

**Avoiding School. A Longitudinal Study on the Association between School pressure and
Truancy among High School Students.**

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Samenvatting

Schooldruk is aan het stijgen onder de Nederlandse jongeren en kan een risico voor spijbelgedrag vormen. Dit onderzoek beoogt de volgende onderzoeksvraag te beantwoorden: Hoe beïnvloedt *schooldruk* het *spijbelgedrag* van middelbare scholieren en wat is de rol van hun *geslacht* en het *monitoren door hun ouders* in deze relatie? Met het testen van een mogelijke oorzaak van spijbelgedrag wordt beoogt de wetenschappelijke kennis over spijbelen te actualiseren en preventiemogelijkheden te ontwikkelen voor spijbelen en de negatieve uitkomsten hiervan. Dit onderzoek heeft een longitudinaal ontwerp. De participanten waren 1357 Nederlandse middelbare scholieren ($M_{leeftijd} = 14,15$; $SD_{leeftijd} = 1,034$; 48,5% jongens). De data heeft uitgewezen dat *schooldruk* geen significante voorspeller van *spijbelen T2* is ($OR = 1,010$; $p = .933$). Dit onderzoek toont tot dusver geen bewijs dat stijgende schooldruk een risico vormt voor spijbelpercentages in Nederland. Echter, de resultaten moeten in de context van de studie limitaties worden beschouwd. Op basis van de resultaten van dit onderzoek kan aan leerplichtambtenaren geadviseerd worden om geen meting van schooldruk te gebruiken om studenten te benaderen die risico lopen op spijbelgedrag.

Abstract

School pressure is increasing among Dutch youth and may poses a risk for truancy. This study aims to answer the following research question: To what extent does *school pressure* influence high school students *truancy*, and what is the role of *sex* and *parental monitoring* in this relationship? By testing a possible predictor of truancy this study aims to update scientific knowledge of truancy and create possibilities to prevent truancy and it's negative outcomes. The study has a longitudinal design. The sample consists of 1357 Dutch high school students ($M_{age} = 14.15$; $SD_{age} = 1.034$; 48.5% boys). The data showed that *school pressure* at T1 did not significantly predict *truancy at T2* ($OR = 1.010$; $p = .933$). So far, this study showed no evidence that the increasing trend in school pressure poses a risk for the truancy rates in the Netherlands. Yet, the results should be seen in the context of the study limitations. Based on the results of this study school attendance officers can be advised not to use a measure of school pressure to target students at risk for truancy.

Avoiding School. A Longitudinal Study on the Association between School pressure and Truancy among High School Students.

Article 28 of the United Nations Convention on the Rights of the Child 1990 states that all children have the right to education. Education is important for the healthy development of children (Sylva, 1994; Bhardwaj, 2016). Strong school attendance and successful graduation seem to be related to many positive outcomes, like improved health and reduced death rates, opportunities for higher education and economic empowerment (Kearney et al., 2019). Contrary to that, not attending school can be a risk for children's healthy development.

Truancy is a form of not attending school. Dembo et al. (2014) define truancy as "unauthorized, intentional absence from compulsory schooling". In 2017, 13% of the Dutch high school students have behaved truant (Stevens et al., 2018). Existing literature relates truancy to many risks, for instance, crime risk behaviour, alcohol use, drinking problems, future poor accommodation, employment problems, fighting, school drop-out, low self-esteem, social isolation, social anxiety and educational failures (Bistamam et al., 2019; Pengpid & Peltzer, 2019; Rocque et al., 2017; van der Woude, van der Stouwe & Stams, 2017).

These negative outcomes as a result of truancy are concerning because prevalence rates show that truancy is common among adolescents in particular. Between 2013 and 2017 truancy has even increased, but only among girls (Stevens et al., 2018). And, unfortunately, truancy is prevalent in many countries (Keppens and Spruyt, 2018).

Because of the above mentioned truancy outcomes and prevalence rates it is important to study the predictors of truancy and, in this way, create possibilities to prevent truancy. Not feeling connected to school, a low socio-economic status, poor school performance, involvement with delinquent peers, lack of supervision after school, and depression can predict truancy (Van der Woude, van der Stouwe, & Stams, 2017; Wroblewski et al., 2019). In addition, the type of educational system in a country can predict truancy as well (Keppens & Spruyt, 2018). Thus, both factors at intrapersonal, interpersonal, and environmental level can predict truancy.

