



Bachelor's Thesis

**Creating a Risk Profile of Bullies in High School:  
The Relation between the Big Five Personality Traits and Offline and  
Online Bullying**

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## **Abstract**

The aim of this study was to examine the relation between the extent of offline and online bullying and the level of the Big Five personality traits neuroticism, extraversion, openness, conscientiousness and agreeableness among 155 high school students. It was expected that students engaging more in offline bullying behaviour would be less agreeable, more neurotic, less conscientious and more extravert than nonbullies. Besides that, the expectation was that students engaging more in online bullying behaviour would be less agreeable, more neurotic, less conscientious and less extravert than nonbullies. Variables were tested by letting the students fill in self-report questionnaires. These questionnaires estimated the level of the personality traits as well as the extent of offline and online bullying. Results showed that the higher the extent of offline bullying, the lower the level of conscientious and the lower the level of agreeableness was. It also showed that the higher the extent of online bullies, the lower the level of openness and the lower the level of agreeableness was. These findings can help create a risk profile of offline and online bullies so that anti-bullying programs can be adjusted to these risk groups.

Keywords: offline bullying, online bullying, bullying, personality, Big Five

## Introduction

News items about teenagers who committed suicide because they were a victim of bullying bring up feelings of unfairness and sadness to society. Simone, a 12 year old Dutch girl, is an example of a victim who committed suicide (“Maarheeze geschokt door zelfmoord 12-jarige Simone”, 2014). The victim’s life has been influenced by the bullying and it has suicide as a consequence. According to Olweus (1999), as cited by Vaillancourt et al. (2008), the definition of bullying is as follows: “a person is being bullied when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other persons. It is a negative action when someone intentionally inflicts, or attempts to inflict, injury or discomfort upon another . . .”. This bullying among teens can take place in schools. A more specific form of bullying is online bullying, also known as cyberbullying. This includes sending hostile or aggressive messages via electronic or digital media, with the aim to cause damage to someone or to discomfort them (Tokunaga, 2010).

Among American teenagers between the age of 10 to 17 years, the prevalence of offline victimization is 57%, which is higher than the prevalence of online victimization of 23% (Mitchell, Ybarra & Finkelhor, 2007). In this study, being a victim meant having experienced some form of victimization in the past year. Also, 73% of the online victims reported to be an offline victim too (Mitchell, Ybarra & Finkelhor, 2007). A recent Dutch study showed that Internet usage in youth between the age of 13 and 17 years has increased from 11.3 hours a week in 2011 to 14.0 hours a week in 2014 (Nationaal Luister Onderzoek, Nationaal Onderzoek Multimedia, & Stichting Kijkonderzoek, 2014). The same research showed that more and more teenagers have access to a mobile phone or smartphone: in 2011 only 27.3% which has increased to 56.8% in 2014. Having access to a mobile phone or smartphone facilitate fast access to the Internet. Internet access has remained virtually the same (respectively 90.3% and 93.7% in 2011 and 2014) (Nationaal Luister Onderzoek,

Nationaal Onderzoek Multimedia, & Stichting Kijkonderzoek, 2014). However, keeping in mind the increase in hours per week and the enormous increase in accessibility to a mobile phone or smartphone, online bullying may have become easier for bullies. It is therefore conceivable that the percentages given by Mitchell et al. (2007) may have grown and perhaps will grow even further in the future.

To prevent or intervene in bullying, anti-bullying programs exist. In a meta-analysis, school-based anti-bullying programs did not show much effect (Ferguson, Miguel, Kilburn, & Sanchez, 2007). It is important that these anti-bullying programs are better adjusted to the person who is targeted, so that the effectiveness can be increased. This is of interest because there are many negative aspects associated with being a victim of bullying. For instance, several studies found that being an offline victim is associated with lower self-esteem on primary school (Slee & Rigby, 1993) and on secondary school (Smokowski, Evans & Cotter, 2014; Rigby & Slee, 1993), and with lower happiness on primary (Slee, 1995) and secondary school (Rigby & Slee, 1993). Other findings regarding offline victims are that they experience more loneliness than nonvictims on short term while on long term they tend to avoid school (Kochenderfer & Ladd, 1996), they more often have suicidal thoughts which are even more often present when the victim has lack of social support (Rigby & Slee, 1999) and they more frequently have physical and mental health problems than nonvictims (Biebl, DiLalla, Davis, Lynch & Shinn, 2011). These physical health problems are headaches and sleep problems.

