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Psychopathy and School Engagement:

The moderating effects of SES

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Abstract

The focus of the current study is on students from secondary vocational education, because high school dropout is high in this type of education. This study looked at variables that may be related to school engagement in 224 Dutch national students (68.75% women) from secondary vocational education. The relationship between psychopathy and school engagement has been examined as well as whether SES acts as a moderator between this relationship. By analyzing the role of SES, this study tried to further the understanding of the psychopathy and school engagement relationship. The results of this study showed a weak negative relationship between psychopathy and school engagement. Additionally, weak negative relationships between the affective as well as the behavioral dimension of psychopathy and school engagement were found. The relationship between psychopathy and school engagement is not moderated by SES. This study may help find information that could assist the development of suitable intervention programs as well as decrease high school dropout rates and its ramifications. Dropping out of school is not spontaneous. A focus on a school based teacher-student relationship seems to be key to strengthening students' engagement in school, thereby reducing school dropout.

Keywords: school engagement, psychopathy, and socioeconomic status

High School Dropout

Affecting both economic growth and employment, in addition to increasing social exclusion and poverty, high school dropout is a social problem not only in The Netherlands, but also in the European Union (Europese Commissie, 2012). High school dropout rates in The Netherlands are the highest in secondary vocational education as compared to pre-vocational education, general secondary education, and pre-university education. In the school year 2014-2015, the dropout rate in this type and level of education was 5% (Nederlands Jeugdinstituut (NJI), 2016). It is important to do more research on school engagement, because several studies have shown that the degree of school engagement is associated with school dropout and psychopathy (Dotterer & Lowe, 2011; Fredricks, Blumenfeld, & Paris, 2004; French & Conrad, 2001). Additionally, various studies have shown that high socioeconomic status (SES) is associated with less school dropout (Alivernini & Lucidi, 2011; Battin-Pearson et al., 2000). Moreover, low SES is a predictor of psychopathy in both adults and adolescents (Drentea & Reynolds, 2012; Hudson, 2005; Reiss, 2013; Rutter, 2003; Sweet, Nandi, Adam, & McDade, 2013). For these reasons, the focus of this study is on the relationship between psychopathy and school engagement. By analyzing the role of SES, this study tries to expand the knowledge about this relationship. This study may help find information that not only can contribute to the development of appropriate intervention programs, but also can help reduce high school dropout rates and the consequences that go with it.

School Engagement

Due to the connection with academic achievement, motivation, school dropout, and high school completion, school engagement is an important phenomenon (Dotterer & Lowe, 2011; Fredricks et al., 2004). School engagement is a multifaceted concept that can be divided into behavioral (participation, attendance), emotional (appeal, classmates), and cognitive (investment, motivation) engagement (Fredricks et al., 2004). It describes the feelings, behaviors, and thoughts of students that are akin to their engagement with school (Dotterer & Lowe, 2011). School engagement allows researchers to measure the amount which students are involved, connected, and committed to school and their motivation to learn and achieve (Gonzalez-DeHass, Willems, & Holbein, 2005; Jimerson, Campos, & Greif, 2003). Engagement is both sensitive and susceptible to variation in environments, moreover, it is presumed to be malleable, because of the interaction of an individual with its context (Fredricks et al., 2004; Wang & Eccles, 2013). The degree of school engagement depends on

a number of factors, where school environment, particularly supportive teachers and peers, sufficient structure, and a positive perception of school, is the most important factor (Fredricks et al., 2004; Wang & Eccles, 2013). The different dimensions of school engagement are linked with a variety of outcomes. Students with positive behavioral engagement more often stay in school and succeed compared to frequently absent and disruptive students, who are at greater risk of dropping out of school (Appleton, Christenson, Kim, & Reschly, 2006; Simons-Morton & Chen, 2009; Wang, 2009).