This study aims to test a possible new predictor of truancy, school pressure. School pressure is a form of school-related psychological stress (Murberg & Bru, 2007). Stress can occur when demands exceed a person's adaptive resources. The school environment includes many potential stressors such as testing, grades, high workload, performance expectations,

and future goals (Hjern, Alfven & Östberg, 2007; Anda et al., 2000; Walburg, 2014). And, school was found to be among the most common reported stressors for adolescent students over time (Stark et al., 1989; Anda et al., 2000; Yusoff, 2010). In addition, between 2001 and 2017 Dutch high school students self-reported school pressure has increased from 28% to 35% (Stevens et al., 2018). If school pressure can predict truancy, then the increase in school pressure could lead to an, undesirable, increase in truancy.

The Relationship between School Pressure and Truancy

Overall, studies on the relationship between school pressure and truancy are lacking. Van Dorsselaer et al. (2010) found that children who experience high school pressure were more likely to behave truant than children who experience low school pressure in a cross-sequential study among 7434 Dutch high school students. Yet, no further studies were found that directly address this relationship. Therefore, two possible mechanisms for the relationship between school pressure and truancy will be discussed.

The first possible mechanism is that students may use avoidant coping strategies in response to school pressure, which may translate itself to truancy. Avoidant coping represents cognitive, emotional, and behavioural activity oriented away from threats, such as cognitive attempts to deny or minimize the stressor or behavioural attempts to withdraw from or avoid the stressor (Herman-Stahl et al., 1995; Chao, 2010; Vizoso, Arias-Gundin & Rodriguez, 2019). Some adolescents withdraw from stressors to cope with stress (Anda et al., 2000; Chao, 2010). If the stressor is school pressure and withdrawal is expressed as not attending school, then this mechanism may explain the relationship between school pressure and truancy.

The second possible mechanism is that school pressure may lead to disliking school which in turn may lead to truancy. Overall studies showed that experiencing school pressure is related to negative attitudes towards school. For example, Van Dorsselaer et al. (2010) found that children who experience school pressure are less positive about school than children who do not experience school pressure. In addition, European workers who experience work pressure become less satisfied with their work (Lopes, Lagoa & Calapez, 2014). Further, several studies have found support for the relationship between negative attitudes towards school and truancy. For example, Van Dorsselaer et al. (2010) found that students who dislike school behave truant more often than children who do not dislike school. And, disliking school is a frequently mentioned truancy motivation (Attwood and Croll, 2014). Furthermore, Dembo et al. (2014) found that truants generally hold more negative attitudes towards school than non-truants. Lastly, Astone and McLanahan (1991) found that

children with more negative attitudes towards school were less likely to receive their high school diploma due to school dropout. Thus, school pressure may lead to truancy because it can make students dislike school.

The Moderating Role of Sex and Parental Monitoring

It is important to study possible moderators to provide more insight in the relationship between school pressure and truancy. Sex can be a moderator in this relationship. It is expected that the relationship between school pressure and truancy is stronger for boys compared to girls. Boys more often seem to dislike school than girls, which could lead to more truancy among boys compared to girls according to the previously discussed mechanism (Van Dorsselaer, 2010). Second, boys and girls seem to differ in their use of coping strategies. Boys seem to have a higher tendency of using externalizing coping behaviours, like avoidance coping, in response to stress compared to girls (Stark et al., 1989; Hampel and Petermann 2006; Kelly et al. 2008; Stange et al. 2014). Therefore, boys may also have a higher tendency of using avoidance coping in response to school pressure than girls do. In this case, boys will probably report more truancy as a result of school pressure than girls.

Further, it is expected that the relationship between school pressure and truancy is stronger for adolescents with low parental monitoring compared to those with high parental monitoring. Parental monitoring refers to parental supervision, communication with their child, and knowledge of their child's whereabouts among other things (Rai et al., 2003). One could logically reason that adolescents with high parental monitoring may have less opportunities to use maladaptive coping strategies in respond to school pressure, which may result in higher school attendance compared to adolescents with low parental monitoring. Dahl (2015) found that truants may avoid school due to a lack of parental monitoring, these findings substantiate the previous reasoning. In addition, parental monitoring can be a protective factor for adolescent risk involvement in general (Rai et al., 2003).

The Current Study

This study aims to provide insight in a barely studied subject by linking two previously distinct research topics, truancy and school pressure. In addition, many studies concerning truancy are dated and therefore the scientific knowledge about truancy should be updated. This study aims to answer the following research question: To what extent is school pressure related to high school students' truancy over time, and what is the moderating role of sex and parental monitoring in this relationship?

