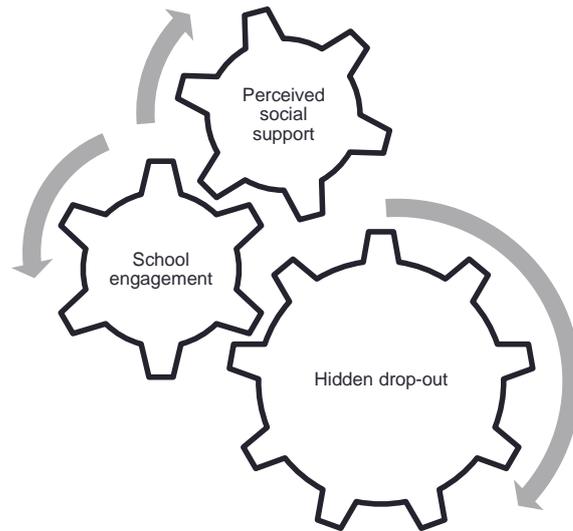


Perceived Social Support and Hidden Drop-out in Junior Vocational High School: the Role of Students' Ethnicity



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Master Thesis Drop-out

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Summary

This thesis focused on investigating the relationship between perceived social support by students and hidden school drop-out. The main research question was whether perceived social support by students predicts hidden drop-out and if the relationship between perceived social support by students and hidden drop-out is moderated by students' ethnicity. Differences in the perceptions of Dutch and immigrant students about the availability of social support (instructional or emotional) from various agents (teacher/classmate/parent) were also investigated using the SPASSQ questionnaire. Participants were 356 Dutch and 68 immigrant students of which 58% were male and 42% female aged between 14 and 16 years old ($M = 14.21$, $SD = 0.88$) from junior vocational high schools in the Netherland. Perceived emotional support from parents was a predictor of hidden drop-out for Dutch students, however for immigrant students perceived emotional support from teachers was a predictor of hidden drop-out. Students' ethnicity is a moderator when predicting hidden drop-out with perceived emotional support from teachers and perceived instructional support from parents. No significant differences were found between the perceptions of Dutch and immigrant students about perceived social support from all agents, however different types of perceived social support are predictors of hidden drop-out for Dutch and for immigrant students.

Key-words: perceived social support, hidden drop-out, self-perceptions, school engagement, junior vocational education, students' ethnicity

Introduction

Obtaining a high school qualification is compulsory in the Netherlands (Rijksoverheid.nl, 2014). In fact all youngsters under the age of nineteen are required to attend school until they have gained a relevant high school qualification (Rijksoverheid.nl, 2014). Completing high school is considered an achievement necessary for the academic, professional, and societal advancement of young people. However, every year thousands of high school students drop out of school without a relevant qualification (Dutch Ministry of Education, Culture, and Science, 2013). For example, in the 2011-2012 school year 36,250 or 9.2% of students dropped out of Dutch high schools without a sufficient qualification (Dutch Ministry of Education, Culture, and Science, 2013). High school drop-out is related to higher

chances of unemployment and delinquency amongst youths (Traag, & Van der Velden, 2008). These negative consequences of drop-out come at a high cost for governments (Rumberger, 1995). That is why the Dutch Ministry of Education Culture, and Science, is committed to reducing the number of high school drop-outs to 8% in 2020. Gaining understanding about the underlying factors that are related to drop-out is beneficial as it might lead to a better understanding of how to reduce high school drop-out (Dale, 2010). In the current study, factors related to predicting drop-out in a multi-ethnic sample of students were investigated.

The (junior) high school population in the Netherlands is ethnically diverse. There are concerns that immigrant students have a higher chance of dropping out of school than Dutch students (Herweijer, 2008). Being an ethnic minority is a student characteristic that increases the likelihood that a student will drop out (Herr, 1997). In fact, according to statistics from the national government of the Netherlands, the drop-out rate amongst immigrant students is twice as high as that of Dutch students (Rijksoverheid.nl, 2014). Immigrant students experience additional challenges due to cultural differences (Van Geel, 2009). For example immigrant students and their parents may experience language difficulties (Jozefowicz & Hernandez, 2008). Adolescents' attitudes towards school are also influenced by cultural values (Jozefowicz & Hernandez, 2008). For example, some cultures place a low value on education (Jozefowicz & Hernandez, 2008). These cultural differences may also play a role with regard to drop-out and perceptions about the availability of social support. Research amongst an ethnically and economically diverse sample of students revealed that support from family and teachers is positively associated with academic achievement (Kenny & Bledsoe, 2005).

This study focussed on gaining more understanding about the relationship between students' perceptions about perceived social support and hidden drop-out. Could it be that students' perceptions about perceived social support are predictors of hidden drop-out? We were also interested in the differences between Dutch and immigrant students.

(Hidden) Drop-out and School (Dis)engagement

Hidden drop-out refers to students who are officially enrolled in school but have a low school engagement (Henry, Knight, & Thornberry, 2012). Hidden drop-out precedes open drop-out, which pertains to students who have left school prematurely without a relevant qualification (Dutch Ministry of Education, Culture, and Science, 2013). Open drop-out is in fact the result of a long process of school disengagement or hidden drop-out (Henry et al.,

2012). Therefore, identifying the indicators of students' school engagement is important in reducing school drop-out (Dryfoos, 1990; O'Sullivan, 1990). School engagement is known to support school completion (Doll & Hess, 2001). Poor school engagement hinders academic achievement and increases the probability of students dropping out of school (Fall & Roberts, 2012). Minority students are particularly at risk of school disengagement (Taylor, 1991). Students' school engagement can pertain to behavioural, emotional and cognitive involvement in school activities (Fredericks, Blumenfeld, Friedel, & Paris, 2005). Behavioural involvement concerns the type of explicit behaviour that students display at school, for example concerning rules or school attendance. Emotional engagement pertains to the emotions and feelings that students have about school, for example happiness. It also pertains to the sympathy from people such as teachers, parents and classmates. Lastly, cognitive engagement refers to the type of effort students make in order to understand their schoolwork. School engagement gives insight into the interaction between the student and the school context (Fall & Roberts, 2012). Students are exposed to a social context that includes a network of people (Bronfenbrenner, 1986). We will elaborate on the importance of social support in the following section.