Psychopathy

Psychopathy is a personality disorder consisting of interpersonal (dishonest charm, grandiosity, and manipulation/lying), affective (callousness, unemotionally, and remorselessness), and behavioral (impulsivity, irresponsible behavior, and thrill-seeking/proneness to boredom) dimensions (Colins, Noom, & Vanderplasschen, 2012; Roose, Bijttebier, Decoene, Claes, & Frick, 2010). These psychopathic dimensions are the core features, which are defined in the three-factor hierarchical model of psychopathy (Cooke & Michie, 2001). Psychopathy is a more distinct classification of antisocial individuals exhibited by a lack of guilt and remorse, lack of empathy, impulsiveness, insensitivity for punishment regarding the student's actions, egocentricity, and antisocial characteristics (Glenn & Yang, 2012; Love & Holder, 2014; Viding, McCrory, & Seara-Cardoso, 2014; Visser, Bay, Cook, & Myburgh, 2010). Children who have high levels of callous-unemotional traits are prone to developing psychopathic and antisocial behaviors (Burke, Loeber, & Lahey, 2007; Dadds, Fraser, Frost, & Hawes, 2005; Frick & Viding, 2009; Frick & White, 2008; Viding, Jones, Frick, Moffitt, & Plomin, 2008; Viding & McCrory, 2012). Previous studies have shown that antisocial scores positively predicted school dropout (French & Conrad, 2001; Hemphälä & Hodgins, 2014). The environment also plays an important role in developing psychopathy; it can either be a risk or a protective factor (Viding & McCrory, 2012). In children and adults, psychopathic personality traits are moderately to highly heritable. Individual genetic differences can explain the variation in the susceptibility to environmental risk factors and why certain individuals have a higher chance of developing psychopathy (Viding et al., 2014).

Psychopathy and School Engagement

School disengagement both leads to school dropout and indicates later life problems (Vaughn et al., 2011). In a study that researched relations between behavioral indicators of school disengagement and psychiatric disorders, researchers found that school disengagement

is associated with antisocial behaviors and comorbid psychiatric disorders. Absenteeism is an important sign of conduct problems and psychiatric distress. This study also found that moderate and severe school disengagement are related to antisocial behavior such as property destruction, lying, stealing, and animal cruelty (Vaughn et al., 2011). Studies found that antisocial behavior contributes to school dropout (French & Conrad, 2001; Hemphälä & Hodgins, 2014). Other studies found that antisocial behavior is incongruous with school engagement (Simons-Morton, 2004; Simons-Morton & Chen, 2009). School engagement has the potential to prevent youth from pathways that lead to antisocial behavior (Furlong et al., 2003), because school engagement can work as a protective factor against antisocial behavior (Li & Lerner, 2011; Morrison, Robertson, Laurie, & Kelly, 2002).

Socioeconomic Status

School disengagement, psychopathy, and the relationship between these two variables are related to school dropout. An important factor that possibly has a moderating effect on the relationship between psychopathy and school engagement is socioeconomic status (SES). Several studies have shown that low SES is a predictor of psychopathy in both adults and adolescents (Amone-P'Olak et al., 2009; Drentea & Reynolds, 2012; Hudson, 2005; Johnson, Cohen, Dohrenwend, Link, & Brook, 1999; Reiss, 2013; Rutter, 2003; Sweet et al., 2013). Lower levels of SES increase the risk for antisocial behavior in individuals (Crowe & Blair, 2008). Psychopathy is significantly less likely to emerge in individuals with higher levels of SES (Silverthorn & Frick, 1999). Moreover, high SES is associated with less school dropout (Alivernini & Lucidi, 2011; Battin-Pearson et al., 2000). Consequently, students from lower income families are more likely to follow a less favorable trajectory for both behavioral and emotional engagement as well as dropout (Battin-Pearson et al., 2000; Janosz, Archambault, Morizot, & Pagani, 2008; Lee & Burkam, 2003; Li & Lerner, 2011).

