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A DYNAMIC AND GENDER SENSITIVE UNDERSTANDING OF ADOLESCENTS' PERSONAL AND SCHOOL RESILIENCE CHARACTERISTICS DESPITE FAMILY VIOLENCE: THE PREDICTIVE POWER OF THE FAMILY VIOLENCE BURDEN LEVEL

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Abstract: In this cross-sectional study on family violence and resilience in a sample of 5,149 middle-school students with a mean age of 14.5 years from four European Union countries (Austria, Germany, Slovenia, and Spain), we worked from the premise that resilience should not be conceptualized as a dichotomous variable. We therefore examined the gender-specific personal and social characteristics of resilience at the three levels "resilient", "near-resilient", and "non-resilient". We also expanded our definition of resilience to include the absence of both externalized and internalized problem behaviours in adolescents who have been exposed to violence in their families. Using multinomial logistic regression we found reliable gender differences in the protective and risk factors between the three resilience levels. We also found that the achieved reliability of our resilience classifications is very high. Our findings suggest that adolescents' positive adjustment despite family violence is affected only in small part by school characteristics. The co-morbidity of social risks in the family and individual factors explains a much larger part of the variance in the analysis. From a content perspective this means that an individual's "resilience status" can be influenced in a focused way by moderating the living environment. These results are discussed in terms of their practical implications for policy.

Keywords: family violence, aggression, depression, adolescence, gender differences, resilience

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Violence in all its contexts including the family is a global concern. In their introduction to the World Health Organization's manual for estimating the costs of violence, Butchart et al. (2008) state that, "Every day, children, women and men live inside their homes with the fear of violence by close family members" (p. v). Further, DeLisi et al. (2010, p. 108) in their extensive review of the literature on the cycle of violence and crime, tell us that "there is considerable evidence that various forms of violence, abuse, depravity, and suffering that occur in early life environments engender maladaptive and antisocial behaviors across contexts (see also Farrington & Welsh, 2007; Gover, 2004; Maas, Herrenkohl, & Sousa, 2008; Patterson, 1982; Teague, Mazerolle, Legosz, & Sanderson, 2008; Wright, Tibbetts, & Daigle, 2008)". DeLisi and colleagues also point out that "environmental exposure to violence figures directly or indirectly in many theoretical explanations of crime…. The long-term consequences of violence exposure, particularly forms occurring in the family home, such as child abuse and child neglect are thought to be particularly catastrophic" (p. 108).

In their meta-analysis of the psychosocial outcomes of child exposure to family violence, Kitzmann, Gaylord, Holt, and Kenny (2003) acknowledged the earlier work of Buehler, Anthony, Krishnakumar, Stone, Gerard, and Pemberton (1997) but noted although Buehler et al. made an important contribution to our overall understanding of a broad spectrum understanding of inter-parental conflict, their analysis cannot not inform us specifically about the effects of witnessing inter-parental violence. To that end, Kitzmann and colleagues examined 118 comparative studies published between 1978 and 2000. The selected studies allowed outcome comparisons for:

1. child witnesses of inter-parental violence with non-witnesses;
2. child witnesses of inter-parental violence with child witnesses (only) of inter-parental verbal aggression;
3. child witnesses of inter-parental violence with children who had been physically abused;
4. child witnesses of inter-parental violence with physically abused children; along with
5. a systematic comparison of the reported outcomes of correlational studies of exposure to the four conditions described above.

All 118 selected studies yielded a significant association between exposure to inter-paternal aggression and/or violence and to physical abuse and poor child outcomes. Witnessing inter-parental violence creates a notable risk, one that is at least as problematic as direct abuse at the hands of one's parents.

As the research on the link between violence exposure and internalizing disorders like depression expands, the evidence of the robust and serious contribution of violence exposure mounts (Briggs-Gowan, Carter, Clark, Augustyn, McCarthy, & Ford, 2010). The *Canadian Incidence Study of Reported Child Abuse and Neglect* published by the Public Health Agency of Canada (2010) concludes that an abusive family environment is linked to high incidence of adjustment problems among Canadian children of all ages in domains of social conduct, intellectual/academic performance, mental health (i.e., anxiety, hyperactivity), and attachment. Corroborating data from a meta-analysis of 60 related studies published between 1990 and 2006 – drawing mainly on samples from locations in the United States – also indicate that mental

health and behavioural problems in children (i.e., internalization and externalization behaviours) are moderately associated with violence exposure at home (Evans, Davies, & DiLillo, 2008). Finally, Wood and Sommers (2011) have argued that the severity of symptoms may worsen if children are exposed to more sources of family violence ("double whammy" effect; see Moylan et al., 2010).

Exposure to violence in the family has serious consequences not for every child, but for a significant number, a number that should not be ignored. However, a limitation of the existing research on youth exposure to family violence and the development of internalizing and externalizing problem behaviour is that while these studies have established associations between family violence and the development of depression and violent behaviour in adolescence, far fewer studies have examined resilience pathways out of the violence cycle (Van der Put, Van der Laan, Stams, Deković, & Hoeve, 2011). As a consequence, the significance of specific socialization patterns for violence resilience is unclear, and we cannot say whether resilience among children and youth who are raised in violent families is "just" the absence of their use of violence or something more (Smith-Osborne, 2008).

Therefore, to say that resilience among children and youth who are raised in violent families can be premised only the absence of their use of violence may be too simplistic (Kassis et al., 2010). Since we also know that both violent behaviour and depression are linked to physical maltreatment by parents (Artz, Nicholson, & Magnuson, 2008; Gilbert et al., 2009; Hussey, Chang, & Kotch, 2006) and witnessing violence or psychological aggression between parents (Kitzmann et al., 2003; Yates, Dodds, Sroufe, & Egeland, 2003), we believe it makes sense to develop an understanding of violence resilience that examines both aggression and depression.

A New Theoretical Framework for Resilience: Resilience as a Non-dichotomous Concept

Luthar, Cicchetti, and Becker (2000, p. 548) alert us to the multidimensional nature of resilience. Masten (2001, p. 228) notes that resilience criteria are not as clear or distinct from one another as they seem to be, that is, are not merely dichotomous, and calls for an empirical evaluation of resilience measures. Khanlou and Wray (2014) suggest that resilience is a process, not a single event that should be understood along a continuum rather than as a binary and fixed outcome.

