

# **Social Support from Parents, Teachers and Peers on the Relationship between Negative Life Events and Adolescents Delinquent Behaviour**

Maike Ariaans

5533414

Zeena Harakeh

Youth-Studies

June, 2018

Word count: 5821

## **Abstract**

Negative life events could be a risk factor for delinquent behaviour of adolescents. Social support (from teachers, peers and parents) is a protective factor against delinquency and could decrease delinquent behaviour or moderate the association between negative life events and delinquency. The current longitudinal study investigates if social support from teachers, peers and/or parents weakens the association between negative life events and delinquency.. The TRacking Adolescents' Individual Lives Survey (TRAILS) was used to analyse this research subject. 1497 Adolescents, aged between 12 and 18 years old, participated in this current study. The results showed that the frequency and intensity of negative life events did not have a significant effect on delinquency. Furthermore the three forms of social support did not prove a moderating factor on delinquent behaviour due to negative life events. From the three forms of social support only social support from teachers could decrease delinquent behaviour. Future research could look more into the effects of teachers on preventing delinquency.

Key words: Negative life events; Adolescents; Social Support; Delinquency

## **Samenvatting**

Negatieve levensgebeurtenissen zijn een risicofactor voor delinquent gedrag. Terwijl sociale steun (van leraren, vrienden en peers) een beschermende factor zijn zouden kunnen zijn tegen delinquentie en het zou een moderende werking kunnen hebben tussen negatieve levensgebeurtenissen en delinquent gedrag. De huidige longitudinale studie onderzoekt of sociale steun van leraren, peers en ouders de relatie tussen negatieve levensgebeurtenissen en delinquentie kan verzwakken. De TRacking Adolescents' Individual Lives Survey (TRAILS) is gebruikt om deze vraag te onderzoeken. In deze huidige studie nemen 1497 adolescenten deel met een leeftijd tussen 12 en 18 jaar oud. De resultaten geven weer dat negatieve levensgebeurtenissen geen significant effect hebben op delinquentie, de drie vormen van sociale steun hebben ook geen moderende werking tussen negatieve levensgebeurtenissen en delinquent gedrag. Van de drie vormen van sociale steun, kon alleen sociale steun van leraren leiden tot een vermindering van delinquent gedrag. Toekomstig onderzoek kan zich richten op de rol van leraren op het voorkomen van delinquent gedrag als zij hun studenten sociale support bieden.

Trefwoorden: Negatieve levensgebeurtenissen, Adolescenten, Social Steun en Delinquentie.

Adolescence is a period in which youth show delinquent behaviour. Delinquent behaviour is defined as behaviour that is not in line with the law, for example theft, robbery and vandalism (van der Ploeg, 2014). Delinquent behaviour can have a big impact on the future of adolescents. People who were engaged in delinquent behaviour during their adolescence often have a lower social economic status, have more negative relationships with significant others and have a poor emotional well-being (Lanctôt, Cernkovich & Giordano, 2007). To prevent those problems and prevent delinquent behaviour, possible risk factors have to be identified.

One of the risk factors that can play a role during adolescence are negative life events. Negative life events have a stronger impact on adolescents than on other age groups (Hoffman & Cerbone, 1999). Research has shown that negative life events can predict delinquent behaviour (Hoffman, 2010). A possible protective factor against delinquency is social support. Social support can come from parents, teachers and peers as they are a part of the social life of adolescents (Bru, Murberg & Stephens, 2001). Parents, teachers and peers who provide social support, are a role model for adolescents. Those role models could help adolescents, who are experiencing problems, with learning new coping skills instead of showing delinquent behaviour as coping mechanism (Bru, Murberg & Stephens, 2001). Social support could therefore be an important factor in reducing the chance of developing delinquency when an adolescent experiences negative life events. When those forms of social support are examined in one design it could provide more insight in which provider of social support has a bigger impact in reducing delinquency. This could be important for (new) policy on or intervention against delinquent behaviour when the adolescent is exposed to negative life events. The aim of this longitudinal study is to examine whether there is a relationship between negative life events and delinquency in adolescents and whether this is moderated by social support (peers, parents and/or teachers).

### **Relationship between Negative Life Events and Delinquency**

Negative life events are defined as events that have a negative influence on the life of the adolescent (Hoffman & Cerbone, 1999). Examples of negative life events are: Divorce of the parents or the death of a family member (Hoffman & Cerbone, 1999). Negative life events can be measured in intensity (how strong does the adolescent experience the negative life event) and frequency (the amount of negative life events). The association between negative life events and delinquency can be explained through the general strain theory by Agnew (1992). According to this theory, feelings of strain and stress could lead to delinquency because for adolescents delinquency is for a way of handling those feelings of strain.

According to Hoffman and Miller (1998) negative life events could increase feelings of strain and stress and therefore lead to delinquency.