Studies mentioned above only examined offline victims. Several studies investigated both online and offline victims and the potential negative effects. For instance, both online and offline victims reported to have more anxiety symptoms (Smokowski et al., 2014) and depressive symptoms compared to nonvictims (Mitchell et al, 2007; Slee, 1995; Smokowski et al., 2014). Mitchell et al. (2007) also found that online and offline victims both were more likely to report delinquent behaviour and substance use compared to nonvictims. Lastly,

children facing high offline and/or online victimization experienced lower life satisfaction compared to their nonvictimized peers (Sumter, Baumgartner, Valkenburg & Peter, 2012). Hence, the consequences of being a victim of either offline or online bullying should not be underestimated. It is therefore important that the amount of victims of bullying are reduced by suppressing the bullying.

Studies examining relations between bullies and problems such as stated before are scarce. Among primary school bullies, it has been found that they more often suffer from depressive symptoms (Slee, 1995). The same study showed that female bullies are less happy than their peers. A study conducted at secondary schools showed that bullies tend to have more suicidal thoughts than their nonbullying peers (Rigby & Slee, 1999).

It is clear that bullying and being bullied can involve a variety of problems. It is therefore important to decrease bullying, and for this, it can be helpful to identify possible bullies. These possible bullies can be identified by creating a risk profile of current bullies. A way of creating such a risk profile is looking at their personalities. According to the Encyclopedia of Psychology, as cited by the American Psychological Association, personality “refers to individual differences in characteristic patterns of thinking, feeling and behaving” (“Personality”, n.d.). In this research, the Big Five factor structure of personality is being used to examine the personality of the children. It consists of the following five personality traits, with between brackets several describing terms: Extraversion (externality; sociability; outgoing), neuroticism (opposite of emotional stability; anxiety), conscientiousness (orderliness; constraint; no impulsivity), agreeableness (likeability; feeling; nurturance), and openness to experience (independence; rebelliousness; intuition) (John, Naumann & Soto, 2008). The correlation between offline and online bullying with the Big Five traits will be investigated in this research. Not much research is done yet regarding the relation between personality and bullying, so it may be relevant to also look into correlations between

personality traits and other traits that may accompany bullying. This way, solid hypotheses can be made for the upcoming analyses.

Research showed that less agreeable people tend to have empathy deficits (McCullough, Bellah, Kilpatrick & Johnson, 2001). According to Olweus (1994), bullies have low empathy with victims of bullying. It is therefore conceivable that bullies, whether they act online or offline, may be less agreeable. Other research showed that this is indeed the case for online bullies (Kokkinos, Baltzidiz & Xynogala, 2016) and for offline bullies as found in a meta-analysis (Mitsopoulou & Giovazolias, 2015). Regarding extraversion, studies show that offline bullies reported to be more extravert than nonbullies (Connolly & O'Moore, 2003; Mitsopoulou & Giovazolias, 2015). On the other hand, online bullies who are less extravert (i.e. more introvert) tend to be lonely and have feelings of weakness in the offline world, which may result in aggressive online behaviour (Kokkinos, Baltzidiz & Xynogala, 2016). Though the researchers of this study do not pose anything about online bullies always being less extravert, it may be true that online bullies actually are less extravert than offline bullies. Besides that, offline bullies reported to be more neurotic on average (Connolly & O'Moore, 2003; Mitsopoulou & Giovazolias, 2015) and less conscientious than nonbullies (Mitsopoulou & Giovazolias, 2015).

Current anti-bullying programs are not specifically aimed at online or offline bullying. Given the previously indicated expectation that online bullying will increase, it may be useful to examine the differences between these two forms of harassment. Differences in personality between online and offline bullies and victims can be used to adapt the anti-bullying programs to the group with a higher risk factor to engage in bullying. In this way, interventions and preventions can respond better and anticipate to certain personality traits or perhaps develop separate branches of interventions for different personalities. It may for instance be more cost-

effective to address a program to the children who are at risk to become an offline or online bully. This research can be a stepping stone to create such a risk profile.