Hypothesis 1 is that students who score high on school pressure (T1) are more likely to behave truant (T2) than students who score low on school pressure. Hypothesis 2 is that it

is expected that the likelihood of truancy (T2) in response to school pressure (T1) is stronger for boys compared to girls (T1). Hypothesis 3 is that it is expected that the likelihood of truancy (T2) in response to school pressure (T1) is stronger for students with low parental monitoring compared to those with high parental monitoring (T1).

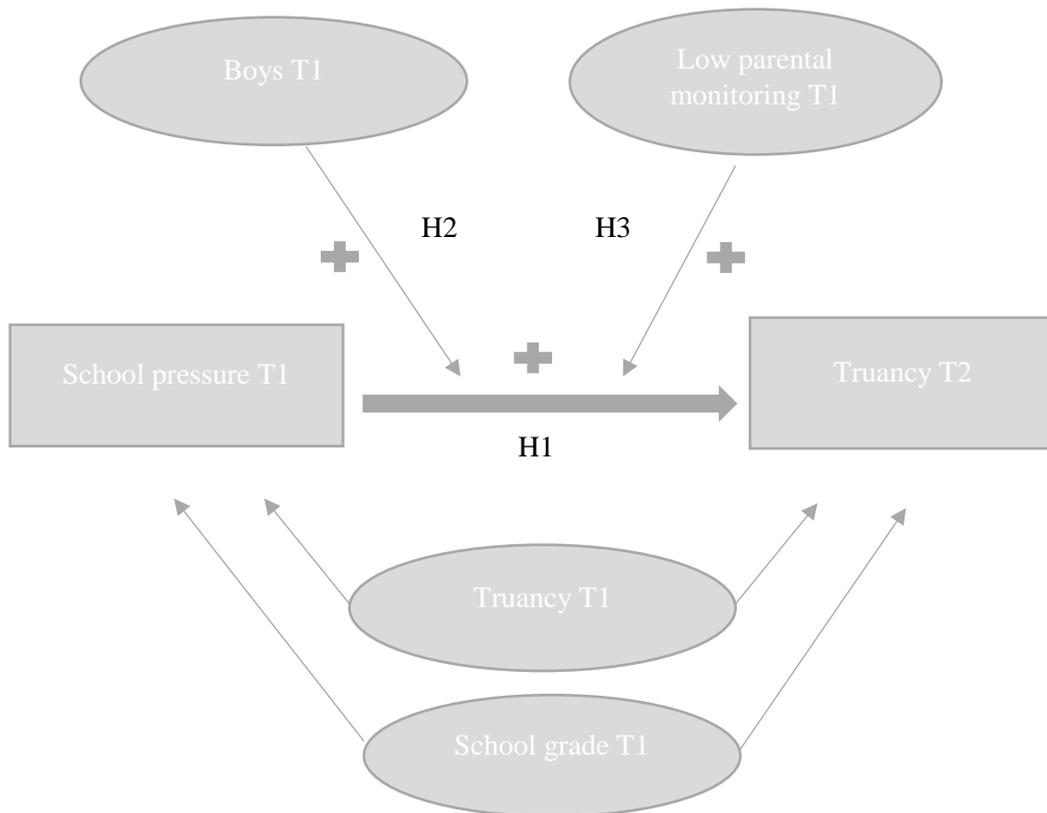


Figure 1. Research model

Methods

Design and Participants

The current study was part of a longitudinal study with a quantitative design. In total, 2893 high school students participated. 772 participants were excluded because they only participated in T1. The main reason for this drop out was that one school did not participate in T2 due to practical reasons. Participants in the dropout sample were older ($M = 15.62$; $SD = 1.28$) than participants who attended both waves ($M = 14.15$; $SD = 1.03$), this difference was significant ($t(1347.13) = -27.47$; $p < .001$). Secondly, participants in the dropout sample attended a different school ($M = 1.55$; $SD = 0.61$) than participants who attended both waves ($M = 1.5$; $SD = 0.5$), this difference was also significant ($t(1371.36) = -2.03$; $p = .042$).

Thirdly, participants in the dropout sample had a lower educational level ($M = 3.46$; $SD = 1.7$)

than participants who attended both waves ($M = 4.01$; $SD = 1.61$), this difference was significant ($t(1533.33) = 7.24$; $p < .001$). Fourthly, participants in the dropout sample experienced more school pressure ($M = 2.43$; $SD = 0.95$) than participants who attended both waves ($M = 2.31$; $SD = 0.86$), this difference was also significant ($t(1472.14) = -2.8$; $p = .005$). And lastly, participants in the dropout sample had higher scores on truancy T1 ($M = 1.64$; $SD = 1.23$) than participants who attended both waves ($M = 1.31$; $SD = 0.86$), also this difference was significant ($t(1206.15) = -6.4$; $p < .001$).