There are several longitudinal studies, which, in line with the strain theory, found that when an adolescent experiences negative life events the chance of delinquency is higher (Aseltine, Gore & Gordon, 2000; Kim, Conger, Elder & Lorenz, 2003; Eitle, Gunkel & Gundy, 2004; Wiesner & Windle, 2004; Hoffman, 2010). Only the study by Eitle and colleagues (2004) was focussed on specific delinquent behaviour, namely: Gang membership, while the other studies were focussed on delinquency in general. Those previous studies did not measure negative life events in frequency or intensity. Three longitudinal studies (Hoffman & Miller, 1998; Hoffman & Cerbone, 1999; Ireland, Rivera & Hoffman, 2008) and a mixed method study with interviews and surveys (Piquero & Sealock, 2004), examined the frequency of negative life events. Their results showed that an adolescent who experienced more negative life events (frequency) showed more delinquent behaviour than an adolescent who experienced less negative life events. The intensity of negative life events has not been examined before, but in the study of Hoffman and Cerbone (1999) it was mentioned that when adolescents perceive the negative life events as more intense, the chances of delinquency become higher.

To conclude, previous empirical studies show that when an adolescent experiences negative life events, the chances of delinquent behaviour become higher. Those findings are in line with the general strain theory (Agnew, 1992) which states that delinquency could be a possible coping mechanism.

### **Social Support from Parents, Teachers and Peers and Delinquent Behaviour**

Social support is received when an adolescent feels that he or she is part of a social network and is being loved (Ikiz & Cakar, 2012). According to Bru, Murberg and Stephens (2001) perceiving social support is a part of social bonding. According to the attachment theory (Hirschi, 1969), the stronger the bond is between an adolescent and a conventional other, the less likely the adolescent will show delinquent behaviour. Because of the attachment the adolescent will become more sensitive to the norms of non-delinquency of the conventional other and will follow those norms.

There are several studies which researched the relationship between social support from parents and delinquency. A meta-analysis (Hoeve et al., 2009), two cross-sectional studies (Parker & Benson, 2004; Thaxton and Agnew 2004) and several longitudinal studies (Wright & Cullen 2001; Meeus, Branje & Overbeek, 2004; Barnes, Hoffman, Welte, Farrell

& Dintcheff, 2006; Kort-butler, 2010) stated that when adolescents receive social support they are less likely to show delinquent behaviour. This is in line with the attachment theory. For social support from teachers, there are also several studies which are in line with the attachment theory. A cross-sectional study (Demantot and van Houtte, 2012) and longitudinal studies (Crosnoe, Erickson & Dornbuch, 2002; Rusdasill, Reio Jr., Stipanovic & Taylor, 2010; Wang, Eccles & Brinkworth, 2013) shows that when an adolescent receives social support from their teacher, the chances of delinquency are lower than when an adolescent receives no social support. The study by Demantot and van Houtte (2012) was focussed on misconduct at schools. In the misconduct scale only a few behaviour items (theft, vandalism and drugs) are seen as delinquent behaviour. For social support from peers the findings are inconsistent. Cross-sectional study by Mcelhaney, Immele, Smith and Allen (2006) and Cooley, Fite and Rubens (2014) shows that when an adolescent receives support from peers the level of delinquency will be decreased. This is in line with the attachment theory, the peers are the conventional others. In contrast, a longitudinal research by Meadows (2007) and two cross-sectional studies (Macneil, Stewart and Kaufman, 2000; Wason, Sifers, Houlihan, 2013) show that peer support can lead to an increase in delinquency.

There are not many previous studies which measured social support from teachers, parents and peers in one study. When social support is tested in one model, it could show which form of social support is the strongest protective factor. Only the cross-sectional study by Bru, Murberg and Stephens (2001) has compared the three forms of social support (Parents, teachers and peers) with misbehaviour in class (picking on classmates). All three forms of social support could decrease misbehaviour in class, but social support from teachers is the strongest predictor. According to Bru, Murberg and Stephens (2001) this could be because of the management style of schools in Norway. There is only one study which researched the three forms of social support on delinquency (Meadows, 2007) but this study did not measure the three forms of social support in one design and therefore a comparison between the forms of social support cannot be made.

To conclude, in line with the social support theory, social support from parents, teachers and peers can reduce the chances of developing delinquent behaviour. Therefore it could also be possible that social support is a protective factor and can have a buffer effect on preventing the development of delinquency.

