# The Relationship between Stress and School Absenteeism

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This thesis has been written as a study assignment under the supervision of an Utrecht University teacher. Ethical permission has been granted for this thesis project by the ethics board of the Faculty of Social and Behavioral Sciences, Utrecht University, and the thesis has been assessed by two university teachers. However, the thesis has not undergone a thorough peer-review process so conclusions and findings should be read as such.

## Abstract

### English

Research has shown that stress is related to higher rates of absenteeism among adolescents. The present study investigated to what extent the relationship between stress and school absenteeism is affected by social support and two types of perfectionism, adaptive perfectionism and maladaptive perfectionism, among adolescents in the Netherlands. Data of the cross-sectional quantitative 'Peilstation 2019' survey research were used. The sample consisted of secondary education students ($N$ = 5527, 48.9% female) between 10 and 16 years old. The results of a linear regression analysis with absenteeism as dependent variable showed that independent variable stress was related to higher rates of absenteeism. However, independent variables adaptive perfectionism, maladaptive perfectionism and social support did not have a notable interaction with the relationship between stress and absenteeism. Regardless, social support and perfectionism were related to stress and school absenteeism. Both types of perfectionism were related to more stress, whereas social support was related to less stress. Adaptive perfectionism was also related to increased school absenteeism, whereas social support was related to less absenteeism. Future research should study the dimensions of perfectionism and how those relate to stress, school absenteeism and social support.

*Key words: school absenteeism, stress, social support, adaptive perfectionism, maladaptive perfectionism*


### Dutch

Onderzoek heeft aangetoond dat stress is gerelateerd aan meer schoolverzuim onder jongeren. In dit onderzoek wordt bestudeerd in hoeverre de relatie tussen stress en schoolverzuim wordt beïnvloed door adaptief perfectionisme, maladaptief perfectionisme en sociale steun onder jongeren in Nederland. Data van het cross-sectioneel 'Peilstation 2019' enquête onderzoek is gebruikt. De steekproef populatie bestond uit leerlingen uit het voortgezet onderwijs ($N$ = 5527, 48,9% vrouw) tussen de 10 en 16 jaar oud. Uit de resultaten van een lineaire regressieanalyse met afhankelijke variabele schoolverzuim bleek dat onafhankelijke variabele stress was gerelateerd aan meer schoolverzuim. Er bleek geen significant effect te zijn van onafhankelijke variabelen adaptief perfectionisme, maladaptief perfectionisme en sociale steun op de relatie tussen stress en schoolverzuim. Sociale steun en perfectionisme waren wel gerelateerd aan meer stress en schoolverzuim. Beide types perfectionisme waren gerelateerd aan meer stress, terwijl sociale steun was gerelateerd aan minder stress. Adaptief perfectionisme was ook gerelateerd aan meer schoolverzuim, terwijl sociale steun was gerelateerd aan minder schoolverzuim. Toekomstig onderzoek zou de dimensies van

perfectionisme en de relatie van deze dimensies aan stress, schoolverzuim en sociale steun verder kunnen verkennen.
*Sleutelwoorden: schoolverzuim, stress, sociale steun, adaptief perfectionisme, maladaptief perfectionisme*

**Contents**

## Introduction

School absenteeism has become an important topic in recent years (Doornwaard et al., 2021), as it has been associated with negative outcomes for adolescents. First, it has a negative impact on adolescents' academic performance (Gottfried, 2019). Absenteeism also increases the school drop out risk of these adolescents (Ogresta et al., 2020) and, therefore, there have also been lower graduation rates (Zaff et al., 2017). In turn, this reduces adolescents' chances for finding fitting jobs and stable careers (Sum et al., 2009). Thus, it is important to find out how school attendance can be improved to decrease these risks. Although research on the topic of absenteeism has been conducted regarding depression, anxiety and stress, not all risk factors have been identified. Therefore, both Fortin et al. (2006) and Gottfried (2019) called for more research on the characteristics of adolescents at risk for absenteeism.

One factor that will be considered is stress, which is particularly important, as adolescents have high stress reactivity (Romeo, 2013; Van den Bos et al., 2014). This means that stressors are likely to have a negative effect on adolescents (Romeo, 2013; Van den Bos et al., 2014). Therefore, it plays an exceptionally important role in school absenteeism. Dupéré et al. (2015) explained that, from a life course perspective, school absenteeism relates to preexisting factors and stressors. Therefore, apart from stress as a predicting factor of absenteeism, we will consider interacting factors social support and perfectionism, as will be explained in later sections. We will investigate to what extent the relationship between stress and school absenteeism is influenced by perfectionism and social support.

## Theoretical Substantiation and Empirical Evidence

### Stress and School Absenteeism

Firstly, research has been conducted on the effects of stress on school absenteeism. Ogresta et al. (2020) explained that stress increases the risk of school absenteeism. Even adolescents who previously had little academic issues are prone to absenteeism due to stress. Moreover, once absenteeism started, it is difficult for students to return to school, as they are confronted by how far they have fallen behind (Kipp & Clark, 2021; Ogresta et al., 2020). Social cognitive theory (SCT) suggests this has a negative effect on self-efficacy, entailing one's beliefs about being capable of completing a certain activity (Bandura, 1997; Dupéré et al., 2015), as adolescents do not feel capable of completing all their homework (Bandura, 2006; Kipp & Clark, 2021; Ogresta et al., 2020). Consequently, agency is low as well, which entails that adolescents do not feel as though they can make their own decisions (Bandura, 1986; Bandura, 2006; Dupéré et al., 2015). This increases the risk of school absenteeism among adolescents (Bandura, 2006; Kipp & Clark, 2021; Ogresta et al., 2020).

