively.

Moreover, data analysis showed that negative relations tend to adversely burden oppressed young people and create multiple pressures for corrective action and simultaneously increase the likelihood of delinquent involvement. Concurrently, the research findings validated the assumption that negative emotions of anger, oppression, insecurity and aggression that are born in an oppressive and coercive environment play a central role in the tendency towards criminal activity, as they increase awareness of injustice and psychological trauma, reduce inhibitions and inevitably activate the desire for revenge and retaliation.

Following the above mentioned, it was concluded that forced confinement due to the Covid-19 pandemic, combined with the already oppressive and stressful world of university students, is very likely to have triggered the explosion of the high rates of cyberbullying and online victimization recorded by the study.

Concluding thoughts and suggestions

As was above demonstrated in detail, the study conducted in the midst of the Covid-19 pandemic on a sample of students aiming to examine the impact and prevalence of the cyberbullying phenomenon and the victimization of young people in Greece, offered great support to the causal approach of Robert Agnew's General Strain Theory. As a matter of fact, the survey, in contrast to previous research projects, identified the presence of online rude, mean or aggressive posts, texts or tweets in the behavior of 51% of the students, who admitted to be either perpetrators or victims.

The analysis of the findings confirmed a significant presence of both negative stimuli associated with coercion, oppression, low learning performance, negative mood and feelings of injustice, frustration and anger, as well as stressful living conditions resulting from low individual and family socio-economic status and lack of positive family influence. Consequently, the collected data greatly verified the accuracy of the relevant hypotheses of the study and confirmed the strong dependence of victimization and cyberbullying involvement from the presence of the sources of strain, introduced by Roberts' Agnew theory and particularly of the strain resulting from the significant amount of cumulative intense situations, oppression, coercion and psychological pressure (Papathanasopoulou, 2021:50).

Following the evaluation of the key finding regarding the undeniable explosive increase in cyberbullying and victimization among young people, it is worth to signalize the

conclusive recognition of the strong association between the growing cyberbullying phenomenon in question and the oppressive and coercive living conditions that resulted from the forced confinement, due to the rapid spread of the Covid-19 pandemic.

In fact, the alarmingly high rates of cyberbullying and online victimization recorded by the survey highlighted the need for further research on the subject, as well as the imperative necessity for additional measures to be put in place in order to prevent and deal more effectively with the very serious issue of cyberbullying among young people on campus.

Moreover, following the outbreak of the Covid-19 pandemic, the need for greater awareness in addressing the cyberbullying phenomenon, as well as in better supporting the psychosocial balance and social development of students has recently become more urgent than ever. The analysis of the survey data shows key points toward the imperative need to develop and introduce better programs to prevent cyberbullying aiming specifically to weaken feelings of injustice, anger and insecurity arising from coercive and oppressive situations and at the same time to strengthen the good standard of living and well-being of students.

Furthermore, education programs should be developed in order to increase the levels of empathy and improve students' mental health and stability, whereas research has shown that cyberbullying perpetrators come from families with a high degree of dysfunction and at the same time are governed by a lack of empathy for the victims, need to gain complete control, sense of insecurity and inability to adapt, while being characterized by fellow students and professors as aggressive, vicious and with a markedly limited capacity to perceive the feelings of others (Bowers et al., 1994:215–232). Moreover, the fact that, according to recent research findings, 42% of online victims did not mention the incident, as well as that the majority of complaints were made mostly to informal bodies, such as a friend (61.5%), family (25.6%) and only 5% were made to official authorities, such as the police (Zarafonitou et al., 2019), makes even more imperative the need to create more and better advisory committees staffed with competent professionals to assist online victims.

Given that several studies have identified a statistically significant association between cyberbullying behavior and low learning performance (Patel et al., 2017:841–843), presence of overestimated self-confidence (Natvig et al., 2001:365–377), aggression and dominant tendency, as well as lack of compassion and understanding of other people's feelings (Andreou & Binoti, 2010:164-17 and Georgiou & Stavrinides, 2008:575), it has subsequently become absolutely necessary to cultivate a more positive relationship between students and their families and professors, find ways to reduce the stress of exams and take all kind of measures in order to help students to deal with tense situations (Papathanasopoulou, 2020:34).