## **Social Support as Moderator between Negative Life Events and Delinquency**

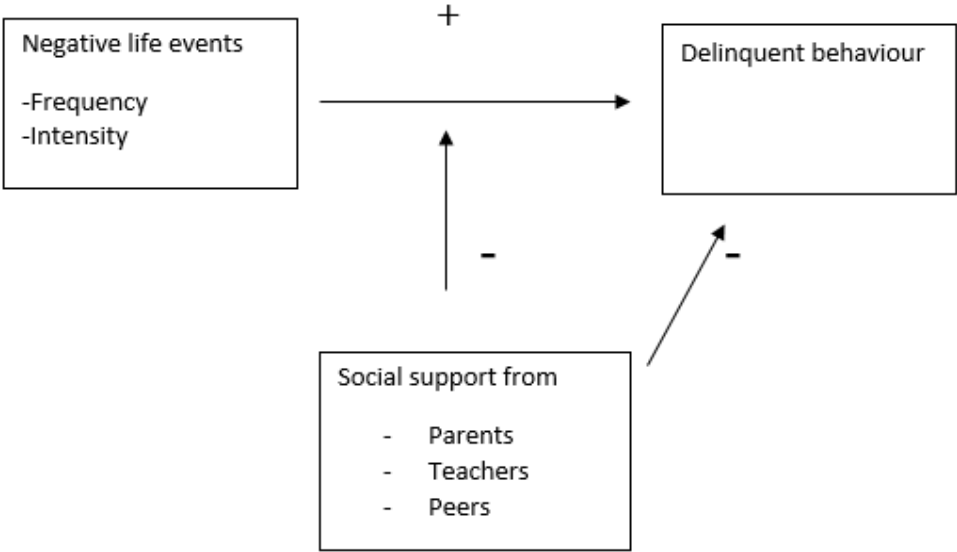
The stress-buffering model (Cohen & Wills, 1985) can be used to explain the moderator role of social support on the relationship between negative life events and delinquency. According to the stress-buffering model a strong supportive network can weaken the effects of negative life events on delinquency. Teacher, peers and parent can provide verbal and emotional support that will work as a buffer by providing another way to handle the effects of negative life events instead of delinquency (Bru, Murberg & Stephens, 2001; Benhorin & McMahon, 2008; Cooley, Fite & Rubens, 2014).

The role of social support from parents, teachers and/or peers on the relationship between negative life events and delinquency has not been tested before. The role of social support as a moderator has been tested before but not for delinquency. A cross-sectional study by Bru and colleagues (2001) found that social support from parents, teachers and peers can reduce showing misbehaviour in class (picking on classmates) when the adolescents experienced negative life events. A cross-sectional study by Benhorin and McMahon (2008) and Graaff, Branje, Wied and Meeus (2012) showed that social support from parents, teachers and/or peers or global support from social network can reduce the negative effects of exposure to violence and negative life events on aggression. Delinquent behaviour is seen as a form of externalizing behaviour (Franken et al., 2015). Both outcomes (misbehaviour in class and aggression) are seen as externalizing behaviour. Therefore, it could be the case that social support is also a moderator on the relationship between negative life events and delinquent behaviour.

### **Current Research**

The aim of this current study is to examine if social support from teachers, peers and parents could weaken the association between negative life events and delinquency. To test the moderating role of social support, this longitudinal study will test the following hypotheses: (see figure 1). (1) Experiencing more negative life events (in frequency and in intensity) leads to delinquent behaviour in adolescents. In line with the general strain theory of Agnew (1992) previous studies shows that an increase in negative life events can lead to delinquency. (2) Receiving more social support from parents, teachers and peers leads to less delinquent behaviour. Previous literature also shows that when an adolescent receives social support, the chances of developing delinquent behaviour is less. For peers there were inconsistent findings, but in line with the attachment theory social support from peers should lead to a

decrease of delinquency. (3) Social support (from parents, peers and/or teacher) reduces the development of delinquent behaviour when the adolescent experience negative life events.



*Figure 1. Moderator effect of Social Support (Parents, Teachers and Peers) on Negative Life Events and Delinquent Behaviour*

## Methods

### *Procedure and Participants*

This current study uses the data from the TRacking Adolescents' Individual Lives Survey (TRAILS). The goal of this study is to gain more insight in the cause of favourable or unfavourable development of adolescents. The TRAILS study was approved by the ethics committee (Huisman et al., 2008). Five municipalities in the north of the Netherlands participated in the TRAILS study. The first two municipalities were requested to give the names and addresses of everyone born between October first, 1989 and September 30, 1990 and for the other three municipalities of everyone born between October first, 1990 and September 30, 1991. Primary schools within the municipalities were also contacted whether they would like to participate. In total 135 schools were contacted. In the end 122 schools (90.4%) and 3145 (90.3%) adolescents participated. Before the adolescents became part of the TRAILS study, both parents and children were informed about the purpose of the study through a brochure, telephone contact with the parents and a school visit for the adolescents and teachers. All participants (parents, teachers and adolescents) gave active consent by signing an informed consent in which they gave their permission to participate in the study. The data from adolescents and teachers were collected through self-reports which were conducted during school time with supervision of a (TRAILS) research assistant. The data from parents were collected through self-reports and interviews at home. After the data were collected 6.7% ( $N=210$ ) of the adolescents were excluded because of incapability (for example due to mental retardation, serious illness or a non-Dutch speaking parent). So in the end 2935 adolescents were part of the first wave of the TRAILS study.

The first wave was conducted in 2000, the most recent wave (wave six) was conducted in 2017. This current study used the data from wave two (2002-2003) and wave three (2005-2007). Questions about negative life events were not included in the first wave, therefore this wave was not part of this study. In wave two 2230 adolescents were part of the study. In this current study only the participants who filled in the questionnaire on delinquency on both wave two and wave three were included, the rest were removed from the data. In total 1497 adolescents participated of whom 53.2% are female and 89.3% are autochthon. 60.8% follows a higher level of education (HAVO, HAVO/VWO or VWO), the other 31.3% follows a lower level of education and 7.1% are still in primary school. During wave 2 the average of the participants was  $M_{age}=13.03$  years old ( $SD=.60$ ). During wave 3 the average age was  $M_{age}=\$



15.73 years old ( $SD=.74$ ).