The stress leading to school absenteeism is not necessarily school stress. Dupéré et al. (2015; 2018) have emphasized how stressful events leading to school absenteeism might also come from factors outside of school. These factors can be derived from the individual, but also the individual's environment (Bandura, 1986). For example, changes in adolescents' homes might cause such stress (Doornwaard et al., 2021; Ogresta et al., 2020; Peeters et al., 2022). Thus, stress is expected to increase the likeliness of school absenteeism.

H1: Stress is positively related to school absenteeism among adolescents.

**Perfectionism**

Furthermore, perfectionism and having high expectations is associated with increased stress and school absenteeism (Peeters et al., 2022; Walburg, 2014). Interestingly, perfectionism is both a risk factor and a protective factor regarding the relationship between stress and absenteeism (Yang & Chen, 2016). Perfectionistic students were found to have less stress. However, stress becomes a risk factor for perfectionistic students in later stages (Wutrich et al., 2020). Perhaps, students who experience perfectionism are less likely to experience stress at a younger age, while this stress increases as they get older. Or perhaps, the type of perfectionism students feel changes with age.

In fact, different effects of perfectionism on the relationship between stress and absenteeism have been identified. Adaptive perfectionism, which embodies striving to reach one's own standards, allows individuals to adapt their personal expectations to ensure these are realistic (Mallision-Howard et al., 2019; Spagnoli et al., 2021). As adolescents are able to make their own choices, agency and self-efficacy are high (Bandura, 1986; Bandura, 2006; Dupéré et al., 2015; Ponton & Rhea, 2013). The presence of stressors in an adolescent's life are related to higher rates of absenteeism (Bandura, 2006; Kipp & Clark, 2021; Ogresta et al., 2020). However, in case the adolescent also experiences adaptive perfectionism, the adolescent can adapt their personal expectations, thereby buffering the relationship between stress and absenteeism. In this case, agency and self-efficacy are high and adolescents are not more or less likely to fall into a pattern of school absenteeism than adolescents who experience less adaptive perfectionism (Anderson et al., 2019; Bandura, 2006; Dupéré et al., 2015; Mallision-Howard et al., 2019; Mendoza Cazarez, 2019; Ogresta et al., 2020; Spagnoli et al., 2021).

Meanwhile, maladaptive perfectionism, which entails evaluative perfectionistic concerns, does influence the relationship between stress and absenteeism (Mallision-Howard et al., 2019; Spagnoli et al., 2021). From the perspective of SCT, maladaptive perfectionism offers little agency. In this case, an adolescent student cannot alter the expectations of the environment (Bandura, 2006). Therefore, the student cannot make choices about their education in this

regard. This causes low self-efficacy (Bandura, 2006), as adolescents are more likely to feel like they cannot uphold the standards of others. Therefore, they cannot buffer the effects of stress by adapting expectations, as these expectations are external to them. Thus, adolescents who experience more maladaptive perfectionism are more likely to fall into a pattern of school absenteeism due to stress, than adolescents who experience less maladaptive perfectionism (Anderson et al., 2019; Bandura, 2006; Dupéré et al., 2016; Mallision-Howard et al., 2019; Mendoza Cazarez, 2019; Ogresta et al., 2020; Spagnoli et al., 2021).

H2: Adolescents who higher rates of experience maladaptive perfectionism are more likely to be absent from school due to stress than adolescent students who experience lower rates of maladaptive perfectionism.

H3: Adolescents who experience higher rates of adaptive perfectionism are not more likely to be absent from school due to stress than students who experience lower rates of adaptive perfectionism.

**Social Support**

According to the SCT, environmental factors are important with regards to school absenteeism (Dupéré et al., 2015). Therefore, adolescents' social relationships will also be considered. For instance, Fortin et al. (2006) showed that adolescents are more likely to be absent from school when their parents show a lack of support and involvement in their education. Furthermore, research indicated the importance of parental support for school engagement (Dupéré et al., 2015; Dupéré et al., 2018; Elliot & Place, 2019; Quin et al., 2018). Research showed that peer support also protects adolescents from school absenteeism. In fact, peer support causes adolescents to be more engaged with their education (Dupéré et al., 2015; Dupéré et al., 2018; Elliot & Place, 2019; Quin et al., 2018). Therefore, we expect that experiencing more social support will be related to less school absenteeism.

We will also consider the interplay of social support with stress and school absenteeism, as experiencing social support buffers the effects of stress on school absenteeism (Lee & Goldstein, 2015). Meanwhile, a lack of social support can strengthen the relationship between stress and school absenteeism (Ogresta et al., 2020; Peeters, et al., 2022). Thus, social support from peers and parents has the potential to moderate the relationship between stress and school absenteeism.

