

**Erasmus
University
Rotterdam**



An A for parenting: the impact of parenting styles on school performance.

Trijntje van de Wouw

Master Thesis in Sociology: Social Inequalities

Student number: 668114

Words: 8791 excl. references

Supervisor: Gabriele Mari

Second reader: Bonnie French

Date: 25-06-2023

Abstract

Literature shows the importance of parenting styles on a child's development and academic performance. However, only a few studies examined the association between parenting styles and academic performance in The Netherlands, even though educational inequalities are a present social problem and are increasing in the Netherlands. This study looks at the relationship between parenting styles and school performance and the underlying factors. Therefore, the research question of this thesis is: to what extent do parenting styles influence school performance for secondary school students and how is this mediated by self-efficacy, intrinsic motivation, and student-teacher relationship in the Netherlands? This study performed multiple regression analyses with data from Cohort Research Educational Careers among pupils aged 5 to 18 (COOL5-18), which is collected between 2007 and 2016 in The Netherlands. In contrast to previous research, the results show evidence for a positive association between permissive parenting and school performance, while authoritative parenting showed little impact on school performance. Authoritarian parenting had a negative impact on school performance which is consistent with previous research. The mediating effects of self-efficacy, intrinsic motivation, and the student-teacher relationship show little and different effects on the associations. The findings are likely to contribute to the debate about combating the growth in educational inequalities in The Netherlands.

Keywords

Adolescents, Cognitive Tests, Educational Inequalities, Parenting Styles, School Performance.

1. Introduction

Parenting styles received great scholarly attention (Pinquart & Gerke, 2019; Pinquart & Kauser, 2018). It is well-established that parenting is highly important for emotional, cognitive, and social development, and therefore, the academic achievements of adolescents and children (Morris et al., 2007; Steinberg et al., 1995). Bronfenbrenner (1979) illustrates this with the ecological model, which shows that children's achievements and developments are related to the micro-environment, i.e., where and with whom children live.

Several studies showed that there is a relationship between parenting styles and academic achievements (Baumrind, 1991; Reitman et al., 2002; Turner et al., 2009; Steinberg et al., 1992; Gonzalez et al., 2002; Masud et al., 2015). Yet, studies focusing on the relationship between parenting styles and academic achievements are few and far between in the Dutch context. Education inequality is a relevant topic in The Netherlands, especially since the Covid-19 crisis. However, educational inequalities are nothing new and it is even increasing in the Netherlands (Onderwijsinspectie, 2019). Even though many studies focused on educational inequalities and policy interventions were created to combat this problem, it is still severely present. This could mean that there are other causes of it, like parenting styles (Notten & Kieft, 2022). In the Netherlands, studies have mainly focused on the influence of parental socioeconomic status (SES), teachers, and school environments as a predictor for educational achievements (Brown & Iyengar, 2008). Hence, differences in parental SES are seen as one of the main causes of educational inequalities in The Netherlands (van de Werfhorst, 2019; Horn, 2009; Griga & Hadjar, 2014; van de Werfhorst & Mijs, 2010; van de Werfhorst & Heath, 2019). Therefore, Dutch policies are mainly focused on combating educational inequalities based on parental SES (van der Werf

et al., 2021; Melhuish et al., 2015; Leseman et al., 2017; Yoshikawa et al., 2013).

Hence, parenting styles and approaches to parenting have been relatively overlooked. Parenting styles influence educational achievements too, independently of parental SES. Moreover, certain parenting styles provide children with a set of socio-emotional and cognitive skills that are helpful in an educational environment on a national or international scale (Steinberg et al., 1989; Lorca et al., 2017; Masud et al., 2016). In certain countries, a certain parenting style is more dominant, for example, parenting styles with mainly high levels of demandingness or mainly high levels of responsibility (Pinquart & Kauser, 2018). This gives insight into educational outcomes on a national level, in the case of this study: the Netherlands. Investigating which character traits are coming from a certain parenting style is helpful to identify which students have more chances and which students need more attention during their educational career.

Therefore, this thesis contributes to the existing research by looking at the influence of parenting styles on school performance in a Dutch context for adolescents. Adolescents show more variety in how they are being raised compared to younger children, therefore studying adolescents might lead to more significant differences in school performances based on parenting styles than younger children (Kaufmann et al., 2000). Furthermore, this study will focus on the factors mediating the widely studied relationship between parenting styles and school performance. Authoritative parenting, in particular, provides students with a sense of responsibility and autonomy that results in competencies that are of high value in school, namely self-efficacy, intrinsic motivation, and affiliate bonding with the teacher (Hayek et al., 2022; Masud et al., 2016; Gonzalez et al., 2002; Turner & Johnson, 2003; Turner et al., 2009).

Hence, this study brings more clarity to the debate on which parenting style is effective for a child's academic development, and which character traits influence this relationship. Having more insight into what positively influences school performance is also important for the Netherlands in general: a strong education system is important for a country's development (Masud et al., 2015). A country with a high academic achievement rate is vital for the assets of a country, such as economic growth, social cohesion, and overall well-being, while the other hand, low academic achievements have negative consequences on people such as worse mental well-being (Heller-Sahlgren & Jordahl, 2023; Fatemeh et al., 2006; Masud et al., 2015). Furthermore, the influence of parenting styles on school performance could shed a different light on systematic causes for educational inequalities and therefore brings new educational policy interventions to the table. This study, therefore, aims to investigate the association between parenting styles and school performance for adolescents in Dutch secondary schools. Furthermore, this thesis aims to find which factors mediate the relationship between parenting styles and school performance by examining self-efficacy, intrinsic motivation, and student-teacher relationships.

This will be studied among students in the third year of secondary school using national cohort data by COOL5-18. COOL5-18 is a Dutch study that stands for, Cohort Research Educational Careers among pupils aged 5 to 18 and is collected between 2007 and 2016. The purpose of COOL5-18 is to collect data to describe and explain student development and the factors that influence that. COOL5-18 is one of the most comprehensive nationally representative cohort studies on the school career of students, which has been approved and commissioned by the Dutch Ministry of Education, Culture, and Sciences (Zee et al., 2021; Driessen et al., 2007).

The research question of this thesis is: *to what extent do parenting styles influence school performance for secondary school students and how is this mediated by self-efficacy, intrinsic motivation, and student-teacher relationship in the Netherlands?*

2. Theoretical Framework

2.1 Parenting styles

Gamble et al. (2007) define a parenting style as a parent's manner of interacting with and responding to children. Baumrind (1991), theorized, that there are two dimensions in parenting styles, namely: responsibility and demand for accountability. This will determine the parenting style, which may result in an authoritative, authoritarian, or permissive parenting style (Baumrind, 1971). These three styles affect how a child is brought up, and from there how one will behave in school.

Authoritative parents strike a balance between responsiveness and discipline. Hence, there are rules but there is no strict obedience. These parents have high standards for their children, they give them a lot of responsibility and autonomy, but still monitor their child's behavior, as well in and outside school (Woolfolk, 2011). The parents are characterized by their warmth, control, and joint decision-making (Kashahu et al., 2014). Studies show that this makes adolescents more confident, intrinsically motivated, and self-reliant (Alhadabi et al., 2019; Gonzalez et al., 2002).

The same does not hold for more authoritarian parents, who show more control over their children and are less responsive to them; this also comes with punitive consequences when a child does not follow the rules (Alhadabi et al., 2019; Gonzalez et al., 2002). Children, therefore, experience little to no autonomy in decision-making. This results in children that show less self-reliance and more dependency on authorities when making choices, which makes them less exploratory (Alhadabi et al., 2019; Aldhafri & Alharthy, 2016; Duff, 2004). The high level of parental pressure decreases a child's intrinsic motivation, parental pressure leads to a negative dependence and this is negative for learning processes (Gurland & Grolnick, 2005).

At last, there are permissive parents: They give their children heaps of freedom and warmth but do not show great control over the child's behavior (Jahanbakhshi & Shabani, 2022). These children experience a high amount of autonomy. According to Gonzalez et al. (2002), adolescents exposed to more permissive parents may lack self-reliance and tolerance for setbacks, which results in a lack of patience for learning and low motivation. Furthermore, the low levels of parental control decrease the social skills of children (Baumrind, 1996).

Hence, these different parenting styles provide children with a set of certain traits and abilities, which influence one's academic skills. Authoritative parenting is seen as beneficial for a child's development (Parra et al., 2019; Kim et al., 2018). This results in that authoritative parenting is related to better academic achievements (Dornbusch et al., 1987; Weiss & Schwarz, 1996; Steinberg et al., 1992; Masud et al., 2015). Children who were brought up by authoritative parents show better academic performances (Steinberg et al., 1992). On the other hand, raising a child very strictly leads to lower school performance (Brown & Iyengar, 2008). This comes from the high pressure that is put on them and the feeling that parents can intervene at any moment (Rogers et al., 2009). Via authoritative parenting, parents give their children the skills to trust themselves and take initiative.

This is already visible at a young age. Children from the age of 4 to 5 who had authoritative parents were more achievement-oriented, and socially and instrumentally competent in school (Baumrind, 1991). Later in one's school career authoritative parenting is positively associated with early adolescent academic achievements, such as better test results in secondary schools (Amani et al., 2019; Diaconu-Gherasim & Mairean, 2016).