### **Measures**

*Delinquency (T2 & T3)*: Delinquency is defined as behaviour that is not in line with the law (van der Ploeg, 2014). Delinquency is measured with 25 questions from the Antisocial Behavior Questionnaire (Moffit & Silva, 1988). The same questions were used for T2 and T3. Examples of questions are: “*How often did you hit someone on the street?*” or “*How often did you participate in a gang (criminal group)?*”. All questions started with how often the adolescent participated in that behaviour. The items were measured on a five point likert scale: “*0=Never, 1=1 time, 2=2-3 times, 3=4-6 times and 4=7 or more times*”. The reliability analysis for delinquency on T2 has an  $\alpha=.83$  and for delinquency T3  $\alpha=.86$  which means that at both waves delinquency is a reliable scale.

*Negative life events (T2)*: Negative life events are defined as life events that have a negative impact on the adolescent, for example: Death of a family member or the divorce of parents (Hoffman & Cerbone, 1999). Negative life events are based on sixteen questions (Bouma, Ormel, Verhulst & Oldehinkel, 2008). First the adolescent had to answer if he or she experienced one of those specific negative life events in the past two years (“*0=yes, 1=no*”). If the answer was positive, the participant needed to fill in the sub questions in which they were asked how intense they experienced the life event. The adolescent could answer the questions on a four point likert scale (“*1=Not awful, 2=A bit awful, 3=Pretty awful = and 4=Really awful*”). Examples of frequency questions are: “*Did you become seriously ill or did you have an accident in the past two years?*” and “*Did your mom past away in the past two years?*” and examples for intensity are “*How awful was it when you became ill or had an accident?*” and “*How awful was it when your mom past away?*”. In this current study, negative life events are measured in frequency and intensity. Frequency will be measured in the amount of negative life events the adolescent experienced. A sum variable is made by making a sum of the total amount of negative life events an adolescent experienced (Hoffman & Cerbone, 1999). Intensity will be measured in how intense the adolescent experienced the life events. All participants who did not experience negative life events and therefore did not feel the life event as intense were given the score zero. After this step, a mean score was conducted for every participant. The participants could score an average between 0 and 5.

*Social support parents (T2)*: An adolescent experience social support when they feel they are loved, being cared for and when they are a part of a social network (Ikiz & Cakar,

2012). Twelve questions from the Family Assessment Device are used to measure social support from parents (Epstein, Baldwin & Bishop, 1983). The questionnaire were part of the reports of parents. Examples of questions are: “*We trust each other*” or “*When there are difficulties we can count on the support of each other*”. A four point likert scale was used to answer the questions: “*1= Fully disagree, 2=Disagree, 3=Agree and 4=Fully agree*”. The twelve questions have a Cronbach alpha of  $\alpha=.87$  which means that the scale of social support from parents is highly reliable.

*Social support teachers (T2)*: Social support from teachers is based on four questions from the self-reports of the adolescents (Ormel, Lindenberg, Steverink & Vonkorff, 1997). Examples of questions are: “*Most teachers will help me if I need some help*” or “*I can trust most teachers*”. The adolescent could answer the four questions based on a five point likert scale: “*1=Never, 2=Almost never, 3=Sometimes, 4=Almost every time and 5=Always*”. The Cronbach alpha is  $\alpha=.74$ , which means that the scale of social support from teacher is reliable.

*Social support peer (T2)*: Social support from peers is based on four questions from self-reports of the adolescents (Ormel, Lindenberg, Steverink & Vonkorff, 1997). Examples of questions are: “*Most peers will help me if I need some help*” or “*I can trust most peers*”. The adolescent could answer the four questions based on a five point likert scale: “*1=Never, 2=Almost never, 3=Sometimes, 4=Almost every time and 5=Always*”. The Cronbach alpha is  $\alpha=.82$  which means that the scale on social support from peers is reliable.

*Control variables*: Sex, age, education level and ethnicity are the control variables in this study. It is expected that boys and older adolescents show more delinquent behaviour than girls or younger adolescents (Thijs, van Dijk, Stoof & Notten, 2014). In this study for the variable sexes, girls are the reference group. Previous research has shown that ethnicity is a predictor for delinquency. Adolescents from native Dutch background (autochthon) show less delinquent behaviour than adolescents who are not native (Leun, Kromhout, Easton & Weerman, 2010). In this study Dutch adolescents are the reference group. When delinquency is compared with the level of education, most adolescents who are delinquent have a lower level of education or did not finish school (Verbruggen, Blokland & van der Geest, 2011). In this study adolescents in lower education are the reference group.