Further, participants with missing values on variables included in the research model were excluded ($n = 764$). These missing values were mostly due to participants who only participated in T2. No participants were excluded as a result of data cleaning. In addition, respondent and researcher remarks were handled before receiving the subset of the data. A total of 22 participants were deleted due to systematic response tendencies and impossible inconsistencies in their answers.

The final sample of this study consisted of 1357 participants. Participants were 12 to 18 years old ($M = 14.15$; $SD = 1.034$) living in the Netherlands and were enrolled in a school for secondary education in the Netherlands. Approximately half of the participants were boys (48.5%). Participants were enrolled in several educational tracks, where 24.1% of the participants were in General Secondary Educational levels (VMBO), 19.6% of the participants were in Higher Secondary Education, 33.6% were in mixed Secondary Education (VMBO/HAVO or HAVO/VWO), and 22.2% were in Pre-University Education (VWO). All participants mastered the Dutch language.

Procedure

The dataset for this research was collected as part of the longitudinal study 'LEF'. LEF is executed by dr. Ina Koning, assistant professor at Utrecht University and ethically approved under the code FETC18-060 (Utrecht University, n.d.). The aim of LEF is to increase the onset of drinking among youth in the municipality Edam-Volendam. This research focused on subset of the collected data to study the relationship between school pressure and truancy.

Participants of the LEF study were selected by the municipality of Edam-Volendam and Enkhuizen. The municipalities selected three high schools with random sampling, all students from these schools were asked to participate in the study. The parents of these students have received a letter with information about the study and were given the possibility to deny consent. Due to a change in the Dutch privacy legislation students could only

participate in T2 if their parents actively gave consent. Participants could exit the study at any moment.

The data collection took place in May and June 2018 (T1) and November and December 2018 (T2) at the participating schools. Participants were asked to fill in an online self-report questionnaire with the use of Qualtrics software under the presence of instructing supervisors. The questionnaire was filled in on computers, tablets or mobile phones. Participants were told that the questionnaire was about elements that enhance a healthy development of youth. They were asked to answer in private without discussing with others. And, they were told that it's about their vision, no answers were wrong or right. Further, participants were told that their answers were confidential. Data of the study was stored in the secured digital environment of Utrecht University. Participants did not receive any payments to participate in the study.

Measures

School pressure T1. The independent variable in this study is *school pressure* ($M = 2.31$; $SD = .856$) which was operationalized as feeling pressure as a result of school stressors and was measured with the question "How much do you feel under pressure from school work?" (Currie et al., 2014). Answers were given on a four-point Likert scale (1 = *completely not* to 4 = *a lot*). Higher scores indicate higher levels of *school pressure*.

Truancy T2. The dependent variable in this study is *truancy T2* ($M = 1.32$; $SD = .907$) which was operationalized as not attending scheduled school classes and measured with "How many hours did you not attend school in the past four weeks?" (Veenstra, Lindenberg, Tinga & Ormel, 2010). Answers were given on a six-point scale (1 = 0 hours to 6 = 7 or more hours). Higher scores indicate higher levels of *truancy*.

Parental monitoring T1. *Parental monitoring* is a moderator in this study, which was operationalized as parental tracking and surveillance efforts of their children's whereabouts and was measured with five items, for instance, "Do you need permission to leave home in the evening on weekdays?" (Kerr, Stattin & Ozdemir, 2012; Kerr & Stattin, 2012). Answers were given on a five-point Likert scale (1 = never to 5 = always). A Principal Component Analyses with oblique rotation was conducted. The variables loaded on one factor with an Eigen Value greater than one, which explained 59.9% of the variance, with factor loadings between .694 and .809. The scale for *parental monitoring* was reliable (five items; Cronbach's $\alpha = .830$). Mean scores were computed as a new variable called *parental monitoring* ($M = 3.447$; $SD = 1.055$). Higher scores indicated higher levels of *parental monitoring*.

Sex. *Sex* also is a moderator in this study which was measured with “Are you a boy or a girl?”. Participants had two answer options (1 = boy or 2 = girl).