The purpose of this study is to further investigate the personality traits that cohere with online and offline bullying and victimization. Also, this study will look onto differences in personality between online and offline bullies. Firstly, both offline and online bullies are expected to be less agreeable, more neurotic and less conscientious than nonbullies. Moreover, offline bullies are thought to be more extravert than nonbullies, while online bullies are thought to be less extravert than nonbullies. Based on the lack of literature, no expectations are formulated regarding the level of openness. However, exploratory analyses will be performed to investigate the relation between openness and offline and online bullies. Lastly, a difference is expected in the degree of extraversion between online and offline bullies in a way that online bullies are thought to be less extravert than offline bullies.

## **Method**

### *Participants*

The sample consisted of 157 high school students of whom 2 were excluded from the analyses because of missing data. Of the remaining 155 students, 65 were boys and 90 were girls. Regarding age, they only had to indicate their birth year, of which the distribution was as follows: 4 students were born in 2000, 37 in 2001, 75 in 2002, and 39 in 2003. The research took place in 2016, so though the students' exact ages cannot be known, they range between 12 and 16 years. The students were in the first (65 students) or second year (90 students) of high school. All students were in VMBO, which is one of the Dutch education levels. Of the participants, 128 (82.2%) were Dutch, 8 (5.7%) were Turkish, 8 (5.1%) were

Moroccan, and 11 (7.0%) had a different ethnicity or indicated having a mixed ethnicity consisting of more than one.

### *Procedure*

The participants for this project were recruited from a high school in North Brabant in the Netherlands. This school was approached by students of the bachelor Psychology. After the school director agreed, classes were selected by the school and passive consent letters were sent to both students and their parents.

The questionnaires were part of a retrospective research around “Project I AM”. The parts that are used in this thesis concern adolescent’s online and offline bullying behaviour and personality. The completion of the questionnaires took place in class with the presence of a teacher and 2 to 5 psychology students during one of the students’ classes. It took 30 to 45 minutes to complete the questionnaire. However, because of their schedule, after 45 minutes the participants had to go to their next class and some did not complete the questionnaire. The first questionnaire had to be filled in on paper and the rest was to be filled in online. Afterwards, the students got a debriefing that the research mostly was aimed at offline and online bullying, personality and quality of relationships.

### *Materials*

In this research, the questionnaire used to estimate personality was the Dutch translation of the Big Five Inventory (BFI) (John, Donahue, & Kentle, 1991). This is a self-report inventory which measures the Big Five personality traits: Neuroticism, extraversion, agreeableness, conscientiousness, openness. Originally, this inventory consists of 44 items but the test used for this paper was a shortened version. It consisted of 25 items, 5 items per personality trait. The participant has to indicate whether they agree or disagree with a statement. An example of an item is: “I am someone who is talkative” (Ik zie mezelf als



iemand die spraakzaam is). The scoring is done on a 9 point Likert scale of which 1 equals to “disagree strongly” (helemaal oneens) and 9 for “agree strongly” (helemaal eens). The scores in between (i.e. 2, 3, 4, 5, 6, 7, 8) were not labelled with a meaning. So, when the participant thinks of himself as very talkative, he agrees with this item so he/she can give this a high score. The total score on the BFI does not have a meaning because it consists of five different traits. Therefore, the score on every trait will be looked at separately. The level of each trait was determined through 5 items of the BFI. This means that every trait has a score range of 5 to 45. A high score on for example agreeableness means that the person reports to be very agreeable.

Test-retest reliability for the English version of the BFI was estimated to be acceptable for conscientiousness (0.76) and agreeableness (0.76) (Gosling, Rentfrow & Swann Jr., 2003). The same research reported the test-retest reliability for openness (0.80), extraversion (0.82) and neuroticism (0.83) to be good. However, these values for test-retest reliability were found on the English version of the 44 item BFI and it is not known in what way the coefficients would differ from those given for the Dutch version of the 25 item BFI. Internal consistencies (Cronbach’s alpha) for each of the traits of the Dutch 44 item BFI were given by Denissen, Geenen, van Aken, Gosling & Potter (2008). They reported Cronbach’s alpha coefficients for agreeableness (0.73) and conscientiousness (0.79) which indicate acceptable internal consistencies, and Cronbach’s alpha coefficients for openness (0.83), extraversion (0.84) and neuroticism (0.86) which indicate good internal consistencies. In contrast with the test-retest reliability mentioned earlier, this research used the Dutch version of the BFI. Yet the number of items used is also 44, while the BFI used in the analyses only has 25 items. It is therefore possible that the Cronbach’s alpha coefficients are different from those given above. Of this research’s data, Cronbach’s alpha coefficients are also calculated. It indicated an unacceptable internal consistency for openness (0.22) and agreeableness (0.43). The Cronbach’s alpha