## **Data analysis**

In the second wave 2230 adolescents participated. But because this is a longitudinal study only the participants who participated in both wave 2 and wave 3 with the questionnaire of delinquent behaviour were included. The 602 adolescents who only participated in T2 and not

in T3 were deleted from the sample. The mean scores, standard deviation and range for negative life events (intensity and frequency), social support (teachers, peers and parents), delinquency (T2 and T3) and for the control variables (sex, age, ethnicity and level of education) were described in the results. The first two hypothesis in which was examined if experiencing negative life events leads to more delinquency and if receiving social support leads to a decrease of delinquency were examined with a linear regression analysis. Before the linear regression analysis was conducted, the assumptions of a linear regression analysis were tested. The following assumptions were checked: Normal distribution, homoscedasticity, multicollinearities, leverage, mahalanobis, cook's distance and standard residuals. There were seventeen cases with a high mahalanobis and three case with a high leverage. Those were not deleted from the sample because there was no difference between the regression analysis with or without the high cases. Because intensity and frequency of negative life events were highly correlated for both variables separate analysis were conducted. Therefore there were four linear regression analysis performed, two cross-sectional with delinquency T2 as outcome and two longitudinal with delinquency T3 as outcome. In all four analysis the control variables were included in the first step and in the next step the other variables were added (social support from parents, teacher and peers and either frequency or intensity). For the longitudinal analysis delinquency T2 was also included in the second step with the other variables. Because delinquency T2 could be an (more) important contributor to delinquency T3.

The last hypothesis, in which was predicted that social support could decrease the influence of negative life events on delinquency, is conducted through the linear regression analysis. For all the variables a new centred variable was made. The centred variables were used to make interaction variables of: Intensity X Social support parent, intensity X social support peers, intensity X Social support teacher, frequency X Social support parent, frequency X social support peers, and frequency X Social support teacher. For every interaction variable a linear regression analysis with control variables was conducted. This means that there were six moderation analysis conducted.

## **Results**

### **Descriptive Statics**

First, the descriptive results will be described (see Table 1). The level of delinquency of adolescents on both time periods are very low, both variables were measured on a scale from 0 (no delinquency) till 4 (high delinquency rate). T2 has a  $M=.28$  ( $SD=.40$ ) and T3 has a

$M=.22$  ( $SD=.30$ ). The range of frequency was 0 (experienced no negative life events) till sixteen (experienced all negative life events). The mean of frequency was  $M=.15$  ( $SD=.42$ ), meaning that most adolescents did not experience negative life events. The range of intensity was 0 (not intense) till 4 (really awful). The level of intensity was also very low  $M=.33$  ( $SD=.42$ ). Adolescents did not experience negative life events as intense. Social support from parents had a range of 0 (no social support) till 4 (receiving social support), for teachers and peers the range was between 0 (no social support) and 4 (social support). Adolescents perceived social support from their parents [ $M=3.86$ ,  $SD=.40$ ], teachers [ $M=3.54$ ,  $SD=.70$ ] and from their peers [ $M=3.57$ ,  $SD=.71$ ]. Only for delinquency, frequency and intensity of negative life events and social support from peers and teachers there were significant differences between boys and girls. Boys showed more delinquent behaviour during T2 [ $M=.35$ ,  $SD=.35$ ] and T3 [ $M=.29$ ,  $SD=.34$ ] than girls on T2 [ $M=.21$ ,  $SD=.24$ ,  $t(1305.65)=-8.86$ ,  $p=.000$ ] and T3 [ $M=.17$ ,  $SD=.24$ ,  $t(1321.58)=-8.41$ ,  $p=.000$ ]. Girls [ $M=.18$ ,  $SD=.45$ ] experienced more negative life events than boys [ $M=.13$ ,  $SD=.38$ ,  $t(1622.49)=2.45$ ,  $p=.014$ ] and girls [ $M=.38$ ,  $SD=1.05$ ] experienced the negative life events as more intense than boys [ $M=.27$ ,  $SD=.91$ ,  $t(1623.57)=2.09$ ,  $p=.037$ ]. Girls [ $M=3.67$ ,  $SD=.73$ ] also reported a higher level of social support from their peers than boys [ $M=3.44$ ,  $SD=.72$ ,  $t(2084)=7.25$ ,  $p=.000$ ] but boys [ $M=3.59$ ,  $SD=.70$ ] reported a higher level of social support from their teacher than girls [ $M=3.50$ ,  $SD=.69$ ,  $t(1621)=-2.73$ ,  $p=.006$ ].

Table 1 also showed the correlations from the variables. Delinquency T2 was highly positive correlated with delinquency T3 and sexes. Delinquency T2 and T3 was negative correlated with social support from parents and level of education. Social support from parents and teachers were also positive significant correlated with social support from peers.