Covariates. *School grade* ($M = 1.98$; $SD = .927$) was a control variable in this study since higher and lower grade students differ in their *truancy* rates as well as their experienced *school pressure* (Hjern, Alfven, & Östberg, 2007; Sonmark, Godeau, Augustine, Bygren, & Modin, 2016; Stevens et al., 2018). *School grade* was measured with “Which class are you in?”. Answers were given on a six-point scale (1 = class 1 to 6 = class 6). Higher scores indicate that the participant was attending a higher *school grade*.

Truancy T1 ($M = 1.31$; $SD = .863$) also was a control variable in this study since an increase in truancy can only be measured in the presence of a baseline measurement of truancy, and since *truancy T1* seems to predict more *truancy at T2* (Attwood & Croll, 2006). *Truancy T1* is measured in the same way as *truancy T2*.

Data Analyses

Data analyses were conducted using IBM SPSS Statistics 25. All steps in SPSS were done with the use of syntax in order to create a replicable study.

Before conducting any analyses the assumptions of multiple regression analysis were checked. First, multivariate outliers were checked using Mahalanobis distance. Second, leverage and standard DFBETE were used to check for influential cases. Thirdly, VIF and tolerance values were used to check for multicollinearity. No outliers, influential cases and multicollinearity were found. Fourthly, a visual check of the distribution of *truancy T2* showed that the data was rightly skewed and residuals were not normally distributed. Fifthly, a residuals plot of ZPRED x ZRESID showed heteroscedasticity. To solve the violations of assumptions *truancy T1* and *T2* were transformed to a binary variable where a score of 0 means truancy was absent and a score of 1 means truancy was present.

To test the hypotheses of this study, with a binary dependent variable, binary logistic regression analysis was the appropriate method to analyse the data. For binary logistic regression two additional assumptions were checked. After adding the interactions of the independent variables with their natural logarithmic transformations to the logistic regression model, the data showed linearity of the logit for all independent variables except *truancy T1* and *sex* which are categorical variables. Further, the Chi square statistics showed independence of errors.

After checking all assumptions binary logistic regression analysis was conducted to test this studies hypotheses. When running the logistic regression analysis predicting variables were added to the model stepwise. The significance limit in this study was $\alpha = .05$

Results

Descriptive Statistics

In this study truancy was prevalent among 16.1% of the participants at T1 and among 14.8% of the participants at T2. In Table 1, bivariate correlations between the studied variables are shown. School pressure was not correlated with truancy T2. And, Sex was not correlated with school pressure and truancy T2. A t-test was conducted to examine the differences between boys and girls for school pressure and truancy T2. Boys ($M = 2.2$; $SD = .832$) and girls ($M = 2.49$; $SD = .922$) significantly differ on school pressure ($t(2127) = -7.789$; $p < .001$). But, boys ($M = .139$; $SD = .346$) and girls ($M = .154$; $SD = .361$) did not significantly differ on truancy T2 ($t(1368) = -.783$; $p = .434$). Further, parental monitoring was positively correlated with school pressure and negatively correlated with truancy T2. In addition, school grade and truancy T1 were positively correlated with truancy T2.

Table 1.

Correlation Matrix School Pressure, Sex, Parental Monitoring, School Grade, Truancy T1, and Truancy T2

	1	2	3	4	5	6
1. School Pressure T1	-	-	-	-	-	-
2. Sex T1	.131**	-	-	-	-	-
3. Parental monitoring T1	.071**	.093**	-	-	-	-
4. School grade T1	.167**	.016	.081**	-	-	-
5. Truancy T1	.016	-.035	.117**	.190**	-	-
6. Truancy T2	-.010	.023	.112**	.077**	.330**	-

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The Relationship between School Pressure T1 and Truancy T2

The results of the binary logistic regression analysis are displayed in Table 2. Only the model with control variables will be discussed. The first hypothesis was that students who score high on school pressure are more likely to behave truant than students who score low on school pressure. The results showed no support for this hypothesis, school pressure T1 did not significantly predict the likelihood of truancy T2 ($OR = 1.010$; $p = .933$). The control variable school grade also did not significantly predict the likelihood of truancy T2 ($OR = 1.055$; $p = .552$). But, the control variable truancy T1 did significantly predict the likelihood of truancy T2 ($OR = 0.161$; $p < .001$). This means that someone is 0.161 times more likely to show truancy on T2 when he already behaved truant at T1. Thus, remarkably, truancy at T1 decreases the likelihood of truancy at T2.