coefficients for neuroticism (0.71), extraversion (0.73) and conscientiousness (0.71) were acceptable. According to Nunnally, as cited by Pallant (2013), the minimum level of Cronbach's alpha is 0.7. However, Cronbach's alpha coefficients of openness and agreeableness are low. This may be due to the small number of items in each of the scales. No information was found about the validity of the BFI.

The questionnaire used to estimate online bullying was the Cyberbullying Questionnaire (CBQ) (Calvete, Orue, Estévez, Villardón & Padilla, 2010). The CBQ used in the current study was an adjusted version of the original: some questions were combined which resulted in 9 questions instead of 16 questions (Gámez-Guadix, Villa-George & Calvete, 2014). Also, it was translated to Dutch. The CBQ is a self-report questionnaire in which the participant has to indicate how often something takes place. An example of an item from the CBQ is "How often do you send threatening or insulting messages by e-mail or cellphone?" (Hoe vaak stuur je dreigende of beledigende mailtjes en smsjes?). The possible answers ranged from 1 being "never" (nooit) and 5 "very often" (heel vaak). The range of the total score on the CBQ is 9 to 45, with a higher score meaning more often participating in online bullying behaviour. The Cronbach's alpha coefficient of the CBQ was 0.90, which indicates an excellent internal consistency (Gámez-Guadix et al., 2014). This concerns the Mexican version of the CBQ. For this research, the Cronbach's alpha coefficient was calculated and it turned out to be questionable (0.65). No research is available on the reliability and validity of the CBQ.

For estimating the extent of offline bullying, the bully scale of the Bullying Prevalence Questionnaire (BPQ) was used (Rigby & Slee, 1993). This is a self-report questionnaire in which the participant has to indicate how often a situation occurs to them. The bully scale of this questionnaire consists of 6 questions, for example: "I like to make other kids scared of me" (Ik vind het leuk om andere kinderen bang voor mij te maken). The possible answers

vary on a scale from 1 “never” (nooit) to 4 “very often” (heel vaak). The bully scale of the BPQ has a score range of 6 to 24. A higher score means that the person participates more often in offline bullying behaviour. Cronbach’s alpha coefficient of the BPQ was reported to be 0.75 and 0.78 on two different schools (Rigby & Slee, 1993), which indicates an acceptable internal consistency. The Cronbach’s alpha coefficient calculated on the data found in this research turned out to be questionable (0.63) No research is available on the reliability and validity of the BPQ.

### *Statistical analyses*

To determine whether the hypotheses given in the introduction will be assumed, multiple regression tests will be carried out for the relation between the two types of bullying and the Big Five personality traits. First, two multiple regression analyses will be conducted: the first analysis with offline bullying as dependent variable, and the second with online bullying as dependent variable. In both analyses, the independent variables are the five personality traits extraversion, openness, agreeableness, neuroticism and conscientiousness. All five personality traits will be added to the model at once. After this, the hypothesis about the difference in extraversion between offline and online bullies will be tested. To do so, the correlation between the extent of offline bullying and the level of extraversion will be compared to the correlation between the extent of online bullying and the level of extraversion using online computer software to carry out Fisher  $r$ -to- $z$  transformations and to compare the  $z$ -values (Preacher, n.d.).

## **Results**

In table 1, the descriptive statistics for each variable is given, along with the range of possible scores of each variable.