Social Support from Parents, Teachers and Classmates

Social support reflects on the network of people that one can tap into for information, advice, assistance and help. Social support can be categorized as instructional or emotional. Instructional support refers to the support focused on learning situations. For example, providing practical help with homework is an example of instructional support. In the context of learning, instructional support is therefore relevant. Emotional support on the other hand is focused on situations related to emotional coping (Vedder, Boekaerts, & Seegers, 2005). For example, a word of encouragement is an example of emotional support.

Adolescents are exposed to many social settings that shape their cognitions, feelings and behaviour through perceptions and interpretations of these settings (Vedder et al., 2005). Social support can be instructional or emotional (Vedder et al., 2005). Instructional support is focused on achieving academic goals and emotional support is focused on emotional and social processes (Berndt, 1999; Furman & Buhrmester, 1992). Students are also exposed to different providers of social support. This study focussed on three agents of perceived social support, namely: teachers, classmates and parents. In the school environment, teachers are a source of instructional support, and emotional support (Wentzel, 1994, 1998). Teacher

support also emerged as an important predictor of achievement-related beliefs in a multi-ethnic sample of urban American high school students (Kenny & Bledsoe, 2005). Furthermore, teacher support has been identified to be important for students' school engagement (Kenny & Bledsoe, 2005). In the school environment, classmates are also present as potential sources of social support (Van Rooij, Pass, & Van den Broek, 2010). Outside of school, parents are important sources of support. Generally, young adolescents have reported parents to be seen as the most important providers of social support instead of teachers or classmates (DuBois, Felner, Brand, Adan, & Evans, 1992).

Social support has been reported to be appreciated by students in the context of learning and instruction (Wentzel, 1998). Youngsters are faced with many challenges whilst attending high school and social support is beneficial in facilitating a successful scholastic career. Experienced support is the support that is actually given; while perceived support is the support that one believes is available (Mooney, Laursen & Adams, 2007). Students' perceptions about the availability of social support influences their learning, development and confidence with regard to their scholastic careers (Mooney et al., 2007).

Understanding how adolescents perceive social support can shed new light on understanding the process and relationship with hidden drop-out. This study focussed on students' perceptions about perceived social support.

Self-perceptions and Social Support

Students' perceptions about social context (teacher support and parental support) predict academic and behavioural engagement (Fall & Roberts, 2012). Family and teacher support as well as peer beliefs have been reported to be important factors in explaining the career adaptability of urban American students (Kenny & Bledsoe, 2005). Teachers, classmates and parents are considered to be the most important sources of social support for students (Vedder et al., 2005). Emotional support from family and support from teachers are also identified as contributors to students' attitudes towards school (Kenny & Bledsoe, 2005). Individuals have the innate need to interact effectively with their environments and to connect with others (Fall & Roberts, 2012). The self-system model of motivational development posits that social support (from parents, teachers and peers) in interaction with students' self-perceptions, influences students' school engagement and school-related behaviour which directly contribute to the decision to drop out (Fall & Roberts, 2012). Higher levels of support from teachers and parents were associated with higher levels of perceived competence,

perceived relatedness, and perceived autonomy amongst students. These self-perceptions were also identified as predictors of school engagement (Fall & Roberts, 2012). An individual's perceptions about identification with school are influenced by the extent to which the social context meets these needs (Fall & Roberts, 2012). Students' self-perceptions about social support mediate the relationship between a social context and school engagement (Fall & Roberts, 2012). School engagement on the other hand mediates the relationship between self-perceptions and dropping out (Fall & Roberts, 2012). Research about perceived social support and school-career adaptability amongst a multi-ethnic sample of urban American students, revealed that emotional teacher support is the most specific contributor to students' perceptions about school identification (Kenny & Bledsoe, 2005). Furthermore, perceived emotional support (from family, teachers and close friends) all contributed significantly to students' school-career adaptability (Kenny & Bledsoe, 2005). Students' perceptions of social support warrant attention with regard to hidden drop-out. Could it be that perceived social support by students predicts school engagement for Dutch and immigrant students living in the Netherlands? In the following section, we will elaborate about the importance of paying attention to students' ethnicity when investigating the phenomenon of drop-out in relation to perceived social support by students. Furthermore, we will look into the differences between Dutch and immigrant students with regard to perceived social support.

Students' Ethnicity

Statistics have revealed that the drop-out rate of minority students is two times higher than that of their Dutch contemporaries (Dutch Ministry of Education, Culture & Science, 2013). According to Statistics Netherlands (Alders, 2001), a person of foreign origin was born outside of the Netherlands or has at least one parent who was born outside of the Netherlands. Previous research has revealed that ethnicity is a student characteristic that is important when investigating drop-out (Jozefowicz & Hernandez, 2008). Could it be that immigrant students receive less social support than Dutch students or have different perceptions about the availability of social support than Dutch students?