In addition to lower levels of SES increasing the risk for antisocial behavior in individuals, a study examined a variety of variables that moderate the stability of psychopathy from early adolescence into young adulthood. The results showed that low family SES, high physical punishment, and more delinquent peers can contribute to adult psychopathy (Lynam, Loeber, & Stouthamer-Loeber, 2008). Furthermore, a study examining family SES and child mental health showed that a reduction in family SES is a risk factor for child mental health, because of increased economic pressures, negative changes in the mental health of the parents, changes in the interactions with the mother, and changes in parenting quality (Solantaus, Leinonen, & Punamäki, 2004). Therefore, it seems that SES can have an impact

on psychopathy, thereby changing the strength of the relationship between psychopathy and school engagement.

Current Study

Because psychopathy and SES have an impact on school engagement in adolescents, it is compelling to examine these variables in relation to each other. Knowing more about how SES works as either a protective or a risk factor is important to understand the impact SES can have on the strength of the relationship between psychopathy and school engagement. Understanding SES as a possible moderator can provide important information about keeping students motivated and engaged in school, which can lead to a reduction in high school dropout.

The focus of the current study is on students from secondary vocational education, because high school dropout is high in this type of education. In 2014-2015, 5% of the students from secondary vocational education dropped out of school (Nederlands Jeugdinstituut (NJI), 2016). Previous studies have examined the relationship between psychopathy and school engagement (Furlong et al., 2003; Simons-Morton, 2004; Vaughn et al., 2011), but the extant literature is limited and there are no studies examining SES as a moderator of this relationship. The current study tries to focus on this gap in the existing literature by investigating the potentially moderating effect of SES on the relationship between psychopathy and school engagement using three hypotheses. We hypothesize that students who score high on psychopathy show less school engagement than students who score low on psychopathy (Simons-Morton & Chen, 2009; Vaughn et al., 2011). Additionally, because most studies of psychopathic traits focus on only the affective dimension of psychopathy (Colins et al., 2014; Frick & White, 2008; Salekin, 2016; Viding & McCrory, 2012), we hypothesize that the affective dimension of psychopathy is linked to school engagement. Lastly, we hypothesize that the relationship between psychopathy and school engagement is moderated by SES (Lynam et al., 2008; Solantaus et al., 2004). The strength of the relationship between psychopathy and school engagement depends on SES, where low SES corresponds to heightened strength of the relationship between psychopathy and school engagement and high SES corresponds to lowered strength.

Method

Participants

A total of 224 Dutch national students from secondary vocational education completed the questionnaires. Three students did not complete the entire questionnaire; they are not included in the sample. The students who participated in this study were from four schools and 15 classrooms in South-Holland. The four schools were divided into healthcare, retail, trade, and finance. The students were between the age of 16 and 24. The mean age of the Dutch national students was 19.03 (*SD* = 2.08) and the sample consisted of 154 female and 66 male students. Four students answered the gender question with 'other'.

Instruments

An online questionnaire consisting of several scales was used. Demographic information about gender, age, ethnic background, student number, school, and study was also obtained.

SES. Socio-economic status, or family wealth, was measured using the Family Affluence Scale (FAS) (Currie, Elton, Todd, & Platt, 1997). It has been found that the FAS is a valid measure of family wealth (Boyce, Torsheim, Currie, & Zambon, 2006) and significantly correlates with parental reports of SES (Andersen et al., 2008). The FAS is a self-report questionnaire including four items to measure family wealth. The first item is: 'Does your family have a car?'. This item is answered on a three-point Likert scale ('*no*', '*yes, one*' or '*yes, two or more*'). The second item is: 'Do you have your own bedroom?'. This item is answered with '*no*' or '*yes*'. The third item is: 'How many computers does your family own?'. This item is answered on a four-point Likert scale *(*'*none*', '*one*', '*two*', '*more than two*'). The last item is: 'During the past twelve months, how many times did you go on vacation with your family?'. This item is answered on a four-point Likert scale ('*none*', '*once*', '*twice*', '*more than twice*'). Higher scores indicate a higher SES. Cronbach's alpha could not be computed, because there were different response categories for the four items.