We take these notions seriously and agree that resilience must not be conceptualized as a dichotomous variable and acknowledge that any definition of resilience should reflect young people's desistance from more severe forms of internalized and externalized problematic behaviour even if they exhibit involvement in less serious violence and milder forms of depression (Liebenberg & Ungar, 2009). We therefore suggest resilience should be categorized in terms of levels that take into account differences in the severity of the use of violence and the tendency to depression of individual actors, and propose a conceptual understanding of

resilience that also includes the concept of "near-resilience". We suggest that such an approach could prove to be more useful for the purposes of prevention and clinical intervention (Hart, Blincow, & Thomas, 2008, p. 132), because this broader scope aims to identify adolescents both at highest and at middle risk for compromised resilience while helping us to learn more about those resilient young people who, contra-intuitively, have successfully handled family violence and are both non-violent and able to the manage their own emotional stability.

Predicting the Violence Resilience of Adolescents

A number of factors have been identified as contributing to violence resilience. Rutter (2007), citing the extensive work of Collishaw et al. (2007) and Jaffee, Caspi, Moffitt, Polo-Tomas, and Taylor (2007), notes that both these longitudinal studies (the first conducted on the Isle of Wight, the second in England and Wales) showed that resilience was not a function of gender. Yet, as Rutter also notes, DuMont, Widom, and Czaja (2007) in their longitudinal American study, found that gender did matter but in conjunction with membership in a racialized group and family stability. The role of gender difference in resilience thus seems to vary depending on social location and family dynamics and should not be considered independently of other factors.

Psychology-based theorists (Brownfield & Thompson, 2005) have emphasized the importance of the individual's self-concept as an important protective factor for violence-resilience. Self-acceptance as well as the knowledge that one's emotions and future can be controlled despite having experienced violence in peer and family contexts, have been shown to be relevant predictors of resilience. Thus, perception of who and what controls one's choices and opportunities plays a significant role in the development of resilience skills. As Brownfield and Thompson (2005) have shown, young people who have a more internalized locus of control (i.e., they see themselves as having a choice in how they behave and what their future holds) are likely to be more resilient to violence.

Parenting style is a well-documented indicator linked to youth violence (Eisenberg et al., 1999; Hair, McGroder, Zaslow, Ahluwalia, & Moore, 2002; Patterson, Capaldi, & Bank, 1991; Patterson & Stouthamer-Loeber, 1984), especially the inconsistent parenting connected with family violence. As well, parenting style is central to understanding why adolescents stay violence-free despite experiencing family violence (Bates, Bader, & Mencken, 2003; Phythian, Keane, & Krull, 2008).

Educational researchers and criminologists have also provided school climate-based explanations for violence resilience and argued that positive school climate (Artz & Nicholson, 2010; Longshore, Chang, Hsieh, & Messina, 2004; Prinstein & Cillessen, 2003) and a good relationship with teachers (Byrne & Lurigio, 2008; Desjardins & Leadbeater, 2011; Yeung & Leadbeater, 2010) are especially helpful protective factors for adolescents from violent families. The central and shared notion of all these studies is that school based social protective factors are core to exiting the family violence cycle. By contrast, verbal aggression by teachers can create severe strain (Khoury-Kassabri, Benbenishty, & Astor, 2005), and higher levels of verbal aggression by teachers have been found to be very closely linked to violence in adolescence (Kassis, 2011).

We therefore chose to investigate the importance and the prevalence of these additional risk and strains for explaining the various patterns of resilience and believe that including these indicators makes it possible for us to examine in a deeper way the existing associations between risk and protective factors. Our intention in this study is to identify the multifaceted school and personal characteristics of adolescents who are resilient to the use of violence and to depression despite having experienced violence in their families. Resilience, the ability to achieve positive adjustment despite adversity (Luthar et al., 2000), has more recently been defined by Ungar (2008) as a process dependent on a range of ecological factors like family, school, and peers that include a focus on community responsibility and social justice. We trust that our approach takes this more comprehensive understanding of resilience into account.

Methods

The Study

The research that we report on here is part of a larger study, the STAMINA project *Formation of non-violent behaviour in school and during leisure time among young adults from violent families*[1], funded from 2009-2011 by the European Commission Daphne III Programme, which has the stated purpose of combating all forms of violence against children, young people, and women. STAMINA is a study that researches the social (family, school, peers) and individual (self-concept, attitudes, behaviour) characteristics of adolescents who are violence-free despite having a family history of violence. In conducting the STAMINA study, we employed quantitative and qualitative methods. In this article we report only on quantitative data that relates to violence resilience as the subject of this paper.

Participants

The data were collected in the spring of 2009 from a random sample of female and male students in four European Union countries (Austria, Germany, Slovenia, and Spain) who completed a questionnaire anonymously. Parental consent was obtained for all participating youth. On the day of the study, all students who were present at the participating schools received a short oral information presentation about the survey and a handout that provided further information about adolescent-specific local counselling resources on family violence. Then students were given the option of participating or declining without penalty. No one chose to decline.

Table 1, sample descriptors, presents the characteristics of the respondents surveyed: 53% of the participants were male, 47% were female, and approximately 29% came from migrant backgrounds. The mean age of the respondents was 14.4 years. Nearly 23% of the

adolescents reported being physically abused by their parents and 17.3% witnessed physical violence between their parents. Approximately 27% exhibited signs of depression and nearly 35% of the students reported participating in physical violence against other adolescents. The sample was aggregated to ensure that we would obtain a sufficient number of participants in each possible analytic category that would allow us to perform regression analysis.

Table 1
Sample Descriptors

	in %	*N*
Gender		
Girls	47.0	2,418
Boys	53.0	2,731
Migration-background		
Without migration-background	71.2	3,666
With migration-background	28.8	1,483
Country		
Germany	55.0	2,832
Austria	14.1	724
Slovenia	14.1	726
Spain	16.8	867
Physical abuse by parents		
Yes	23.0	1,184
No	77.0	3,965
Witnessing physical spousal abuse		
Yes	17.3	892
No	82.7	4,257
Depression		
Yes	27.1	1,394
No	72.9	3,755
Physical aggression		
Yes	34.8	1,793
No	65.2	3,356
Age, AV: 14.40, *SD*: 0.934	*N* = 5,149	

Data Collection

All measures are based on mean-score scales of the adolescents' self-reports. Self-report surveys as a means for generating reliable incidence rates have been extensively reviewed in the literature on self-reports (Alder & Worrall, 2004; Doob & Cesaroni, 2004; Hindelang, Hirschi, & Weis, 1981; Sprott & Doob, 2004). In order to create our survey we adapted and adopted a number of standardized subscales that are described below. Inter-correlation between the subscales indicated that the factors are specific and can't be summarized in a second order factor (see Table 5):

Aggression experiences with peers subscale. Aggression experiences with peers were measured as follows: Use of physical aggression towards others was measured using an eight-item scale (α = .82) entitled, *Use of physical aggression against peers* (e.g., "During a brawl, I hurt a boy/a girl so much that he/she was in pain for several days and/or had to go and see a doctor.") developed by Kassis (2003).