Consequently, the issue arises an immediate and compelling need to take sooner than later, a national level action in order to effectively address problematic social issues related to unemployment, poverty, insufficient social support and inequality among

young people, as well as feelings of social insecurity stemming from fear of crime and intensified by the states' incapacity to protect (Zarafonitou, 2009:9).

With regard to cyber victimization on campus, the latest research data should be taken into consideration as they reveal that students who are more likely to be targeted as victims often show evidence of peer differences in appearance, behavior, clothing and communication, which are perceived by potential perpetrators in a negative way, most commonly as a sign of weakness. Victims often show tendencies of insecurity, shyness, introversion, hypotension, low self-confidence, while at the same time are distinguished for their good learning performance (Georgiou & Stavrinides, 2008:575). Research data show that young males are more victimized by the female population and often face difficulties in psychosocial adjustment to the school or university environment, while tending to withdraw from duties, responsibilities and socializing with peers and show depressive or anxious behavior (Veenstra et al., 2005:672–682). It is noted that the conclusions in question were confirmed by other researchers who argued that victims tend to distance themselves from the social fabric of school or university, and thus they become easy targets for cyberbullying perpetrators (Fox & Boulton, 2005:313-328).

As research is further pointed out, the majority of online victimized students come from overprotective, but more balanced family backgrounds than cyberbullying perpetrators. This fact made clear the socio-cultural superiority of the victim in relation to the perpetrator and at the same time provided theoretical support to the reasons that urges the bully to target his victim. It is noted that the case of victims' overprotective family background was also supported by research based on attributing to victims the above mentioned characteristics of insecurity, emotional sensitivity, low self-esteem, lack of sociability and friends, as well as the tendency to isolate and to attribute to themselves the blame for the bullying they suffer (Smokowski & Kopasz, 2005:101-110).

Following the logical sequence of the above findings and taking into account that the majority of victims do not report their experience, resulting in a passive attitude to their victimization which evokes feelings of fear, embarrassment, insecurity, weakness and shame, it becomes clear that victim support groups need to be immediately developed (Myers & Cowie, 2013:251-267). In particular, according to Agnew, victimization leads victims through the tension that contains all of the above mentioned, negative emotions into a parallel vicious circle, which feeds them with additional intensive pressures and transforms them from victims to perpetrators, a fact that constantly perpetuates the cyberbullying phenomenon. It is noted that the development of youth counseling centers aiming to offer emotional support to cyber victims, is a suggestion fully compatible with the theoretical framework of General Strain Theory as its goal is to weaken and remove negative emotions and at the same time strengthen the positive.

Finally, an important contribution to fight cyberbullying and online victimization of young people will be made by conducting additional research studies on students in order to investigate the interdependence between the escalation of the phenomenon and

the existence of oppressive and coercive living conditions, negative feelings of injustice, abandonment, insecurity, isolation, loss of self-esteem and parental rejection.

In conclusion, it is pointed out that, based on both the high rates of cyberbullying recorded and the fact that the survey in question was carried out during the coronavirus pandemic, further specialized research is needed on the interface between forced confinement, oppressive and coercive living conditions and the rise of cyberbullying and online victimization among young people.

Acknowledgments

References

Agatson, P., Kowalski, R. & Limber, S. (2008). *Students' Perspectives on Cyber Bullying*. Journal of Adolescent Health, Vol. 41(6), 59-60.

Agnew, R. (1985). *A revised strain theory of delinquency.* Social Forces, Vol. 64, 151-167.

Agnew, R. (1992). *Foundation for a General Strain Theory of Crime and Delinquency.* Criminology Vol. 30(1), 47-87.

Agnew, R. (2001). *Building on the foundation of general strain theory: Specifying the types of strain most likely to lead to crime and delinquency.* Journal of Research in Crime and Delinquency, Vol. 38(4), 319-361.

Agnew, R. (2006). *Pressured into Crime: An Overview of General Strain Theory.* Los Angeles, Roxbury Publications, 72.