Table 1: *Correlation Bivariate Correlations, Means, Standard-deviations and Range of the Variables and Confounding Variables*

	1	2	3	4	5	6	7	8	9	10	11	M	SD	Range
1.Delinquent Behaviour T2		.461**	-.021	.019	-.111***	-.253***	-.063**	.219***	-.096***	.052*	.042	.28	.40	.000-2.670
2.Delinquent Behaviour T3			-.048	-.030	-.078**	-.160***	-.052*	.209***	-.183***	-.022	.040	.22	.30	.000-3.080
3.Negative life Events (frequency) T2				.775***	-.023	-.005	-.004	-.060*	.071**	.015	.011	.33	.97	.000-4.000
4.Negative life Events (intensity) T2					.040	.005	.009	-.051*	.039	.116	.110	.15	.42	.000-3.000
5.Social support Parents T2						.036	.066**	.022	.124***	-.078**	-.076**	3.87	.40	2.170-4.550
6.Social support Teachers T2							.318***	.068**	.006	-.043	.053*	3.54	.70	1.000-5.000
7.Social support Peers T2								-.148***	.085**	.021	.030	3.57	.71	1.000-5.000
8.Sex <sup>1</sup>									-.021	-.034	-.023	.47	.50	.000-1.000
9.Level of education <sup>2</sup> T2										.015	-.035	.39	.49	.000-1.000
10.Age											-.031	13.03	.60	12.000-15.000
11.Etnicity <sup>3</sup>												1.11	.31	1.000-2.000

Note<sup>1</sup>: 0= woman, 1= Men, Note<sup>2</sup>: 0=lower education, 1=higher education, Note<sup>3</sup> 0=Native-Dutch, 1=not native-Dutch

\*=p<.050, \*\*p<.010, \*\*\*p=.000 N=1497. Pearson and Point-Biserial

### **Intensity, Frequency and Social Support as a Predictor of Delinquent Behaviour**

The first step was to perform a linear regression analysis to analyze if there is an association between the intensity and frequency of negative life events and delinquent behaviour on both T2 and T3. The control variables were also included in the analysis. Frequency and intensity did not predicted delinquency T2 in the cross-sectional design, but also did not have a significant effect in the longitudinal design with delinquency T3 (see Table 2 and Table 3).

To test the second hypothesis, which predicted that social support from parents, teachers and peers could decrease delinquency, a linear regression analysis was conducted. The cross-sectional results showed that social support from teachers, parents and peers have a significant effect on delinquency T2. Social support from teachers and parents decreased the effect of delinquency, while social support from peers increased delinquency (see Table 2). In the longitudinal design with delinquency T3 only social support from teachers was significant (see table 3). If adolescents received social support from their teacher, the level of delinquency decreased.

Sex, ethnicity, age and level of education were the control variables in this study. In the linear regression analysis only sex and level of education had a significant effect in the longitudinal design with delinquency T3 (see Table 3). Boys had a higher chance of showing delinquency than girls and for adolescents in lower education the effect of delinquency is decreased.

Table 2. *Linear Regression Analysis with Delinquency T2 as Dependent Variable, Social Support (Parents, Teachers & Peers), Intensity and Frequency as Independent Variables and the Control Variables.*

Variables	Intensity				Frequency			
	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>
Sex <sup>1</sup>	.155	.015	.257***	10.540	.154	.015	.256***	10.473
Age T2	.021	.012	.042	1.751	.022	.012	.043	1.785
Level of- education	-.055	.015	-.090***	-3.718	-.054	.015	-.089***	-3.650
Ethnicity	.050	.025	.049*	2.023	.050	.025	.049*	2.018
Frequency	-	-	-	-	.004	.017	.005	.216
Intensity	.009	.007	.029	1.203	-	-	-	-
SSParent <sup>2</sup>	-.072	.018	-.094***	-3.870	-.072	.018	-.095***	-3.904
SSTeacher	-.126	.011	-.290***	-11.371	-.126	.011	-.289***	-11.333
SSPeers	.037	.011	.087**	3.879	.037	.011	.087**	3.386

Note<sup>1</sup> 0=women, 1=men. Note<sup>2</sup>: SS=Social Support. Dependent Variable: Delinquency T2.

\*  $p < .050$ , \*\*  $p < .010$ , \*\*\*  $p = .000$

Intensity:  $R^2 = .386$ , Frequency:  $R^2 = .385$

Table 3. *Linear Regression Analysis with Delinquency T3 as Dependent Variable, Social Support (Parents, Teachers & Peers), Intensity and Frequency and Delinquency T2 as Independent Variables and the Control Variables.*

Variables	Intensity				Frequency			
	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>
Sex <sup>1</sup>	.079	.014	.137***	5.765	.079	.014	.137***	5.766
Age T2	-.020	.011	-.041	-1.811	-.020	.011	-.042	-1.849
Level of- education	-.083	.013	-.141***	-6.168	-.083	.013	-.140***	-6.131
Ethnicity	.032	.022	.033	1.454	.033	.022	.034	1.488
Frequency	-	-	-	-	-.022	.015	-.032	-1.430
Intensity	-.011	.007	-.036	-1.602				
SSParent <sup>2</sup>	-.014	.017	-.020	-.861	-.014	.017	-.019	-.837
SSTeacher	-.035	.010	-.084**	-3.354	-.035	.010	-.085**	-3.385
SSPeers	.016	.010	.040	1.628	.016	.010	.039	1.607
Delinquent Behaviour T2	.370	.023	.387	15.871	.369	.023	.386	15.844

Note<sup>1</sup> 0=women, 1=men. Note<sup>2</sup>: SS=Social Support. Dependent Variable: Delinquency T2.