Table 1. Descriptive statistics of the variables with N=155

	Mean	SD	Minimum	Maximum	Possible range
Offline bullying	7.30	1.81	6	15	6-24
Online bullying	10.00	1.90	9	20	9-45
Neuroticism	26.12	7.99	6	45	5-45
Extraversion	30.54	7.43	13	45	5-45
Openness	27.27	5.25	10	40	5-45
Conscientiousness	28.83	7.41	9	45	5-45
Agreeableness	31.46	5.64	16	44	5-45

First, the assumptions regarding multiple regression analysis were tested. Linearity and homoscedasticity were tested by looking at the scatterplots of both the extent of offline bullying and the extent of online bullying in relation to the levels of the personality traits. No pattern was visible, so both these assumptions were met. It was also visible that there was no dependence of residuals. The assumption of normality was met according to histograms. The last assumption of multicollinearity was checked by looking at the Variance Inflation Factor, which varied between 1.09 and 1.39 for all variables. This suggests that this assumption was also met. Results from the multiple regression analyses are shown in table 2.

### *Offline bullying*

The multiple regression analysis gave a significant result ( $F(5, 149) = 4.71, p = 0.001$ ) with a  $R^2$  of 0.14. This means that offline bullying can be predicted for 14% by the Big Five personality traits. Also, Cohen's  $f^2$  was calculated and was found to be  $f^2 = 0.16$ . This is according to Cohen's (1988) guidelines, as cited by Selya, Rose, Dierker, Hedeker and Mermelstein (2012), a medium effect size. Further results regarding this multiple regression analysis is given in table 2. It is visible that the negative relation between the extent of offline bullying and the level of conscientiousness is significant, as well as the negative relation between the extent of offline bullying and the level of agreeableness. This means that in this sample, offline bullies tend to be less conscientious and less agreeable than nonbullies. Both of these results are in line with the hypotheses given in the introduction. No support was

found for the hypotheses regarding a positive relation between the extent of offline bullying and the level of neuroticism.

### *Online bullying*

For online bullying, the results of the multiple regression analysis were also significant ( $F(5, 149) = 7.88, p < 0.001$ ) with a  $R^2$  of 0.21. Online bullying can therefore be predicted for 21% by the Big Five personality traits. Cohen's  $f^2$  was 0.26, which according to Cohen's guidelines indicates a medium to large effect size (Selya et al., 2012). Also shown in table 2 are the results of the multiple regression for online bullying and the five personality traits. As expected, a negative relation between the extent of online bullying and the level of agreeableness was found. Unexpectedly, a negative relation was found between the extent of online bullying and the level of openness. This means that in this sample, online bullies are less agreeable and less open to new experiences than nonbullies. However, in contrast to our hypotheses, no significance was found for the relation between the extent of online bullying and the level of conscientiousness and the extent of online bullying and the level of neuroticism.

Table 2. Multiple regression analyses for the relation between offline bullying and online bullying and the Big Five personality traits

	Offline bullying $\beta$	Online bullying $\beta$
Neuroticism	-0.08	0.03
Extraversion	0.13	0.07
Openness	-0.00	-0.26**
Conscientiousness	-0.18*	-0.09
Agreeableness	-0.19*	-0.25**
Total proportion explained variance	0.14	0.21

Significance levels are indicated by asterisks: \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

### *Offline bullying versus online bullying*

The correlation between the extent of offline bullying and the level of extraversion was 0.18 while the correlation between the extent of online bullying and the level of extraversion was 0.09. The expectation was that students who engaged more in online bullying behaviour would be less extravert than students who engaged more in offline bullying behaviour. The results from the performed test showed that this was not the case ( $z(155) = 0.73, p = 0.23$ ), meaning that in this sample, students engaging in offline bullying behaviour and those engaging in online bullying behaviour did not differ significantly on the level of extraversion.

## **Discussion**

The purpose of this study was to investigate whether the Big Five personality traits are associated with online and offline bullying among Dutch high school students. Also, it looked into differences in personality between online and offline bullies. The results partly correspond to the hypotheses given earlier. As expected, students engaging more in offline bullying behaviour reported to be less agreeable and less conscientious than did nonbullies. However, they did not report to be more neurotic or less extravert than nonbullies. No differences between Students engaging more in offline bullying behavior and nonbullies were found in the level of openness. Students engaging more in online bullying behaviour reported to be less agreeable than nonbullies, which was one of the hypotheses. Unexpectedly, they also reported to be less open to new experiences than nonbullies. However, no difference was found between students engaging more in online bullying behaviour and nonbullies in the level of neuroticism, extraversion or conscientiousness. Lastly, the expectation that those

engaging in online bullying behaviour would be less extravert than those engaging in offline bullying behaviour was not met.