Concerning parental support, previous studies have suggested that immigrant parents play a different role than Dutch parents in relation to their children's education (Distelbrink & Pels, 2000). This difference may be due to difficulty with the national language which affects immigrant parents' ability to help with school work (Jozefowicz & Hernandez, 2008). Differences pertaining to the level of education between Dutch and immigrant parents should

also be taken into consideration because immigrant parents tend to be less educated than their Dutch counterparts (Van Rooij et al., 2010). Students whose parents have lower levels of education have been reported to have higher chances of dropping out (Van Rooij, et al., 2010). Furthermore, immigrant parents may have less knowledge about national school systems (Van der Veen & Meijnen, 2002). Due to the barriers that immigrant parents experience, immigrant students may be at risk of receiving less parental support (Jozefowicz & Hernandez, 2008). For example, a previous study reported that Turkish and Moroccan immigrant students in the Netherlands do not perceive their parents to be the most important source of support with regard to school matters (Distelbrink & Pels, 2000).

In the school environment, teachers have been recognised as being an important source of support for students (Vedder et al., 2005). Perceptions by students about the lack of support by teachers have been reported to contribute to deciding to leave school in the United States of America (Jozefowicz & Hernandez, 2008). Immigrant students in the United States of America may receive and perceive less support from national teachers due to aversive racism (Linnehan, Weer, & Stonely, 2011). According to the aversive racism theory, ethnic minority students and national students are treated and evaluated differently by their teachers and counsellors (Linnehan et al., 2011). Discrimination by teachers and counsellors is not explicit but implicit (Linnehan et al., 2011). Immigrant students may also perceive less support from their national teachers because of cultural differences pertaining to race, language, religion and values (Jozefowicz & Hernandez, 2008).

Classmates have been identified to be part of the social network of students (Van Rooij, et al., 2010). Having classmates that are supportive has been reported to be beneficial for students' social integration at school (Van Rooij, et al., 2010). Immigrant students may perceive less support from national classmates when they are in the minority (Bradley & Renzulli, 2011). Cultural and racial differences may get in the way of friendships between national and immigrant students (Bradley & Renzulli, 2011). As a result of racial barriers minority students tend to reject friendships with national students, therefore leading them to receive less support from national classmates. (Fordham & Ogbu, 1986).

Social Economic Status

Family socio-economic factors are strongly related to school drop-out (Jozefowicz & Hernandez, 2008). Poverty affects the ability of parents to provide basic necessities for their children and is a stressor that can be detrimental to success in school (Jozefowicz &

Hernandez, 2008). Poverty is a stressor that can diminish academic achievement, involvement and attendance (Jozefowicz & Hernandez, 2008). Students affected by family financial constraints will tend to lack basic necessities such as food and clothing and these are factors that can affect students' ability to attend school comfortably due to increased self-consciousness, anxiety, distress and social withdrawal (Jozefowicz & Hernandez, 2008). Furthermore, parents with demanding jobs are less able to monitor and provide sufficient educational support to their children due to lack of time (Bronfenbrenner, 1986). Disparities between the drop-out rates of African-American and Caucasian students have also been attributed to significant differences in income (Bradley & Renzulli, 2011). The effects of a low family income can hinder school attendance and achievement and lead to school drop-out (Jozefowicz & Hernandez, 2008). Students with lower economic backgrounds are more at risk of dropping out (Traag, 2012). Drop-out is also higher amongst ethnic minority students (Traag & Van der Velden, 2008). Ethnic minority students also tend to have a lower socio-economic status than national students (Van Rooij et al., 2010). Some studies have discovered that the economic background of students' parents is a significant characteristic that influences drop-out and that social economic status tends to overlap with ethnicity (Traag, 2012). Immigrants in the Netherlands, as in most countries have lower socio-economic levels than the indigenous population (Van Geel, 2009). Taking into consideration the possible interference of social economic status with ethnicity, the economic background of students has therefore been included as a control variable in this study.

Current Study

Drop-out is a serious problem with many negative consequences (Rumberger, 1995). Early detection of students who are at risk of dropping out can help to prevent drop-out (Dale, 2010). This study aims to expand the knowledge about predictors of hidden drop-out. The relationship between students' perceptions about social support and hidden drop-out will be examined. Furthermore, Dutch and immigrant students will be compared when using perceived social support to predict hidden drop-out. This is because students' ethnicity has been reported to be important when investigating drop-out (Jozefowicz & Hernandez, 2008). The similarities and differences between Dutch and immigrant students about perceived social support will therefore be taken into account.

The main research question is *whether perceived social support by students predicts hidden drop-out and if this relationship is moderated by students' ethnicity*. In an explanatory

manner, we will also investigate if students' ethnicity is a moderator because too few studies have investigated if students' ethnicity interacts with the relationship between predictors of hidden drop-out and hidden drop-out. Moderation occurs when the relationship between two variables depends on a third variable (Baron & Kenny, 1986).

Based on the self-system model of motivational development (Fall & Roberts, 2012), we expect students' perceptions about perceived social support from parents and teachers to predict school engagement. Furthermore based on research by Kenny and Bledsoe (2005), the expectation is also that perceived emotional support from parents and teachers will be predictors of hidden drop-out. Students' perceptions about perceived social support from peers were not identified as predictors of school engagement; therefore we do not expect perceived social support from classmates to predict school engagement (Fall & Roberts, 2012; Kenny & Bledsoe, 2005).

Another question is *whether Dutch and immigrant students have different perceptions about perceived social support (instructional/emotional) from various agents (teacher/classmate/parent)*. Based on research by Jozefowicz and Hernandez (2008), which illustrated that immigrant parents are less able to help their children with schoolwork because of difficulty with the national language and research by Van Rooij et al. (2010), which reported that immigrant parents are generally less educated than Dutch parents, the expectation is that immigrant students will report less perceived parental instructional support than Dutch students. Based on research by Dubois et al. (1992), which reported that adolescents regardless of ethnicity generally regard their parents to be the most important providers of emotional support, the expectation is that both immigrant as well Dutch students will have report similarly about perceived parental emotional support. Based on research by Linnehan et al. (2011), which reported that immigrant students are treated differently than national students by national teachers due to aversive racism, the expectation is that immigrant students will report less perceived instructional and emotional teacher support than Dutch students. Based on research by Bradly and Renzulli (2011) and Fordham and Ogbu (1986) which reported that cultural and racial differences get in the way of friendships between immigrant students when they are in the minority and national students, the expectation is that immigrant students will report less perceived instructional and emotional support from classmates than Dutch students.