Depression subscale. Depressive symptoms are assessed using five adapted items (α = .78) from the Beck Depression Inventory (Beck & Alford, 2009) (e.g., "Now and then I feel that my life is not worth living.").

Family risk factors. To identify family risks we used four converging but independent (see also Table 5 on inter-correlation of the subscales) factors. To assess respondents experiences with family violence, we employed three subscales adapted from the *Family Violence Inventory* developed by Mayer, Fuhrer, and Uslucan (2005) for assessing family violence: (a) The five-item subscale *Witnessing physical spousal abuse* (α = .88) (e.g., "I noticed one of my parents forcefully shoving or pushing the other one around."); (b) the three-item measure, *Witnessing verbal spousal abuse*, (α = .85) (e.g., "I witnessed my parents shouting at each other very loudly."); and **(**c) the scale *Physical abuse by parents* (α = .83).

Inconsistent parenting as the third family risk factors subscale (e.g., "People in my family beat me up so severely that I had bruises or scratches.") was assessed by using an adapted five-item subscale (α = .83) developed by Kassis (2003) using the *Parenting Style Inventory* designed by Krohne and Pulsack (1996) (e.g., "My parents often scold me for no apparent reason.").

Individual protective factors. We employed four subscales for measuring the individual protective factors. To measure self-concept we adopted three subscales developed by Fend (2000) for his Youth Inventory instrument: (a) The four-item *Emotional Self-control* subscale (α = .65) (e.g., "I am one of those people who sometimes cannot control their anger."); (b) the four- item *Optimistic Future View* subscale (α = .68) (e.g., "I am afraid of everything that might happen in future." reversed coded); and (c) the four-item *Self-acceptance* subscale (α = .59) (e.g., "I have quite a good opinion about myself.").

Individual's activities geared to finding alternatives to violence were assessed with the four item scale *Seeking help to avoid violence behaviour* (α = .76) Kassis (2011) (e.g. "If I need help I know which people and places to go to.").

School protective factors. To measure experiences with school-based aggression and school climate we developed four subscales: (a) The four-item subscale (α = .69) V*erbally aggressive teacher behaviour*, adapted (Kassis, 2003) from the Teacher Aggression Inventory developed by Krumm, Lamberger-Baumann, and Haider (1997) (e.g., "You were insulted or sworn at by a teacher."); (b) the four-item subscale (α = .78), *Close relationship with teachers* assesses the quality of the relationship between students and teachers by using an indicator developed by Fend (2000) (e.g., "I quite like most of our teachers."); (c) the four-item subscale (α = .85), *Acceptance by other students*, a subscale developed as part of *Youth Inventory* (Fend, 2000) assesses the quality of the student-to-student relationships (e.g., "In my class, I

sometimes feel a bit like an outsider." reversed coded); (d) the three-item subscale (α = .65), *School Climate* is also a part of the part of the *Youth Inventory* (Fend, 2000), and assesses if the students are feeling particularly connected to their classmates (e.g., "Many of the pupils in my class do not get along with each other at all." reversed coded).

Analytic Strategy

The statistical analyses for this study were conducted in four stages. These are described in turn below:

Analytic stage 1: Identifying family violence: The composite "family-burden variable"

To identify participants who had experienced family violence, we initially defined the composite family-burden variable and tested for possible gender differences. Respondents who indicated they were involved in some family violence ("physical abuse by parents" and/or "witnessing physical spousal abuse") were included in the sample (Family-Burden) for subsequent analysis stages.

Analytic stage 2: Examining gender differences in all the measured subscales

In this stage we analyzed all the subscales in the overall and in the family-burden sample to test for gender-specific conditions in the two samples.

Analytic stage 3: Computing the composite variable resilience and trichotomization of the Family-Burden sample in "resilient", "near-resilient", and "non-resilient" adolescents

In order to investigate participants' resilience to violence despite their reporting experiences with family violence (n = 1,644), we created three resilience conditions: The students who reported no use of violence at all (answer 1 = "never happened" on the 4-point Likert scale) and who additionally had depression-scores below the middle of the scale "depression" (answers range 1 = "Not true at all", 2 = "Mostly not true", on the 4-point Likert scale) were coded as resilient (n = 510, 31.0%).

For the second condition, which we labelled "non-resilient", we selected those participants who were situated in the highest quartile for using violence and/or reporting depression on the highest level. The and/or condition secured the consideration of the co-occurrence of high levels of externalized and internalized symptoms for adolescents in violent families, (n = 668, 40.6%). Participants in this and/or condition were coded as non-resilient.

For the third condition, all students who were not in the "resilient" or in the "non-resilient" group were coded as near-resilient, (n = 466, 28.3%). These students had mid-level scores for using violence and/or in reporting depression.

Analytic stage 4: Identifying resilience patterns by multinomial logistic regressions separated for male and female adolescents

In the fourth stage, multinomial logistic regression analyses separated for male and female adolescents were used to identify the resilience patterns of those exposed to family violence in the Family-Burden sample. Multinomial logistic regression analyses were conducted separately for girls and for boys using three models. Model 1 enhances the resilience prediction of the nominal coded fact of having experienced family violence by the *intensity of family risk factors* (Witnessing physical spousal abuse, Witnessing verbal spousal abuse, Physical abuse by parents, Inconsistent parenting) to the three resilience levels. Model 2 adds the association between self-concept (Emotional self-control, Worrisome Future, Self-acceptance) as *individual protective factors and the three* resilience levels. Model 3 adjusts additionally for the resilience level prediction strength of s*chool protective factors* (No verbally aggressive teachers, Close relationship to teachers, Acceptance by peers at school, School climate). In order to identify the specific effects of each model in a more differentiated manner we will closely look at the Odds Ratios, and the changes in R^2.

Results

Analysis results of stage 1: Identifying participants who had experienced family violence

Of the 5,149 young people who participated in our research, 1,644 (31.9%) had been affected by family violence. In these families, three kinds of experiences with violence were found:

1. the young person was *physically abused by his/her parents* (752 or 14.6%);
2. the young person *witnessed the parents physically abusing each other* (460 or 8.9%);
3. the young person was *physically abused by his/her parents and witnessed his/her parents physically abusing each other*, poly-victimization (Finkelhor, Ormrod, & Turner, 2007), (432 young people or 8.4%).