H4: Social support is negatively related to school absenteeism among adolescents.

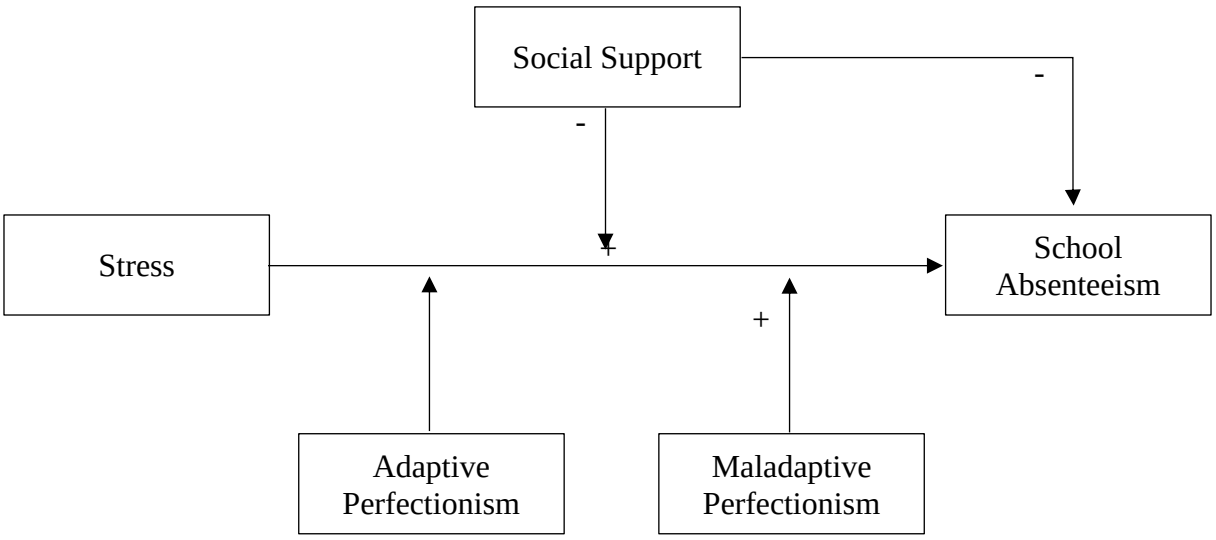
H5: Adolescents who experience more social support are less likely to be absent from school due to stress than adolescents who experience less social support.

**Explanatory Model**

To conclude the empirical review, the aim of this research is to further explore the relationship between stress and school absenteeism while considering the moderating variables social support and perfectionism. The identified hypotheses have been visualized in Figure 1.

**Figure 1**

*Explanatory model of the relationship between stress and school absenteeism among adolescents*




## Method

**Sample**

This study is based on existing data from the 'Peilstation 2019' research (Kleinjan et al., 2020). Quantitative cross-sectional research was conducted by distributing a survey. The random sample consisted of $N$ = 5527 secondary education students (48.9% female) between *min* = 10 and *max* = 16 years old ($M$ = 13.90, $SD$ = 1.38). Most participants were in the first ($n$ = 1248, 22.6%), second ($n$ = 1253, 22.6%), third ($n$ = 1271, 23%) or fourth class ($n$ = 1315, 23.8%) of secondary school. Only some were in the fifth ($n$ = 427, 7.7%) or sixth class ($n$ = 18, .3%). Regarding educational level, 27.3% of participants followed pre-university education (vwo, $n$ = 1511), 27% followed lower general secondary education (vmbo-t, $n$ = 1495), 22.7% followed senior general secondary education (havo, $n$ = 1258) and 19.1% followed preparatory secondary vocational education (vmbo-b, $n$ = 1055). Most participants lived in a household with two parents ($n$ = 4077, 73.7%). It is important to note that the data was already cleaned by Kleinjan et al. (2020), therefore, no participants had to be deleted.

## Procedure

As described by Kleinjan et al. (2020), the survey was distributed in secondary schools. To keep the representativity of the research intact, a random sample was collected in two phases. The first phase was a random selection of secondary schools who were in the administration of DUO. Per school, two (< 500 students) or three (> 500 students) classes were selected. Schools were approached by either the GGD or the Trimbos-Institute. If schools did not respond, they were called and asked for a response. In total, $N = 274$ schools were reached out to and $N = 110$ secondary schools (response rate 40%) with $N = 288$ classes and $N = 6118$ students ($N = 5587$ students between 12 and 16 years old) participated in the study. Students filled out a digital questionnaire under supervision of a trained Trimbos-Institute research assistant. Parents of the students were informed of the study beforehand and given the opportunity to deny their children's participation. Participation was completely voluntary, participants could stop their participation at any time and the data was completely anonymous. After completing the survey, participants were thanked and given the opportunity to read more information about the topics discussed in the survey.

## Measuring Instruments

### *Stress*

To measure the independent variable stress, a 5-point Likert scale was used, ranging from 1 = 'never' to 5 = 'always'. A higher score on this scale indicated that the participant experienced more stress. Only one item, about job related stress, had a sixth option (6 = no job), which was recoded to be a missing value. The scale included 7 items such as 'I feel stressed because of school'. The items were combined into a scale with one factor, $M = 1.95$, $SD = .68$, *min* = 1, *max = 5, Cronbach's alpha* = .794.