The results found in this research correspond to some of the results given in the meta-analysis by Mitsopoulou and Giovazolias (2015). They suggest that the strongest associations resulting from their meta-analysis are the negative relations between bullying and agreeableness and conscientiousness, not specifying the type of bullying. The results they found regarding bullying and its relation with neuroticism, extraversion and openness were weaker. This may imply why in the current research, no association is found with these three personality traits. The research cited above is namely a meta-analysis while the current study is a single study containing only 155 participants (Mitsopoulou & Giovazolias, 2015). It is therefore conceivable that a result found in their research may not be found in the current. Moreover, their meta-analysis is mainly aimed at researches on general bullying behaviour without distinguishing online and offline bullying. Because the current research does distinguish these two types, different effects may be found. Other evidence that supports part of the results is given by Kokkinos, Baltzidis and Xynogala (2016). They reported online bullies to be less agreeable than nonbullies which is also one of the outcomes of the current study.

It is interesting to look into explanations of the found results. Firstly, an explanation of the negative found relation between offline bullying and agreeableness, as well as the negative relation between online bullying and agreeableness, seems like an obvious one. Bullies are generally found not to be agreeable, since they exhibit unpleasant behaviour to other people. However, an explanation of the negative relation between offline bullying and conscientiousness is harder to constitute. As stated in the introduction, conscientiousness is among other things characterized by having no impulsivity. This would mean that offline bullies can act impulsive. This may result in them engaging in bullying behaviour because they act

without thinking of the consequences. However, this is not an explanation of the fact that this relation was only found among offline bullies and not among online bullies. An explanation of the fact that online bullies are less open to new experiences is also difficult to form.

Openness to new experiences is namely characterized by being rebellious, which can be a part of being a bully. However, the internal consistency of 0.22 for openness in this study was unacceptable (Pallant, 2013). It is therefore not clear in what extent this result should be interpreted.

There are several limitations in this study. Firstly, the BFI was shortened from 8-9 statements to 5 statements per personality trait. This may have influenced the accuracy of the estimations of the personality traits. Answering one question in one of the extremes can have a big influence on the result of that personality trait. The validity of the shortened BFI is not yet known. Also, the extents of offline and online bullying were low in this sample. Most of the children did not engage in bullying behaviour which resulted in low mean scores of these two variables. Another limitation of the BFI is that during the completion of the questionnaires, many students had trouble with the phrasing of some questions. Though a list of difficult words was projected on a screen in class, some statements were still unclear and hard to understand for the students. An example of a difficult question is: "I am someone who can be cold and aloof" (ik zie mezelf als iemand die koud en afstandelijk is). It is possible that the comprehension of the questions was still not good enough for the students to answer the questions. The results may therefore be distorted in a way that the students may have chosen the most neutral answer (i.e. 5 on a 9 point Likert scale) or perhaps just clicked a random answer.

Besides these limitations, this study also contains strengths. It differentiates online and offline bullying, while previous research is often aimed at bullying in general. By doing this, the results can be better interpreted because it is clear what type of bullying correlates with a



certain personality trait. This knowledge creates a clearer risk profile of the aggressor which can be helpful in the future. It gives better insight in whom to aim more specific anti-bullying programs at. It may be more cost-effective to only address the anti-bullying programs to the children who are at risk to become an offline or online bully. However, this is only a surmise and more research is needed in order to possibly realize this. Another strength of this study is that, though only on the trait extraversion, offline bullies and online bullies were compared with each other which, as far as known, has not been done before. Knowing the differences in personality between offline and online bullies can possibly improve the anti-bullying programs even more.

Much research can be done in this field in the future, especially because of the lack of literature available regarding offline and online bullies and their personalities. Therefore, the first point for future research is to further investigate these relations. For instance, the current research is carried out at a single school in the Netherlands. Hence, the representativeness is very low. Future research can examine the same relations studied in this research on more schools spread over the Netherlands. Also, more age categories could be studied. Both these improvements would ameliorate the representativeness. Another point for future research is to test whether other factors play an important role in the relation between offline and online bullying and personality. This relation is possibly influenced by another factor causing a mediated effect or an indirect effect between the two types of bullying and personality. Before drawing solid conclusions and use these to create new anti-bullying programs, this relation should be investigated further. Future research should therefore be aimed at exploring the relations between the extent of offline and online bullying and the levels of the personality traits. After exploring this relations and thus having created a risk profile of offline and online bullies, more specific anti-bullying programs aimed at children who are at risk of becoming

an offline or online bully can be created. These programs can then be tested for effectiveness of the intervention.