This means that in total by the age of 14.4 years, almost every fourth respondent (14.6% + 8.4% = 23.0%), had been physically abused by his or her parents and almost every sixth respondent (8.9% + 8.4% = 17.3%) had witnessed physical spousal abuse. The separation of girls and boys into these sub-groups of affected families did not prove to be significant (Chi-square = 5.285, $df = 3$, $N = 5{,}149$, $p > .05$).

Analysis results of stage 2: Gender differences in measured subscales

Gender differences in mean scores for all measured variables in the overall ($N = 5{,}149$) and in the family burden sample ($n = 1{,}644$) for boys and girls were examined and are reported in Table 2. Girls in both the overall and family burden samples reported significantly higher levels of depression, witnessing verbal spousal abuse, seeking help to avoid violence, and verbally aggressive teachers. As well, in the overall sample, girls also reported significantly higher levels of close relationships to teachers.

On the other hand, boys in both samples reported significantly higher levels of physical aggression against peers, witnessing physical spousal abuse, physical abuse by parents, exercising emotional self-control, holding an optimistic future view, and experiencing self-

acceptance. Additionally, boys reported significantly lower levels of "Close relationship with teachers" in the overall sample.

Table 2
Gender Differences of all Measures, Means and Standard Deviations

	Overall Sample		Family Burden Sample	
	N = 5,149		*n* = 1,644	
Measure	Girls	Boys	Girls	Boys
Resilience: Externalized/ Internalized				
Physical aggression against peers	1.07 (.23)	1.18 (.35)***	1.15 (.32)	1.33 (.49)***
Depression	2.20 (.75)	1.97 (.69)***	2.50 (.74)	2.24 (.74)***
Family risk factors				
Witnessing physical spousal abuse	1.10 (.36)	1.13 (.50)*	1.34 (.59)	1.41 (.81)*
Witnessing verbal spousal abuse	1.90 (1.11)	1.71 (.99)***	2.55 (1.37)	2.25 (1.24)***
Physical abuse by parents	1.12 (.35)	1.16 (.44)***	1.37 (.54)	1.48 (.66)***
Inconsistent parenting	1.84 (.68)	1.82 (.64)ns	2.16 (.73)	2.09 (.68)ns
Individual protective factors				
Emotional self-control	2.45 (.65)	2.58 (.68)***	2.26 (.64)	2.43 (.69)***
Optimistic future view	2.99 (.64)	3.13 (.64)***	2.82 (.68)	2.97 (.67)***
Self-acceptance	2.86 (.63)	3.04 (.61)***	2.72 (.66)	2.92 (.62)***
Seeking help to avoid violence	2.88 (.35)	2.82 (.40)***	2.80 (.43)	2.73 (.47)**
School protective factors				
No verbally aggressive teachers	3.65 (.46)	3.53 (.56)***	3.52 (.54)	3.38 (.64)***
Close relationship to teachers	2.93 (.62)	2.85 (.67)***	2.80 (.65)	2.77 (.71)ns
Acceptance by peers at school	1.65 (.68)	1.65 (.69)ns	1.79 (.73)	1.83 (.73)ns
School climate	2.59 (.70)	2.58 (.77)ns	2.50 (.71)	2.45 (.76)ns

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$., ns = non-significant

Analysis results of stage 3: Identifying resilience in the Family Burden sample

As noted above, three resilience conditions – "resilient", "near-resilient", and "non-resilient" – were created in order to classify respondents who were exposed to family violence

(*n* = 1,644). Of that sample, 510 (31.0%) students were coded as resilient, 466 (28.3%) as near-resilient, and 668 (40.6%) as non-resilient. It is noteworthy from the outset that only one-third of the adolescents who experienced family violence could be coded as resilient. This suggests that family violence creates a resilience barrier with a huge magnitude.

Our data yielded some slight gender differences on resilience status (Chi-square = 11.877, *df* = 2, *n* = 1,644, *p* < .01.). That difference in significance is due to the higher number of girls (35.3%) than boys (27.4%) in the resilient group and the lower prevalence of girls (37.9%) than boys (43.0%) in non-resilient group. However, because of the low Cramer's V = 0.085^2 the gender difference should not be considered to be a robust predictor of the resilience status. Interestingly, gender does not help to distinguish membership in the near-resilient group, as the number for both genders is the same (26.8% for girls, 29.7% for boys).

Cross-national comparisons of self-reported resilience yielded no significant differences among the four national samples for girls for the conditions "Resilient vs. Near-resilient" for girls (Chi-square = 1,648, *df* = 3, *n* = 470, *p* > .05) or for boys (Chi-square = 0.217, *df* = 3, *n* = 506, *p* > .05). Also non-significant were the differences among the four national samples for girls for the condition "Near-resilient vs. Non-resilient" (Chi-square =3,594, *df* = 3, *n* = 490, *p* > .05). The only significant difference that emerged from our comparison was for boys in the German and Austrian sample (Chi-square = 12.087, *df* = 3, *n* = 644, *p* < .01), such that Austrian males reported non-resilience more frequently (54.6%) than German males (37.9%). None of the Slovenian or Spanish male sub-samples differed from each other or from the German or Austrian samples (see table 3).

Table 3
The resilience variable by gender and country within the family burden sample (n=1,644)

	Total sample	Austria	Germany	Slovenia	Spain
	n (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Girls, Resilience status	757 (100%)	70 (9.23%)	515 (68.03%)	85 (11.23%)	87 (11.49%)
Resilient	267 (35.3%)	24 (34.3%)	171 (33.2%)	40 (47.1%)	32 (36.8%)
Near-Resilient	203 (26.8%)	16 (22.9%)	138 (26.8%)	23 (27.1%)	26 (29.9%)
Non-Resilient	287 (37.9%)	30 (42.9%)	206 (40.0%)	22 (25.9%)	29 (33.3%)
Boys, Resilience status	887 (100%)	108 (12.17%)	559 (63.02%)	90 (10.15%)	130 (14.65%)
Resilient	243 (27.4%)	25 (23.1%)	166 (29.7%)	21 (23.3%)	31 (23.8%)
Near-Resilient	263 (29.7%)	24 (22.2%)	181 (32.4%)	24 (26.7%)	34 (26.2%)
Non-Resilient	381 (43.0%)	59 (54.6%)	212 (37.9%)	45 (50.0%)	65 (50.0%)

Analysis results of stage 4: Identifying resilience patterns

In the fourth analytic stage, our objective was to examine the gender-specific patterns of the predictors that are relevant for the differences between our three levels of resilience (“resilient”, “ near-resilient”, “non-resilient”) in the Family-Burden sample. In order to determine these patterns, computed multinomial logistic regressions for the female and male adolescents in our samples were conducted separately. By first testing the inter-correlations of all independent variables by gender we assured that no multi-collinearity problems existed in our analysis because the highest inter-correlation was $r = .528$. Bivariate correlations between each of the variables are reported by gender in Table 4.