### *Social Support*

Independent variable social support was measured on a 3-point Likert scale, ranging from 1 = 'not true' to 3 = 'very true'. A higher score on this scale indicated that the participant experienced more social support. The scale included 5 items such as 'I have someone I trust'. The items were combined into a scale containing one factor, $M = 2.73$, $SD = .43$, *min* = 1, *max* = 3, *Cronbach's alpha* = .860.

### *Adaptive Perfectionism*

Independent variable adaptive perfectionism was measured based on 2 items. Firstly, the item 'I feel pressure to live up to my own expectations' was measured on a 4-point Likert scale ranging from 1 = 'not at all' to 4 = 'often'. The second item was 'I allow myself to make mistakes' and was measured on a 3-point Likert scale, ranging from 1 = 'very true' to 3 = 'not

true'. This item was recoded to match the order of the first item. A higher score on these scales indicated that the participant experienced more adaptive perfectionism. As these items were measured on different scales, Z-scores were used to create a single scale, *M* = .00, *SD* = .50, *min* = -1.01, *max* = 2.08, *Cronbach's alpha* = .404.

***Maladaptive Perfectionism***

Independent variable maladaptive perfectionism was measured based on 2 items. Firstly, the item 'I feel pressure to live up to others' expectations' was measured on a 4-point Likert scale ranging from 1 = 'not at all' to 4 = 'often'. The second item was 'Others accept it when I make mistakes' and was measured on a 3-point Likert scale, ranging from 1 = 'very true' to 3 = 'not true'. This item was recoded to match the direction of the first item. A higher score on these scales indicated that the participant experienced more maladaptive perfectionism. As the items were measured on different scales, Z-scores were used to create a single scale, *M* = .00, *SD* = .52, *min* = -1.10, *max* = 2.45, *Cronbach's alpha* = .281.

***Absenteeism***

Dependent variable absenteeism was measured based on 3 items. Firstly, the items 'in the last four weeks, how often did you not go to school because you were sick?' and 'in the last four weeks, how often did you not go to school because you were skipping class?' were measure with 6 options, 1 = 'not a single day', 2 = 'one day', 3 = 'two days', 4 = 'three to four days', 5 = 'five to six days', 6 = 'seven or more days'. The third item was 'in the last four weeks, how many hours of class did you miss because you were skipping?' and was measured based on 6 options, 1 = 'zero hours', 2 = 'one hour', 3 = 'two hours', 4 = 'three to four hours', 5 = 'five to six hours', 6 = 'seven or more hours'. A higher score indicated more school absenteeism. As the items were measured on different scales, the Z-scores were used to create a scale. Furthermore, a log transformation was performed to meet the assumption of normality, *M* = .00, *SD* = .73, *min* = -1.57, *max* = .82, *Cronbach's alpha* = .545. The log variable was used in all analyses regarding absenteeism.

***Background Variables***

Background variables age, gender, educational level and family composition were controlled for in this study. Firstly, age will be analyzed, as previous research indicated that the role of perfectionism in the relationship between stress and school absenteeism differs based on age (Wutrich et al., 2020; Yang & Chen, 2016). Furthermore, it has been indicated that the effect of stress on school absenteeism might differ based on gender (Boer et al., 2022). It has also been shown that female adolescents are more likely to experience stress (Doornwaard et al., 2021), therefore, gender will also be analyzed (0 = 'male', 1 = 'female'). Next, participants

indicated their educational level (1 = ‘vmbo-b’, 2 = ‘vmbo-b/t’, 3 = ‘vmbo-t’, 4 = ‘vmbo-t/havo’, 5 = ‘havo’, 6 = ‘havo/vwo’, 7 = ‘vwo’), as adolescents with higher educational levels have been shown to experience more stress (Doornwaard et al., 2021). Lastly, family composition was analyzed (0 = other than living with both parents, 1 = living with both parents), differentiating between living with both parents and other family compositions, as this influences social support (Doornwaard et al., 2021; Ogresta et al., 2020; Peeters et al., 2022).

**Data Analysis**

The hypotheses will be studied by conducting a linear regression analysis with dependent variable absenteeism. Age, gender, educational level and family composition will be analyzed as control variables. Furthermore, the influence of independent variables stress, maladaptive perfectionism, adaptive perfectionism and social support will be analyzed. To measure the second, third and fifth hypotheses, interaction variables will be added to the analysis. Thus, variables containing the interactions between stress and social support, stress and adaptive perfectionism and stress and maladaptive perfectionism will be added.

Furthermore, assumption checks have been executed. The data was checked for the assumptions of normality, linearity, homoscedasticity and multicollinearity. To meet the assumption of normality, a log transformation was conducted on dependent variable absenteeism, thus all analyses are completed with this log variable. As a result, all assumptions are met.