In general children from authoritative parents learn more about how to be responsive and to

independently deal with demandingness, which is important in obtaining higher academic performance (Reitman et al., 2002; Turner et al., 2009). This leads to a positive association between an authoritative parenting style and school performance compared to authoritarian and permissive parenting, which is negatively associated with school performance (Baumrind, 1991; Reitman et al., 2002; Turner et al., 2009; Steinberg et al., 1992; Gonzalez et al., 2002; Masud et al., 2015). Therefore, the first hypothesis is as followed: *Authoritative parenting leads to better school performance for adolescents in Dutch secondary schools compared to authoritarian and permissive parenting.*

2.2 Self-efficacy

Parenting styles can impact school performances because it influences a child's socio-emotional and cognitive development, and these, in turn, affect academic achievements (Steinberg et al., 1989; Lorca et al., 2017; Masud et al., 2016). Studies found that a family environment with a certain parenting style can impact children's self-efficacy (Hayek et al., 2022; Turner et al., 2009; Tam et al., 2012). Self-efficacy is by Bandura (1997) defined as 'believing in one's capabilities to organize and execute courses of action to get to certain goals'. Self-efficacy is useful in several situations, such as life transitions, work, and school (Bandura, 1986; Chemers et al., 2001). Parenting styles can influence attitudes toward education via self-efficacy. Children from authoritative parents tend to show more self-efficacy than children from authoritarian and permissive parents and this influences their academic behaviors (Turner et al., 2009; Tam et al., 2012). Authoritative parenting gives a child a sense of responsibility, the belief that one can control their environment (Turner & Johnson, 2003; Turner et al., 2009), which is important for self-efficacy. As self-efficacy increases, academic performance also improves (Chemers et al., 2001). More specially, self-efficacy is strongly related to academic performance for college students (Pajares, 1996). Adolescents with higher self-efficacy have higher academic aims and work with more effort to these aims (Hayek et al., 2022). Furthermore, adolescents show more resistance to difficulties (Komarraju & Nadler, 2013; Schunk & Pajares, 2009). Self-efficacy allows children to have more confidence in the tasks they perform, in which adolescents more strongly believe they can succeed (Turner et al., 2009). Overall, this leads to higher grades and school performance for children from authoritative parents (Pajares, 1996; Chemers et al., 2001; Turner et al., 2009). This leads to hypothesis 2: *authoritative parenting leads to more self-efficacy in adolescents which results in better school performance.*

2.3 Intrinsic motivation

Authoritative parents stimulate their children to have confidence and to be independent more than authoritarian and permissive parents do (Arënliu et al., 2014). Hence, children with more authoritative parents grow up with more responsibility and autonomy. This leads to an environment of encouragement, and this increases self-motivation as well as intrinsic motivation. Patall et al. (2008) namely show that higher levels of responsibility in children are positively associated with intrinsic motivation. Therefore, children who grew up with authoritative parents display a higher amount of intrinsic motivation (Arënliu et al., 2014). Intrinsic motivation is positive for one's academic achievements. Children with more intrinsic motivation feel as well more competent and autonomous, furthermore, and because of that, they find tasks more enjoyable. This results in learning more deeply, often beyond the minimum that is requested for passing a test (Larson & Rusk, 2011). Over time this

improves scholastic skills, which in turn makes learning more pleasurable because of more competence (Carlton & Winsler, 1998). A vicious circle, that in general leads to higher educational achievements (Arënliu et al., 2014; Gottfried, 1990). Turner et al. (2009) showed that an authoritative parenting style is positively associated with achievement motivation and, thereby, academic performance. In addition, the relationship between authoritative parenting and high intrinsic motivation leads to educational success for different age groups (Gonzalez et al., 2002; Ginsburg & Bronstein, 2008; Turner et al., 2009; Rivers et al., 2012; Arënliu et al., 2014). Therefore, hypothesis 3 can be drawn: *authoritative parenting leads to more intrinsic motivation in adolescents which results in better school performance.*

2.4 Student-Teacher relationship

The way parents interact daily with their children is essential in the development of children's personalities and how they will, in turn, interact with others. According to Mensah & Kuranchie (2013), authoritative parenting is based on reasoning, consensus, understanding, and trust, which will lead to prosocial behavior. The study shows that children of authoritative parents are socially more competent and had a greater overall social development than children of authoritarian parents (Mensah & Kuranchie, 2013). This can lead to a better relationship with teachers due to the social norms children from authoritative parents learn at home, which will positively influence children's conduct and learning at school. Hence, good student-teacher relationships foster academic success. A good student-teacher relationship allows more room for exploration and taking risks in academic tasks. Furthermore, the teacher is more aware of the student's learning progress, goals, and needs (Admin, 2017; Coristine et al., 2022). This positively influences school results. This leads to hypothesis 4: *authoritative parenting leads to a better student-teacher relationship which results in better school performance.*

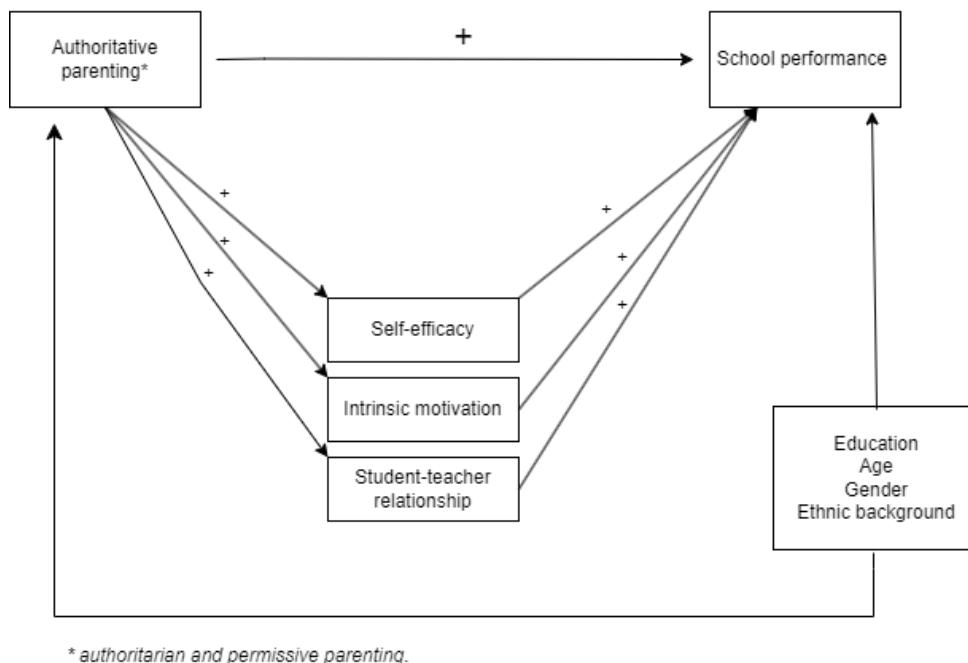


Figure 1: conceptual model with 4 hypotheses and control variables.

3. Methods and data

3.1 Dataset information

In this paper, I will utilize data from COOL5-18, which stands for Cohort Research Educational Careers among Dutch pupils aged 5 to 18. The purpose of COOL5-18 is to collect data to describe and explain student and pupil development and the factors that influence this development. This study followed pupils aged 5 to 18 in their school career through primary and secondary education and intermediate vocational education. Three aspects of this development are central to the research. Firstly, cognitive development: knowledge and skills in Dutch, English, and arithmetic/mathematics. Secondly, the development of social competencies, including citizenship competence. And thirdly, social-emotional development. COOL5-18 is a nationally representative cohort study on the school career of students, which has been approved and commissioned by the Dutch Ministry of Education, Culture, and Sciences (Zee et al., 2021; Driessen et al., 2007).

3.2 Analytical sample

For this thesis, I used the third wave of COOL 5-18 data, namely COOL5-18 VO-3 (secondary school, year 3), collected in 2013-2014, which included a total of 16,279 respondents from several Dutch secondary schools. This dataset contains information about school performance via tests in different school subjects and personal traits. Furthermore, the last chapter of the data, chapter 10, is a questionnaire for parents and gives information about approaches to parenting. Notable is that only 7,989 parents/caregivers answered either one or more questions in this section, which could be explained by the free choice respondents had in answering this section.

When creating the new variables for this thesis, 68,299 observations were lost due to listwise deletion. This is a relatively high number and is mainly caused by the following variables. Firstly, the control variable, ethnic background, has 8,335 missing values. Furthermore, the dependent variable, school performance, which is operationalized from a set of questions in four scholastic domains, has 10,002 missing values. In total there were 11 questions spread over the four scholastic domains sections, everyone who missed an answer to one of the questions was deleted from the sample. Lastly, 4,528 parents answered all the questions about parenting styles, everyone else who missed an answer on one of the questions was removed when making three variables that show approaches to parenting, namely: authoritative, authoritarian, and permissive parenting. These three parenting styles will be compared to each other to state which one leads to the best school performance. The final N after listwise deletion consists of 2,060 individuals with a mean age of 15 years old.

3.3 Operationalization

Dependent variable: school performance

The level of school performance is measured by scholastic tests in the study which tap into children's cognitive skills. The study measures skills in four domains: reading comprehension, language skills, mathematics, and English. These results reflect a student's abilities and skills at school. The different subjects each had a subset of a maximum of 4 questions. COOL converted the test scores to *ability scores*, which are non-linear transformations (Lord & Novick, 1968).

Ability scores can be interpreted as a level of mastery. The scores vary between 0 and 100 percent. A higher percentage means a higher mastery of a skill. Ability scores are more fundamental because this thesis includes students that are in different tracks, ability scores are namely test independent and true scores and observed scores are test dependent (Lord, 1953). When performing population-level analyses, it has the preference to use the ability scores from the database, because the use of the raw skill scores may lead to a (strong) overestimation of variance in the population (COOL-5-18, 2017; Wu, 2005). Hence, the raw score is dependent on errors of measurement and this does not apply to ability scores (Lord, 1980; Lord & Novick, 1968).

The four cognitive skill measures, reading comprehension, language skills, mathematics, and English, are computed into one variable by calculating the mean of all items, this variable is called 'ability score'. This variable shows the overall score on cognitive skills, which leads to a more general conclusion about how one will perform in school. Notably is that this is a prediction of how one will perform in school since this study did not look at the actual school results, but rather at how students scored on the four ability tests in the COOL survey. Furthermore, by using the sum of four different cognitive skills, the results do not give attention to scores on one specific cognitive skill, but rather aim to look at educational performance in general.

To conclude, by taking the sum of ability scores, conclusions can be drawn about school performance based on parenting styles, although this is a prediction, it is a reflection of how one is performing in school at that moment. This new variable, ability score, ranges from 17.28 to 98.04. 17.28 means having the lowest score on the scholastic tests and 98.04 means the highest score on all the scholastic tests. The reliability analysis revealed that the scale has a Cronbach's alpha of .875, which confirms good internal consistency. There is a mean of 73.55 and a standard deviation of 15.34.

Independent variable: parenting style

Parenting styles are measured via nine survey items. Specifically, one of the parents or guardians of the respondent had to answer who decides in the household about:

1. What time the child should be home
2. Whether the child may have a (side) job
3. Whether the child can drink alcohol at home
4. Whether the child can drink alcohol at parties
5. What TV shows the child watches

6. What follow-up training the child will follow
7. When the child does his/her homework
8. How long the child plays internet and/or computer games
9. If the child can go out

The answer categories are 1) Me and/or partner, without consultation with the child; 2) Me and/or partner, after consultation with the child; 3) Me and/or partner together with the child; 4) The child himself, after consulting with me and/or my partner; 5) The child himself, without consultation with me and/or my partner; 6) Not applicable.

The answers are divided into three new variables, namely: authoritative, authoritarian, and permissive parenting. The categorization is based on the literature on parenting styles by Baumrind (1978). Authoritarian parenting is based on the sum of answers on 'me and/or partner, without consultation with the child' and 'me and/or partner, after consultation with the child'. Indicating, as stated by Baumrind (1978) a strict parenting style with little responsiveness for the child, where parents decide.