Table 4
Gender-Specific Inter-correlations of all Observed Variables of the Family-Burden Sample n = 1,644

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Physical aggression against peers	1	.133**	.321**	.163**	.364**	.153**	-.179**	-.081*	.008	-.376**	-.446**	-.219**	.023	-.107**
2. Depression	.223**	1	.211**	.254**	.175**	.407**	-.528**	-.354**	-.468**	-.144**	-.182**	-.192**	.374**	-.158**
3. Witnessing physical spousal abuse	.479**	.193**	1	.384**	.239**	.165**	-.144**	-.155**	-.024	-.108**	-.218**	-.115**	.046	-.040
4. Witnessing verbal spousal abuse	.301**	.249**	.499**	1	.081*	.324**	-.227**	-.119**	-.084*	-.081*	-.118**	-.090*	.056	-.015
5. Physical abuse by parents	.492**	.277**	.396**	.233**	1	.229**	-.135**	-.096**	-.070	-.161**	-.187**	-.121**	.126**	-.036
6. Inconsistent parenting	.140**	.313**	.180**	.353**	.233**	1	-.311**	-.280**	-.324**	-.092*	-.208**	-.202**	.232**	-.195**
7. Emotional self-control	-.116**	-.453**	-.100**	-.200**	-.064	-.242**	1	.228**	.215**	.209**	.194**	.184**	-.161**	.173**
8. Optimistic future view	-.143**	-.378**	-.193**	-.250**	-.156**	-.292**	.267**	1	.386**	.067	.175**	.182**	-.206**	.105**
9. Self-acceptance	-.059	-.429**	-.103**	-.126**	-.113**	-.286**	.139**	.434**	1	-.035	.061	.173**	-.362**	.109**
10. Seeking help to avoid violence	-.360**	-.154**	-.225**	-.177**	-.168**	-.088**	.112**	.073*	.066	1	.278**	.124**	-.024	.063
11. No verbally aggressive teachers	-.464**	-.227**	-.331**	-.260**	-.283**	-.260**	.200**	.199**	.087**	.319**	1	.489**	-.015	.116**
12. Close relationship to teachers	-.269**	-.096**	-.114**	-.146**	-.153**	-.174**	.122**	.126**	.113**	.133**	.404**	1	-.061	.113**
13. Acceptance by peers at school	.129**	.428**	.182**	.139**	.325**	.244**	-.199**	-.235**	-.373**	.000	-.090**	-.033	1	-.217**
14. School climate	-.132**	-.159**	-.167**	-.115**	-.101**	-.174**	.206**	.117**	.066*	.101**	.251**	.120**	-.200**	1

Note.
Girls' values above diagonal, boys' values below diagonal.
* $p < .05$, ** $p < .01$

Model 1: Intensity of familial strains as predictors of the three resilience levels

In the first Model we tested the intensity of familial strain predictors (Witnessing physical spousal abuse, Witnessing verbal spousal abuse, Physical abuse by parents, Inconsistent parenting) in relation to the three resilience levels. The family Model yielded a reliable explanatory value for predicting the specific resilience levels (the prediction strength is reported in % Nagelkerke) and is robust in the girls (24.1% Nagelkerke) as well as in the boys (21.3% Nagelkerke) sample (see Table 5).

Table 5
Gender-Specific Pseudo-R-Square of Model 1 "Intensity of Familial Strains"

		Pseudo-R-Quadrat
Female	Cox und Snell	.214
	Nagelkerke	.241
	McFadden	.111
Male	Cox und Snell	.188
	Nagelkerke	.213
	McFadden	.097

The prediction strength of the intensity of familial strains on the specific resilience levels are conclusive (see Table 6): In comparison to the resilient students the probability (see Table 6) for being near-resilient for both genders is significantly predicted by the amount of experienced "Inconsistent parenting" (Girls OR = 2.17; Boys OR = 1.64). Additionally for boys, a higher amount of "Witnessing physical spousal abuse" predicts a 2.12 times higher probability that they will be found in the near resilience group rather than resilience group.

The non-resilience level is best explained for both genders by the same three indicators. The probability, detected as odds ratio "OR", to be found on the non-resilient than on the resilient level was far higher for girls and for boys for the experiences of "Witnessing physical spousal abuse" (Girls OR = 3.32; Boys OR = 3.28), "Physical abuse by parents" (Girls OR = 3.24; Boys OR = 3.61), and for "Inconsistent parenting" (Girls OR = 2.96; Boys OR = 1.83).

With Model 1 we have established that the number and amount of family strains, that is, the experience and levels of Witnessing physical spousal abuse", "Physical abuse by parents," "Witnessing verbal spousal abuse", and "Inconsistent parenting" are significantly predictive of the resilience level for adolescents of both genders.

Table 6

Gender-Specific Multinomial Logistic Regression: Parameter Estimates of Model 1 "Intensity of Familial Strains"

Samples	Resilience level[a]		B	SE	Wald statistic	OR
female	Near-resilient	Intercept	-2.77***	.59	21.86	
		Witnessing physical spousal abuse	.17	.31	.30	1.18
		Witnessing verbal spousal abuse	.05	.08	.33	1.05
		Physical abuse by parents	.48	.28	2.90	1.63
		Inconsistent parenting	.77***	.15	24.45	2.17
	Non-resilient	Intercept	-5.57***	.57	95.22	
		Witnessing physical spousal abuse	1.20***	.27	19.54	3.32
		Witnessing verbal spousal abuse	.08	.08	.95	1.08
		Physical abuse by parents	1.17***	.26	20.06	3.24
		Inconsistent parenting	1.08***	.15	49.72	2.96
male	Near-resilient	Intercept	-1.85**	.54	11.82	
		Witnessing physical spousal abuse	.75**	.27	7.43	2.12
		Witnessing verbal spousal abuse	-.13	.09	1.95	.87
		Physical abuse by parents	.24	.25	.88	1.27
		Inconsistent parenting	.49**	.15	10.30	1.64
	Non-resilient	Intercept	-4.32***	.52	68.16	
		Witnessing physical spousal abuse	1.18***	.26	20.43	3.28
		Witnessing verbal spousal abuse	.07	.08	.69	1.07
		Physical abuse by parents	1.28***	.22	31.99	3.61
		Inconsistent parenting	.60***	.15	16.26	1.83

Note: * $p < .05$.; ** $p < .01$.; *** $p < .001$.
[a]Reference resilience level category is "resilient"

Model 2: Intensity of familial strains & individual protective factors as predictors of the three resilience levels

In Model 2 we added individual protective factors to the family strains as predictors of the three resilience levels. With an overall prediction value of 39.8% Nagelkerke for girls, and 36.5% Nagelkerke for boys, the family strains and individual protective factors combined model also works very well for both genders (see Table 7). As the values of the Pseudo-R^2-Values show, adding individual protective factors to the family strains substantially increases the explanatory strength of the model for both genders (ΔR^2 girls 15.7% Nagelkerke and for boys ΔR^2 15.2% Nagelkerke).