## Results

**Correlation Analysis**

To start the analyzing of results, a bivariate correlation analysis has been conducted (Table 1). The dependent variable absenteeism had small significant correlations with all independent variables, except with adaptive perfectionism ($r$ = .00, $p$ = .936). Dependent variable absenteeism was positively and significantly correlated with independent variable stress, $r$ = .13, $p$ < .001. Next, absenteeism was also positively and significantly correlated with independent variable maladaptive perfectionism, $r$ = .07, $p$ < .001. Furthermore, there was a significant, negative correlation between absenteeism and social support, $r$ = -.11, $p$ < .001.

Following, there were medium to large significant correlations between the independent variables. Stress was positively and significantly correlated to both maladaptive perfectionism ($r$ = .47, $p$ < .001) and adaptive perfectionism ($r$ = .46, $p$ < .001). Stress also had a negative and significant correlation with social support, $r$ = -.23, $p$ < .001.

**Table 1**

*Correlation Matrix*

| | *N* | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Absenteeism | 5531 | .00 | .73 | - | | | | | | | | |
| 2. Stress | 5532 | 1.95 | .68 | .13** | - | | | | | | | |
| 3. Maladaptive perfectionism | 5532 | .00 | .76 | .07** | .47** | - | | | | | | |
| 4. Adaptive perfectionism | 5532 | .00 | .79 | .00 | .46** | .54** | - | | | | | |
| 5. Social support | 5532 | 2.73 | .43 | -.11** | -.23** | -.36** | -.27** | - | | | | |
| 6. Gender[a] | 5528 | .49 | .50 | -.02 | .32** | .12** | .17** | .04** | - | | | |
| 7. Age | 5532 | 13.90 | 1.38 | .13** | .19** | .14** | .13** | -.03 | -.02 | - | | |
| 8. Education level[b] | 5532 | 4.26 | 2.17 | -.12** | .15** | .06** | .16** | .10** | .05** | .01 | - | |
| 9. Family composition[c] | 5525 | .74 | .44 | -.07** | -.09** | -.07** | -.01 | .08** | .02 | -.03** | .15** | - |

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

[a] 0 = male, 1 = female

[b] 1 = vmbo-b, 7 = vwo

[c] 0 = other than living with both parents, 1 = living with both parents

## Regression Analysis Absenteeism

To evaluate the hypotheses, a linear regression analysis with absenteeism as dependent variable has been conducted (Table 2). Three models were added to the analysis. All control variables were added to the first model. In the second model, the main effects were added. Lastly, in the third model, the interaction effects were added. As this model was not significant, the analyses are based on the second model, unless indicated otherwise. All analyses controlled for the remaining variables in the second model.

The first hypothesis stated that stress is positively related to school absenteeism among youth. The linear regression analysis confirmed this hypothesis, ß = .17, 95%*CI* = [-.03, .04], $p < .001$ (Table 2). This indicates that adolescents who experience more stress are likely to have higher absenteeism rates than students who experience less stress when controlling for the remaining variables.

The second hypothesis stated that adolescents who experience higher rates of maladaptive perfectionism are more likely to be absent from school due to stress than adolescents who experience lower rates of maladaptive perfectionism. There was no significant main relationship between maladaptive perfectionism and absenteeism (ß = .01, $p = .823$) and the interaction effect (model 3) was not significant, ß = .05, $p = .143$ (Table 2). This means that adolescents who experience more maladaptive perfectionism are not more likely to be absent

from school due to stress than adolescents who experience less maladaptive perfectionism. Therefore, the second hypothesis is rejected.

**Table 2**

*Linear Regression Analysis with Dependent Variable Absenteeism*

| Absenteeism | *b*(95%*CI*) | *SEb* | ß | *p* |
|---|---|---|---|---|
| Model 1 Control Variables | | | | |
| Constant | -.76 (-.98, -.55) | .11 | | <.001 |
| Gender | -.01 (-.05, .03) | .02 | -.01 | .569 |
| Age | .04 (.03, .06) | .01 | .13 | <.001 |
| Educational level | -.02 (-.03, -.01) | .00 | -.11 | <.001 |
| Family composition | -.05 (-.10, .00) | .02 | -.05 | .037 |
| Model 2 Main Effects and Control Variables | | | | |
| Constant | -.68 (-.93, -.43) | .13 | | <.001 |
| Gender | -.05 (-.09, .00) | .02 | -.05 | .039 |
| Age | .03 (.02, .05) | .01 | .10 | <.001 |
| Educational level | -.02 (-.03, -.01) | .00 | -.12 | <.001 |
| Family composition | -.03 (-.08, .02) | .02 | -.03 | .209 |
| Stress | .11 (.07, .14) | .02 | .17 | <.001 |
| Social support | -.06 (-.12, -.01) | .03 | -.06 | .015 |
| Maladaptive perfectionism | .00 (-.03, .04) | .02 | .01 | .823 |
| Adaptive perfectionism | -.04 (-.08, -.01) | .02 | -.08 | .007 |
| Model 3 Main Effects, Interaction Effects and Control Variables | | | | |
| Constant | -.69 (-.94, -.43) | .13 | | <.001 |
| Gender | -.05 (-.09, .00) | .02 | -.05 | .037 |
| Age | .03 (.02, .05) | .01 | .10 | <.001 |
| Educational level | -.02 (-.03, -.01) | .00 | -.12 | <.001 |
| Family composition | -.03 (-.08, .02) | .02 | -.03 | .208 |
| Stress | .10 (.06, .14) | .02 | .15 | <.001 |
| Social support | -.06 (-.11, -.01) | .03 | -.06 | .026 |
| Maladaptive perfectionism | .00 (-.03, .03) | .02 | .00 | .992 |
| Adaptive perfectionism | -.04 (-.07, -.01) | .02 | -.08 | .013 |
| Stress * Social support | -.02 (-.08, .05) | .03 | -.02 | .565 |
| Stress * Maladaptive perfectionism | .04 (-.01, .08) | .02 | .05 | .143 |
| Stress * Adaptive perfectionism | -.01 (-.05, .03) | .02 | -.01 | .701 |