Notably, is the 'consultation with the child', which makes it arbitrary if this is an authoritative or authoritarian parenting style. However, this indicates an authoritarian parenting approach from the point of view that the students in the sample are already adolescents around 15 years old, while the parents still decide for them in the end. Hence, considering the age of the respondents, parents who control their child's behavior, are having an authoritarian parenting style (Olla et al., 2018).

Authoritative parenting is based on the sum of the answers on: 'me and/or partner together with the child' and 'the child himself, after consulting with me and/or my partner'. This means an approach where the child is centered and is expected to be responsible, while at the same time, there is a dialogue with the parents about rules and behaviors (Baumrind, 1978). Permissive parenting is based on the sum of answers on 'the child himself, without consultation with me and/or my partner', indicating a very high amount of freedom and autonomy of the child.

In order to create the three parenting style variables, all the answers that represent that certain parenting style are recoded as 1, while all other answers are recoded as 0. After that, the mean of all the questions was calculated. Hence, a high score on one of the parenting styles means higher use of that certain parenting style, there is a range from 0 to 1. Expect for permissive parenting, this ranges from 0 to .78, meaning that no one answered all the nine questions with: 'the child himself, without consultation with me and/or my partner'. The average authoritarian parenting score is .34, .53 for authoritative parenting and .13 for permissive parenting.

Mediating variables

Self-efficacy

The level of self-efficacy experienced by respondents is measured based on six statements to which respondents had to indicate to what extent the statements applied to them. The statements are as follows: 1) I'm sure everything will work out at school this year; 2) I can do even the hardest assignments at school if I do my best; 3) I can make up for all my work for school if I only have enough time; 4) I can do almost anything at school, as long as I keep trying; 5) I can also learn difficult things at school; 6) I'm sure that even the most difficult tasks will work for me at school. All variables are recoded in the same way in which a higher score means a higher feeling of self-efficacy. These items are computed

into one variable by calculating the mean of all items. This new variable is called: self-efficacy, ranging from 1 to 5, in which 1 means not having self-efficacy at all and 5 means a maximum experience of self-efficacy. The reliability analysis revealed that the scale has a Cronbach's alpha of .845, which confirms good internal consistency. There is a mean of 3.55 and a standard deviation of .66.

Intrinsic motivation

The level of intrinsic motivation experienced by respondents is measured using the 'Inventory of School Motivation' (ISM) chosen by the COOL5-18 study. This instrument is based on the 'personal investment model' of Maehr (1984) and was developed by McInerney & Sinclair (1991) (COOL 5-18, 2017). COOL5-18 used a fairly short version with 33 items divided into subscales by McInerney and Ali (2004). To measure intrinsic motivation I used the subscales of task, effort, competition, social concern, social power, and affiliation. The subscales, praise, and token, were not used because they tap into extrinsic motivation. Out of these subscales with each a set of statements, respondents could answer to which extent they agreed with the statement (from 1 "not at all" to 5 "totally agree"). The six subscales were recoded into one scale, called motivation. Ranging from 1 to 5, in which 1 means not having motivation at all and 5 means a maximum experience of motivation. The reliability analysis revealed that the scale has a Cronbach's alpha of .665, which confirms good internal consistency. There is a mean of 2.93 and a standard deviation of .50.

Teacher-student relationship

The teacher-student relationship is measured by seven statements based on the connection the respondents have with the teacher. These items are based on the study of Peetsma et al. (2001). The seven statements are as followed: 1) The teachers usually know how I feel; 2) I can talk to the teachers about problems; 3) If I feel unhappy, I can talk to the teachers there; 4) I feel comfortable with the teachers; 5) The teachers understand me; 6) I have good contact with the teachers; 7) I would rather have other teachers. These items are computed into one variable by calculating the mean of all items. 1 means total disagreement and 5 means totally agreeing with the statement. The reliability analysis revealed that the scale has a Cronbach's alpha of .847, which confirms good internal consistency. There is a mean of 3.18 and a standard deviation of .83.

Control variables

Education

Literature shows that parental education is associated with parenting styles. Parents with higher educational levels more often practice authoritative parenting styles than lower-educated parents (Kashahu et al., 2014). Furthermore, higher education among parents is also positively associated with a child's academic achievements (Li & Qiu, 2018; Idris et al., 2020; Terfassa, 2018). Education is added as a control variable by looking at the highest academic achievements of the caregiver or parent of the child. A caregiver is not the "official" parent but does look after the child and is therefore also parenting the child. For this thesis, I divided low and high education. 0 means low, meaning that the parent/caregiver did not attain education or that the highest educational level is primary school, secondary school, or pre-vocational education. 1 means high, having attained higher vocational

education and university. This distribution is based on the categorization used by the Central Bureau of Statistics (n.d.). 61.1% are low-educated and 38.9% are higher educated.

Age

Parenting styles are associated with age. Parents with older children were more likely to have permissive parenting styles (Rosen et al., 2008). Hence, as children are younger, parents have more authoritarian and authoritative parenting approaches (Dornbusch et al., 1987). Furthermore, older children are obtaining better school results than younger children in the same class (Dhuey et al., 2019). Age is added as a continuous control variable. The age range of the respondents in the dataset goes from 12.4 to 18.1 years old. The descriptives show that age has a mean of 15.1.

Sex

Literature shows that parenting styles differ according to the sex of the child. Parental authoritativeness is positively associated with femininity in Western countries (Lin & Billingham, 2014). Parents give girls more decision-making autonomy, while boys are treated more authoritarian (Lin & Billingham, 2014; Wray-Lake et al., 2010). Furthermore, sex is also associated with school performance. On average, girls outperform boys in school (Scheeren & Bol, 2022). This is especially the case when school performance is measured by grades (DiPrete & Buchmann, 2013). Sex is added as a dummy control variable. Male respondents are given a score of 0 and female respondents are given a score of 1. 50.6% of the respondents are male and 49.4% are female.

Ethnic background

Parenting styles show ethnic variation and are influenced by culture. Moreover, ethnic background has an impact on how one benefits academically from a certain parenting style. Steinberg et al. (1992) showed that adolescents who are white, profit more from authoritative parenting in an academic environment than adolescents who are African-American and Asian-American. Generally, Asian and African-American parents show more authoritarian styles and less authoritative styles than White parents (Dornbusch et al., 1987; Steinberg et al., 1992). Ethnicity also influences school performance. In the Netherlands pupils and students from minoritized ethnic groups, hence, with a migration background are more often in lower educational tracks (Vogels et al., 2021). Ethnic background is added as a dummy control variable and is based on the Central Bureau of Statistics (n.d.) definition of having a migration background, defining that one of the parents is born in another country. The survey by COOL5-18 holds a question that asks where the parent or caregiver of the child is born. Respondents who are born in the Netherlands are given a score of 1, and everyone who was born in another country is given a score of 0. The results show that 90.1 % of the parents are born in the Netherlands and 9.9% are born in another country.

3.4 Analytical approach

Stepwise linear regression is the main analytical approach. Three multiple regression analyses are done, based on authoritative, authoritarian, and permissive parenting. For each table, there is the following order: in the first model, the independent variable, the parenting style is added. In the second model, the control variables education, sex, age, and ethnic background are added. Low education, men, and ethnic background are the reference groups. Hereby, the main effect of parenting styles on school performance

is studied, in order to state if authoritative parenting is associated with stronger school performance compared to authoritarian and permissive parenting.

In the following models, the mediating variables, self-efficacy, intrinsic motivation, and student teacher-relationship, are added. The indirect effect of authoritative parenting via self-efficacy, intrinsic motivation, and student teacher-relationship on school performance is measured by comparing the coefficients of the regression analysis with and without the mediating variable. When testing the hypotheses, an alpha value of .05 will be used to determine statistical significance.

Table 1 shows the descriptive statistics of the sample. The final N after listwise deletion is 2,060. The division of men and women is almost equal in the population sample. Age has a mean of 15.1 years old. Noteworthy is the level of school performance, which is measured by 'ability score', this has a mean of 73.55, which means an overall high score on the cognitive tests. Furthermore, considering the parenting styles, permissive parenting has a relatively low sample mean of .13. The education of the parents is also noteworthy, 61.1% of the parents are low educated. And finally, ethnic background shows that students with Dutch parents are overrepresenting, namely 90.9%.

Table 1: Descriptive statistics of prepared variables

Continuous variables	Minimum	Maximum	Mean	Std. Deviation
School performance	17.28	98.04	73.55	15.34
Parenting style				
Authoritative	0	1	.53	.28
Authoritarian	0	1	.34	.29
Permissive	0	.78	.13	.13
Self-efficacy	1	5	3.55	.68
Intrinsic motivation	1	5	2.93	.50
Teacher-student relationship	1	5	3.11	.63
Age	12.4	18.1	15.1	.57
Categorical variables		Valid percentage		
Education parents				
Low educated		61.1		
High educated		39.9		
Sex				
Male		50.6		
Female		49.4		
Ethnic background				
Yes		9.1		
No		90.9		
Valid N (listwise)	2,060			

Source: COOL5-18, date-subset VO-3 2013-2014.

4. Results

4.1 Main effect of parenting styles on school performance.

To investigate the main effect between parenting styles and school performance multiple linear regression is done. To find evidence for the main effect of parenting styles on school performance, three regression analyses are done. The first one is based on authoritative parenting, the second one on authoritarian parenting, and the third one on permissive parenting.

Table 2 consists of the effect of authoritative parenting on school performance. In the first model the independent variable, authoritative parenting is added, the analysis shows that authoritative parenting is not a significant predictor of school performance ($B=1.12$, $SE=1.14$, $p=.33$). In Model 2 the control variables, education, age, sex, and ethnic background are added. The effect of authoritative parenting on school performance became stronger and more significant ($B=2.05$, $SE=1.09$, $p=.06$), but still shows weak evidence for a relation between authoritative parenting and school performance.

Table 3 consists of the effect of authoritarian parenting on school performance. In the first model the independent variable, authoritarian parenting is added, the analysis shows that authoritarian parenting is a significant predictor of school performance ($B=-2.97$, $SE=1.13$, $p=.009$). Hence as authoritarian parenting increases by 1 point, school performance decreases by 2.97 points. Suggesting a negative correlation between authoritarian parenting and school performance. In Model 2 the control variables, education, age, sex, and ethnic background are added. The effect of authoritarian parenting on school performance becomes stronger and more significant ($B=-3.90$, $SE=1.08$, $p<.001$). So, with the inclusion of control variables, the correlation between authoritarian parenting and school performance increases.

