

Available at: <http://www.tandfonline.com/doi/abs/10.1080/00221325.2013.834290>

**Bullying behaviours and victimisation experiences among adolescent students: The role of
resilience**

Abstract

The role of resilience in the relationship between bullying behaviours, victimisation experiences, and self-efficacy was examined. Three hundred and 93 (191 male, 202 female) adolescents (mean age = 15.88, $SD = .64$) from schools in Coimbatore, India completed scales to assess bullying behaviours and victimisation experiences, resilience, and self-efficacy. Multigroup SEM, with separate groups created according to participant sex, revealed that resilience mediated the relationship between bullying behaviours and self-efficacy in males. Males engaged in bullying behaviours and experienced victimisation more frequently than females. The findings of the study have implication for designing intervention programs to enhance resilience among adolescents and young adults to enable them to manage bullying behaviours.

Key words: bullying behaviours, victimisation, resilience, self-efficacy

Bullying behaviours and victimisation experiences among adolescent and young adult students: The role of resilience

Interest in school bullying behaviours and victimisation experiences as topics of psychological research was prompted by Olweus' work in Scandinavia in the 1970s (Olweus, 1978). Since then numerous studies have been conducted and have yielded evidence that engaging in bullying behaviours and experiencing victimisation are significant life-events for many adolescents (Eslea et al., 2004). More recently, bullying behaviours and victimisation experiences have been examined in a range of countries (Harel-Fisch et al., 2011), although comparably little is known about the experiences of those from India. Bullying refers to any repeated and ongoing negative behaviour that induces fear in another individual (Espelage & Swearer, 2003; Olweus, 1993). Bullying behaviours and victimisation experiences, can take many forms including verbal, social, or physical and these can also either be direct or indirect (Hawker & Boulton, 2000). Typically the victim is perceived as powerless compared to the bully who is perceived as powerful or dominant (Rigby, 2002). Therefore, victimisation is regarded as conceptually distinct from pranks with teasing, name-calling, shoving, and other harmful actions perceived by many adolescents as mere joyful pranks (Shakeshaft et al., 1997).

Victims of bullying report experiencing depression, isolation, low self-esteem, hopelessness, fear, and insecurity, and engaging in violent or self-destructive behaviours (Espelage & Swearer, 2003; Nansel et al., 2001; Olweus, 1993). Additionally, victims of bullying also perform less well academically (Thijs & Verkuyten, 2008) as a consequence of their victimisation experiences. Adolescence and young adulthood marks a time when individuals may be more susceptible to the effects of victimisation because of changes in social relationships with peers and adults, heightened emotions, and biological changes (Pellegrini,

Bartini, & Brooks, 1999). Further, those adolescents and young adults who experience victimisation and also engage in bullying behaviours have lower levels of self-efficacy compared to those adolescents and young adults who do not (Ozer, Totan, & Atik, 2011).

Self-efficacy is “the belief in one’s capabilities to organize and execute the courses of action required to manage prospective situations” (Bandura, 1995, p. 2). These beliefs are regarded as determinants of how people think, behave, and feel (Bandura, 1994). The concept of self-efficacy is the pith of Bandura’s social cognitive theory which emphasises the role of observational learning, social experience, and reciprocal determinism in the development of personality. The attitudes, abilities, and cognitive skills comprise an individual’s self-system which, in turn, influences how they perceive situations and behave in response to different situations.

The relationship between victimisation, bullying, and self-efficacy has been reported in various studies with children across a range of ages and countries. For example, in middle school children from Turkey, either being a bully, being a victim, or being a bully and a victim was associated with lower levels of self-efficacy compared to those children who were not involved (Ozer et al., 2011). In a sample of Greek children, higher levels of victimisation were associated with lower levels of assertion self-efficacy for females, higher aggressive self-efficacy for males, and lower learning and performance self-efficacy for males and females (Andreou, 2004). Conversely, higher levels of bullying behaviours were associated with lower assertion self-efficacy for females, higher aggressive self-efficacy for males, and lower learning and performance self-efficacy for males and females. The author argued that one explanation for the association between victimisation and self-efficacy for aggression was that experiencing victimisation may promote children to rely on more aggressive cognitions. Andreou (2004) also

argued that the findings reflect sex differences in children's preferred bullying method. It is likely that sex stereotypes influence these outcomes. Low assertion and highly aggressive self-efficacy are relegated to females and males respectively in social expectations. These stereotypes are indicted in these cases of females and males, in the case of both bullies and victims.