It is still too early to create an anti-bullying program based on these results because more research is needed in this field. However, the knowledge that there could be a difference in personality between offline bullies, online bullies and nonbullies questions current anti-bullying programs. As stated in the introduction, current anti-bullying programs do not show much effect (Ferguson et al., 2007). Current programs can be studied to investigate if they fall short at targeting the bullies. If so, it can be useful to use personality as a determining factor to distinguish offline and online bullies from nonbullies and use this knowledge to adapt anti-bullying programs to focus on the group concerned. This research is a stepping stone to create a personality profile of the risk group.

Though no risk profile containing all five personality traits can be formed, it can be formed partially. The results show that the higher the extent of offline bullying, the lower the level of conscientious and the lower the level of agreeableness was. It also showed that the higher the extent of online bullies, the lower the level of openness and the lower the level of agreeableness was. These results have created an opening for future research in investigating the differences between offline bullies, online bullies and nonbullies. This may, ultimately, help anti-bullying programs to be better at targeting the potential bullies and prevent them to become one in the future.

## References

- Biebl, S. J. W., DiLalla, L. F., Davis, E. K., Lynch, K. A., & Shinn, S. O. (2011). Longitudinal associations among peer victimization and physical and mental health problems. *Journal of Pediatric Psychology, 36*(8), 868-877. doi:10.1093/jpepsy/jsr025
- Calvete, E., Orue, I., Estévez, A., Villardón, L., & Padilla, P. (2010). Cyberbullying in adolescents: Modalities and aggressors' profile. *Computers in Human Behavior, 26*(5), 1128-1135. doi:10.1016/j.chb.2010.03.017
- Connolly, I., & O'Moore, M. (2003). Personality and family relations of children who bully. *Personality and Individual Differences, 35*(3), 559-567. doi:10.1016/S0191-8869(02)00218-0
- Denissen, J. J. A., Geenen, R., van Aken, M. A. G., Gosling, S. D., & Potter, J. (2008). Development and validation of a Dutch translation of the Big Five Inventory (BFI). *Journal of Personality Assessment, 90*(2), 152-157. doi:10.1080/00223890701845229
- Ferguson, C. J., Miguel, C. S., Kilburn, J. C., & Sanchez, P. (2007). The effectiveness of school-based anti-bullying programs: A meta-analytic review. *Criminal Justice Review, 32*(4), 401-414. doi:10.1177/0734016807311712
- Gámez-Guadix, M., Villa-George, F., & Calvete, E. (2014). Psychometric properties of the Cyberbullying Questionnaire (CBQ) among Mexican adolescents. *Violence and Victims, 29*(2), 232-247. doi:10.1891/0886-6708.VV-D-12-00163R1
- Gosling, S. D., Rentfrow, P. J., & Swann Jr., W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality, 37*(6), 504-528. doi:10.1016/S0092-6566(03)00046-1

- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). The Big Five Inventory--Versions 4a and 54. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.
- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm Shift to the Integrative Big-Five Trait Taxonomy: History, Measurement, and Conceptual Issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (pp. 114-158). New York, NY: Guilford Press.
- Kochenderfer, B. J., & Ladd, G. W. (1996). Peer victimization: Cause or consequence of school maladjustment? *Child Development*, 67(4), 1305-1317. doi:10.2307/1131701
- Kokkinos, C. M., Baltzidis, E., & Xynogala, D. (2016). Prevalence and personality correlates of Facebook bullying among university undergraduates. *Computers in Human Behavior*, 55, 840-850. doi:10.1016/j.chb.2015.10.017
- Maarheeze geschokt door zelfmoord 12-jarige Simone. (2014, March 14). Retrieved from <http://www.omroepbrabant.nl/?news/208004502/Maarheeze+geschokt+door+zelfmoord+12-jarige+Simone.aspx>
- McCullough, M. E., Bellah, C. G., Kilpatrick, S. D., & Johnson, J. L. (2001). Vengefulness: Relationships with forgiveness, rumination, well-being, and the Big Five. *Personality and Social Psychology Bulletin*, 27(5), 601-610. doi:10.1177/0146167201275008
- Mitchell, K. J., Ybarra, M., & Finkelhor, D. (2007). The relative importance of online victimization in understanding depression, delinquency, and substance use. *Child Maltreatment*, 12(4), 314-324. doi:10.1177/1077559507305996