Table 4 consists of the effect of permissive parenting on school performance. In the first model the independent variable, permissive parenting is added, the analysis shows that permissive parenting is a positive significant predictor of school performance ($B=9.07$, $SE=2.45$, $p<.001$). Hence as permissive parenting increases by 1 point, school performance increases by 9.07 points. This suggests a highly positive correlation between permissive parenting and school performance. In model 2 the control variables, education, age, sex, and ethnic background are added. The effect of permissive parenting on school performance becomes stronger and more significant ($B=9.43$, $SE=2.37$, $p<.001$).

The analysis shows that authoritative parenting might be associated with better school performance, but this evidence is not clear-cut. However, the analysis shows that the opposite effect of authoritarian parenting is significant. The study suggests that there is a negative association between authoritarian parenting and school performance. Furthermore, permissive parenting appears to be a highly positive significant predictor of school performance. Therefore, there is no strong support for hypothesis 1: *Authoritative parenting leads to better school performance for adolescents in secondary school compared to authoritarian and permissive parenting.*

Mediations

Authoritative parenting

4.2 Self-efficacy

In Model 3 of Table 2, the mediating variable self-efficacy is added, this is a highly significant positive predictor of school performance ($B=2.90$ SE =.48, $p<.001$). Hence, when self-efficacy increases by one point, school performance increases by 2.90.

The inclusion of self-efficacy does not reduce the bivariate effect of authoritative parenting on school performance. Hence, the effect of authoritative parenting on school performance does not work through self-efficacy, which rejects hypothesis 2: *authoritative parenting leads to more self-efficacy in adolescents which results in better school performance.*

However, the effect of authoritative parenting on school performance became slightly significant when controlled for self-efficacy ($B=2.16$ SE= 1.09, $p=.048$). As authoritative parenting increases by 1 point, school performance increases by 2.16. This is not highly significant and neither a strong increase compared to model 2. However, the analysis suggests that authoritative parenting might be associated with better school performance, but the evidence is not clear-cut.

4.3 Intrinsic motivation

In Model 4 Table 2, intrinsic motivation is added, this is a highly significant predictor of school performance ($B= 4.27$, SE= .66, $p<.001$). As intrinsic motivation increases by one point, school performance increases by 4.27 points.

The inclusion of intrinsic motivation does account for a very small proportion of the effect of authoritative parenting on school performance ($B=1.98$, SE=1.09, $p=.07$). There is a small reduction of 3.4% in the effect of authoritative parenting on school performance. Size and direction are in line with the hypothesis, however, considering the p-value, there is no strong evidence and support for hypothesis 3: *authoritative parenting leads to more intrinsic motivation in adolescents which results in better school performance.*

4.4 Student-teacher relationship

In Model 5 Table 2, the student-teacher relationship is added, but this does not show a significant effect ($B=.98$, SE=.51, $p=.08$).

The inclusion of the student-teacher relationship does account for a very small proportion of the effect of authoritative parenting on school performance ($B= 1.98$, SE=1.10, $p= .07$). There is again a small reduction of 3.4% in the effect of authoritative parenting on school performance. Size and direction are in line with the hypothesis, however, considering the p-value, there is no strong evidence and support for hypothesis 4: *authoritative parenting leads to a better student-teacher relationship which results in better school performance.*

4.5 Additional analyses

Authoritarian parenting

Table 3 shows the effect of the mediating variables on the negative and significant correlation between authoritarian parenting and school performance. The inclusion of self-efficacy in model 3 does account for a very small proportion of the effect of authoritarian parenting on school performance ($B=-3.81$, SE=1.08, $p<.001$). There is a small reduction of 2.3% in the effect of authoritarian parenting on school

performance. This provides some evidence that authoritarian parenting leads to less self-efficacy which results in decreased school performance. In Model 4 intrinsic motivation is added. The inclusion of intrinsic motivation does account for a very small proportion of the effect of authoritarian parenting on school performance ($B=-3.84$, $SE=1.07$, $p<.001$). There is a small reduction of 1.5% in the effect of authoritarian parenting on school performance. The reduction provides some evidence that authoritarian parenting leads to less intrinsic motivation in adolescents which results in decreased school performance. In Model 5 student-teacher relationship is added. The inclusion of the student-teacher relationship does account for a very small proportion of the effect of authoritarian parenting on school performance ($B=-3.77$, $SE=1.08$, $p<.001$). There is again a small reduction of 3.3% in the effect of authoritarian parenting on school performance. This provides evidence that authoritarian parenting leads to a decreased student-teacher relationship which results in decreased school performance.

Permissive parenting

Table 4 shows the effect of the mediating variables on the highly positive and significant correlation between permissive parenting and school performance. The inclusion of self-efficacy in model 3, does account for a proportion of the effect of permissive parenting on school performance ($B=8.59$, $SE=2.36$, $p<.001$). There is a reduction of 8.9% in the effect of permissive parenting on school performance. This provides some evidence that permissive parenting leads to more self-efficacy which results in a better school performance. In Model 4 intrinsic motivation is added. The inclusion of intrinsic motivation does not reduce the bivariate effect of permissive parenting on school performance ($B=9.51$, $SE=2.35$, $p<.001$). Hence, the effect of permissive parenting on school performance does not work through intrinsic motivation. In Model 5 student-teacher relationship is added. The inclusion of student-teacher relationships does account for a very small proportion of the effect of permissive parenting on school performance ($B=9.30$, $SE=2.38$, $p<.001$). There is a small reduction of 1.3% in the effect of permissive parenting on school performance. This provides some evidence that permissive parenting leads to better student-teacher relationships which results in better school performance.

Table 2: the effect on school performance by an authoritative parenting style

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Education (ref. = low)		7.24 (.63)***	6.89 (.62) ***	6.72 (.62)***	7.18 (.62)***
Age (ref. = young)		-5.23 (.60)***	-5.02 (.54)***	-4.94 (.59)***	-5.07 (.60)***
Sex (ref. = male)		1.09 (.61)	1.47 (.62)*	1.18 (.61)	.90 (.61)
Ethnic Background (ref. = yes)		-1.66 (1.17)	-1.41 (1.17)	-1.47 (1.17)	-1.86 (1.17)
Authoritative parenting	1.12 (1.14)	2.05 (1.09)	2.16 (1.09) *	1.98 (1.09)	1.98 (1.10)
Self-efficacy			2.90 (.48) ***		
Intrinsic motivation				4.27 (.66)***	
Student-teacher relationship					.89 (.51)
Constant	74.28 (.69)***	150.43 (9.21)***	136.76 (9.39)***	133.66 (9.43)***	145.70 (9.34)***

Note: N = 2,060. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. Reference categories and standard errors in brackets.

Source: COOL5-18 VO-3

Table 4: the effect on school performance by a permissive parenting style

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Education (ref. = low)		7.06 (.61)***	6.73 (.61) ***	6.55 (.61)***	7.02 (.61)***
Age (ref. = young)		-5.28 (.59)***	-5.05(.59)***	-4.98 (.59)***	-5.11 (.60)***
Sex (ref. = male)		.64 (.61)	1.06 (.61)	.76 (.61)	.49 (.61)
Ethnic Background (ref. = yes)		-1.22(1.16)	-.96 (1.15)	-1.02 (1.14)	-1.42 (1.15)
Permissive parenting	9.07 (2.45) ***	9.43 (2.37) ***	8.59 (2.36) ***	9.51 (2.35) ***	9.30 (2.38) ***
Self-efficacy			2.85 (.48) ***		
Intrinsic motivation				4.30 (.64)***	
Student-teacher relationship					.96 (.50)
Constant	73.76 (.44) ***	150.94 (9.07)***	137.35 (9.25) ***	133.94 (9.28)***	145.84 (9.20)***

Note: N = 4973. *p < 0.05; **p < 0.01; ***p < 0.001. Reference categories and standard errors in brackets.

Source: COOL5-18 VO-3

Table 3: the effect on school performance by an authoritarian parenting style

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Education (ref. = low)		7.29 (.62)***	6.94 (.62) ***	6.79 (.62)***	7.24 (.62)***
Age (ref. = young)		-5.21 (.59)***	-4.99(.59)***	-4.91 (.59)***	-5.04 (.60)***
Sex (ref. = male)		.99(.61)	1.36 (.61)*	1.09 (.61)	.80 (.61)
Ethnic Background (ref. = yes)		-1.57(1.16)	-1.27 (1.16)	-1.36 (1.15)	-1.75 (1.16)
Authoritarian parenting	-2.97 (1.13)**	-3.90 (1.08)***	-3.81 (1.08) ***	-3.84 (1.07) ***	-3.77(1.08) ***
Self-efficacy			2.85 (.48) ***		
Intrinsic motivation				4.21 (.64)***	
Student-teacher relationship					.83 (.50)
Constant	75.84(.50)	152.40 (9.18)***	138.71 (9.37) ***	135.56 (9.40)***	147.62 (9.32)***

Note: N = 4973. *p < 0.05; **p < 0.01; ***p < 0.001. Reference categories and standard errors in brackets.

Source: COOL5-18 VO-3

5. Conclusion and discussion

The main objective of this research is to answer the research question: to what extent do parenting styles influence school performance for secondary school students and how is this mediated by self-efficacy, intrinsic motivation, and student-teacher relationship in the Netherlands?

According to the results of the multiple linear regression analysis – performed with data from COOL5-18 – mixed evidence was found in support of the 4 hypotheses. The first hypothesis stated that authoritative parenting leads to better school performance for adolescents in secondary school compared to authoritarian and permissive parenting. There is partly found evidence that is in line with the first hypothesis, the analysis suggests that authoritative parenting shows indeed a positive association with school performance, so as authoritative parenting increases, school performance becomes better. However, this evidence is not clear-cut, since the p-value is relatively high. The opposite parenting style, authoritarian parenting, shows a clear negative and significant association with school performance. Therefore, it can be suggested that as authoritarian parenting increases, school performance decreases. Furthermore, and unexpectedly, permissive parenting is highly positive and significantly associated with school performance. Hence, as parents tend to raise their children more in a permissive way, their school performance increases.

The results show no evidence for the other 3 hypotheses, in other words, self-efficacy, intrinsic motivation, and student-teacher relation do not significantly mediate the relationship between authoritative parenting and school performance. However, there are some additional results: self-efficacy, intrinsic motivation, and student-teacher relationship do mediate the association between authoritarian parenting and school performance. However, these variables have a relatively small effect on the association between authoritarian parenting and school performance. The most profound finding of the analysis is the positive correlation between permissive parenting and school performance. The mediating variable self-efficacy strongly mediates the effect between permissive parenting and school performance. So as permissive parenting increases, the self-efficacy of students increases and therefore one's school performance. Furthermore, self-efficacy and intrinsic motivation are also independent predictors of school performance.