Method

Sample

This study focused on students in the first, second and third classes of junior vocational high schools in the Netherlands. These students were aged between twelve and sixteen years old. The mean age of all the students together was 14.21 years ($SD = 0.88$). The mean age of the Dutch students was 14.23 years ($SD = 0.87$). Whilst the immigrant students had a mean age of 14.15 years ($SD = 0.90$). Students were classified as immigrants if they were born abroad or had at least one parent who was born abroad (Alders, 2001). During the 2012-2013 school year, a total of four hundred and twenty-four students participated in the research. Fifty-eight percent of all the participants were boys and forty-two percent were girls. The gender of two participating students was unknown. The Dutch students were also composed of fifty-eight percent of boys and forty-two percent of girls. The immigrant students on the other hand were composed of fifty-five percent of boys and forty-five percent of girls. The students were affiliated with five high schools from the following four Dutch provinces: North Holland, South Holland, Zeeland, and North Brabant. Sixty-eight students classified as immigrants, representing nineteen non-Dutch ethnicities were registered. A maximum of two students represented each non-Dutch ethnicity. The most occurring frequency was one student per non-Dutch ethnicity. The following nineteen non-Dutch ethnicities were registered: Antillean, Turkish, German, Greek, French, Albanian, Somalian, Brazilian, Bulgarian, Russian, South-African, Kurdish, Afghan, Belgian, Thai, Argentinean, Polish, Ethiopian and Colombian.

Instruments

This study was part of a larger research group focused on researching different aspects that may lead to hidden drop-out. The following variables were measured with the questionnaire: school engagement, social support, discrimination, self-image, life satisfaction, ethnicity, identity, social economic status and parental supervision. This study reports about social support, ethnicity and school engagement. In order to measure school engagement, the Dutch translation of the *School Engagement Scale* (SES) was utilized. Social support was measured using the Dutch translation of The *Student Perceived Availability of Social Support Questionnaire* (SPASSQ). Descriptions of the above mentioned instruments are included in the rest of this chapter.

School engagement scale. The School Engagement Scale (SES; Fredericks et al.,

2005) measured the amount of engagement students experience at school. The questionnaire was translated to Dutch by three master students of Education (Valk, 2012). The SES was composed of nineteen items in the form of statements which could be answered with a five point Likert scale: *never, on occasion, some of the time, most of the time and all of the time*.

The questionnaire consisted of the following three subscales: behavioural engagement, emotional engagement and cognitive engagement. The first five items measured behavioural engagement, for example: “I pay attention in class”. Items six till eleven measured the subscale emotional engagement of which an item was “I feel happy in school”. The remaining items twelve till nineteen measure cognitive engagement, for example “I study at home even when I don’t have a test”. Statements 45, 48, 49 and 58 were formulated negatively and were therefore recoded reversely. A total of 95 points could be scored with a maximum of 25 points for behavioural engagement, a maximum of 30 points for emotional engagement and a maximum of 40 points for cognitive engagement. The higher the total score, the higher the school engagement. Low school engagement is a good indicator of hidden drop-out (Fredericks et al., 2005; Valk, 2012). The three subscales have an adequate internal consistency and enough predictive validity (Fredericks et al., 2005).

For this study, the SES questionnaire was slightly adjusted. A total of four questions were replaced with other questions that pertained more directly to drop-out. The reliability of the behavioural, emotional and cognitive engagement scales were measured with Cronbach’s alpha and amounted to the following values: 0.644, 0.664 and 0.635. The Cronbach’s alpha for the total scale was 0.823.

Student perceived availability of social support questionnaire. The Student Perceived Availability of Social Support Questionnaire (SPASSQ; Vedder et al., 2005) measured how students experience the availability of social support or assistance from parents, classmates and teachers. In this study nine items about school-related situations regarding learning situations and situations about emotional coping were used. Four items about perceived instructional support were used and five items were focused on perceived emotional support. There were four answer categories namely: *hardly ever, sometimes, often and always*, which could be filled in about parents, classmates and teachers. This resulted in 27 reactions. An example of an item about perceived instructional support was “who is prepared to help you when you have problems with your homework?” An example of an item about perceived emotional support was “who shares your feelings when you are sad?” For this study two items from the original questionnaire of eleven items were omitted. Both the

perceived instructional and the perceived emotional subscales were reduced by one item each. The perceived instructional support subscale for the various agents had an average Cronbach's alpha of 0.752. The perceived emotional support subscale for the various agents had an average Cronbach's alpha of 0.759. In total the questionnaire had a Cronbach's alpha of 0.842.

Ethnicity. Ethnicity is a variable which is determined by the birth country of the student and both parents. An example of an item is "in which country where you born?" Based on the filled in answers and using the criteria used by Statistics Netherlands (Alders, 2001), students were grouped into the following two categories: immigrant and Dutch. Students who were not born in the Netherlands and or who had at least one parent who was not born in the Netherlands were categorized as immigrants. The rest of the students were categorized as Dutch.

Social Economic Status. Students' social economic status was determined by using the postal code of the students to generate statistical information about the average monthly income of adults or families residing in specific postal code areas or neighbourhoods.

Procedure

High schools in the Netherlands that provide junior vocational education were approached by nine master students of Education by telephone and email. A total of five schools agreed to participate in the research. Schools were free to decide if parental permission was necessary for students' participation. Schools also determined if the questionnaires were administered during school hours. Upon request of certain schools, a special letter about the permission and participation in the study was sent to parents.