The Moderating role of Sex and Parental Monitoring T1

The second hypothesis in this study was that the likelihood of truancy on T2 when having a high score on school pressure at T1 is stronger for boys compared to girls. The results did not support this hypothesis, sex was not a significant moderator in the relationship between school pressure and truancy ($OR = 0.844$; $p = .372$). This means that the relationship between school pressure and truancy was similar for both boys and girls.

The third hypothesis in this study was that the likelihood of truancy on T2 when having a high score on school pressure at T1 is stronger for students with low parental monitoring compared to those with high parental monitoring. The results also did not support this hypothesis, parental monitoring was not a significant moderator in the relationship between school pressure and truancy ($OR = 1.062$; $p = .504$). This means that parental monitoring was not a protective factor in the relationship between school pressure and truancy.

Table 2.

Logistic Regression Analysis Between School Pressure at T1 and Truancy at T2

		B	S.E.	Exp (B)	95% CI
Model	School pressure	0.010	0.123	1.010	[0.794-1.285]
4	Sex	0.098	0.462	1.103	[0.446-2.728]
	Sex x School pressure	-0.170	0.191	0.844	[0.581-1.226]
	Parental monitoring	-0.376	0.222	0.687	[0.444-1.061]
		0.060	0.090	1.062	[0.891-1.266]

Parental monitoring x				
School pressure	0.053	0.089	1.055	[0.885-1.256]
School grade	-1.826	0.177	0.161*	[0.114-0.228]
Truancy T1				
Cox-Snell R ²	.092			
Nagelkerke R ²	.162			

Note. * $p < .05$. $Model X^2(8) = 6.663$.

Discussion

This study aimed to examine the longitudinal relationship between school pressure and high school students truancy, and to examine the moderating role of sex and parental monitoring in this relationship. The results showed that there was no significant relationship between school pressure (T1) and truancy (T2). In addition, sex and parental monitoring were no significant moderators in this relationship. However, the control variable truancy T1 was a significant predictor of truancy T2. Remarkably, the presence of truancy at T1 decreased the odds of truancy at T2.

The Longitudinal Relationship between School Pressure and Truancy

It was hypothesized (H1) that students who score high on school pressure are more likely to behave truant than students who score low on school pressure. The results showed that school pressure was not significantly related to the chance of truant behaviour. This means that students have similar chance of truancy regardless of their level of experienced school pressure. Thus, the results are not in line with Hypothesis 1.

There are two possible explanations for this finding. First, students may have remained positive attitudes towards school regardless of their school pressure due to other, untested, factors. Van Dorsselaer (2010) found that students who like school are less likely to behave truant. Second, participants in this study may not have used avoidance coping strategies in response to school pressure. One reason to expect that school pressure T1 would increase the likelihood of truancy T2 is the possible use of avoidance coping in response to school pressure. However, avoidance coping strategies were found not to be used frequently (Anda et al., 2000; Chao, 2010). Since the results did not show a significant relationship between school pressure and truancy, it seems that students are not likely to use avoidance coping strategies in response to school pressure. In addition, the truancy in the sample of this study could be caused by other factors like not feeling connected to school, a low socio-economic

status, poor school performance, involvement with delinquent peers, and depression (Van der Woude, van der Stouwe, & Stams, 2017; Wroblewski et al., 2019).

There are also two methodological explanations for this finding. First, a specific group of participants dropped out after T1 and was left out of the analyses due to missing data. Attrition analysis showed that this created a biased sample that includes students who experienced less school pressure and who behaved less truant. Yet, students with the highest levels of stress seem to be more likely to use maladaptive coping strategies as which avoidance coping is classified (Anda et al., 2000). Thus, the group of students for whom school pressure was most likely to increase the likelihood of truancy was left out of the analysis. In addition, school truancy might be the reason for adolescent participants to dropout during longitudinal survey studies (Post, Gilljam, Bremberg and Galanti, 2012).

Second, several researchers have suggested that low school pressure may lead to truancy as well. Sälzer, Trautwein, Lüdtke and Stamm (2012) found that a low perceived workload was significantly positively related to high school students truancy. Thus, both high and low school pressure may lead to truancy which can explain why no significant relation between school pressure and truancy is found in this study.