Table 7
Gender-Specific Pseudo-R-Square of Model 2 "Intensity of Familial Strains & Individual Protective Factors"

	Pseudo-R-Quadrat		**ΔR^2 Change to Model 1, the "Intensity of Familial Strains"**
Female	Cox und Snell	.353	.139
	Nagelkerke	.398	.157
	McFadden	.200	.089
Male	Cox und Snell	.323	.135
	Nagelkerke	.365	.152
	McFadden	.181	.084

In Model 2, (see Table 8), as in Model 1, higher scores in "Inconsistent parenting" (Girls OR = 1.80; Boys OR = 1.49), and "Witnessing physical spousal abuse" just for boys (Boys OR = 2.13) were detected as predictive of the near-resilient in comparison to the resilient level for both genders. Also predictive of the near resilience than the resilience level for both genders were lower scores on the personal indicators "Emotional self-control" (Girls OR = .47; Boys OR = .53), and "Seeking help to avoid violence" (Girls OR = .39; Boys OR = .29).

Additionally in Model 2, mostly the same indicators as in Model 1 were found to be predictive for the difference between resilient and non-resilient level for both genders. Thus for both genders, the higher their scores of "Witnessing physical spousal abuse" (Girls OR = 3.16; Boys OR = 3.28) and experiencing "Physical abuse by parents" (Girls OR = 3.37; Boys OR = 3.91) the higher the probability that they were found in the "non-resilient" group. Also for both genders, lower self-reported scores for all four individual protective indicators were predictive for non-resilience A decrease in "Emotional self-control" (Girls OR = .24; Boys OR = .31), "Optimistic future view" (Girls OR = .55; Boys OR = .69), "Self-acceptance"(Girls OR = .45; Boys OR = .67), and "Seeking help to avoid violence" (Girls OR = .28; Boys OR = .11) lead to a significantly higher probability that respondents would be non-resilient rather than resilient. Additionally, but only for girls, an increase of "Inconsistent parenting" (Girls OR = 1.81) was a more significant predictor of location on the non-resilient than on the resilient level.

Table 8

Gender-Specific Multinomial Logistic Regression: Parameter Estimates of Model 2 "Intensity of Familial Strains & Individual Protective Factors*"*

Samples	Resilience level[a]		B	SE	Wald statistic	OR
female	Near-resilient	Intercept	3.39*	1.33	6.44	
		Witnessing physical spousal abuse	.16	.31	.26	1.17
		Witnessing verbal spousal abuse	.01	.08	.0!	1.00
		Physical abuse by parents	.45	.29	2.45	1.58
		Inconsistent parenting	.58**	.17	11.79	1.80
		Emotional self-control	-.74***	.17	17.18	.47
		Optimistic future view	-.24	.17	2.03	.78
		Self-acceptance	-.15	.18	.75	.85
		Seeking help	-.92**	.31	8.83	.39
	Non-resilient	Intercept	6.12***	1.34	20.81	
		Witnessing physical spousal abuse	1.15***	.28	16.29	3.16
		Witnessing verbal spousal abuse	.03	.09	.11	1.03
		Physical abuse by parents	1.21***	.28	18.17	3.37
		Inconsistent parenting	.59**	.17	11.43	1.81
		Emotional self-control	-1.40***	.19	50.90	.24
		Optimistic future view	-.58**	.18	10.47	.55
		Self-acceptance	-.79***	.18	18.44	.45
		Seeking help	-1.24***	.31	15.69	.28
male	Near-resilient	Intercept	3.93**	1.34	8.53	
		Witnessing physical spousal abuse	.75**	.27	7.38	2.13
		Witnessing verbal spousal abuse	-.18	.09	3.33	.83
		Physical abuse by parents	.28	.25	1.22	1.32
		Inconsistent parenting	.40*	.16	5.88	1.49
		Emotional self-control	-.62***	.15	16.71	.53
		Optimistic future view	-.25	.17	2.11	.77
		Self-acceptance	.11	.17	.43	1.12
		Seeking help	-1.23***	.33	13.55	.29

Non-resilient	Intercept	7.67***	1.33	32.81	
	Witnessing physical spousal abuse	1.19***	.27	18.96	3.28
	Witnessing verbal spousal abuse	-.03	.09	.10	.96
	Physical abuse by parents	1.36***	.23	32.97	3.91
	Inconsistent parenting	.32	.17	3.50	1.37
	Emotional self-control	-1.16***	.16	50.35	.31
	Optimistic future view	-.36*	.17	4.25	.69
	Self-acceptance	-.39*	.18	4.55	.67
	Seeking help	-2.20***	.32	45.10	.11

Note: * $p < .05$.; ** $p < .01$.; *** $p < .001$.
[a]Reference resilience level category is “resilient”

In summary, for Model 2, the multinomial regression shows that for both genders (Table 8) family strains and the personal protective factors seem to be more significant for predicting membership in the "non-resilient" and "resilient" groups than for predicting membership in and differences between the "near-resilient" and "resilient" groups. Additionally, we detected that lower levels for all four personal protective factors predicted membership in the non-resilient group rather than in the near-resilient group for both girls and boys. This suggests that the low levels of or the absence of these four personal protective factors makes it more difficult for young people (female or male) to remain resilient when faced with family violence.

Model 3: Intensity of familial strains, individual, and school protective factors *as predictors of the three resilience levels*

In Model 3, the addition of the school protective factors to the family strain factors and individual protective factors resulted in only very low additional predictive value for the resilience level location of both genders (see Table 9): For girls the Pseudo-R^2-change of Model 3 to Model 2 is 3.1% Nagelkerke, and for boys 2.8% Nagelkerke.

Table 9
Gender-Specific Pseudo-R-Square of Model 2 "Intensity of Familial Strains, Individual & School Protective Factors"

	Pseudo-R-Quadrat		ΔR^2 Change to Model 2, the "Familial Strains & Individual Protective"
Female	Cox und Snell	.380	.027
	Nagelkerke	.429	.031
	McFadden	.220	.020
Male	Cox und Snell	.347	.024
	Nagelkerke	.393	.028
	McFadden	.198	.017

Model 3 generated an almost exact replication of the indicators already detected in Model 2 (see Table 10) for membership in the near-resilient and non-resilient groups for both girls and boys.