Agnew, R. (2010). *A general strain theory of terrorism.* Theoretical Criminology, Vol. 14(2), 131–153.

Agnew, R. & White, H. (1992). *An Empirical Test of General Strain Theory.* Criminology, Vol. 30(4), 475–499

Al-Badayneh, M., Al-Khattar, A., Al-Kresha, R. & Al-Hasan, K. (2012). *Bullying Victimization among College Students (A Transnational Problem): A Test of Agnew's General Strain Theory*. The Homeland Security Review, Vol. 6(2), 83.

Andreou, E. (2000). *Bully/victim problems and their association with psychological constructs in 8 to 12 year-old Greek schoolchildren.* Aggressive Behavior, Vol. 26(1), 49-56.

Andreou, E. & Binoti, F. (2010). *Children's Bullying Experiences Expressed Through Drawings and Self-Reports*. Research Article Vol. 31(2), 164-177.

Antoniadou, N. & Kokkinos K. (2013). *Summary of Greek surveys of children and adolescents on cyberbullying and victimization conducted up to 2012*. Preschool & School Education, Laboratory of Pedagogical Research & Applications P.T.P.E., University of Crete, Vol. 1(1), 138-169 (in Greek).

Artinopoulou, V., Babalis, T. & Nikolopoulos, V. (2010). *Panhellenic Survey on Domestic Violence and Bullying in Primary and Secondary education. Available at:* www.minedu.gov.gr (12/10/2020) (in Greek).

Aseltine, R., Gore, S. & Gordon, J. (2000). *Life Stress, Anger and Anxiety, and Delinquency: An Empirical Test of General Strain Theory*. Journal of Health and Social Behavior, Vol. 41, 256-275.

Bauman, S. & Newman, M. (2013). *Testing Assumptions About Cyberbullying: Perceived Distress Associated With Acts of Conventional and Cyber Bullying*. Psychology of Violence, Vol. 3(1), 27.

Bowers, L., Smith, K. & Binney V. (1994). *Perceived family relationships of bullies, victims and bully/victims in middle childhood*. Journal of Social and Personal Relationships, Vol. 11(2), 215–232.

Brezina, T. (2006). *Adapting to strain: An examination of delinquent coping responses*. Criminology, Vol. 34(1), 39-60.

Brezina, T. & Agnew, R. (1997). *Relational problems with peers, gender and delinquency.* Youth and Society, Vol. 29, 84-111.

Broidy, L. & Agnew, R. (1997). *Gender and crime: A general strain theory perspective* σε: Journal of Research in Crime and Delinquency, Vol. 34, 275-306.

Chapell, M., Casey, D., De la Cruz, C., Ferrell, J., Forman, J., Lipkin, R., Newsham, M., Sterling, M. & Whitaker, S. (2004). *Bullying in university by students and teachers.* Adolescence, Vol. 39, 53-64.

Cowie, H. (2013). *Cyberbullying and its impact on young people's emotional health and well-being.* Psychiatrist, Vol. 37(5), 167-170.

Daigle, L., Fisher, B. & Cullen, F. (2008). *The Violent and Sexual Victimization of College Women. Is Repeat Victimization a Problem?* Journal of Interpersonal Violence, Vol. 23(9), 1296-1313.

Dredge, R., Gleenson, J. & De la Piedad, X. (2014). *Risk Factors Associated with Impact Severity of Cyberbullying Victimization: A Qualitative Study of Adolescent Online Social Networking.* Cyber psychology, Behavior and Social Networking, Vol. 17(5), 287-291.

Fox, C. & and Boulton, M. (2005). *The social skills problems of victims of bullying: Self, peer and teacher perceptions.* British Journal of Educational Psychology, Vol. 75, 313-328.

Ganiaris, N. (2020). *The evidential utilization of the Internet Protocol address (IP Address).* Criminal Chronicles, P. N. Sakkoulas, 463. (in Greek).
Georgiou, S. & Stavrinides, P. (2008). *Bullies, Victims and Bully-Victims - Psychosocial Profiles and Attribution Styles.* School Psychology International, Vol. 29, 575.