Consequently, females and males may resort to retaining those stereotypes when they are a bully or a victim as a defense to maintain their ego stability. Additionally, self-efficacy was also associated with the other roles that children adopt in the bullying/victim arena: Children from Finland who had the reputation of acting as a defender reported having higher levels of self-efficacy (Pöyhönen, Juvonen, & Salmivalli, 2010). Consequently, the present study examined the extent to which bullying behaviours and victimisation experiences predicted self-efficacy in adolescents and early adults.

Previous research has sought to examine the protective factors that children who experience victimisation utilise to ameliorate the effects of victimisation for their psychosocial adjustment. Whilst some victims may try to distance themselves from peers (NMSA, 2001; Wessler, 2003), others use peer friendships as a protective buffer (Pellegrini et al., 1999). However, some victims rely on their own abilities and resilience to overcome the effects of victimisation (Bowes, Maughan, Caspi, Moffitt, & Arseneault, 2010).

Resilience pertains to the maintenance of positive adaptation by individuals despite experiences of significant adversity and, as such, can be regarded as a dynamic process. Consequently, resilience implies exposure to significant threat or severe adversity and the achievement of positive adaptation despite this significant threat (Luthar & Zigler, 1991; Luthar, Cicchetti, & Becker, 2000; Masten, Best, & Garmezy, 1990; Rutter, 1990; Werner & Smith, 1982, 1992). Further, resilience is also conceptualised as the ability to respond in a flexible and

resourceful manner to a range of social situations with different demands (Overbeek, Zeevalkink, Vermulst, & Scholte, 2010). Enhancing resilience has been proposed as one way to reduce the effects of victimisation (Beightol, Jeverson, Gray, Carter, & Gass, 2009) as not all children who engage in bullying behaviours and experience victimisation have psychosocial adjustment difficulties but rather some are resilient to the effects (Bowes et al., 2010). Although Beightol et al. did not directly test the link between resilience, bullying behaviours, and victimisation experiences, the researchers reported that their school-based intervention designed to enhance resilience led to higher levels of self-efficacy in the children.

Experiencing victimisation may result in adolescents and young adults drawing on their resilience such that resilience buffers them from the potential negative consequences of experiencing victimisation. Overbeek, Zeevalkink, Vermulst, and Scholte (2010) examine resilience as a potential mediator in the relationship between victimisation and self-esteem in adolescents in the Netherlands. Although there was no evidence of resilience mediating the relationship, the authors suggested that this finding may have occurred because the entire sample experienced negative effects of victimisation. However, the authors only examined experiences of victimisation over the previous five days and also used a limited conceptualisation of victimisation experiences. Therefore, the present research extended this line of enquiry and examined the extent to which resilience mediated the relationship between bullying behaviours, victimisation experiences, and self-efficacy in 14- to 20-year-olds from India. The present study also extended Overbeek et al.'s conceptualization of bullying behaviours and victimisation experiences to physical, verbal, and social domains and increased the retrospective time frame for the accounts to the previous year.

Although there tends to be a general under reporting of experiencing victimisation (Shakeshaft et al., 1997), with victims more prevalent than bullies (Pellegrini et al., 1999), bullying behaviours and victimisation experiences are pervasive during adolescence (Unnever & Cornell, 2003). However, whilst sex differences have emerged in the patterns of victimisation experiences and bullying behaviours (e.g., Mynard & Joseph, 2000; Kyriakides, Kaloyirou, & Lindsay, 2006), males and females are at equal risk of experiencing victimisation (Ashbaugh & Cornell, 2008; Olweus, 2003; Shakeshaft et al., 1997). There are also sex differences in how adolescents and young adults deal with victimisation and bullying. For example, Williams and Cornell (2006) reported that males were less likely to seek help compared to females when they experience bullying. Therefore, sex was explored as a potential moderator in the hypothesized relationships between bullying behaviours, victimisation experiences, resilience, and self-efficacy.

The aim of the present study was to examine bullying behaviours and victimisation experiences in 14- to 20-year-olds from India. In particular, through the use of structural equation modeling, the research examined the extent to which resilience mediated the relationship between victimisation, bullying behaviours, and self-efficacy to test the hypothesised model in Figure 1. Separate groups were also created according to sex to explore the extent to which sex moderated the hypothesised relationships in Figure 1.