Specifically for the girls, higher levels of "Inconsistent parenting" (Girls OR = 1.67) were significantly connected to membership in the near-resilient rather than the resilient group, and in the non-resilient rather than to the resilient group (Girls OR = 1.59). Also, only for the girls, lower scores for the items "Optimistic future view" (Girls OR = .60), and "Self-acceptance" (Girls OR = .47) were significantly predictive of membership in the non-resilient rather than the resilient group. Interestingly, for girls, higher levels of "Acceptance by peers at school" (Girls OR = 1.51) were significantly predictive of membership in the non-resilient rather than the resilient group.

Further, Model 3 showed that specifically for the boys, higher levels of "Witnessing physical spousal abuse" (Boys OR = 2.01), and "Witnessing verbal spousal abuse" (Boys OR = 1.25) were significant for membership in the near-resilient rather than the resilient group. As well, for both genders, location on the near-resilient level in comparison to the resilient level was predicted by lower levels of "Emotional self-control" (Girls OR = .48; Boys OR = .57),"Seeking help to avoid violence" (Girls OR = .43; Boys OR = .32), and "No verbally aggressive teachers" (Girls OR = .54; Boys OR = .44).

Table 10

Gender-Specific Multinomial Logistic Regression: Parameter Estimates of Model 3 "Intensity of Familial Strains, Individual, and School Protective Factors"

Samples	Resilience level[a]		B	SE	Wald statistic	OR
female	Near-resilient	Intercept	5.16**	1.64	9.81	
		Witnessing physical spousal abuse	.10	.32	.11	1.11
		Witnessing verbal spousal abuse	.02	.09	.08	1.02
		Physical abuse by parents	.32	.29	1.15	1.37
		Inconsistent parenting	.51**	.17	8.56	1.67
		Emotional self-control	-.71***	.18	15.47	.48
		Optimistic future view	-.18	.17	1.06	.83
		Self-acceptance	-.11	.18	.35	.89
		Seeking help	-.84**	.31	6.99	.43
		No verbally aggressive teachers	-.61*	.26	5.35	.54
		Close relationship to teachers	-.11	.18	.37	.89
		Acceptance by peers at school	.22	.16	1.98	1.25
		School climate	.04	.15	.09	1.04
	Non-resilient	Intercept	9.15***	1.69	29.26	
		Witnessing physical spousal abuse	1.06***	.29	12.83	2.89
		Witnessing verbal spousal abuse	.06	.09	.48	1.06
		Physical abuse by parents	1.05***	.29	13.13	2.87
		Inconsistent parenting	.46*	.18	6.52	1.59
		Emotional self-control	-1.38***	.20	46.47	.25
		Optimistic future view	-.49**	.18	7.15	.60
		Self-acceptance	-.73***	.19	14.25	.47
		Seeking help	-1.05**	.32	10.67	.34
		No verbally aggressive teachers	-1.22***	.27	20.57	.29
		Close relationship to teachers	.13	.19	.48	1.14
		Acceptance by peers at school	.41*	.16	6.02	1.51
		School climate	-.10	.16	.43	.89
male	Near-resilient	Intercept	6.88***	1.61	18.07	
		Witnessing physical spousal abuse	.70*	.28	6.14	2.01
		Witnessing verbal spousal abuse	.21*	.10	4.62	1.25
		Physical abuse by parents	.27	.26	1.11	1.32

	Inconsistent parenting	.33	.17	3.79	1.39
	Emotional self-control	-.56***	.15	12.66	.57
	Optimistic future view	-.22	.17	1.56	.80
	Self-acceptance	.10	.19	.31	1.11
	Seeking help	-1.11**	.34	10.65	.32
	No verbally aggressive teachers	-.80**	.23	11.37	.44
	Close relationship to teachers	-.01	.15	.01	.99
	Acceptance by peers at school	.01	.16	.01	1.01
	School climate	-.13	.13	1.00	.87
Non-resilient	Intercept	11.43***	1.63	48.83	
	Witnessing physical spousal abuse	1.10***	.27	15.80	3.02
	Witnessing verbal spousal abuse	-.08	.10	.65	.92
	Physical abuse by parents	1.27***	.24	26.32	3.56
	Inconsistent parenting	.21	.17	1.46	1.24
	Emotional self-control	-1.06***	.16	39.75	.34
	Optimistic future view	-.31	.18	2.97	.72
	Self-acceptance	-.37	.19	3.59	.68
	Seeking help	-2.04***	.33	36.86	.12
	No verbally aggressive teachers	-1.06***	.24	19.62	.34
	Close relationship to teachers	-.17	.16	1.19	.83
	Acceptance by peers at school	.12	.16	.55	1.13
	School climate	-.03	.14	.06	.96

Note: * $p < .05$.; ** $p < .01$.; *** $p < .001$.
[a]Reference resilience level category is “resilient”

Finally, Model 3 (see Table 10) also showed that for both genders, membership in the non-resilient group vs. the resilient group is significantly correlated to higher scores for "Witnessing physical spousal abuse" (Girls OR = 2.89; Boys OR = 3.02), "Physical abuse by parents" (Girls OR = 2.87; Boys OR = 3.56), and lower scores for "Emotional self-control" (Girls OR = .25; Boys OR = .34), and "Seeking help to avoid violence" (Girls OR = .34; Boys OR = .12). Additionally, the analysis generated by Model 3 showed that for both genders lower levels of "No verbally aggressive teachers" (Girls OR = .29; Boys OR = .34) distinguishes for membership in the non-resilient group than in the resilient group.

Overall the multinomial regression showed that for both genders (Table 10) lower self-reported scores for family strains and higher scores for individual protective indicators seem to contribute more significantly to resilience than school protective factors. Accordingly, this suggests that when adolescent girls and boys are highly burdened by family strains and, at the same time, have few if any personal resources, the school-related protective factors that we examined in our study are not sufficient to counter these negative influences. For both genders, the intensity of familial strains was especially predictive for membership in the non-resilient and resilient groups. This also holds for the protective effects of individual factors. Still, overall, given the significance of the contribution of lower levels of family risk factors to higher levels of resilience despite having experienced family violence, we underline the necessity of including especially family violence prevention as a keystone for all programmes that aim to build and support resilience in adolescents.