The questionnaires were group administered by master students of education. At least one student of Education and a teacher was present in the classroom to give explanations and assistance if needed. The anonymity of the study was explained to the students beforehand. A short introduction about the research including instructions about how to fill in the questionnaire was part of the procedure. The filled in questionnaires were collected by the student.

Results

Data Description

Using histograms, boxplots and normality plots, the normality of the variables was

inspected. The mean scores and standard deviations were also calculated. Missing data was also noted as well as outliers. There were no extreme outliers for any of the key variables. The outliers that were detected were acceptable because they did not exceed the one and a half standard deviation criteria. Therefore there was no need to exclude any of the respondents.

Univariate analysis revealed a normal distribution of the school engagement scale and three perceived social support subscales, namely perceived instructional support from parents, perceived emotional support from teachers and perceived instructional support from classmates. Three perceived social support subscales and the monthly income variable did not have a normal distribution, however due to the large number of participants this was not a problem. Having more than thirty participants compensates for not having a normal distribution (Moore & McCabe, 2006). Further inspection of the standard kurtosis scores and standard skewness scores as well as the histograms also revealed that some continuous variables had normal distributions while others did not.

Data inspection revealed that the data was suitable to be used to perform the parametric/statistical tests needed to answer the research questions. A summary of the descriptive statistics of the key variables can be found in Table 1.

Table 1

Descriptive Statistics of Key Variables Comparing Dutch and Immigrant Students

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	Standard Skewness	Standard Kurtosis	Missing <i>n</i>
Instructional support parents						
Dutch	338	10.50	3.12	-2.14	-2.19	15
Immigrant	61	10.54	3.14	-2.11	-.49	6
Emotional support parents						
Dutch	338	15.73	3.47	-7.47	2.31	15
Immigrant	55	15.76	3.55	-2.96	1.40	12
Instructional support teacher						
Dutch	339	12.08	2.89	-4.60	-.59	14
Immigrant	63	11.83	2.98	-2.15	.54	4
Emotional support teacher						
Dutch	335	12.34	3.79	-1.16	-2.48	18
Immigrant	59	12.02	3.91	.31	-.82	8
Instructional support classmates						
Dutch	341	10.81	2.61	-1.83	-1.06	12
Immigrant	59	14.22	3.68	-1.68	-.87	7
Emotional support classmates						
Dutch	338	14.28	3.55	-4.23	-.72	15
Immigrant	59	14.22	3.68	-1.05	-1.06	8
School engagement						
Dutch	338	38.51	6.08	-.24	-.94	15
Immigrant	63	39.51	7.50	-.92	-.61	4
Monthly Income postal code						
Dutch	253	2.43	.95	6.59	6.26	100
Immigrant	61	2.43	1.13	6.55	9.73	6

Predicting School Engagement for Dutch and Immigrant Students

Standard multiple regression was used to assess the ability of the perceived social support subscales in predicting school engagement. The average neighborhood monthly income was also included as a control. Dutch and immigrant students were separated by splitting the data-file before performing separate standard multiple regression analyses using six perceived social support subscales and monthly income to predict school engagement for Dutch and for immigrant students. The results are presented in Table 2. Two perceived social support subscales were predictors of school engagement and different predictors were found for Dutch and for immigrant students. Perceived emotional support from parents significantly predicted school engagement for Dutch students, ($\beta = .210$, $t(330) = 2.18$, $p = .030$). For immigrant students on the other hand, perceived emotional support from teachers significantly predicted school engagement ($\beta = .452$, $t(51) = 2.38$, $p = .022$). Perceived social support also explained a significant proportion of variance in school engagement scores for Dutch students, $R^2 = .22$, $F(6, 315) = 14.69$, $p < .001$. A higher significant proportion of variance in school engagement scores, $R^2 = .33$, $F(6, 44) = 3.62$, $p < .005$, was explained by perceived social support for immigrant students. The average neighborhood monthly income which was included as a control variable was not a significant predictor of school engagement. The Tolerance value of each predictor indicated how much of the variability of the specific predictor was not explained by the other predictors (Pallant, 2013). Tolerance values higher than .10, were reported for each perceived social support subscale, indicating that the multiple correlation with other variables was not high (Pallant, 2013). The Variance inflation value (VIF) is the inverse of the Tolerance value (1 divided by Tolerance) (Pallant, 2013). VIF values below 10 were found for each variable, which also suggested that the correlation with other variables was not high, therefore dismissing multicollinearity (Pallant, 2013). The results of the standard multiple regression can be found in Table 2.

Table 2

Predictors of school engagement for Dutch and immigrant students using multiple regression

Variable	Unstand-ardized		Stand-ardized		<i>p</i>	Correlations		Collinearity Statistics	
	<i>B</i>	SE	β	<i>t</i>		Partial	Part	Tol.	VIF
Instructional support parents									
Dutch	.189	.157	.097	1.205	.230	.079	.070	.524	1.907
Immigrant	-.836	.489	-.351	-1.709	.095	-.258	-.217	.385	2.599
Emotional support parents									
Dutch	.367	.169	.210	2.178	.030	.142	.127	.366	2.734
Immigrant	.330	.444	.156	.744	.461	.115	.095	.366	2.731
Instructional support teacher									
Dutch	.325	.172	.154	1.889	.060	.124	.110	.508	1.970
Immigrant	.643	.439	.255	1.465	.151	.223	.186	.534	1.874
Emotional support teacher									
Dutch	.140	.127	.088	1.109	.268	.073	.065	.545	1.833
Immigrant	.867	.364	.452	2.382	.022	.349	.303	.450	2.225
Instructional support classmates									
Dutch	-.014	.185	-.006	-.076	.940	-.005	-.004	.534	1.872
Immigrant	-.009	.405	-.004	-.023	.982	-.004	-.003	.519	1.926
Emotional support classmates									
Dutch	.059	.156	.035	.380	.704	.025	.022	.412	2.429
Immigrant	-.424	.396	-.208	-1.071	.291	-.165	-.136	.428	2.335
Monthly income postal code									
Dutch	-.101	.380	-.016	-.265	.791	-.017	-.015	.966	1.035
Immigrant	-.524	.876	-.079	-.597	.553	-.093	-.076	.925	1.081

p < .05

Note. Results for *p* < .05 are in boldface. Tol.=tolerance; VIF=Variance Inflation Factor