Psychopathy. Psychopathic-like traits in adolescents were measured using the Youth Psychopathic Traits Inventory-Short version (YPI-S) (Van Baardewijk et al., 2010). The YPI-S is a self-report scale consisting of 18 items. These items are distributed among the following three dimensions, with each having six items: interpersonal dimension (dishonest charm, grandiosity, and manipulation/lying), affective dimension (callousness, unemotionally, and remorselessness) and behavioral dimension (impulsivity, irresponsible behavior, and thrill-seeking/proneness to boredom) (Colins, Noom, & Vanderplasschen, 2012). A sample item of

the interpersonal dimension scale is: 'I have the ability to con people by using my charm and smile'. A sample item of the affective dimension scale is: 'I think that crying is a sign of weakness even if no one sees you'. A sample item of the behavioral dimension scale is: 'I consider myself as a pretty impulsive person'. Each item is scored on a four-point Likert scale ranging from '*does not apply at all*' to '*applies very well*'. Higher scores indicate higher levels of psychopathic-like traits. It has been found that the YPI-S total score, as well as all three of the YPI-S dimensions, are reliable and valid measures, as the test is internally consistent (Colins et al., 2012). The YPI-S identifies psychopathic-like youths with high scores on all three dimensions. They display more conduct problems and have committed more offenses than their non-psychopathic-like juvenile complements (Colins et al., 2012). The Cronbach's alpha of the YPI-S scale was .85. The Cronbach's alpha of the interpersonal dimension was .81, .76 for the affective dimension, and .71 for the behavioral dimension.

School engagement. School engagement was measured using the School Engagement Questionnaire (Fredricks, Blumenfeld, & Paris, 2004). The School Engagement Questionnaire is a self-report questionnaire consisting of 14 items to measure cognitive, emotional and behavioral components of school engagement. A sample item of this scale is: 'I feel happy in school'. Each item is scored on a four-point Likert scale ranging from *'almost never'* to *'always'*. Higher scores indicate stronger levels of behavioral engagement. Cronbach's alpha for this scale ranges from .74 to .86 (Fredricks & McColskey, 2012). In the current study Cronbach's alpha of this scale was .78.

Procedure

The study was approved by the Leiden University Ethics Review Board of the Institute of Education and Child Studies. Prior to the school visits, schools and teachers were informed about the goal of the study and anonymity was assured. The school visits took place during school hours in the presence of two researchers and a teacher in a computer lab. Students were informed about the research via an information letter and were told that participation was voluntary and anonymous. After the briefing, students had to fill out the online questionnaire in silence, however, they could ask the researchers for clarification. Debriefing took place after finishing the online questionnaire. The researchers told the students that this research was conducted to determine possible explanations for decreased school engagement and an increased risk of dropping out. The researchers provided students, who wanted to obtain more information about bullying, with websites, told them where they could go if they

had complaints about the study, and/ or if the questionnaire evoked personal memories and feelings. The school visit took 60 minutes.

Statistical Analyses

The questionnaire data has been processed and analyzed. Analyses were conducted using SPSS, a program used to apply statistical procedures to large data files (De Vocht, 2013, p. 11). It is indicated below what tests are used to answer the research questions.

To examine the relationship between the independent variable psychopathy and the dependent variable school engagement, a Pearson correlation was computed. Correlation shows the strength and direction of the relationship between two variables (De Vocht, 2013, p. 181). The correlation coefficient was calculated to see how strong the relationship between psychopathy and school engagement was. A scatterplot was used to see if the relationship between both variables was linear. Moreover, in case the scatterplot showed outliers, the test was computed again without these participants. If the results did not differ considerably, the participants remained in the sample, otherwise they were removed. Lastly, to check if there was a bivariate normal distribution, the skewness and kurtosis of the distribution were calculated and histograms were plotted. To look at the three specific dimensions of psychopathy and their relationships with school engagement, more Pearson correlations were computed. The same analyses were computed as written above.