To conclude and to answer the research question, parenting styles are associated with school performance. In particular, authoritarian parenting and permissive parenting significantly predict school performance and therefore one's educational career. Raising a child strictly, with little to no free choice for the child, compared to raising a child very freely with a lot of autonomy might have an impact on one's school results. Furthermore, self-efficacy, intrinsic motivation, and student-teacher relationship have a varying, but relatively low, impact on the association between those parenting styles and school performance.

The results go against the previous literature about parenting styles and school performance. Hence, the general view in science is that authoritative parenting leads to better school results, because children learn about how to be responsive and independently deal with demandingness, which is important in obtaining higher academic performance (Baumrind, 1991; Reitman et al., 2002; Turner et al., 2009; Steinberg et al., 1992; Gonzalez et al., 2002; Masud et al., 2015). Authoritative parents create an environment that fosters a child's autonomy and independence while guiding with rules and expectations (Kashahu et al., 2014). The results from this study are partly in line with this idea, so the results show evidence that an increase in an authoritative parenting style leads to better school performance, but these results are not highly significant. This study shows that authoritative parenting is not a strong predictor for educational inequalities based on school performance. There could be other explanations for this indication. First, there might be a misinterpretation of authoritative parenting, this

study looked at whom the decisions make for the child, the child self, the parents, or together, to identify the parenting style. However, authoritative parenting can be defined by more factors. For example, a parent might still be controlling or demanding which influences one's academic performance (Murayama et al., 2016), even though decision-making goes consensual as defined in this study. Secondly, emotional support might play a role as well. Even though authoritative parents create structure and guidance for their children while a child still experiences autonomy, there might not be sufficient emotional support. When a child does not feel nurtured, this can affect their well-being and therefore their school performance (Clarke, 2020). And lastly, there can be other external factors, such as peer interactions and learning difficulties that influence the relationship between any parenting style and school performance (Floyd & Olsen, 2017).

On the other hand, previous research firmly stated that a permissive style is negative for one's school performance. This is due to that permissive parents give their children much freedom and warmth but do not show control over the child's behavior (Jahanbakhshi & Shabani, 2022). These children experience a high amount of autonomy, which results in less self-reliance and less patience for learning and have therefore low motivation (Gonzalez et al.; 2002). In this study, children with a permissive parenting style show the highest increase in school performance compared to those who have other parenting styles. This is very unconventional, since children who were brought up with much freedom, more often show worse academic outcomes (Baumrind, 1996). However, it can be explained by the warmth and responsiveness of permissive parents, which create secure attachment relationships for their children (Marty et al., 2005). A study by Perez-Gramaje et al. (2019) shows that adults who were raised with indulgent parents, a synonym for permissive parents, have the greatest personal and social well-being. Their parents raised their children with higher parental warmth and lower parental strictness than those who had authoritative and authoritarian parents (Perez-Gramaje et al., 2019). Hence, as well a secure attachment style, as a good well-being, leads to better educational achievements (Clarke, 2020).

Furthermore, the results show that the relationship between permissive parenting and school performance is mediated by self-efficacy. Self-efficacy refers to the belief to accomplish tasks, this is normally not in line with permissive parenting which is characterized by a lack of structure (Tam et al., 2012). However, this result could again be explained by how permissive parenting is measured in this study. Namely, the child that has the autonomy to decide for themselves, this is closely related to autonomy support. Autonomy support is defined by a child's independent decision-making, which is positively associated with self-efficacy (Won & Shirley, 2018).

The results on authoritarian parenting are in line with previous research, namely that parents who show more control over their children and are less responsive to them result in children with lower school performance. Those children experience no autonomy in decision-making, therefore they have less self-reliance and more dependency on authorities when making choices. This makes one less exploratory, and eventually, this is negative for educational performance (Alhadabi et al., 2019; Aldhafri & Alharthy, 2016; Duff, 2004).

This research has several limitations that can be addressed with further research. Firstly, school performance is measured by scholastic questions in the survey itself. Although it shows a pupil's knowledge, it might not accurately reflect the actual school performance. With the notable results in mind, such as that permissive parenting is associated with better school performance, further research should study the associations between parenting styles and school performance again, but then analyze actual school results, to draw more representative conclusions.

Secondly, the parenting styles are measured by a question about who decides for the child, although this is key in the approaches to the parenting styles (Baumrind, 1971), for more academic validity, parenting styles should be measured with more nuance. Parenting styles are also based on a

parent's warmth, emotional availability, and nurturing capacities, which impact the educational achievements of children. Therefore, a broader way of operationalizing parenting styles is important for drawing more nuanced and representative conclusions. Thirdly, only a subsample answered all the questions on parenting styles, this might be a selective subsample, therefore future studies could assess the same question by asking all parents or caregivers to fill in this survey instrument. Fourthly, the SES of a student might still play a role, parenting styles might have differential effects on school performance depending on the SES of a student. Future studies could examine if SES moderates the association between parenting styles and school performance. Lastly, parenting styles are culture and country dependent. This thesis looked at one point in time in the Netherlands. Further research should aim for a cross-sectional and longitudinal study, to examine how changes in parenting styles affect school performance. Longitudinal research is also important for the causality of the findings in this study; hence, this research cannot state a causal relationship between parenting styles and school performance.

However, this study gives a new perspective on which parenting styles are important for a child's school performance and therefore academic career. It brings a new perspective on the widely studied phenomenon, parenting styles. It shows the importance of a permissive parenting style on a child's school career. Therefore, this thesis shows the dynamic nature of parenting styles, by introducing new parenting approaches that are important for school performance, namely raising a child more freely, but with warmth. Furthermore, this thesis confirms the negative relationship between authoritarian parenting and school performance, and questions the impact of authoritative parenting, which might change considering time and place. This study also shows that intrinsic motivation, self-efficacy and a student-teacher relationship slightly mediate the relationship between an authoritarian and permissive parenting style and school performance. This sheds light on the traits and abilities a child gains from certain parenting styles.

Educational policies should consider these results when aiming to decrease educational inequalities. This study shows that a certain parenting style is associated with differences in school performance. Hence, when thinking about interventions to tackle education inequalities there could be a focus on how a child is raised, that goes beyond the arguments about SES. Policies should promote parenting styles that are good for a child's well-being and therefore one's school career. Furthermore, educational institutions should reconsider a permissive parenting style as not automatically bad for a child's school results, but rather look at the positive traits coming from this parenting style.

Future research could build further on this study, by measuring the three parenting styles with more nuance and by looking at actual school results in primary school. If results are replicated, it might be warranted to change commonly held beliefs about parenting styles and academic performance in the Netherlands.

6. References

- Admin. (2017). *4 benefits of positive student-teacher relationships*. Pride Surveys. Retrieved March 6, 2023, from [4 Benefits of Positive Student-Teacher Relationships | Pride Surveys Pride Surveys](#)
- Aldhafri, S., & Alharthy, I. (2016). Undergraduate Omani Students' identity and perceptions of parenting styles. *Review of European Studies*, 8(2), 114–123.
- Alhadabi, A., Aldhafri, S., Alkharusi, H., Al-Harthy, I., Alrajhi, M., & AlBarashdi, H. (2019). Modeling parenting styles, moral intelligence, academic self-efficacy, and learning motivation among adolescents in grades 7–11. *Asia Pacific Journal of Education*, 39(1), 133-153.
- Amani, M., Nazifi, M., & Sorkhabi, N. (2020). Parenting styles and academic achievement of early adolescent girls in Iran: Mediating roles of parent involvement and self-regulated learning. *European Journal of Psychology of Education*, 35, 49-72.
- Arënliu, A., Hoxha, L., Bërxulli, D., & Jemini-Gashi, L. (2014). Parenting styles and intrinsic motivation among high school students—Do parenting styles influence motivation orientation of high school students? In International Institute of Social and Economic Sciences (Ed.), *Conference proceedings. 9th International*
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental psychology*, 4(1p2), 1-103.
- Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. *Journal of Early Adolescence*, 11(1), 56-95.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard university press.
- Brown, L., & Iyengar, S. (2008). Parenting styles: The impact on student achievement. *Marriage & Family Review*, 43(1-2), 14-38.
- Carlton, M. P., & Winsler, A. (1998). Fostering intrinsic motivation in early childhood classrooms. *Early Childhood Education Journal*, 25, 159-166
- Centraal Bureau voor de Statistiek. (N.d.). *Opleidingsniveau*. Retrieved February 27, 2023, from [Opleidingsniveau \(cbs.nl\)](#)
- Centraal Bureau voor de Statistiek. (n.d.). *Migratie achtergrond*. Retrieved february 27, 2023, from [Migratieachtergrond \(cbs.nl\)](#)
- Chemers, M. M., Hu, L., & Garcia, B. F. (2001). Academic self-efficacy and first-year college student performance and adjustment. *Journal of Educational Psychology*, 93(1), 55-64
- Clarke, T. (2020). Children's wellbeing and their academic achievement: The dangerous discourse of 'trade-offs' in education. *Theory and Research in Education*, 18(3), 263-294.
- Zijsling, D.H. (2017). Cohort Research Educational Careers age 5-18 – COOL 5-18 CO-3. Dans Data Station Social Sciences and Humanities. Retrieved February 15, 2023, from [Cohortonderzoek Onderwijsloopbanen van 5-18 jaar - COOL 5-18 - VO-3 2013/14 - DANS Data Station Social Sciences and Humanities](#)
- Coristine, S., Russo, S., Fitzmorris, R., Beninato, P., & Rivolta, G. (2022, April 1). *The importance of student-teacher relationships*. Classroom Practice in 2022. Retrieved March 6, 2023, from <https://ecampusontario.pressbooks.pub/educ5202/chapter/the-importance-of-student-teacher-relationships/>
- Dhuey, E., Figlio, D., Karbownik, K., & Roth, J. (2019). School starting age and cognitive development. *Journal of Policy Analysis and Management*, 38(3), 538-578.
- Diaconu-Gherasim, L. R., & Măirean, C. (2016). Perception of parenting styles and academic achievement: The mediating role of goal orientations. *Learning and Individual Differences*, 49, 378-385.
- DiPrete, T. A., & Buchmann, C. (2013). *The rise of women: The growing gender gap in education and what it means for American schools*. Russell Sage Foundation.
- Dornbusch, S. M., Ritter, P. L., Leiderman, P. H., Roberts, D. F., & Fraleigh, M. J. (1987). The relation of parenting style to adolescent school performance. *Child development*, 1244-1257.
- Driessen G., Mulder L., Ledoux G., Roeleveld J., Van der Veen I. (2007). Cohortonderzoek COOL 5–18: Basisrapport basisonderwijs, eerste meting 2007/2008. Nijmegen, the Netherlands: ITS.