*Note*. $F$ (4,1667) = 14.40, $R^2$ = .03, $p$ < .001 for model 1. $F$ (4,1663) = 11.73, $\Delta R^2$ = .03, $p$ < .001 for model 2. $F$ (3,1660) = 1.31, $\Delta R^2$ = .00, $p$ = .268 for model 3.

The third hypothesis stated that adolescents who experience more adaptive perfectionism are not more likely to be absent from school due to stress than students who experience less adaptive perfectionism. The main relationship between adaptive perfectionism and school absenteeism was significant, ß = -.08, 95%*CI* = [-.08, -.01], $p$ = .007. However, the interaction effect of adaptive perfectionism and stress on absenteeism (model 3) was not significant, ß = -.01, $p$ = .701 (Table 2). This was in line with the third hypothesis.

The fourth hypothesis entailed a negative relationship between social support and school absenteeism. The negative direct effect of social support on absenteeism was significant, ß = -.06, 95%*CI* = [-.12, -.01], $p$ = .015 (Table 2). This means that adolescents experiencing more social support are less likely to engage in school absenteeism. Therefore, the fourth hypothesis is accepted.

The last hypothesis was that adolescents who experience more social support are less likely to be absent from school due to stress than adolescents who experience less social support. However, the interaction effect (model 3) was not significant, ß = -.02, $p$ = .565 (Table 2). This indicates that students who experience more social support are less likely to be absent from school, but this does not moderate the relationship between social support and stress. Thus, the last hypothesis was rejected.

***Control Variables***

Finally, analyses with control variables were conducted (Table 2). Gender had a negative relationship with absenteeism (ß = -.05, 95%*CI* = [-.09, .00], $p$ = .039), meaning that female adolescents are less likely than male adolescents to be absent from school. Next, age had a positive relationship with absenteeism (ß = .10, 95%*CI* = [.02, .05], $p$ < .001), indicating that school absenteeism becomes more likely as adolescents grow older. Lastly, a negative relationship between educational level and absenteeism was shown (ß = -.12, 95%*CI* = [-.03, -.01], $p$ < .001), which entails that adolescents with a higher educational level are less likely to be absent from school.

***Exploratory Regression Analysis Stress***

The expected interaction effects were not found. Therefore, there might be a different influence of maladaptive perfectionism, adaptive perfectionism and social support on the relationship between stress and school absenteeism. The correlation analysis indicates that there is a relationship between maladaptive perfectionism, adaptive perfectionism, social support and stress. These relationships were explored by conducting a linear regression analysis with stress as dependent variable, $F$ (3, 1671) = 216.07, $p$ < .001, $R^2$ = .29 (Table 3).

**Table 3**

*Exploratory Regression Analysis with Dependent Variable Stress*

| Stress | *b*(95%*CI*) | *SEb* | ß | *p* |
|---|---|---|---|---|
| Model 1 Direct Effects | | | | |
| Constant | 2.29 (2.05, 2.26) | .10 | | < .001 |
| Maladaptive Perfectionism | .26 (.24, .29) | .02 | .29 | < .001 |
| Adaptive Perfectionism | .26 (.23, .27) | .02 | .29 | < .001 |
| Social Support | -.08 (-.11, -.04) | .04 | -.05 | .025 |

The analysis showed that, in fact, maladaptive perfectionism, adaptive perfectionism and social support seem to have a relationship with stress. There was a significant positive relationship between maladaptive perfectionism and stress, ß = .29, 95%*CI* = [.24, .29], $p < .001$. Additionally, there was a significant positive relationship between adaptive perfectionism and stress, ß = .29, 95%*CI* = [.23, .27], $p < .001$. This entails that experiencing more maladaptive or adaptive perfectionism is related to experiencing more stress. The analysis also showed a negative significant relationship between social support and stress, ß = -.08, 95%*CI* = [-.11, -.04], $p = .025$. This means that experiencing more social support is related to experiencing less stress.

## Discussion

This study investigated to what extent the relationship between stress and school absenteeism is moderated by adaptive perfectionism, maladaptive perfectionism and social support. This topic was deemed important as school absenteeism has been associated with negative academic and career outcomes for adolescents (Doornwaard et al., 2021; Gottfried, 2019; Sum et al., 2009; Zaff et al., 2017). Research on absenteeism has been conducted, however, more research was needed on the characteristics of adolescents at risk for absenteeism (Fortin et al., 2006; Gottfried, 2019). Therefore, the present study added to the typology of these adolescents by investigating the relationship between stress and absenteeism and, specifically, how social support, adaptive and maladaptive perfectionism influenced this relationship.