Moderation is used to identify factors that potentially change the relationship between independent and dependent variables (Baron & Kenny, 1986). During hierarchical multiple regression, variables are entered in several blocks or steps in a predetermined order (Pallant, 2013). Moderated regression analysis using hierarchical multiple regression was used to investigate if students' ethnicity is a moderator when using perceived social support to predict students' school engagement.

The ethnicity variable was dummy-coded. Furthermore, the perceived social support subscales and ethnicity variable were centered before performing hierarchical multiple regression in a model consisting of two blocks. The first block assessed the main effects using centralized subscales of perceived social support and the centralized ethnicity variable to predict school engagement. The first block explained a significant twenty-one percent of variance in school engagement scores, $R^2 = .21$, $F(7, 356) = 13.62$, $p < .001$. The second block assessed the interaction-effects by including the variables in the first block and the interaction-effects between each centralized perceived social support subscale with the centralized ethnicity variable to predict school engagement. After the variables in the second block were included, the entire model explained twenty-five percent of variance in school

engagement scores, $R^2 = .25$, $F(13, 350) = 8.98$, $p < .001$. This is a higher proportion of variance than explained by the first block alone, $\Delta R^2 = .039$, $\Delta F(6, 350) = 3.026$, $p = .007$. The addition of the interaction-effects in the second block increased the variance significantly by four percent.

In the first block, the perceived instructional teacher support subscale produced the only significant result ($\beta = .221$, $t(394) = 3.50$, $p < .001$). This is a positive coefficient, the higher the perceived instructional teacher support score, the higher the school engagement score. In the second block, the perceived instructional teacher support subscale also produced a significant result with a lower beta value than it produced in the first block ($\beta = .195$, $t(388) = 3.10$, $p = .002$). The perceived emotional teacher support subscale also produced a significant result ($\beta = .151$, $t(380) = 2.40$, $p = .017$). The interaction-effect between the perceived parental instructional support subscale and ethnicity produced a significant result ($\beta = -.142$, $t(385) = -1.98$, $p = .049$). This is a negative coefficient. When students are of immigrant origin, school engagement decreases with increased levels of perceived instructional parental support. The opposite is the case for Dutch students. This is illustrated in Figure 1. The interaction-effect between the perceived emotional teacher support subscale and students' ethnicity, significantly predicted school engagement ($\beta = .153$, $t(380) = 2.19$, $p = .029$). This is a positive coefficient. When students are of immigrant origin, the relationship between perceived emotional support from teachers and school engagement is stronger than when students are of Dutch origin. This is illustrated in Figure 2. Predicting school engagement using the perceived emotional support from teachers is moderated by students' ethnicity. In the final model, two perceived support subscales had significant interaction-effects with students' ethnicity, with the perceived emotional teacher support subscale recording a higher beta value ($\beta = .153$, $t(380) = 2.19$, $p = .029$) in interaction with students' ethnicity than the perceived instructional parental support subscale in interaction with students' ethnicity ($\beta = -.142$, $t(385) = -1.98$, $p = .049$).

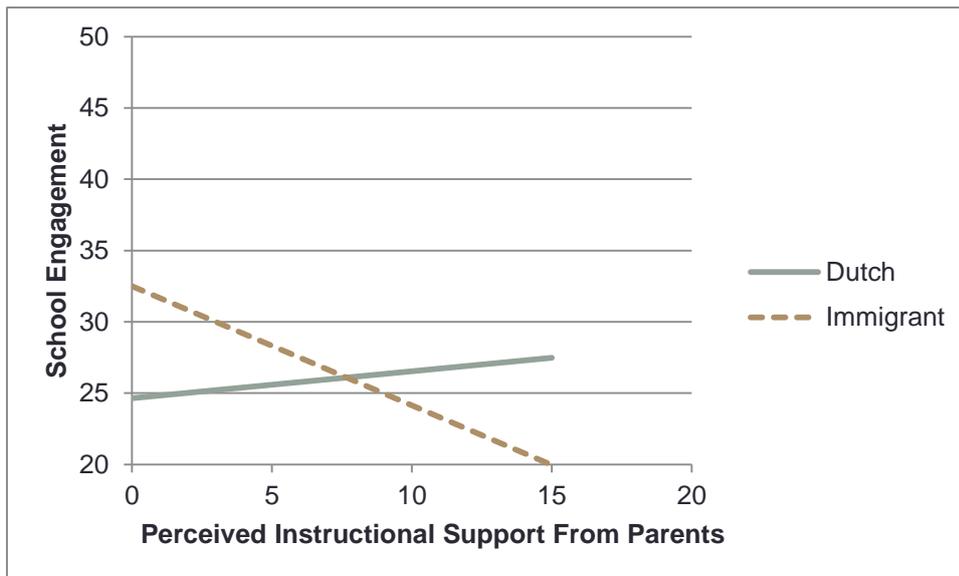


Figure 1. The relationship between school engagement and perceived instructional support from parents is very different for Dutch and for Immigrant students. Students' ethnicity interacts with the relationship.