- Duff, A. (2004). Understanding academic performance and progression of first year-accounting and business economics undergraduates: The role of approaches to learning and prior academic achievement. *Accounting Education: An International Journal*, 13(4), 409–430.
- Eazazi, S. H. (1997). Family sociology with an emphasis on the role, structure, and function of the family in contemporary period. *Tehran: Enlightened Women's Studies*, 16.
- Fatemeh, A., Hossein, B., & Asqar, A. (2006). An epidemiological study of obsessive-compulsive disorder among high school students and its relationship with religious attitudes. *Arch. Iran. Med.* 9(2), 104–107.
- Floyd, F. J., & Olsen, D. L. (2017). Family-peer linkages for children with intellectual disability and children with learning disabilities. *Journal of applied developmental psychology*, 52, 203-211.
- Gamble, W. C., Ramakumar, S., & Diaz, A. (2007). Maternal and paternal similarities and differences in parenting: An examination of Mexican-American parents of young children. *Early Childhood Research Quarterly*, 22(1), 72-88.
- Ginsburg, G. S., & Bronstein, P. (1993). Family factors related to children's intrinsic/extrinsic motivational orientation and academic performance. *Child development*, 64(5), 1461-1474.
- Gonzalez, A. R., Holbein, M. F. D., & Quilter, S. (2002). High school students' goal orientations and their relationship to perceived parenting styles. *Contemporary Educational Psychology*, 27(3), 450-470.
- Gottfried, A. E. (1990). Academic intrinsic motivation in young elementary school children. *Journal of Educational Psychology*, 82(3), 525-538.
- Griga, D. & Hadjar, A. (2014). Migrant Background and Higher Education Participation in Europe: The Effect of the Educational Systems. *European Sociological Review*, 30(3), 275-286.
- Gurland, S.T., & Grolnick, W.S. (2005). Perceived threat, controlling parenting, and children's achievement orientations. *Motivation and Emotion*, 29(2), 103–12
- Hayek, J., Schneider, F., Lahoud, N., Tuani, M., & de Vries, H. (2022). Authoritative parenting stimulates academic achievement, also partly via self-efficacy and intention towards getting good grades. *Plos one*, 17(3), e0265595.
- Heller-Sahlgren, G., & Jordahl, H. (2023). Test scores and economic growth: update and extension. *Applied Economics Letters*, 1-4.
- Horn, D. (2009). Age of selection counts A cross-country analysis of educational institutions. *Educational Research and Evaluation*, 15(4), 343–366.
- Idris, M., Hussain, S., & Ahmad, N. (2020). Relationship between parents' education and their children's academic achievement. *Journal of Arts & Social Sciences*, 7(2), 82-92.
- Jahanbakhshi, Z., & Shabani, F. (2022). Predicting loneliness based on perceived parenting style and self-esteem in adolescents: the moderating role of gender. *Journal of Preventive*, 3(2), 18-31.
- Kashahu, L., Dibra, G., Osmanaga, F., & Bushati, J. (2014). The relationship between parental demographics, parenting styles and student academic achievement. *European scientific journal*, 10(13), 237-251.
- Kaufmann, D., Gesten, E., Lucia, R. C. S., Salcedo, O., Rendina-Gobioff, G., & Gadd, R. (2000). The relationship between parenting style and children's adjustment: The parents' perspective. *Journal of Child and family studies*, 9, 231-245.
- Kim, Y., Calzada, E. J., Barajas-Gonzalez, R. G., Huang, K. Y., Brotman, L. M., Castro, A., & Pichardo, C. (2018). The role of authoritative and authoritarian parenting in the early academic achievement of Latino students. *Journal of Educational Psychology*, 110(1), 119.
- Komarraju, M., & Nadler, D. (2013). Self-efficacy and academic achievement: Why do implicit beliefs, goals, and effort regulation matter? *Learning and individual differences*, 25, 67-72.
- Larson, R. W., & Rusk, N. (2011). Intrinsic motivation and positive development. *Advances in child development and behavior*, 41, 89-130.
- Leseman, P., Mulder, H., Verhagen, J., Broekhuizen, M., Van Schaik, S., & Slot, P. (2017). Effectiveness of Dutch targeted preschool education policy for disadvantaged children: Evidence from the pre-COOL study. In H. P. Blossfeld, N. Kulic, J. Skopek, & M. Triventi (Eds.), *Childcare, early education, and social inequality—An international perspective* (pp. 173–193). Cheltenham, England: Edward Elgar.
- Li, Z., & Qiu, Z. (2018). How does family background affect children's educational achievement? Evidence from Contemporary China. *The Journal of Chinese Sociology*, 5(1), 1-21

- Lin, Y. C., & Billingham, R. E. (2014). Relationship between parenting styles and gender role identity in college students. *Psychological Reports, 114*(1), 250-271.
- Lord, F. M. (1953). An application of confidence intervals and of maximum likelihood to the estimation of an examinee's ability. *Psychometrika, 18*, 57-76.
- Lord, F. M. (1980). Applications of item response theory to practical testing problems. Hillsdale, NJ: Lawrence Erlbaum
- Lord, F. M., & Novick, M. R. (1968). *Statistical theories of mental test scores*. Reading, MA: Addison-Wesley.
- Maehr, M. L. (1984). Meaning and motivation: Toward a theory of personal investment. In R. Ames, & C. Ames (Eds.), *Research on motivation in education* (pp. 115-144). New York: Academic Press.
- Marty, A. H., Readdick, C. A., & Walters, C. M. (2005). Supporting secure parent-child attachments: The role of the non-parental caregiver. *Early child development and care, 175*(3), 271-283.
- Masud, H., Thurasamy, R., & Ahmad, M. S. (2015). Parenting styles and academic achievement of young adolescents: A systematic literature review. *Quality & quantity, 49*, 2411-2433.
- Masud, H., Ahmad, M. S., Jan, F. A., & Jamil, A. (2016). Relationship between parenting styles and academic performance of adolescents: mediating role of self-efficacy. *Asia Pacific Education Review, 17*, 121-131.
- McInerney, D.M. & Ali, J. (2006). Multidimensional and hierarchical assessment of school motivation: cross-cultural validation. *Educational Psychology, 26* (6), 717-734
- McInerney, D. M. & Sinclair, K. E. (1991). Cross-cultural model testing inventory of school motivation. *Educational and psychological measurement, 51*, 123-133.
- Melhuish, E., Ereky-Stevens, K., Petrogiannis, K., Ariescu, A., Penderi, E., Rentzou, K., Tawell, A., Slot, P. L., Broekhuizen, M., & Leseman, P. (2015). *A review of research on the effects of early childhood education and care (ECEC) upon child development*. CARE-report D4.1. Oxford, England: Department of Education, University of Oxford. Retrieved from <http://ecec-care.org>
- Mensah, M. K., & Kuranchie, A. (2013). Influence of parenting styles on the social development of children. *Academic Journal of Interdisciplinary Studies, 2*(3), 123.
- Morris, A. S., Silk, J. S., Steinberg, L., Myers, S. S., & Robinson, L. R. (2007). The role of the family context in the development of emotion regulation. *Social development, 16*(2), 361-388.
- Murayama, K., Pekrun, R., Suzuki, M., Marsh, H. W., & Lichtenfeld, S. (2016). Don't aim too high for your kids: Parental overaspiration undermines students' learning in mathematics. *Journal of Personality and Social Psychology, 111*(5), 766-779.
- Notten, N., Kieft, M., Samenleving, L. G., & Zwolle, H. W. (2022). Kansenongelijkheid in het onderwijs: met de blik op het oosten.
- Olla, M. B., Daulima, N. H. C., & Putri, Y. S. E. (2018). The experience of parents implementing authoritarian parenting for their school-age children. *Enfermeria clinica, 28*, 122-125.
- Onderwijsinspectie. (2019). Rapport De Staat van het Onderwijs 2019. Onderwijsverslag 2017/2018. Retrieved may 3, 2023, from: [Rapport De Staat van het Onderwijs 2019 | Onderwijsverslag over 2017/2018 | Rapport | Inspectie van het onderwijs \(onderwijsinspectie.nl\)](https://www.onderwijsinspectie.nl/rapport-de-staat-van-het-onderwijs-2019)
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of educational research, 66*(4), 543-578.
- Patall, E. A., Cooper, H., & Robinson, J. C. (2008). The effects of choice on intrinsic motivation and related outcomes: a meta-analysis of research findings. *Psychological Bulletin, 134*(2), 270-300.
- Parra, Á., Sánchez-Queija, I., García-Mendoza, M. D. C., Coimbra, S., Egidio Oliveira, J., & Díez, M. (2019). Perceived parenting styles and adjustment during emerging adulthood: A cross-national perspective. *International Journal of environmental research and public health, 16*(15), 2757.
- Peetsma, T. T. D., Wagenaar, E., & Kat, E. de (2001). School motivation, future time perspective and well-being of high school students in segregated and integrated schools in the Netherlands and the role of ethnic self-description. In J. Koppen, I. Lunt, & C. Wulf (Eds.). *Education in Europe; Culture, Values, Institutions in transition* (pp. 54-74). Münster/New York: Waxmann.
- Perez-Gramaje, A. F., Garcia, O. F., Reyes, M., Serra, E., & Garcia, F. (2019). Parenting styles and aggressive adolescents: Relationships with self-esteem and personal maladjustment. *European Journal of Psychology Applied to Legal Context, 12*(1), 1-10.
- Pinquart, M., & Gerke, D. C. (2019). Associations of parenting styles with self-esteem in children and