The possible moderating effect of SES on the relationship between psychopathy and school engagement was measured using a moderation analysis with the PROCESS tool of Hayes (Field, 2013). In this study, the independent variables were psychopathy and SES, and the dependent variable was school engagement. The SES and psychopathy variables were centered before conducting the analysis. A residual analysis was done to detect outliers and to check assumptions of multiple linear regression. To check if the residuals were normally distributed and if the regression model was linear, a histogram, a normal probability plot, and a linear regression plot were computed. A scatterplot was used to detect bivariate outliers. An output table with the residual statistic measurements and an overview of the outliers were made. Cook's distance and Leverage were measured to estimate the influence of a case as well as the distance from a case to the average values of all independent variables. In case of outliers, the test was calculated again without these participants. If the outliers did not influence the results considerably and were valid reflections of the sample values, then the participants remained in the sample. However, if the conditions were not met, then they were removed.

Results

Data Screening

The univariate and bivariate analyses showed that the continuous variables were normally distributed, as shown by the skewness and kurtosis scores, plots, and histograms. The scatterplot showed that the relationship between the psychopathy and school engagement variables was linear. The assumptions for performing multiple linear regression analysis were met. Outliers were revealed by using scatterplots and they occurred with the variables school engagement and age. The Cook's distance and Leverage scores for the dependent variable school engagement were in an acceptable range. The tests were performed with and without these outliers. No significant differences were found between both test results, therefore, the outliers remained in the sample. An overview of the statistics for the different continuous variables used in this study are reported in Table 1.

Table 1

Descriptive Statistics for the Continuous Variables

	N	Min.	Max.	*M*	*SD*	Skewness	Kurtosis
School engagement	224	14.00	50.00	32.07	5.53	-0.06	1.19
Psychopathy	224	18.00	57.00	31.59	8.11	0.83	0.51
SES	224	6.00	13.00	10.00	1.81	-0.37	-0.44
Age[a]	104	16.00	24.00	19.03	2.08	1.07	0.37

Note. [a] Students from one school did not fill in their age.

Psychopathy and School Engagement

To examine the relationship between psychopathy and school engagement, a Pearson correlation was computed. The results show a significant negative relationship between these variables, r (222) = -0.25, $p < .01$. There is a weak negative relationship between psychopathy and school engagement. So students who score high on psychopathy show less school engagement. To find out if there is a significant relationship between the different dimensions of psychopathy and school engagement, other Pearson correlations were computed. The correlations between the variables are reported in Table 2.

Table 2

Pearson Correlation Coefficients for the Dimensions of Psychopathy and School Engagement

	Interpersonal dimension	Affective dimension	Behavioral dimension
School engagement	-.13	-.18**	-.28**
N	224	224	224

**$p < .01$

There is no significant relationship between the interpersonal dimension and school engagement. However, there is a weak negative relationship between the affective dimension and school engagement; students who score high on the affective dimension show less school engagement. There is also a weak negative relationship found between the behavioral dimension and school engagement; students who score high on the behavioral dimension show less school engagement.

Psychopathy x SES

To test whether the relationship between psychopathy and school engagement is moderated by SES, a multiple linear regression analysis was conducted. The test indicated that the overall model is significant $R^2 = .086$, F (3, 220) = 7.44, $p < .001$. As seen in Table 3, the interaction is not significant, $b = -.065$, 95% CI [-0.14, 0.0069], $t = -1.78$, $p = .076$. These results indicate that the relationship between psychopathy and school engagement is not moderated by SES.

Table 3

Linear Model of Predictors of School Engagement

	B	*SE*	β	*t*	*p*
(Constant)	32.04	.36	-0.00	89.25	< .001
SES	-0.028	.21	-0.00	-0.13	.90
Psychopathy	-0.16	.052	-0.23	-3.05	.002
Psychopathy x SES	-0.065	.037	-0.17	-1.78	.076