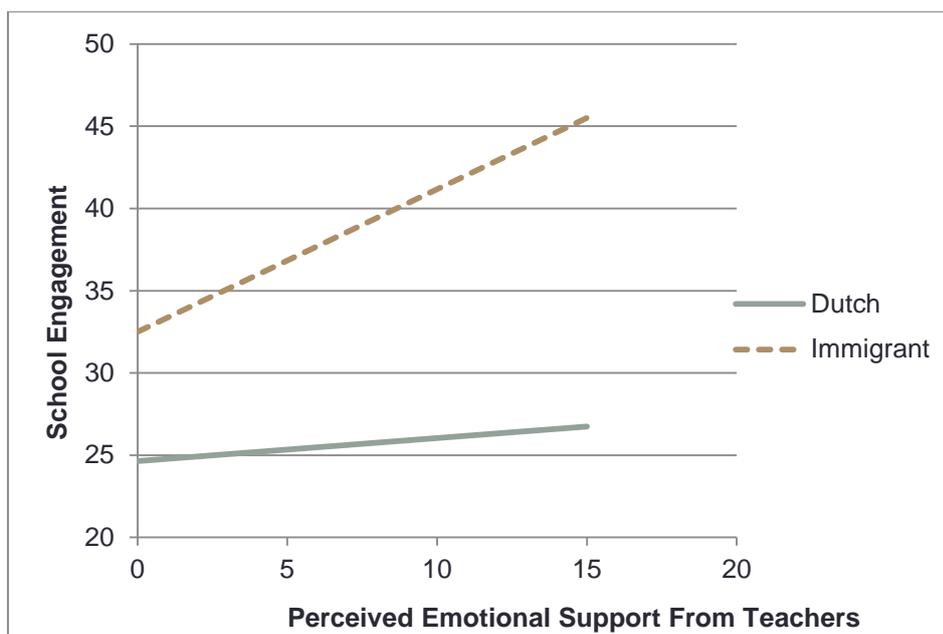


Figure 2. Predicting school engagement using perceived emotional support from teachers is moderated by students' ethnicity. For immigrant students alone, perceived emotional support is a predictor.

Perceived Social Support Subscales and School Engagement Scores

Independent-samples t-tests were conducted to investigate the differences between the scores of Dutch and immigrant students on the six perceived social support subscales and the

school engagement scale. An independent t-test was also conducted using the average neighborhood income of students. Independent-samples t-tests are used to compare the mean scores of two different groups of people (Pallant, 2013). The current study compared Dutch and immigrant students. Mean scores and standard deviation values are presented in Table 1. Statistically significant differences were not found in the mean scores of the six perceived social support subscales and school engagement scale for Dutch and immigrant students. The perceived parental instructional support scores of Dutch students, did not significantly differ $t(397) = -.09, p < .05$ from the scores of immigrant students as shown in Table 1. There was also no significant difference in the perceived parental emotional support scores of Dutch students $t(391) = -.07, p < .05$ and those of immigrant students as shown in Table 1. Likewise, there was no significant difference in the perceived instructional support scores from teachers of Dutch students $t(400) = .63, p < .05$ and those of immigrant students as shown in Table 1. The perceived emotional support scores from teachers of Dutch students $t(392) = .61, p < .05$ did not significantly differ from the scores of immigrant students as shown in Table 1. Statistically significant differences were not found between the perceived instructional support scores from classmates of Dutch students $t(72.87) = .51, p < .05$ and those of immigrant students as shown in Table 1. Likewise there was also no significant difference in the perceived emotional support scores from classmates of Dutch students $t(395) = .12, p < .05$ and the scores of immigrant students as shown in Table 1. Although not statistically significant, it was interesting that the mean school engagement score of immigrant students $t(399) = -1.15, p < .05$ was higher than the mean school engagement score of Dutch students as shown in Table 1. Lastly, no statistically significant differences were found between the monthly family incomes of Dutch and immigrant students $t(312) = .06, p < .05$ as shown in Table 1.

Discussion

This study focused on investigating the relationship between perceived social support and hidden drop-out in junior vocational education in the Netherlands and the role of students' ethnicity. The main research question focused on whether perceived social support by students predicts hidden drop-out and if this relationship is moderated by students' ethnicity. A second research question was whether Dutch and immigrant students have

different perceptions about the availability of perceived social support (instructional or emotional) from various agents (teacher/classmate/parent).

Our first research question investigated if students' perceptions about perceived social support are predictors of hidden drop-out and the role of students' ethnicity. Based on theory by Fall and Roberts (2012), we hypothesized that students' perceptions about perceived social support from parents and teachers would be predictors of school engagement. Furthermore based on research by Kenny and Bledsoe (2005), we expected perceived emotional support (as opposed to perceived instructional support) from teachers and parents to be predictors. Standard multiple regression analysis revealed that two emotional support subscales pertaining to parents and teachers are predictors of hidden drop-out. For immigrant students, perceived emotional teacher support was revealed to be the only predictor of hidden drop-out and for Dutch students perceived emotional support from parents was the only predictor of hidden drop-out. Finally, in an exploratory manner we investigated if students' ethnicity is a moderator. Moderated regression analysis using hierarchical multiple regression revealed that two perceived support subscales, namely perceived instructional parental support and perceived emotional teacher support are moderated by students' ethnicity when predicting hidden drop-out. Our expectation was confirmed for two perceived support subscales from parent and teachers.