- adolescents: A meta-analysis. *Journal of Child and Family Studies*, 28, 2017-2035.
- Pinquart, M., & Kauser, R. (2018). Do the associations of parenting styles with behavior problems and academic achievement vary by culture? A meta-analysis. *Cultural Diversity and Ethnic Minority Psychology*, 24(1), 75–100. <https://doi.org/10.1037/cdp0000149>
- Reitman, D., Rhode, P., Hupp, S. D. A., & Altobello, C. (2002). Development and validation of the Parental Authority Questionnaire–Revised. *Journal of Psychopathology and Behavioral Assessment*, 24, 119-127.
- Rivers, J., Mullis, A. K., Fortner, L. A., & Mullis, R. L. (2012). Relationships between parenting styles and the academic performance of adolescents. *Journal of Family Social Work*, 15(3), 202-216.
- Rogers, M. A., Theule, J., Ryan, B. A., Adams, G. R., & Keating, L. (2009). Parental involvement and children's school achievement: Evidence for mediating processes. *Canadian Journal of School Psychology*, 24(1), 34-57.
- Rosen, L. D., Cheever, N. A., & Carrier, L. M. (2008). The association of parenting style and child age with parental limit setting and adolescent MySpace behavior. *Journal of Applied Developmental Psychology*, 29(6), 459-471.
- Scheeren, L., & Bol, T. (2022). Gender inequality in educational performance over the school career: The role of tracking. *Research in Social Stratification and Mobility*, 77, 100661.
- Schunk, D. H., & Pajares, F. (2009). Self-Efficacy Theory. In *Handbook of motivation at school* (pp. 49-68). Routledge.
- Steinberg, L., Lamborn, S. D., Dornbusch, S. M., & Darling, N. (1992). Impact of parenting practices on adolescent achievement: Authoritative parenting, school involvement, and encouragement to succeed. *Child development*, 63(5), 1266-1281.
- Won, S., & Shirley, L. Y. (2018). Relations of Perceived parental autonomy support and control with adolescents' academic time management and procrastination. *Learning and Individual Differences*, 61, 205-215.
- Tam, C. L., Chong, A., Kadirvelu, A., & Khoo, Y. T. (2012). Parenting styles and self-efficacy of adolescents: Malaysian scenario. *Global Journal of Human Social Sciences (GJHSS)*, 12(14) (Version 1), 19-25.
- Terfassa, A. D. (2018). The relationship between parental education and children's academic performance: The case of Genda Tesfa primary school, Dire Dawa. *Res Hum Soc Sci*, 8(5), 10-6.
- Turner, E. A., Chandler, M., & Heffer, R. W. (2009). The influence of parenting styles, achievement motivation, and self-efficacy on academic performance in college students. *Journal of college student development*, 50(3), 337-346.
- Turner, L. A., & Johnson, B. (2003). A model of mastery motivation for at-risk preschoolers. *Journal of educational psychology*, 95(3), 495-505.
- Van de Werfhorst, H. G. (2019). Early tracking and social inequality in educational attainment: educational reforms in 21 European countries. *American Journal of Education*, 126(1), 65-99.
- Van de Werfhorst, A.G. & Heath, A. (2019). Selectivity of Migration and the Educational Disadvantages of Second-Generation Immigrants in Ten Host Societies. *European Journal of Population*, 35(2), 347–378.
- Van de Werfhorst, H. G., & Mijs, J. J. B. (2010). Achievement Inequality and the Institutional Structure of Educational Systems: A Comparative Perspective. *Annual Review of Sociology*, 36(1), 407–428.
- Van der Werf, W. M., Slot, P. L., Kenis, P. N., & Leseman, P. P. M. (2021). Inclusive practice and quality of education and care in the Dutch hybrid early childhood education and care system. *International Journal of Child Care and Education Policy*, 15, 1-29.
- Vogels, R., Turkenburg, M., & Herweijer, L. (2021). *Samen of gescheiden naar school: De betekenis van sociale scheiding en ontmoeting in het voortgezet onderwijs*. Sociaal Cultureel Planbureau. <https://www.scp.nl/publicaties/publicaties/2021/02/04/samen-of-gescheiden-naar-school>.
- Weiss, L. H., & Schwarz, J. C. (1996). The relationship between parenting types and older adolescents' personality, academic achievement, adjustment, and substance use. *Child development*, 67(5), 2101-2114.
- Woolfolk, A. (2011). *Educational Psychology. Active Learning Edition (3rd ed.)*. Boston, MA: Allyn & Bacon.
- Wray-Lake, L., Crouter, A. C., & McHale, S. M. (2010). Developmental patterns in decision-making autonomy across middle childhood and adolescence: European American parents' perspectives. *Child development*, 81(2), 636-651.
- Wu, M. (2005). The role of plausible values in large-scale surveys. *Studies in Educational Evaluation*, 31, 114-128

Yoshikawa, H., Weiland, C., Brooks-Gunn, J., Burchinal, M. R., Espinosa, L. M., Gormley, W. T., Ludwig, J., Magnuson, K. A., Phillips, D., Zaslow, M. J. (2013). *Investing in our future: The evidence on preschool education*. Chapel Hill, North Carolina: Frank Porter Graham Center/Society for Research in Child Development. Retrieved from <https://fpg.unc.edu/node/6419>

Zee, M., Rudasill, K. M., & Bosman, R. J. (2021). A cross-lagged study of students' motivation, academic achievement, and relationships with teachers from kindergarten to 6th grade. *Journal of Educational Psychology, 113*(6), 1208

Zijsling, D., Keuning, J., M.-A. Keizer-Mittelhaëuser, Naayer, H. & Timmermans, A. C. (2017). Cohortonderzoek COOL5-18: Technisch rapport meting VO-3 in 2014. Groningen: GION Onderwijs/Onderzoek

7. Appendix

7.1 Syntax

* Encoding: UTF-8.

*****creating variables.**

****control variables.**

***education.**

FREQUENCIES hooplg_z.

Recode hooplg_z (1 thru 10 = 0) (11 thru 12 = 1) (ELSE = SYSMIS) INTO edu.

variable labels edu 'educational level'.

value labels edu 0' low' 1'high'.

descriptives edu.

FREQUENCIES edu.

*** age.**

Descriptives leeftijd.

***gender.**

recode sekse (1=0) (2=1) into sex.

value labels sex 0'male' 1'female'.

frequencies sex.

*** ethnic background.**

An A for parenting: the impact of parenting styles on school performance. Master Thesis by Trijntje van de Wouw.

recode gbl_z (1=1) (2 thru 16=0) (else=sysmis) into ethnicbackground.

value labels ethnicbackground 1'the netherlands' 0'other'.

frequencies ethnicbackground.

** dependent variable.

****Dependent variable.**

*** New variable: school performance.**

DATASET ACTIVATE DataSet1.

RELIABILITY

/VARIABLES=bgl_bank3 eng_bank3 tvz_bank3 wis_bank3

/SCALE('abilityscore') ALL

/MODEL=ALPHA

/STATISTICS=DESCRIPTIVE SCALE CORR

/SUMMARY=TOTAL.

COMPUTE abilityscore= (bgl_bank3 + eng_bank3 + tvz_bank3 + wis_bank3) / 4.

execute.

variable labels abilityscore 'ability score on 4 domains'.

frequencies abilityscore.

descriptives abilityscore.

****independent variable**

*** New variable: parenting styles.**

*** AUTHORITATIVE.**

recode ov_aut1 (1 thru 2=0) (3 thru 4=1) (5=0) (else=sysmis) into Auth_1.

recode ov_aut2 (1 thru 2=0) (3 thru 4=1) (5=0) (else=sysmis) into Auth_2.

recode ov_aut3 (1 thru 2=0) (3 thru 4=1) (5=0) (else=sysmis) into Auth_3.

recode ov_aut4 (1 thru 2=0) (3 thru 4=1) (5=0) (else=sysmis) into Auth_4.

recode ov_aut5(1 thru 2=0) (3 thru 4=1) (5=0) (else=sysmis) into Auth_5.

recode ov_aut6 (1 thru 2=0) (3 thru 4=1) (5=0) (else=sysmis) into Auth_6.

recode ov_aut7 (1 thru 2=0) (3 thru 4=1) (5=0) (else=sysmis) into Auth_7.

recode ov_aut8 (1 thru 2=0) (3 thru 4=1) (5=0) (else=sysmis) into Auth_8.

recode ov_aut9 (1 thru 2=0) (3 thru 4=1) (5=0) (else=sysmis) into Auth_9.

COMPUTE AUTHORITATIVE = (Auth_1 + Auth_2 + Auth_3 + Auth_4 + Auth_5 + Auth_6 + Auth_7+
Auth_8 + Auth_9)/9.

execute.

FREQUENCIES AUTHORITATIVE.

***AUTHORITARIAN.**

recode ov_aut1 (1 thru 2=1) (3 thru 5=0) (else=sysmis) into aut_1.

recode ov_aut2 (1 thru 2=1) (3 thru 5=0) (else=sysmis) into aut_2.

recode ov_aut3 (1 thru 2=1) (3 thru 5=0) (else=sysmis) into aut_3.

recode ov_aut4 (1 thru 2=1) (3 thru 5=0) (else=sysmis) into aut_4.

recode ov_aut5 (1 thru 2=1) (3 thru 5=0) (else=sysmis) into aut_5.

recode ov_aut6 (1 thru 2=1) (3 thru 5=0) (else=sysmis) into aut_6.

recode ov_aut7 (1 thru 2=1) (3 thru 5=0) (else=sysmis) into aut_7.

recode ov_aut8 (1 thru 2=1) (3 thru 5=0) (else=sysmis) into aut_8.

recode ov_aut9 (1 thru 2=1) (3 thru 5=0) (else=sysmis) into aut_9.

COMPUTE AUTHORITARIAN= (Aut_1 + Aut_2 + Aut_3 + Aut_4+ Aut_5 + Aut_6 + Aut_7+ Aut_8+ aut_9) /9.

execute.

frequencies AUTHORITARIAN.

***PERMISSIVE.**

recode ov_aut1 (1 thru 4=0) (5=1) (else=sysmis) into Per_1.

recode ov_aut2 (1 thru 4=0) (5=1) (else=sysmis) into Per_2.

recode ov_aut3 (1 thru 4=0) (5=1) (else=sysmis) into Per_3.

recode ov_aut4 (1 thru 4=0) (5=1) (else=sysmis) into Per_4.

recode ov_aut5 (1 thru 4=0) (5=1) (else=sysmis) into Per_5.

recode ov_aut6 (1 thru 4=0) (5=1) (else=sysmis) into Per_6.

recode ov_aut7 (1 thru 4=0) (5=1) (else=sysmis) into Per_7.

recode ov_aut8 (1 thru 4=0) (5=1) (else=sysmis) into Per_8.

recode ov_aut9 (1 thru 4=0) (5=1) (else=sysmis) into Per_9.

COMPUTE PERMISSIVE= (Per_1 + Per_2+ Per_3+ Per_4 + Per_5 + Per_6+ Per_7+ Per_8+ Per_9)/9.

execute.

frequencies PERMISSIVE.

descriptives AUTHORITARIAN AUTHORITATIVE PERMISSIVE.

*****mediating variables**

****self-efficacy.**

COMPUTE efficacy = means (lv_sef1, lv_sef2, lv_sef3, lv_sef4, lv_sef5, lv_sef6).

execute.

frequencies efficacy.

descriptives efficacy.

DATASET ACTIVATE DataSet1.