\*  $p < .050$ , \*\*  $p < .010$ , \*\*\*  $p = .000$

Intensity:  $R^2 = .486$ , Frequency:  $R^2 = .498$

### **Social Support as Moderator between Negative Life Events and Delinquency**

The third hypothesis examined if social support from parents, teachers and peers could weaken the association between negative life events and delinquency. A univariate regression analysis was conducted to test the hypothesis. Frequency and intensity of negative life events were the independent variables and delinquency T2 (cross-sectional analysis) and delinquency T3 (longitudinal analysis) was the dependent variable in this analysis. The control variables were also included.

For the cross-sectional design with delinquency T2 and frequency, social support from teachers [ $B = -.005$ ,  $SD = .025$ ,  $t(1609) = -.182$ ,  $\beta = -.004$ ,  $p = .856$ ], social support from peers [ $B = -.013$ ,  $SD = .026$ ,  $t(1611) = .507$ ,  $\beta = .012$ ,  $p = .612$ ] and social support from parents [ $B = -.007$ ,



$SD=.046$ ,  $t(1500)=-.163$ ,  $\beta=-.004$ ,  $p=.870$ ] did not predict delinquent behaviour. In the longitudinal analysis with delinquency T3 and frequency as the independent variable, social support from parents [ $B=.026$ ,  $SD=.043$ ,  $t(1500)=.588$ ,  $\beta=.015$ ,  $p=.557$ ], social support from peers [ $B=.007$ ,  $SD=.025$ ,  $t(1611)=.267$ ,  $\beta=.006$ ,  $p=.789$ ] and social support from teachers [ $B=-.018$ ,  $SD=.025$ ,  $t(1609)=-.750$ ,  $\beta=-.018$ ,  $p=.454$ ] also did not have a significant effect on delinquency. The same accounts for intensity. In the cross-sectional analysis with delinquency T2, social support from teachers [ $B=-.007$ ,  $SD=.011$ ,  $t(1608)=-.647$ ,  $\beta=-.015$ ,  $p=.518$ ], social support from parents [ $B=-.016$ ,  $SD=.019$ ,  $t(1499)=-.840$ ,  $\beta=-.021$ ,  $p=.401$ ] and social support from peers [ $B=-.001$ ,  $SD=.010$ ,  $t(1610)=-.130$ ,  $\beta=-.003$ ,  $p=.896$ ] did not predict delinquent behaviour. In the longitudinal analysis with delinquency T3, social support from teachers [ $B=-.018$ ,  $SD=.010$ ,  $t(1608)=-1.769$ ,  $\beta=-.042$ ,  $p=.077$ ], social support from parents [ $B=.005$ ,  $SD=.018$ ,  $t(1499)=.292$ ,  $\beta=.018$ ,  $p=.770$ ] and social support from peers [ $B=-.005$ ,  $SD=.010$ ,  $t(1610)=-5.36$ ,  $\beta=-.013$ ,  $p=.592$ ] also did not have a significant effect on delinquent behaviour.

## Discussion

The aim of this longitudinal study was to examine if social support from teachers, parents and peers could weaken the association between negative life events and delinquency. The longitudinal findings showed that even when there was not a significant association between negative life events and delinquency, social support from peers, teachers and parents was also not a moderator between negative life events and delinquency. Social support from peers and parents did not have a significant effect on delinquency either. But social support from teachers did decrease the effects of delinquency.

### Negative Life Events and Delinquency

Negative life events (frequency and intensity) were not a predictor for delinquency in this longitudinal study. This is not in line with the first hypothesis and findings in previous longitudinal researches, in which was predicted that negative life events increased the chance of delinquency. Most of the previous studies used risk groups as target groups for their participants. This current study used a representative target group, there were only participants excluded based on incapability. It could be that previous studies found significant effects because they used risk groups who have a higher chance at experiencing negative life events. The studies (Hoffman & Miller, 1998; Hoffman & Cerbone, 1999; Eitle, Gunkel &

Gundy, 2004; Piquero & Sealock, 2004; Hoffman, 2010) used families from which a parent suffers from mental health problems (for example major depression), psychoactive substance abuse disorder or only included gang members or adolescents who were already delinquents (non-delinquents or non-gang members were excluded). Research from Costello, Erkanli, Fairbank and Angold (2002) showed that there are adolescents who are at a higher risk of experiencing negative life events. One of those risk groups are adolescents who are exposed to mental health problems of family members. Adolescents who are in a gang or show delinquent behaviour also have a higher chance at experiencing negative life events. Because of their delinquent behaviour, they may have less social skills and therefore are more vulnerable to more negative life events considering relationships (Kim, Elders, Conger & Lorenz, 2003). Future research could examine if using a representative target group (not only risk groups) could lead to a significant effect between negative life event and delinquency.