Based on our results, we can conclude that two perceived emotional support subscales pertaining to parents and teachers are predictors of hidden drop-out and that predicting hidden drop-out is moderated by students' ethnicity for two types of perceived support namely instructional parental support and emotional teacher support. Our expectation based on research by Fall and Roberts (2012) that perceived support from teachers would predict hidden drop-out was confirmed only for perceived emotional teacher support and for immigrant students but not for perceived instructional teacher support and Dutch students. A possible explanation is because immigrant students perceive more emotional support from teachers than parents because immigrant parents are less able to help with school work due to language difficulties or because immigrant parents are less educated than their Dutch counterparts (Jozefowicz & Hernandez, 2008). Another explanation is because immigrant parents are less knowledgeable about the Dutch school system, therefore making teachers the more suitable for support with school matters (Van der Veen & Meijnen, 2002). A possible explanation for the reason why perceived emotional support from teachers was a predictor of hidden drop-out for immigrant students is because emotional support from teachers has been

identified as a contributor to students' attitudes towards school (Kenny & Bledsoe, 2005). Our expectation based on research by Fall and Roberts (2012) that perceived support from parents would predict hidden drop-out was confirmed only for perceived emotional parent support and for Dutch students. A possible explanation for the reason why perceived emotional support from parents was a predictor of hidden drop-out is because emotional support from family including parents has been identified as a contributor to students' attitudes towards school (Kenny & Bledsoe, 2005).

Our second research question focused on whether Dutch and immigrant students have different perceptions about the availability of different types of perceived social support from different agents such as parents, teachers and classmates. Based on research by Jozefowicz and Hernandez (2008) and Van Rooij et al. (2010) we expected immigrant students to report less perceived instructional support from parents than Dutch students. However, our results revealed that immigrant and Dutch students reported similarly about perceived instructional parental support. Based on research by Dubois et al. (1992), the expectation was that Dutch and immigrant students would not report differently about perceived parental emotional support. Our expectation concerning the lack of differences between Dutch and immigrant students concerning perceived parental emotional support was confirmed. Our expectation based on research by Linnehan et al. (2011), was that immigrant students would report less perceived emotional and instructional support from teachers than Dutch students. However, our results revealed that immigrant and Dutch students reported similarly about perceived instructional and emotional teacher support. Based on research by Bradley and Renzulli (2011) and Fordham and Ogbu (1986), the expectation was that immigrant students would report less perceived instructional and emotional support from classmates than Dutch students. Our expectation was not confirmed because our results revealed that immigrant and Dutch students report similarly about perceived instructional and emotional support from classmates.

A possible explanation for the lack of differences between Dutch and immigrant students concerning perceived instructional parental support, perceived support from teachers (instructional and emotional) and perceived support from classmates (instructional and emotional), could be because the sample of Dutch and immigrant students in the current study were of similar social economic status. Previous research in the Netherlands revealed that when students' ethnicity is controlled for social economic status, Dutch and immigrant students are very similar with regard to attitudes towards school and (hidden) drop-out (Traag,

2012). In the current study, there were no significant differences between the monthly family incomes of Dutch and immigrant students. Another possible explanation for the lack of differences between Dutch and immigrant students is the theory of post-materialism, which posits that immigrant parents are as (equally) concerned about the social mobility and academic achievement of their children as national parents. As a result of the ambition of immigrant and Dutch parents for their children to succeed socially and academically, immigrant and Dutch students share similar attitudes towards school, academic achievement and perceived support (Rothon, 2006). The lack of differences between Dutch and immigrant students could also be due to the fact that the immigrant students our sample are well integrated into the Dutch school system and Dutch culture. Another explanation might be due to the fact that differences between Dutch and immigrant students are minimal (Van der Veen & Meijnen, 2001). Based on our results, we can conclude that Dutch and immigrant students have similar perceptions about the availability of perceived instructional and emotional support from parents, teachers and classmates.

Implications and Suggestions

This research has investigated the concept of hidden drop-out in relation to students' perceptions about social support and students' ethnicity. The current study revealed that perceived emotional parental support is a predictor of hidden drop-out for Dutch students, while perceived emotional teacher support is a predictor of hidden drop-out for immigrant students. Furthermore perceived emotional support from teachers is moderated by students' ethnicity. We therefore recommend that teachers give more emotional support than instructional support to immigrant students as opposed to Dutch students. We also advise Dutch parents to provide more emotional support than instructional support to their Dutch children.

Lastly, we strongly recommend further studies to use the knowledge about predictors of hidden drop-out and the role of students' ethnicity to develop and implement effective intervention tools such as early warning indexes that can be used to support indigenous and immigrant students who are at risk of (hidden) drop-out or who are already experiencing (hidden) drop-out by increasing students' school engagement. We strongly advise that students' ethnicity should be taken into account. It is also advisable to educate parents and teachers about hidden drop-out.

Restrictions

Although much effort was made to gather a good sample of junior vocational high school students in the Netherlands, a critical factor to consider, was whether the sample was a good representation of the population of junior vocational high school students in the Netherlands. Due to the limited number of schools willing to participate in the study, convenience sampling was inevitable. Although the five participating schools generated 424 participants, this sample was not entirely representative of the population of junior vocational high school students in the Netherlands with respect to geographical and ethnic diversity. Urbanization is an aspect that was not taken in account. Higher concentrations of immigrant students live in urbanized areas (Roelofs, Keppels, & Eimers, 2009). The drop-out rate also tends to be higher in urbanized areas in general where there are higher percentages of immigrants students (Van Rooij et al., 2010).

The limited percentage of students in the sample that classified as immigrants is another restriction to consider. Furthermore the immigrant students in the sample were not a good representation of the immigrant population of junior vocational high school students in the Netherlands. Immigrant students from the major urbanized areas were not represented in the sample. Lastly, another limitation was the use of cross-sectional data. When students are repeatedly monitored over a period of time, more information can be generated to help answer our research questions.

In spite of the above mentioned restrictions, the current study generated meaningful conclusions and implications. We advise further studies to gather a sample representative of the geographical and ethnic population of junior vocational high school students in the Netherlands so that the results are generalizable. We also recommend carrying out a longitudinal study.

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