Haynie, D., Nansel, T. & Simonsmorton, B. (2003). *The Association of Bullying and Victimization with Middle School Adjustment.* Journal of Applied School Psychology, Vol. 19(2), 45-61.

Hoffmann, J. & Miller, A. (1998). *A Latent Variable Analysis of General Strain Theory.* Journal of Quantitative Criminology, Vol. 14, σελ. 83-110.

Kranidioti, M. (2006). *INTEGRATION Method of Development of Theory in Criminology.* Nomiki Vivliothiki Group, 103 (in Greek).

Livingstone, S., Haddon, L., Görzig, A. & Ólafsson, K. (2011). *European Kids Online Final Report 2011.* Available at: http://eprints.lse.ac.uk/39351/ (12/10/2020).

Mazerolle, P. (1998). *Gender, General Strain, and Delinquency: An Empirical Examination.* Justice Quarterly, Vol.15, 65-91.

Mazerolle, P., Piquero, A. & Capowich, G. (2003). *Examining the Links between Strain, Situational and Dispositional Anger, and Crime: Further Specifying and Testing General Strain Theory.* Youth Society, Vol. 35, 131.

Merton, K. (1938). *Social Structure and Anomie.* American Sociological Review, Vol. 3(5), 672-682.

Natvig, K., Albrektsen, G. & Qvarnstrom, U. (2001). *Psychosomatic symptoms among victims of Norwegian school bullying.* Journal of Health Psychology, Vol. 6(4), 365–377.

Olweus, D. (1994). *Bullying at School: Basic Facts and Effects of a School Based Intervention Program.* Journal of Child Psychology and Psychiatry, 1171-1190.
Olweus, D., Limber, S. & Mihalic, S. (1999). *Blueprints for Violence Prevention: Book Nine - Bullying Prevention Program*, 16, available at: https://www.ncjrs.gov/App/abstractdb/AbstractDBDetails.aspx?id=174202 (12/10/2020).

Papathanasopoulou, N. (2021). *Cyberbullying in the light of Robert Agnews' General Strain Theory.* Postgraduate thesis Postgraduate Studies Criminology and Anti-Crime Policy, of the Law School of National and Kapodistrian University of Athens, 34-50-192 (in Greek).

Patel, H., Varma, J., Shah, S., Phatak, A. & Nimbalkar, S. (2017). *Profile of Bullies and Victims Among Urban School-going Adolescents in Gujarat*. Indian Pediatrics-Department of Psychiatry, Pramukhswami Medical College, Vol. 54, 841–843.

Paternoster, R. & Mazerolle, P. (1994). *General strain theory and delinquency: A replication and extension.* Journal of Research in Crime and Delinquency, Vol. 31(3), 235-263.

Piquero, N. & Sealock, M. (2000). *Generalizing general strain theory: An examination of an offending population.* Justice Quarterly, Vol. 17(3), 449-484.

Smokowski, R. & Kopasz, H. (2005). *Bullying in School: An Overview of Types, Effects, Family Characteristics, and Intervention Strategies*. Journal Children & Schools, Vol. 27, 101-110.

Veenstra, R. et al. (2005). *Bullying and Victimization in Elementary Schools: A Comparison of Bullies, Victims, Bully/Victims and Uninvolved Preadolescents*. Developmental Psychology, Vol. 41(4), 672– 682.

Ybarra, M. & Mitchell, K. (2004). *Youth engaging in online harassment: associations with caregiver–child relationships, Internet use, and personal characteristics*. Journal of Adolescence, Vol. 27(3), 319-336.

Zarafonitou, Ch. (2009a). *Fear of Crime: The Greek paradox.* Available at: https://criminology.panteion.gr/attachments/article (in Greek) (1.4.2021).

Zarafonitou, Ch. et al. (2014) *Victimization and fear of crime of students, who use the Internet*. Eglimatologia, Vol. 1-2, 21-29. Available at: https://www.researchgate.net/publication/281650142 (in Greek) (21.4.2021).

Zarafonitou, Ch. et al. (2019) *Sexual harassment and fear of crime among students, who use the Internet.* Available at: https://criminology.panteion.gr/attachments/article (in Greek) (21.4.2021).