### **Social Support from Teacher, Peers and Parents and the Effect on Delinquency**

Social support from teachers could decrease the effect of delinquency. This finding is in line with the second hypothesis, which stated that social support could decrease the chance of delinquency. Teachers are seen as natural mentors (Dubois & Silverthorn, 2005). If an adolescent has a natural mentor the chances of risk behaviour like delinquency will decrease. Natural mentors like teachers provide social support and are a role model for the adolescent. For adolescents those natural mentors provide positive social norms which the adolescent will take on (Dubois & Silverthorn, 2005). This is in line with the attachment theory.

The results of social support from peers and parents are not in line with the hypothesis and the findings of previous studies. A possible explanation why social support from peers was not significant could be because their peers are delinquents. According to the Social bond theory (Hirschi, 1969) adolescents will show more delinquent behaviour if their friends are delinquents. If an adolescent has friends who do not engage in delinquency (conventional friends) the chances of delinquency are lower because their friends do not support this behaviour (Meadows, 2009). This current study did not measure the level of delinquency of the peers, while those peers could influence the results for social support from peers (Meadows, 2009). Future research should include the level of delinquency of peers for measurement.

A reason why there was not found a significant effect for parents could be because there was not made a distinction between paternal support or maternal support. A meta-analysis from Hoeve and colleagues (2009) found that support from fathers is a stronger

predictor in reducing delinquency than support from mothers but also that, receiving poor support from a father is also a stronger predictor for delinquency than poor support from mothers. The results also showed that the same-sex relationship between parent and children (father-son and mother-daughter) is a stronger predictor in reducing delinquency than the different sex relationship (father-daughter and mother-son). When a son received none or limited (poor) support from his father, the chance of delinquent behaviour is higher than when he received poor support from his mother. The same accounts for support from a mother towards her daughter (Hoeve et al., 2009). A reason why the same-sex relationship is of greater influence, could be that an adolescent identifies with the same-sex parent, this could lead to a better relationship (attachment) between the two and in line with the attachment theory, a good relationship can lead to less delinquency (Hoeve et al., 2009). Future research could see when social support from parents is divided in maternal support and paternal support if there is a significant effect on delinquency and as moderator between negative life events and delinquency.

The results of the analysis are not in line with the third hypothesis, in which was examined if social support was a moderator between negative life events and delinquency. Social support did not have a buffer effect. A reason for this could be because social support can be measured in different ways. Social support can be measured in emotional support, instrumental support, informational support, companionship support, and appraisal support (Sterrett, Jones, Mckee & Kincaid, 2011). Cohen and Hoberman (1983) measured different forms of social support on the relationship between negative life events and self-esteem of adolescents. From the five forms of social support they measured only two forms of social support had a significant effect on self-esteem and were a moderator between negative life events and self-esteem. This could be the same for the current study. Social support is measured in one form, but it could be that if social support is measured in for example instrumental support that it could have a significant effect. Future research should therefore examine the different forms of social support on delinquency and as moderator between negative life events and delinquency and examine if the measurement (operationalisation) of social support makes a difference.

### **Strengths and Limitations**

This study has some strengths. The first strength is that this is a longitudinal study and therefore the association between negative life events and delinquency could be examined. A second strength of this study is that it examined social support from parents, peers and

teachers in one design. Parents, teachers and peers are three important social agents in the life of an adolescent (Wang, Eccles & Brinkworth, 2013) and by measuring them in one design they can be compared. By comparing the three forms it can be examined which one has a stronger effect on delinquency. A third strength of this current study is the measurement of negative life events. In this study negative life events are measured in intensity and frequency. In previous research only frequency is used as measurement, while the literature stated that intensity of a negative life events could lead to a higher chance of delinquency. This study therefore gave more insight in the effect of intensity of negative life events.

On the other hand this study also has some limitations. The first limitation is the use of different measurements. Social support from teachers and peers is measured through self-reports of adolescents, while social support from parents comes from parents reports of the parents. Adolescents could see the support they are given from their parents differently (lower or higher) than how parents think they support their child. Therefore future research should use self-reports of adolescents for all three forms of social support and could examine if this could lead to a significant effect for social support from parents. Another limitation of this current study is the measurement of negative life events. Negative life events are measured as events that occurred during the last two years, but an adolescent could also have experienced negative life event before those two years for example during childhood. Those events could still have some impact in the adolescent's life and therefore influence delinquent behaviour.

### **Conclusion and Implications**

In this current study there was not an significant relation between negative life events (frequency and intensity) and delinquency. Social support from teachers, peers were not a moderator between negative life events and delinquency. Of the three forms of social support only social support from teacher was a significant predictor in decreasing delinquency. Future research could examine the association between negative life events and delinquency on a representative target group and see if negative life events still have a significant effect on delinquency. Future research should also include the level of delinquency and should make a difference between paternal support and maternal support and examine if this would make a difference on the effect on delinquency and as moderator between negative life events and delinquency. Finally future research should examine the different forms of social support on negative life events and delinquency and see if the operationalisation of social support matters.

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