Lastly, another explanation of the finding could be the simplified use of truancy in this study. When transforming truancy to a binary variable students who reported low levels of truancy were categorized together with students who reported higher levels of truancy. However, there could be significant differences between students with different levels of truancy. Because, for instance, truancy outcomes seem to differ in their frequencies between high and low levels of truancy (Attwood and Croll, 2014) and truancy outcomes seem to get worse when the level of truancy increases (Attwood and Croll, 2006)

The Moderating Role of Sex

It was hypothesized (H2) that the likelihood of truancy T2 in response to school pressure is stronger for boys compared to girls. The results showed that boys and girls did not differ in their likelihood of truancy in response to school pressure. This means that both boys and girls have the same chance of truancy when experiencing the same level of school pressure. Thus, the results are not in line with Hypothesis 2.

An explanation for this finding can be that participants in the sample of this study have few sex differences in disliking school. Van Dorsselaer et al. (2010) found that sex differences in liking school were only significant among 13 and 15 year old students. Yet, approximately half of the participants in this study (49.2%) were of different age. If school

pressure has the same effect on liking school for both boys and girls among differently aged students it can explain why sex is not a significant moderator in this study.

The Moderating Role of Parental Monitoring

It was hypothesized (H3) that the likelihood of truancy T2 in response to school pressure T1 is stronger for students with low parental monitoring compared to those with high parental monitoring. The results showed that parental monitoring was no protective factor in the relationship between school pressure and truancy. This means that participants have a similar chance of truancy when experiencing the same level of school pressure regardless of their level of parental monitoring. Thus, the results are not in line with Hypothesis 3.

A methodological explanation for this finding can be the use of a self-report measure of parental monitoring among adolescents. This self-reported finding may be a false representation of parental monitoring since participants, in this case, report on someone else's behaviour. In a study among American high school students, adolescent reported parental monitoring knowledge was a significant protective factor against negative consequences of substance use, contrary to that parent reported parental monitoring knowledge was not significant (Branstetter and Furman, 2013). Thus, the actual parental monitoring in the sample could be either higher or lower than reported by the participants which might have influenced the results of this study.

Another explanation for this finding can be that the questions used to measure parental monitoring do not assess parental monitoring in a school context. Truancy typically takes place during school times while, in this study, the questions concerning parental monitoring assess monitoring during the evenings and weekends. Parental monitoring during the evenings and weekends might influence truancy differently than school-related parental monitoring which can explain why parental monitoring did not serve as a protective factor in this study. However, no studies were found to underscore this reasoning. Yet, school-related parental monitoring seems to positively influence academic achievement via self-determined motivation and academic self-efficacy (Affuso, Bacchini and Miranda, 2016).

Strengths, Limitations and Future Directions

This study has multiple strengths. First, the study used a longitudinal research design which creates more insight in the studied direction of the relationship than a cross-sectional design. Another strength is the target group of the study which consist of 11 to 17 years old high school students. School pressure and truancy is especially prevalent among high school students (Stevens et al., 2018). Further, this study mostly used recent articles and data.

This study also has some design, sample, and measurement limitations which provide important insights for future research on this topic. First, the longitudinal design of this study only included two waves with six months in between. More waves with shorter intervals could provide more insight in the development of truancy in response to school pressure. Second, the sampling of this study only took place in two towns in the Netherlands. Future research should create a more nationally representative sample. Third, this study is limited by its attrition rate. When studying truancy in a school sample, dropouts might be extra relevant to study since, logically, truants are more likely to be absent during data collection moments at school compared to non-truants. Future truancy research should reduce attrition by targeting participants independent of their school. Fourth, this study is limited by the use of a self-report measure of parental monitoring among adolescents. Future research should include a self-report measure of parental monitoring among both parents and adolescents. Fifth, this study is limited by the absence of a measure of school-related parental monitoring. Future truancy research should assess school-related parental monitoring to test if it serves as a protective factor in the longitudinal relationship between school pressure and truancy.

In addition to the study limitations future research on this topic can be improved by measuring parenting style rather than parental monitoring. Parenting style exist of three important dimensions; warmth, behavioural control, and psychological autonomy support (Kerr, Stattin and Özdemir, 2012). The measure of parental monitoring in this study only includes the dimension behavioural control.

Besides, parental knowledge rather than parental monitoring might serve as a protective factor against truancy in response to school pressure. Bornstein (2002) describes how it is frequently assumed that parental knowledge is acquired through parental monitoring in the form of tracking and surveillance. However, parental knowledge rather develops in the context of a trusting parent-child relationship. Thus, future research on this topic can be improved by including a measure of parental knowledge.

Furthermore, when studying adolescents it is important to measure both parent and peer influences. Several researchers have suggested that peers are of more influence on adolescents risk behaviour than parents are (Resen, 2018; Harakeh, de Looze, Schrijvers, van Dorsselaer, and Vollebergh, 2012). Thus, future research on this topic can be improved by measuring peer influences.