Insert Figure 1 about here

Method

Participants

Data was collected from 393 (191 male, 202 female) adolescents and early adults aged between 14 and 20 ($M = 15.88$, $SD = .64$) studying in classes 11th and 12th at 6 randomly selected schools located in Coimbatore, Tamil Nadu, India. One participant was aged 14 and one was aged 20; the remaining 391 participants were aged between 15 and 18. Participants were recruited from government schools, missionary schools, co-education schools, and single-sex schools through stratified sampling techniques.

Measures

Victimisation and bullying. The 36-item Adolescent Peer Relations Instrument (Parada, 2000) was used to separately assess experiences of bullying and victimisation across three dimensions: Verbal, social, and physical behaviour. Participants reported the frequency with which they had experienced victimisation or engaged in bullying behaviours over the past year using a 6-point scale ranging from 1 (*Never*) to 6 (*Everyday*) for verbal bullying (e.g., “Teased them by saying things to them”, $\alpha = .77$), social bullying (e.g., “Got my friends to turn against a student”, $\alpha = .71$), physical bullying (e.g., “Pushed or shoved a student”, $\alpha = .71$), verbal victimisation (e.g., “I was ridiculed by students saying things to me”, $\alpha = .76$), social victimisation (e.g., “I was left out of activities, games on purpose”, $\alpha = .68$), and physical victimisation (e.g., “Something was thrown at me to hit me”, $\alpha = .79$).

Self-efficacy. The Self-Efficacy Scale (Sherer et al., 1982) was used to assess self-efficacy. The 23-item scale assessed general (17 items) and social self-efficacy (6 items, e.g., “I am a self-reliant person”). Participants were asked to indicate the extent to which the items described them using a six-point scale that range from A (*Disagree strongly*) to F (*Agree Strongly*). The total

scale had modest reliability $\alpha = .64$ while general self-efficacy subscale had adequate reliability $\alpha = .63$ and social self-efficacy subscale had very modest reliability $\alpha = .26$. The general self-efficacy and social self-efficacy were treated as separate constructs in the subsequent analysis.

Resilience. The Bharathiar University Resilience Scale (BURS; Annalakshmi, 2009) was used to assess the psychological resilience as a dispositional measure. The 30-item BURS assessed resilience in terms of: Duration taken to get back to normalcy; reaction to negative events; response to risk factors (specifically disadvantaged environment) in life; perception of effect of past negative events; defining 'Problems'; hope/confidence in coping with future; and openness to experience and flexibility (e.g., "I usually get back to my cheerful self pretty soon no matter what failures occur in my life"). Participants reported the extent to which the item was applicable to them using a 5 point scale ranging from 1 (*Statement is not at all appropriate in describing me*) to 5 (*Statement is most appropriate in describing me*). A higher score indicated higher resilience and the scale demonstrated acceptable reliability $\alpha = .71$.

A panel of three competent social scientists, of which two had a PhD in Psychology and one had a PhD in sociology, was convened to ascertain the face validity of the scales chosen for use in the study. The members of the panel had adequate research experience and belonged to Tamil speaking population. The tamil speaking panel considered the constructs of bullying, victimisation, self-efficacy and resilience, and also scanned the items of the scales to ensure that the constructs were appropriate for the target population. The panel endorsed the face validity of the measures and their applicability in this study.

Procedure

All the scales were translated into Tamil, the vernacular language, from English in which the scales were originally presented by their authors. The translations were checked for accuracy

by the panel of social scientists cited above. All the scales were administered in bilingual format, i.e., in English and Tamil. Prior to completing the questionnaire in small groups, participants gave written consent.

Results

Bullying behaviours and victimisation experiences according to sex

To examine differences in bullying behaviours according to sex, a one-way unrelated MANOVA was used. The physical, verbal, and social bullying behaviours subscales were entered as the dependent variables and sex was the independent variable. There was a significant effect of sex, $\Lambda(3, 389) = 15.27, p < .001, \eta^2 = .105$. Separate univariate analyses revealed that males engaged in significantly greater levels of physical, $F(1,391) = 43.63, p < .001, \eta^2 = .105, M_{\text{males}} = 10.76, SD_{\text{males}} = 4.47, M_{\text{females}} = 8.33, SD_{\text{females}} = 2.65$, verbal, $F(1,391) = 27.43, p < .001, \eta^2 = .066, M_{\text{males}} = 14.52, SD_{\text{males}} = 6.20, M_{\text{females}} = 11.59, SD_{\text{females}} = 4.83$, and social $F(1,391) = 14.67, p < .001, \eta^2 = .036, M_{\text{males}} = 8.73, SD_{\text{males}} = 3.94, M_{\text{females}} = 7.43, SD_{\text{females}} = 2.71$, bullying behaviours compared to females.