### Stress and Absenteeism

The first hypothesis stated that adolescents who experience stress are more likely to portray school absenteeism. Previous studies showed that stress was related to increased school absenteeism (Ogresta et al., 2020). SCT explained that stress is related to low self-efficacy and agency, increasing the chance of school absenteeism (Bandura, 1986; Bandura, 2006; Dupéré et al., 2015; Kipp & Clark, 2021, Ogresta et al. 2020). In line with the first hypothesis,

adolescents who experience more stress are absent from school more often than adolescents who experience less stress. This confirmed the results found in previous research and formed an important basis for the rest of this study, as all other hypotheses were created around the assumption that stress and school absenteeism were related.

**The Influence of Perfectionism**

The second hypothesis stated that adolescents who experience adaptive perfectionism would not be more likely to be absent from school due to stress than adolescents who experience less adaptive perfectionism. Previous studies showed that adaptive perfectionism allowed high self-efficacy and agency. Therefore, allowing adolescents to set realistic personal expectations and not significantly influencing the relationship between stress and absenteeism (Anderson et al., 2019; Bandura, 2006; Dupéré et al., 2015; Kipp & Clark, 2021; Mallision-Howard et al., 2019; Mendoza Cazarez, 2019; Ogresta et al., 2020; Spagnoli et al., 2021). Only a direct relationship between adaptive perfectionism and absenteeism was found, and as expected, no interacting relationship, as was in line with this hypothesis.

It was expected that maladaptive perfectionism, contrary to adaptive perfectionism, would interact with the relationship between stress and absenteeism, as this type of perfectionism had been connected with low self-efficacy and agency (Bandura, 2006). This is due to maladaptive perfectionism not allowing for adapting expectations to ensure these are realistic. Therefore, the likelihood of adolescents portraying school absenteeism due to stress increases (Anderson et al., 2019; Dupéré et al., 2015; Mallision-Howard et al., 2019; Mendoza Cazarez, 2019; Ogresta et al., 2020; Spagnoli et al., 2021). However, this interacting relationship was not found. Additionally, there was no direct effect of maladaptive perfectionism on absenteeism.

As the results of the types of perfectionism were not as expected, alternative explanations were sought. The easiest explanation would be to name the low reliability of the two perfectionism scales as the reason the results were not as expected. However, a more interesting explanation is that there might not be a clear methodological distinction between adaptive and maladaptive perfectionism, causing difficulty measuring a difference. In fact, Hackfort and Schinke (2020) have stated that, in sports, there is no such thing as types of perfectionism, but rather dimensions of perfectionism, meaning that it might be more difficult to differentiate as they are both part of perfectionism. One should statistically be able to measure their separate effects. However, one dimension cannot be measured without considering the effect of the other as they add up to the single multidimensional concept of perfectionism. Hackfort and Schinke (2020) also explain that adaptive perfectionism is often viewed as ‘good’

and maladaptive perfectionism is often viewed as ‘bad’. Such ‘good’ and ‘bad’ effects cannot be separated when analyzing perfectionism (Hackfort & Schinke, 2020). However, this does not explain clearly why a direct negative relationship between adaptive perfectionism and absenteeism was found, which was not the case for maladaptive perfectionism.

An additional analysis with maladaptive and adaptive perfectionism as independent variables and stress as dependent variable was conducted as well. This analysis indicated that experiencing maladaptive or adaptive perfectionism is related to more stress. Therefore, we wondered if perfectionism might have a confounding effect on stress and absenteeism. However, the main relationship between maladaptive perfectionism and absenteeism was not significant. Additionally, adaptive perfectionism is related to more stress, which is contrary to the negative relationship that was expected (Anderson et al., 2019; Bandura, 2006; Dupéré et al., 2015; Kipp & Clark, 2021; Mallision-Howard et al., 2019; Mendoza Cazarez, 2019; Ogresta et al., 2020; Spagnoli et al., 2021). Based on the current research, these results cannot yet be clearly explained. Therefore, more research should be done to determine whether maladaptive and adaptive perfectionism can be found and distinguished in this context, and to determine how they are related to stress, absenteeism and to each other.

**Social Support**

The fourth hypothesis was also not confirmed. SCT indicated the importance of environmental factors when considering school absenteeism (Dupéré et al., 2015). In fact, previous studies showed that social support from parents and peers can buffer the relationship between stress and absenteeism, making absenteeism due to stress less likely (Lee & Goldstein, 2015; Ogresta et al., 2020; Peeters et al., 2022). Unexpectedly, such an interacting relationship was not found. However, there was a relationship between social support and absenteeism, entailing that adolescents who experienced more social support were less likely to be absent from school. Additional analyses showed that social support also had a relationship with stress. This relationship entailed that adolescents experiencing more social support experienced less stress. Therefore, we expect that there is a confounding influence of social support on the relationship between stress and school absenteeism. This might implicate that an important characteristic of adolescents who experience stress and school absenteeism is low social support. However, to confirm this result, additional research is needed to investigate whether, in fact, there is a confounding relationship or if the influence of social support manifests itself in different ways as well.