Discussion

The goal of this study was to understand more about the possible moderation effects that SES can have on the strength of the relationship between psychopathy and school engagement in students from secondary vocational education. Several studies have shown that the degree of school engagement is associated with school dropout and psychopathy (Dotterer & Lowe, 2011; Fredricks, Blumenfeld, & Paris, 2004; French & Conrad, 2001). Various studies have shown that low SES is a predictor of psychopathy in both adults and adolescents (Drentea & Reynolds, 2012; Hudson, 2005; Reiss, 2013; Rutter, 2003; Sweet, Nandi, Adam, & McDade, 2013). Psychopathy is significantly less likely to emerge in individuals with higher levels of SES (Silverthorn & Frick, 1999). In addition, high SES is associated with less school dropout (Alivernini & Lucidi, 2011; Battin-Pearson et al., 2000). Students from lower income families are more likely to follow a less favorable trajectory for both behavioral and emotional engagement as well as dropout (Battin-Pearson et al., 2000; Janosz, Archambault, Morizot, & Pagani, 2008; Lee & Burkam, 2003; Li & Lerner, 2011). By investigating the role of SES, this study tried to further the knowledge regarding this relationship. The extant literature is limited about the relationship between psychopathy and school engagement, and there are no studies examining SES as a moderator of this relationship. The current study addressed this gap in the existing literature by examining the potentially moderating effect of SES on the relationship between psychopathy and school engagement. This study may help find information that not only can contribute to the development of appropriate intervention programs, but also can help reduce high school dropout rates and the consequences that go with it.

Psychopathy and School Engagement

Consistent with our hypothesis, the results show a weak negative relationship between psychopathy and school engagement, which previous studies have shown is a predictor of school dropout (Archambault et al., 2009; Hemphälä & Hodgins, 2014; Henry et al., 2012). This result is in line with studies that found that antisocial and other problem behavior contributes to school dropout (French & Conrad, 2001; Wang & Fredricks, 2014), since psychopathy is a more distinct classification of antisocial individuals (Glenn & Yang, 2012). To observe this psychopathy and school engagement correlation more closely, the relationship between the three dimensions of psychopathy and school engagement were examined.

These results show that the relationship between the interpersonal dimension of psychopathy and school engagement is nonsignificant and negative. A possible explanation

for this non-significant finding is that the interpersonal dimension of psychopathy is characterized by dishonest charm, grandiosity, and manipulation/lying (Colins et al., 2012). Furthermore, this interpersonal dimension of psychopathy takes narcissistic features into account namely grandiosity and self-absorption (Centifanti, Kimonis, Frick, & Aucoin, 2013). This aligns with previous findings that grandiose narcissism and the Narcissistic Personality Disorder (NPD) are positively related to the interpersonal dimension of psychopathy (Colins et al., 2012; American Psychiatric Association, 2013; Schoenleber, Sadeh, & Verona, 2011). This disorder is characterized by exaggerated feelings of self-importance, an excessive need for admiration, and manipulation. Research has shown that persons with elevated narcissistic traits had an exaggerated tendency to internalize successes, commonly attributed to high ability, to inflate their self-worth and appear superior to those around them. When experiencing a failure, these people with elevated narcissistic traits externalize the failure by attributing it to lack of effort in order to protect their self-esteem (Emmons, 1987; Stucke, 2003; Millon, 2011). A study conducted on students exhibiting narcissistic traits found that these students predicted high grade performance more often, but in reality their true performance was below their expectations. Additionally, these individuals overestimated their performance on a cooperative task, showing the discrepancy between their ability attributions and the true amount of effort devoted to tasks (Farwell & Wohlwend-Lloyd, 1998). Since this study relies on self-report data, the subset of students with elevated narcissistic traits in the interpersonal dimension of psychopathy may report higher school engagement than they actually exhibit. This socially desirability bias in school engagement data may skew the negative relationship between the interpersonal dimension of psychopathy and school engagement, possibly making it a nonsignificant and negative relationship.