To examine differences in victimisation experiences according to sex, a one-way unrelated MANOVA was used. The physical, verbal, and social victimisation experiences subscales were entered as the dependent variables and sex was the independent variable. There was a significant effect of sex, $\Lambda(3, 389) = 16.32, p < .001, \eta^2 = .112$. Separate univariate analyses revealed that males experienced significantly greater levels of physical, $F(1,391) = 43.43, p < .001, \eta^2 = .100, M_{\text{males}} = 11.03, SD_{\text{males}} = 5.24, M_{\text{females}} = 8.24, SD_{\text{females}} = 2.88$, and verbal, $F(1,391) = 7.00, p = .008, \eta^2 = .018, M_{\text{males}} = 15.54, SD_{\text{males}} = 6.91, M_{\text{females}} = 13.82, SD_{\text{females}} = 6.04$, victimisation compared to females.

Structural equation modeling

Separate latent variables were created to reflect bullying behaviours, victimisation experiences, and self-efficacy to remove error from the measurement of these constructs as the scales designed to assess these contained previously validated subscales (Raykov & Marcoulides, 2006). Multigroup structural equation modeling was used to test the hypothesized model in Figure 1 and to test the hypotheses that: (a) bullying behaviours and victimisation experiences would predict self-efficacy, (b) resilience would mediate the relationship between bullying behaviours, victimisation experiences, and self-efficacy, and (c) sex differences would emerge in these relationships using Amos version 21. The separate groups comprised participants of the same sex. Figure 2 shows the model with standardized coefficients for males and Figure 3 shows the model with standardized coefficients for females.

The model was a good fit of the data, comparative fit index (CFI) = .93, goodness of fit index (GFI) = .94, root mean square error of approximation (RMSEA) = .062, $\chi^2(44) = 110.1$, $p < .001$. The CFI and GFI exceeded the recommended value of .90 (Bryant & Yarnold, 1995; Byrne, 2001) and the RMSEA was $< .08$ (Byrne, 2001; Schumacker & Lomax, 1996). However, the chi-square indicated that the model was not a complete fit of the data (Schumacker & Lomax, 1996).

To examine sex as a moderator, the procedure outlined by Byrne (2001) was implemented. Initially, all of the paths were constrained to be equal across both groups and then individually unconstrained to examine potential sex differences in strength using chi-square change. Constraining all paths indicated that there were sex differences in path strength across the models, $\Delta\chi^2(64) = 1438.89$, $p < .001$.

Findings in males The direct paths between bullying behaviours, victimisation experiences, and self-efficacy were not significant (Figure 2). Resilience positively predicted self-efficacy: Higher levels of resilience predicted higher self-efficacy. To examine the role of resilience as a mediator in the relationship between bullying behaviours, victimisation experiences, and self-efficacy, for the requirements of mediation to be met, it was necessary that the mediator variable was predicted by the predictor variable and that the mediator variable predicted the outcome variable (Baron & Kenny, 1984). In males, the first condition of mediation was met for bullying behaviours, as bullying behaviours negatively predicted resilience: Engaging in higher levels of bullying behaviours predicted low levels of resilience, and this path was stronger in males than females, $\Delta\chi^2(1) = 109.14, p < .001$. Resilience mediated the relationship between bullying behaviours and self-efficacy, Sobel's $z = -2.20, p < .05$. Engaging in higher levels of bullying behaviours predicted lower levels of resilience which in turn predicted higher self-efficacy. Resilience did not mediate the relationship between victimisation experiences and resilience.

Findings in females The direct paths between bullying behaviours, victimisation experiences, and self-efficacy were not significant (Figure 3). Resilience positively predicted self-efficacy: Higher levels of resilience predicted higher self-efficacy and this path was stronger in females than in males, $\Delta\chi^2(1) = 724.19, p < .001$. Resilience did not mediate the relationship between bullying behaviours, victimisation experiences, and self-efficacy.