Discussion

As results showed there is reason to be concerned, even alarmed: of the 5,149 participating adolescents with an average age of 14.5 years, 1,644 or 31.9% reported experiencing violence in their families with 23% reporting physical parental abuse and 17% reporting witnessing physical spousal abuse. Interestingly, this prevalence of family violence in four European Union countries is very similar to prevalence levels found in the United States, where almost 28% of adolescents in the U.S. National Longitudinal Study of Adolescent Health reported physical abuse by caregivers during childhood (Hussey et al., 2006).

Consistent with the findings of Herrenkohl et al. (2003), Sousa et al. (2011), and Yates et al. (2003), we detected a robust significant overlap between the two reported family violence indicators. We conclude therefore with Kassis, Artz, and Moldenhauer (2013), that our levels approach to understanding resilience allows us to see that as the amount of violence exposure increases, the number of participants who remain resilient declines and the quality of the resilience becomes more precarious.

Our findings suggest that for both genders, in order to promote resilience, controlling family strains and risks is of greater importance than promoting protective personal or school factors because the weight of the intensity of familial risk and strain predictors (Witnessing physical spousal abuse, Witnessing verbal spousal abuse, Physical abuse by parents, and Inconsistent parenting) best predicts resilience status even though protective factors still play a

significant role. Because of the sample size, we decided not to work at the subsample level, so the specific role of poly-victimization (Finkelhor et al., 2007) could not be examined. More research on co-occurrence and how this relates to the resilience continuum would be of great use in expanding our understanding of resilience and our new model. As well, a deeper qualitative understanding of the specific family situations in which violence occurs, one that examines the levels of resilience that we suggest, would be extremely relevant. These kinds of insights are likely best achieved through case studies (Artz, 1998).

Our study supports Khanlou and Wray's (2014) findings that in order to promote resilience, controlling risks is a central strategy. When compared with resilient students, for both genders, the probability of near resilience is significantly predicted by the amount of experienced "Inconsistent parenting". Additionally, a higher amount of "Witnessing physical spousal abuse" contributes to a higher probability that boys will be found at the near resilience level rather than at the resilient level. Further, location at the non-resilience level is best explained for both genders by the same three indicators: "Witnessing physical spousal abuse", "Physical abuse by parents", and "Inconsistent parenting". Thus, for both males and females, the higher the levels of exposure to these negative experiences, the lower the resilience levels.

On the positive side of the equation, when we consider individual protective factors, for both genders, higher levels of the personal indicators – that is, "Emotional self-control" and "Seeking help to avoid violence" – are predictive of location at the resilient rather than the near-resilient level. As well, for both genders, lower self-reported scores for all four individual protective factors were significant for non-resilience such that decreases in "Emotional self-control", "Optimistic future view", "Self-acceptance", and "Seeking help to avoid violence" were predictive of significantly a higher probability that respondents would be non-resilient rather than resilient. Our finding that a positive self-concept is highly predictive for resilience supports the work of Brownfield and Thompson (2005).

School protective factors added only a low additional predictive value for assessing resilience levels for both genders. Interestingly, for girls, higher levels of "Acceptance by peers at school" were significant for membership in the non-resilient rather than the resilient group. For boys, lower levels of exposure to verbally aggressive teachers were predictive of their location at the near-resilient level rather than the non-resilient level, but the effect did not contribute to location at the resilient level. Although these findings are somewhat supportive of those of Byrne and Lurigio (2008), and Desjardins and Leadbeater (2011) – that especially for adolescents from violent families good relationship with teachers may be helpful resources – our findings suggest that we should not expect positive teacher interactions to erase the negative familial impacts.

Overall, the multinomial regression showed that for both genders lower self-reported scores for exposure to violence in the family and inconsistent parenting and higher scores for individual protective indicators seem to contribute more significantly to resilience than school protective factors. Accordingly, this suggests that when adolescent girls and boys are highly burdened by exposure to family violence and poor parenting and, at the same time, have few if any personal resources, the school-related protective factors that we examined in our study are not sufficient to counter these negative influences. The level of familial difficulties was for both

genders especially predictive for membership in the non-resilient and resilient groups. This also holds for the protective effects of individual factors. Still, overall, given the significance of the contribution of lower levels of family risk factors to higher levels of resilience despite having experienced family violence, we underline the necessity of including especially family violence prevention as a keystone for all programmes that aim to build and support resilience in adolescents.

The cross-sectional character of this study implies that we make no conclusions about causalities, and that are results speak only to resilience factors. While not engaging in the ongoing methodological and philosophical discussion about whether causality really exists in social sciences (Mackie, 1974, 1965/1993; Maruyama, 1997; Waldmann & Hagmayer, 2006), we still note that longitudinal studies (Sousa et al., 2011; Spano, Rivera, & Bolland, 2010) have concluded that there is a reciprocal relationship between violence in adolescence and parental physical abuse. These "coercive cycles" (Leadbeater, Boone, Sangster, & Mathieson, 2006) seem to be well established and our work confirms that and adds to the discussion the notion that different forms of family abuse can also have different effects on the resilience level of the adolescents who are subjected to such abuse. As a next step, we believe that we need to replicate our model both across several more E.U. countries and also in the English-speaking industrialized world in order to test its validity, and hope that in the meantime, we have made a good beginning with our revision of existing approaches to understanding resilience.

Ultimately, we conclude that the level of family violence burden (Finkelhor et al., 2007; Kassis et al., 2013), and the accumulation of risk factors (Kassis et al., 2013; Loeber, Slot, & Stouthamer-Loeber, 2008) are central to resilience status and should therefore be the prime targets for prevention and intervention.

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Endnotes

1. This study (STAMINA: “Formation of non-violent behaviour in school and during leisure time among young adults from violent families”) has been funded 2009-2011 by the EC Daphne III Programme whose stated purpose is to combat all forms of violence against children, young people and women (Project-number: JLS/2007/DAP-1/ 134 30-CE-02280 90/00-40). The STAMINA Project was additionally funded by the German Federal Ministry of Family Affairs, Senior Citizens, Women and Youth.

2. All measures are available from the lead author. The main purpose of Cramer’s V is to report the importance of a prediction of an association between two nominal variables. If the proportion of variability is high it provides a high prediction by the model. The measure and its interpretation are very similar to the Pearson correlation coefficient with ranges from -1 to +1, while 0 indicates no relationship. Coefficients higher than 0.30 are counted as fairly predictive for the analyses made. Chi-square values are directly proportional to the sample size. And as Knoke, Bohrnstedt, and Potter Mee (2002) state: “This sensitivity of $\chi 2$ to sample size in a crosstab underscores the important difference between statistical significance and substantive importance” (p. 147).