However, there is a weak negative relationship between the affective dimension of psychopathy and school engagement, meaning that students who score high on this dimension show less school engagement. The significant relationship between the affective dimension (callous unemotional) of psychopathy and school engagement is consistent with prior research that has been done (Colins et al., 2014; French & Conrad, 2001; Frick & White, 2008; Hemphälä & Hodgins, 2014; Salekin, 2016; Viding & McCrory, 2012). In addition, there is a weak negative relationship between the behavioral dimension of psychopathy and school engagement. Behavioral dimension of psychopathy contains traits and behaviors exhibited by early behavior problems and impulsivity (Hare, 2003). Research has shown that students who dropout of school face more discipline problems in addition to being less engaged in homework, school, and school activities (Ekstrom, Goertz, Pollack, & Rock, 1986). It is more

likely for dropouts to have poor attendance, disruptive behaviors, and early school failure (Fredricks et al., 2004). Research has found that social isolation, unfriendliness, and antagonization by peers are parts of the dropout problem (Finn, 1989; Wang & Eccles, 2013). Disobedient children or those who dislike school are more likely to be rejected by peers, which increases the chances of dropping out of school (French & Conrad, 2001; Ladd, Birch, & Buhs, 1999; Ladd & Coleman, 1997). Because previous research has found that less school engagement is a predictor of school dropout (Archambault, Janosz, Fallu, & Pagani, 2009; Henry, Knight, & Thornberry, 2012), it may be possible that students who score high on the behavioral dimension of psychopathy display these same traits and characteristics as explained above that contribute to less school engagement. Therefore, this possibly explains the significant finding between the behavioral dimension of psychopathy and school engagement.

SES

The results regarding SES in this study are in contrast with our hypothesis and demonstrate that the overall relationship between psychopathy and school engagement is not moderated by SES. Although previous studies have shown that SES is associated with psychopathy and school engagement independently, there are no studies examining SES as a moderator of the relationship between psychopathy and school engagement. A possible explanation for this nonsignificant finding is that in this study the gender ratio was skewed, being that more girls (68.75%) than boys participated. It is known from literature that there are gender differences when it comes to psychopathy. Psychopathy is less prevalent in women than in men (Salekin, Rogers, Ustad, & Sewell, 1998; Vitale, Smith, Brinkley, & Newman, 2002). Another possible explanation for this can be that published research is biased in favor of statistically significant findings, better understood as the file drawer problem (Rosenthal, 1979). This phenomenon occurs because editorial policy favors significant results in addition to researchers being unwilling to publish nonsignificant findings. This publication bias will therefore give an overestimated number of significant results on the topic (Dalton, Aguinis, Dalton, Bosco, & Pierce, 2012; Rosenberg, 2005).

Most of the studies that are conducted on SES took place in the United States. In the United States, the welfare sector and youth protection have less resources and facilities than in the Netherlands (Janssen, Konijn, & Ostrowska, 2000). In the United States, tax credits are used as the primary form for child care extending beyond lower-middle income groups. Tax credits allow minimum government involvement (Gustafsson & Stafford, 1994). The

government maintains minimal involvement because of the individualistic culture of the United States (Tresignie, Elchardus, & Derk, 2002). The national ethos of the 'American Dream' is an ideology that encourages citizens to work hard so that they can climb the ladder to a higher social status with the government as uninvolved as possible (Van Swaaningen, 2013). In this ideology, poverty and unemployment are signs of personal failure, just as dependence on government benefits is seen as laziness (Tresignie et al., 2002). While the idea of freedom is highly stressed in the United States, the concepts of equality and solidarity are emphasized to a greater degree in the developed welfare states in Europe (Van Swaaningen, 2013). Therefore, as a welfare state, the Netherlands emphasizes the protection and promotion of the social and economic well-being of its citizens. Thus, the difference between poor and rich is larger in the United States than in the Netherlands, as evidenced by the 17.5% and the 7.7% of the populations living below the poverty line in the respective countries (OECD, 2017). Low SES in the United States is different than low SES in the Netherlands because of the Netherlands being a welfare state. The low SES group in the Netherlands still has access to the internet and has other tools that can help because of the involvement of the government. Therefore, due to the difference in political policies between the two countries the nonsignificant finding can be explained since most studies have been conducted using data from the United States, whereas this study uses data from the Netherlands.