**Strengths and Limitations**

The present study had multiple strong points and points of improvement. To start positively, this study shed new light on the characteristics of adolescents who are at risk of school absenteeism due to stress. No clear answers to the interaction of social support and perfectionism with the relationship between stress and absenteeism were found, however, exploring the relationships did allow making suggestions for future research to build on the results of this study. Furthermore, the direct relationship between stress and absenteeism has been reconfirmed, showing that this relationship remains when adding control and moderating variables.

However, there were also some limitations. An existing data set was used in this study. Although this did ensure that a large representative sample was used, it also caused difficulties while attempting to add new information to the literature. Many analyses were already conducted with this data set, meaning that it is difficult to conduct original analyses and have original results. Attempting to conduct original analyses meant, in this case, that we had to conduct analyses with perfectionism scales that had questionable reliability. This is likely to be explained by the small number of items included in the scales. This could also have influenced the reliability of the results regarding the second and third hypothesis. Thus, future research should create surveys and scales that can measure perfectionism more accurately, to optimize the chances of reliable results.

**Conclusion**

To conclude, the relationship between stress and school absenteeism was influenced by social support, maladaptive perfectionism and adaptive perfectionism. However, not in the manner that was expected. After the moderating effects of maladaptive perfectionism, adaptive perfectionism and social support on the relationship between stress and absenteeism were not found, other analyses were conducted. We found that adolescents who experience social support are less likely to experience stress and portray school absenteeism. We also found that adaptive perfectionism is associated with more stress, however, it is associated with less school absenteeism. Lastly, maladaptive perfectionism is associated with more stress. As these results are not as expected, future research should continue studying the relationships between these variables. The goal of this study, to add to a typology of adolescents at risk for school absenteeism due to stress has been reached. Although there is not a clear answer yet, more clarity on the influences of perfectionism and social support on the relationship between stress and absenteeism has been created.

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# Appendices

## Appendix 1: Interdisciplinarity

The topic of stress and school absenteeism among adolescent students can be considered from multiple disciplines. This is quite important as well, as there is not just one perspective affecting this topic. Psychology is a very insightful discipline as it explains factors that are inherent to the adolescent student. However, there are factors external to the individual that are important to consider as well. For instance, journals of sociology and education are quite insightful to explain how perfectionism and social support can influence the effects of stress on school absenteeism among adolescent students. Thus, different disciplines are essential to explain this topic.

Regarding the topic of stress and school absenteeism among adolescent students, sociocultural theory (Bandura, 1986) could be applied. However, the empirical findings from different disciplines have also proven useful. These can indicate which individual factors most likely have a relationship with stress and school drop out, but also show which environmental factors have an influence on these relationships. This gives a more complete overview of levels on which stress among adolescents needs to be considered.

The factors that are identified in this study can be placed in Sameroff's Transactional Model of Development (2009). Firstly, stress is considered a personal factor, meaning that it is inherent to the individual. Secondly, social support can be categorized as a familial or group factor, which is quite obviously most fitting. Thirdly and lastly, perfectionism can be categorized as personal, familial/group, and societal. We have shown that adaptive perfectionism is a personal factor, as this entails adhering to standards that are inherent to the individual. However, maladaptive perfectionism entails adhering to standard that are external to the individual. Thus, these standards are produced by family, groups and society.

As the topic of stress and school absenteeism among adolescent students can be approached from different disciplines and social categories, the present research model can be considered interdisciplinary. Especially the disciplines of psychology, education and sociology are important to consider. Additionally, stress, perfectionism, and social support can be considered on different levels of Sameroff's model (2009). Therefore, the model of this research can be considered interdisciplinary.

## Appendix 2: Contract

Utrecht, 2022

This letter constitutes formal confirmation of the fact that the data from Utrecht University Peilstationsresearch 2019 have been made available to Elke Roukema of Utrecht University.

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

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

**Research question**:

The following variables will be used: To what extent is the effect of stress on school absenteeism influenced by perfectionism and social support?

Dependent variable: School absenteeism, question 10 and 11

Independent variables: Stress, question 16; Social support, 5 items of question 82; Maladaptive and adaptive perfectionism, question 81 and 82

Other variables: Age, question 1; Gender, question 2.

No report based on the data from the project entitled Peilstation 2019 will be made public, unless permission has been obtained in advance from the Project Coordinator for Peilstation 2019.

After the expiration of this contract, dated June 30th, 2023, Elke Roukema shall delete the Peilstation 2019 data.

Dates and signature:

25-01-2023 

| Name of student: | Name of Project Coordinator: |
|---|---|
| Elke Roukema | Regina van den Eijnden |

**Appendix 3: Research Activities**

**Registration Form: Research Activities for TED-students (in total 60 hrs)**

Elke Roukema

9518630

| **Research Activities** | **Total number of Hours** | **Signature YS staff** |
|---|---|---|
| **Conducting and processing interviews with youth and parents of youth who struggle with school stress, performance pressure, school absenteeism and school drop out.** | **60** | Margot Peeters,  |