Insert Figure 2 and Figure 3 about here

Discussion

In summary, the results of the multigroup SEM provide evidence that resilience mediated the relationship between bullying behaviours and self-efficacy in male adolescents and young adults aged between 14- and 20-year-olds from India. However, there was no such relationship for females or between victimisation experiences, resilience, and self-efficacy. There was also evidence of sex differences in the adolescents and early adults bullying behaviours and experiences of victimisation.

There was no direct path between victimisation experiences and self-efficacy which does not support the previous research that suggests that experiencing victimisation was associated with reduced self-efficacy (Ozer et al., 2011). One potential explanation for the lack of a comparable path between self-efficacy and victimisation experiences resides in the various types of self-efficacy and victimisation experiences (Andreou, 2004). Andreou reported that in Greek children more frequent victimisation experiences were associated with lower levels of assertion self-efficacy whereas for males more frequent victimisation experiences was associated with higher aggressive self-efficacy. Therefore, the results of the present study may reflect differences in self-efficacy and this should be further explored in future research. For example, collective efficacy which pertains to the informal social controls that operate under social norms of trust is an emerging theoretical concept that has been applied to explain violence and as such may be important in victimisation experiences and bullying behaviours (Sapouna, 2010).

Resilience was found to mediate the relationship between bullying behaviours and self-efficacy such that engaging in higher levels of bullying behaviours predicted lower levels of resilience and higher levels of resilience, in turn, predicted higher levels of self-efficacy in males. Therefore, the mediating role of resilience in the present study suggests that resilience

acted as protective factor that may serve to buffer against male adolescents and early adults from the negative effects of engaging in bullying behaviours. For example, previous research with children has reported that engaging in more frequent bullying behaviours is associated with lower self-efficacy (Andreou, 2004; Ozer et al., 2011).

Perceived self-efficacy likely affects individuals' ability to adapt and deal flexibly with difficult situations, and also their aspirations, analytical thinking, and perseverance in the face of failure (Bandura et al., 2001). This is particularly relevant to adolescent development because in order to negotiate the risks and challenges associated with this transitional period, adolescents' success is partly dependent on the strength of their perceived self-efficacy (Bandura et al., 1999).

Retaining a sense of control over one's life is an important factor in the successful adaptation to a variety of circumstances in which stressors are encountered (Aspinwall & Richter, 1999). Self-efficacy has therefore been conceptually and empirically linked with greater persistence and successful adaptation to stress (Aspinwall & Richter, 1999). Coping skills in adolescence is of critical importance in maintaining positive adaptation to stressors (Compas, Connor-Smith, Saltzman, Thomsen & Wasdworth, 2001). Coping is a way to set into motion personal resources, and resilience is the positive outcome of successful coping (Compas et al., 2001).

Conceptually, resilience may be distinguished from self-efficacy since it is possible that self-efficacy may be present even in the absence of stressors (Diehl, Semegon, & Schwarzer, 2006). Self-efficacy has been conceptualised as one of the components of resilience and post traumatic growth (Rutter, 1987; Tedeschi & Calhoun, 1995; Werner & Smith, 1982). A case study of American-African female university student showed that resilience appeared to be the result of a high level of mathematics self-efficacy and support systems (Eatman, 2009).

Resilience was significantly and positively correlated with self-efficacy among African-American urban students (Speight, 2009). Higher levels of academic self-efficacy significantly related to higher value of education and lower levels of stress among adolescents as found in a study attempting to build a structural equation model of resiliency in adolescence (Gillis, 2011). Significant relationships between resilience and self-efficacy exist among business managers (Svence & Greaves, 2013). Self-efficacy affects lives in highly stressful situations but also helps one to develop motivation and envision challenging goals in life (Schwarzer & Warner, 2013). An information processing approach has highlighted the role of self-efficacy in resilience (Benight & Cieslak, 2013).

It is likely the bullying adolescent is engaged in bullying as a means of coping with certain personal stressors.

There was no evidence that resilience mediated the relationship between experiencing victimisation and self-efficacy which does not support the argument advanced by Bowes et al. (2010) that some victims rely on their own resilience to ameliorate the effects of experiencing victimisation. Consequently, future research is needed to further explore the role of resilience in the relationship between victimisation experiences and self-efficacy as Beightol et al. (2009) alluded to before school-based interventions are designed to promote resilience in students.