- Mitsopoulou, E., & Giovazolias, T. (2015). Personality traits, empathy and bullying behavior: A meta-analytic approach. *Aggression and Violent Behavior, 21*, 61-72.  
doi:10.1016/j.avb.2015.01.007
- Nationaal Luister Onderzoek, Nationaal Onderzoek Multimedia, & Stichting Kijkonderzoek. (2014). *Media Standaard Survey 2014*. Retrieved from  
[https://kijkonderzoek.nl/images/MSS/MSS\\_2014\\_rapportage\\_150302.pdf](https://kijkonderzoek.nl/images/MSS/MSS_2014_rapportage_150302.pdf)
- Olweus, D. (1994). Annotation: Bullying at school: Basic facts and effects of a school based intervention program. *Journal of Child Psychology and Psychiatry, 35*(7), 1171-1190.  
doi:10.1111/j.1469-7610.1994.tb01229.x
- Pallant, J. (2013). SPSS Survival manual: A step by step guide to data analysis using IBM SPSS (5th ed.). Berkshire, England: Open University Press.
- Personality. (n.d.). Retrieved April 21, 2016, from <http://www.apa.org/topics/personality/>
- Preacher, K. J. (n.d.). Calculation for the test of the difference between two independent correlation coefficients [Online computer software]. Retrieved from  
<http://www.quantpsy.org/corrttest/corrttest.htm>
- Rigby, K., & Slee, P. T. (1993). Dimensions of interpersonal relating among Australian school children and their implications for psychological well-being. *Journal of Social Psychology, 133*(1), 33-42. doi:10.1080/00224545.1993.9712116
- Rigby, K., & Slee, P. T. (1999). Suicidal ideation among adolescent school children, involvement in bully-victim problems, and perceived social support. *Suicide and Life-Threatening Behaviour, 29*(2), 119-130. doi:10.1111/j.1943-278X.1999.tb01050.x

- Selya, A. S., Rose, J. S., Dierker, L. C., Hedeker, D., & Mermelstein, R. J. (2012). A practical guide to calculating Cohen's  $f^2$ , a measure of local effect size, from PROC MIXED. *Frontiers in Psychology*, 3, 111. doi:10.3389/fpsyg.2012.00111
- Slee, P. T. (1995). Peer victimization and its relationship to depression among Australian primary school students. *Personality and Individual Differences*, 18(1), 57-62. doi:10.1016/0191-8869(94)00114-8
- Slee P. T., & Rigby, K. (1993). The relationship of Eysenck's personality factors and self-esteem to bully victim behaviour in Australian school boys. *Personality and Individual Differences*, 14(2), 371-373. doi:10.1016/0191-8869(93)90136-Q
- Smokowski, P. R., Evans, C. B., & Cotter, K. L. (2014). The differential impacts of episodic, chronic, and cumulative physical bullying and cyberbullying: the effects of victimization on the school experiences, social support, and mental health of rural adolescents. *Violence and Victims*, 29(6), 1029-1046. doi:10.1891/0886-6708.VV-D-13-00076
- Sumter, S. R., Baumgartner, S. E., Valkenburg, P. M., & Peter, J. (2012). Developmental trajectories of peer victimization: Off-line and online experiences during adolescence. *Journal of Adolescent Health*, 50, 607-613. doi:10.1016/j.jadohealth.2011.10.251
- Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behavior*, 26(3), 277-287. doi:10.1016/j.chb.2009.11.014
- Vaillancourt, T., McDougall, P., Hymel, S., Krygsman, A., Miller, J., Stiver, K., & Davis, C. (2008). Bullying: Are researchers and children/youth talking about the same thing? *International Journal of Behavioral Development*, 32(6), 486-495. doi:10.1177/0165025408095553