RELIABILITY

/VARIABLES=lv_sef1 lv_sef2 lv_sef3 lv_sef4 lv_sef5 lv_sef6

/SCALE('ALL VARIABLES') ALL

/MODEL=ALPHA.

****motivation.**

COMPUTE motivation = means (lv_tsk, lv_eff, lv_comp, lv_soco, lv_sopo, lv_aff).

execute.

frequencies motivation.

descriptives motivation.

RELIABILITY

/VARIABLES=lv_tsk, lv_eff, lv_comp, lv_soco, lv_sopo, lv_aff

/SCALE('LV_TSK') ALL

/MODEL=ALPHA.

****student teacher relationship.**

Recode lv_wdo7 (5=1) (4=2) (3=3) (2=4) (1=5) (ELSE = SYSMIS) INTO LV_WDO7_rec.

variable labels LV_WDO7_rec 'I would rather have other teachers'.

value labels LV_WDO7_rec 5 'not true at all' 4 'not true' 3 'sometimes true' 2 'agree' 1 'totally agree'.

An A for parenting: the impact of parenting styles on school performance. Master Thesis by Trijntje van de Wouw.

descriptives LV_WDO7_rec.

FREQUENCIES LV_WDO7_REC.

COMPUTE studentteacher = means (lv_wdo1, lv_wdo2, lv_wdo3, lv_wdo4, lv_wdo5, lv_wdo6, LV_WDO7_rec).

execute.

variable labels studentteacher 'student teacher relationship'.

frequencies studentteacher.

descriptives studentteacher.

RELIABILITY

/VARIABLES=lv_wdo1 lv_wdo2 lv_wdo3 lv_wdo4 lv_wdo5 lv_wdo6 LV_WDO7_rec

/SCALE('LV_TSK') ALL

/MODEL=ALPHA.

****descriptions variables prepared for thesis.**

DATASET ACTIVATE DataSet1.

DESCRIPTIVES VARIABLES= abilityscore AUTHORITARIAN AUTHORITATIVE PERMISSIVE efficacy motivation studentteacher edu sex leeftijd ethnicbackground

/STATISTICS=MEAN STDDEV RANGE MIN MAX

**** regression analysis table 1 authoritative parenting.**

***MODEL 1 main effect.**

An A for parenting: the impact of parenting styles on school performance. Master Thesis by Trijntje van de Wouw.

Regression /dep=abilityscore /METHOD = ENTER AUTHORITATIVE.

***MODEL 2 main effect of authoritative parenting with control variables.**

Regression /dep = abilityscore /METHOD = ENTER edu leeftijd sex ethnicbackground AUTHORITATIVE.

****Mediation.**

*** MODEL 3 self-efficacy.**

Regression /dep = abilityscore /METHOD = ENTER edu leeftijd sex ethnicbackground AUTHORITATIVE efficacy.

*** MODEL 4 intrinsic motivation.**

Regression /dep = abilityscore /METHOD = ENTER edu leeftijd sex ethnicbackground AUTHORITATIVE motivation.

***MODEL 5 student-teacher relationship.**

Regression /dep = abilityscore /METHOD = ENTER edu leeftijd sex ethnicbackground AUTHORITATIVE studentteacher.

**** regression analysis table 2 authoritarian parenting.**

***MODEL 1 main effect.**

Regression /dep=abilityscore /METHOD = ENTER authoritarian.

***MODEL 2 main effect of authoritarian parenting with control variables.**

Regression /dep = abilityscore /METHOD = ENTER edu leeftijd sex ethnicbackground AUTHORITARIAN.

An A for parenting: the impact of parenting styles on school performance. Master Thesis by Trijntje van de Wouw.

****Mediation.**

*** MODEL 3 self-efficacy.**

Regression /dep = abilityscore /METHOD = ENTER edu leeftijd sex ethnicbackground AUTHORITARIAN efficacy.

*** MODEL 4 intrinsic motivation.**

Regression /dep = abilityscore /METHOD = ENTER edu leeftijd sex ethnicbackground AUTHORITARIAN motivation.

***MODEL 5 student-teacher relationship.**

Regression /dep = abilityscore /METHOD = ENTER edu leeftijd sex ethnicbackground AUTHORITARIAN studentteacher.

**** regression analysis table 3 Permissive parenting.**

***MODEL 1 main effect.**

Regression /dep=abilityscore /METHOD = ENTER PERMISSIVE.

***MODEL 2 main effect of PERMISSIVE parenting with control variables.**

Regression /dep = abilityscore /METHOD = ENTER edu leeftijd sex ethnicbackground PERMISSIVE.

****Mediation.**

*** MODEL 3 self-efficacy.**

Regression /dep = abilityscore /METHOD = ENTER edu leeftijd sex ethnicbackground PERMISSIVE efficacy.

*** MODEL 4 intrinsic motivation.**

Regression /dep = abilityscore /METHOD = ENTER edu leeftijd sex ethnicbackground PERMISSIVE motivation.

***MODEL 5 student-teacher relationship.**

An A for parenting: the impact of parenting styles on school performance. Master Thesis by Trijntje van de Wouw.

Regression /dep = abilityscore /METHOD = ENTER edu leeftijd sex ethnicbackground PERMISSIVE studentteacher.

7.2 CHECKLIST ETHICAL AND PRIVACY ASPECTS OF RESEARCH

INSTRUCTION

This checklist should be completed for every research study that is conducted at the Department of Public Administration and Sociology (DPAS). This checklist should be completed *before* commencing with data collection or approaching participants. Students can complete this checklist with help of their supervisor.

This checklist is a mandatory part of the empirical master's thesis and has to be uploaded along with the research proposal.

The guideline for ethical aspects of research of the Dutch Sociological Association (NSV) can be found on their website (http://www.nsv-sociologie.nl/?page_id=17). If you have doubts about ethical or privacy aspects of your research study, discuss and resolve the matter with your EUR supervisor. If needed and if advised to do so by your supervisor, you can also consult Dr. Bonnie French, coordinator of the Sociology Master's Thesis program.

PART I: GENERAL INFORMATION

Project title: Thesis on parenting styles and academic achievements

Name, email of student: Trijntje van de Wouw, 668114tw@student.eur.nl

Name, email of supervisor: Gabriele Mari, mari@essb.eur.nl

Start date and duration: 02-01-23, duration: 6 months

Is the research study conducted within DPAS

YES - NO

An A for parenting: the impact of parenting styles on school performance. Master Thesis by Trijntje van de Wouw.

If 'NO': at or for what institute or organization will the study be conducted?

(e.g. internship organization)

PART II: HUMAN SUBJECTS

1. Does your research involve human participants. **YES - NO**

If 'NO': skip to part V.

If 'YES': does the study involve medical or physical research? **YES - NO**

Research that falls under the Medical Research Involving Human Subjects Act (WMO) must first be submitted to an accredited medical research ethics committee or the Central Committee on Research Involving Human Subjects (CCMO).

2. Does your research involve field observations without manipulations
that will not involve identification of participants. **YES - NO**

If 'YES': skip to part IV.

3. Research involving completely anonymous data files (secondary
data that has been anonymized by someone else). **YES - NO**

If 'YES': skip to part IV.

PART III: PARTICIPANTS

1. Will information about the nature of the study and about what participants can expect during the study be withheld from them? YES - NO
2. Will any of the participants not be asked for verbal or written 'informed consent,' whereby they agree to participate in the study? YES - NO
3. Will information about the possibility to discontinue the participation at any time be withheld from participants? YES - NO
4. Will the study involve actively deceiving the participants? YES - NO
Note: almost all research studies involve some kind of deception of participants. Try to think about what types of deception are ethical or non-ethical (e.g. purpose of the study is not told, coercion is exerted on participants, giving participants the feeling that they harm other people by making certain decisions, etc.).
5. Does the study involve the risk of causing psychological stress or negative emotions beyond those normally encountered by participants? YES - NO
6. Will information be collected about special categories of data, as defined by the GDPR (e.g. racial or ethnic origin, political opinions, religious or philosophical beliefs, trade union membership, genetic data, biometric data for the purpose of uniquely identifying a person, data concerning mental or physical health, data concerning a person's sex life or sexual orientation)? YES - NO
7. Will the study involve the participation of minors (<18 years old) or other groups that cannot give consent? YES - NO
8. Is the health and/or safety of participants at risk during the study? YES - NO
9. Can participants be identified by the study results or can the confidentiality of the participants' identity not be ensured? YES - NO
10. Are there any other possible ethical issues with regard to this study? YES - NO

If you have answered 'YES' to any of the previous questions, please indicate below why this issue is unavoidable in this study.

What safeguards are taken to relieve possible adverse consequences of these issues (e.g., informing participants about the study afterwards, extra safety regulations, etc.).

Are there any unintended circumstances in the study that can cause harm or have negative (emotional) consequences to the participants? Indicate what possible circumstances this could be.

Please attach your informed consent form in Appendix I, if applicable.

Continue to part IV.

PART IV: SAMPLE

Where will you collect or obtain your data?

COOL 5-18

3-VO collected in 2013-2014.

Note: indicate for separate data sources.

What is the (anticipated) size of your sample?

_2060

N _____

Note: indicate for separate data sources.

What is the size of the population from which you will sample?

16292 N

Note: indicate for separate data sources.

Continue to part V.

Part V: Data storage and backup

Where and when will you store your data in the short term, after acquisition?

SPSS

Note: indicate for separate data sources, for instance for paper-and pencil test data, and for digital data files.

Who is responsible for the immediate day-to-day management, storage and backup of the data arising from your research?

Myself

How (frequently) will you back-up your research data for short-term data security?

Monthly

In case of collecting personal data how will you anonymize the data?

Note: It is advisable to keep directly identifying personal details separated from the rest of the data. Personal details are then replaced by a key/ code. Only the code is part of the database with data and the list of respondents/research subjects is kept separate.

PART VI: SIGNATURE

Please note that it is your responsibility to follow the ethical guidelines in the conduct of your study. This includes providing information to participants about the study and ensuring confidentiality in storage and use of personal data. Treat participants respectfully, be on time at appointments, call participants when they have signed up for your study and fulfill promises made to participants.

Furthermore, it is your responsibility that data are authentic, of high quality and properly stored. The principle is always that the supervisor (or strictly speaking the Erasmus University Rotterdam) remains owner of the data, and that the student should therefore hand over all data to the supervisor.

Hereby I declare that the study will be conducted in accordance with the ethical guidelines of the Department of Public Administration and Sociology at Erasmus University Rotterdam. I have answered the questions truthfully.

Name student: Trijntje van de Wouw

Name (EUR) supervisor:
Gabriele Mari

Date: 20-03-2023

Date: 24-03-2023