At last, future research can be improved by controlling for additional predictors of truancy based on existing literature.

Conclusion

This study contributes to scientific knowledge about school pressure and truancy. Overall, this study showed no evidence that the increasing trend in school pressure poses a risks for the truancy rates in the Netherlands. The limitations of and insignificant results found in the study, together with the theoretical framework, indicate that the research topic needs to be studied more broadly. Yet, based on the results of this study school attendance officers can be advised not to use a measure of school pressure to target students at risk for truancy. Future research on this topic can provide school attendance officers with current knowledge about truancy and indications on how to prevent it.

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Appendix A. Interdisciplinarity

Truancy is influenced by factors at multiple levels, thus the study of truancy requires an interdisciplinary approach. I will discuss the interdisciplinarity of the research topic using Bronfenbrenner's ecological model (Figure A1).

Literature review revealed several factors that can predict truancy. At the individual level truancy can be predicted by not feeling connected to school, a low socio-economic status, poor school performance, and depression (Van der Woude, van der Stouwe, & Stams, 2017; Wroblewski et al., 2019). Several microsystem variables, like involvement with delinquent peers and lack of supervision after school can also predict truancy. The type of educational system in a country, which is part of the exosystem, can predict truancy as well (Keppens & Spruyt, 2018). Further, the older children are the higher amount of truancy is found in a sample of Dutch adolescents, this can be interpreted as a chronosystem variable (Stevens et al., 2018).

The research model in this study (Figure A1) includes factors at multiple levels of influence. It aims to test how school pressure (microsystem) influences truancy (individual level), and what the role of parental monitoring (mesosystem) is in this relationship. Furthermore, the influence of school grade (chronosystem) will also be tested.

Lastly, knowledge from multiple disciplines like psychology, sociology, and pedagogy were used to develop a theoretical framework for the research topic. This was useful because the variables in this study are studied in different disciplines. Thus, it can be concluded that this study contains many interdisciplinary components.

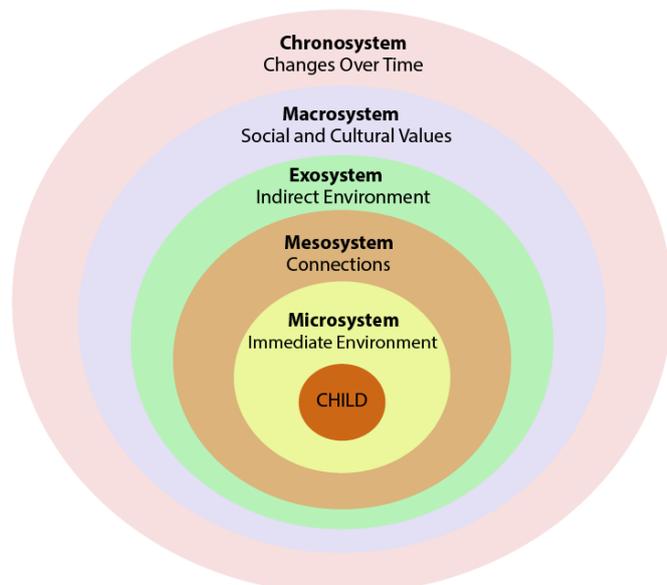


Figure A1. Bronfenbrenner's ecological model

Appendix B. Data use contract

Utrecht, 2020

This letter constitutes formal confirmation of the fact that the data from the Utrecht University LEF project have been made available to Vangelise Mills of Utrecht University.

These data will not be made available to others, and the data may be used only for analysis and reporting on topics for the thesis, about which agreement has been reached with Winneke van der Schuur.

Vangelise Mills will receive access to the data from the dataset in order to answer the following research questions within the framework of the thesis:

Research question: How does school pressure influence high school students truancy, and what is the role of parental monitoring in this relationship?

The following variables will be used:

Dependent variable: Truancy (Q56)

Independent variables: School pressure (Q55), parental monitoring (Q37), sex (Q4)

Other variables: school grade (Q7)

No report based on the data from the project entitled LEF may be made public, unless permission has been obtained in advance from the Project Coordinator for the LEF.

After the expiration of this contract, dated 8-31-2020, Vangelise Mills shall delete the LEF data.

Dates and signature: January 28th, 2020

Name of student:

Name of Project Coordinator:

Vangelise Mills

Winneke van der Schuur