Limitations

The current study has some limitations. The first limitation of this study is that the results are based on the analysis of cross-sectional data, making it impossible to draw conclusions about cause and effect of the significant findings (Malhotra & Birks, 2000). Longitudinal studies are needed to understand the underlying processes and mechanisms of following a less favorable trajectory and eventually dropping out of school.

The second limitation is that this study entirely depended on self-report data. Self-report questionnaires rely on the self-insight and self-reflection of the participants within a limited set of answers and these measures are susceptible to response biases. A more complete portrayal might have been found if a variety of assessments were used to collect data on the variables, such as teacher and parent reports on students' engagement in school or their exhibited psychopathic behavior. However, the use of self-report measures to examine psychopathy-like traits in adolescents is important (Andershed, Gustafson, Kerr, & Stattin, 2002; Colins et al., 2012). Among other things, adolescents can report on their behaviors, emotions, and thoughts in different situations. Therefore, self-report data may be a useful tool

for analyzing the basis of psychopathy (Muñoz & Frick, 2007). Moreover, precautions were taken in order to prevent possible negative effects of self-report measures. Validated questionnaires were used and anonymity and confidentiality were assured.

The last limitation is that the sample consisted of only Dutch national students. It is possible that the results would be different for either Western or Non-western immigrant youth living in the Netherlands.

Future Research

These limitations notwithstanding, the present study extended previous research by examining the relationship between psychopathy, school engagement, and SES in a sample of Dutch national students. The results of this study show that the link between psychopathy and school engagement is not moderated by SES. It would be interesting to see if moderation is found in students with different cultural backgrounds. Western and non-western immigrants might be more likely to be part of less favorable trajectory groups of school engagement (Li & Lerner, 2011; Wang, Willett, & Eccles, 2011).

The current study used the FAS as an indicator of SES. Future research might use other indicators of SES, for example, maternal education or household income, because several studies have shown significant associations between these indicators and school engagement trajectories (Johnson, Crosnoe, & Elder Jr, 2001; Li & Lerner, 2011). Future research should also include more participants that qualify as low SES to see if these same results are found.

The extant literature about the relationship between the different dimensions of psychopathy and school engagement is limited. Most studies of psychopathic traits focus on the affective dimension of psychopathy, however all three dimension and the interaction between them should be studied (Colins et al., 2014; Salekin, 2016; Stellwagen & Kerig, 2012). It would be interesting to examine, for future research, the relationship between the interpersonal dimension of psychopathy and school engagement, because this relationship needs further examination (Zwaanswijk, Veen, van Geel, Andershed, & Vedder, 2016).

Dropping out of school does not happen instantly; school disengagement usually comes after a long period of feeling continuously more disconnected from school. Additionally, truancy, absenteeism, involvement in risky behaviors, and delinquency are all precursors to low school engagement (Ang, Huan, Chan, Cheong, & Leaw, 2015; Wang & Fredricks, 2014). Because school engagement has the potential to prevent youth from pathways that lead to antisocial behavior, it is important to strengthen students' engagement

in school. A key relationship for prevention and intervention is the teacher-student relationship. The development of supportive teacher-student relationships and an emotional connection to peers can help reduce dropout rates (Ang et al., 2015; Fredricks et al., 2004; Lee & Burkam, 2003; Murray, 2009). By focusing on the relationships in the classroom, students' academic and socio-emotional performance can improve, as teacher-student relationships can possibly compensate for children with demographic risk and behavioral problems (Hamre & Pianta, 2005; Meehan, Hughes, & Cavell, 2003; Sabol & Pianta, 2012). Improving relationships in the school environment can possibly be successful in reducing the appearance of Callous Unemotional Traits and associated behavioral problems (Kyranides, Fanti, Katsimicha, & Georgiou, 2017). Because school engagement develops over time from an interaction between individual factors and school pathways (Wang & Fredricks, 2014), a focus on a school based teacher-student relationship seems the key to strengthen students' engagement in school and thereby reducing school dropout.

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