The research also examined whether sex differences emerged in adolescents and young adults bullying behaviours and victimisation according. There was evidence in the sample of 14- to 20-year-olds from India that males engaged more frequently in physical, verbal, and social bullying compared to females. Although males and females are at equal risk of experiencing victimisation (Ashbaugh & Cornell, 2008; Olweus, 2003; Shakeshaft et al., 1997), in the current study with 14- to 20-year-olds from India, males experienced higher levels of verbal and

physical victimisation than females. The finding with regard to physical victimisation is consistent with previous studies from other countries that have reported males experience greater levels of physical victimisation whereas females experience greater levels of social and verbal victimisation (Kyriakides et al., 2006; Mynard & Joseph, 2000), although that finding was not replicated in the present study. However, the sex differences identified in the current study are consistent with the socio-cultural perspective of bullying behaviours and victimisation experiences that argues that males are likely to experience and engage in greater levels of bullying (Wimmer, 2009). Another potential explanation for the sex differences in the current study pertains to the propensity for adolescents and young adults to report their experiences of victimisation as there is a general tendency for individuals to under report their experiences of victimisation (Shakeshaft et al., 1997).

Although the present study has identified the mediating role of resilience in the relationship between bullying behaviours and self-efficacy in males the cross-sectional nature of the study means that the direction of causality should be treated with caution. Consequently, future research should adopt a longitudinal approach to draw further conclusions about the direction of causality. In a longitudinal study, by modeling the sequence of events in time and then considering the associated prediction probabilities, specific causal relationships between bullying, resilience and self-efficacy can be better understood (Arjas, 1993). It would also be meaningful to examine the role of resilience in the context of post-traumatic growth as an indicator of wellbeing for those who have experienced victimisation over time (Joseph et al., 2012). Also, subsequent research should include a range of informants to overcome the issues associated with common method variance (Lindell & Whitney, 2001). However, whilst trying to address the issue of common method variance, it is important that researchers recognize the

importance of capturing the 'voice' of adolescents and young adults as we have done in the present study. Further, because of the many issues associated with the measurement and self-report of bullying behaviours and victimisation experiences, Buhs, McGinley, and Toland (2010) have argued that the only way to fully understand the phenomena of bullying is as we have done in the current study: Asking the individuals involved. Utilising such self-report methods affords researchers with a unique insight in to the experiences of adolescents' and young adults' own experience (Arseneault et al., 2005) and, as such, have many benefits over other methods. Future research could also develop the range of bullying behaviours and victimisation experiences by asking about adolescents' and young adults' experiences in the cyber world because technology is increasingly being used as a medium to bully others and a medium where victimisation is experienced (Dehue, Bolman, & Vollnick, 2008; Smith, 2009).

In summary, the present research has documented the role of resilience as a mediator in the relationship bullying behaviours and self-efficacy in males. There was also evidence that males experienced greater levels of victimisation and engaged more frequently in bullying behaviours than females.

References

- Andreou, E. (2004). Bully/victim problems and their association with Machiavellianism and self-efficacy in Greek primary school children. *British Journal of Educational Psychology*, *74*, 297–309.
- Annalakshmi, N. (2009). Bharathiar University Resilience Scale In H.C.Purohit & A.Wagh (Eds.), *Research Methods – Tools and Techniques* (pp 105-121). New Delhi: Shree Publishers.
- Arjas, E. (1993). On predictive causality in longitudinal studies. *Journal of Statistical Planning and Inference*, *34* (3), 361–386.
- Arseneault, L., Kim-Cohen, J., Taylor, A., Caspi, A., & Moffitt, T. E. (2005). Psychometric evaluation of 5- and 7-year-old children's self-reports of conduct problems. *Journal of Abnormal Child Psychology*, *33* (5), 537-550.
- Ashbaugh, L., & Cornell, D. (2008). Sexual harassment and bullying behaviors in sixth graders. *Journal of School Violence*, *7*, 21-38.
- Aspinwall, L.G., and Richter, L. (1999). Optimism and self-mastery predict more rapid disengagement from unsolvable tasks in the presence of alternatives. *Motivation and Emotion*, *23* (3), 221-245.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice- Hall, Inc.
- Bandura, A. (1994). Self-efficacy. In V.S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol.4, pp. 71-81). New York: Academic Press.
- Bandura, A. (1997). *Self-efficacy: the exercise of control*. New York: Freeman.

- Bandura, A. (Ed.). (1995). *Self-efficacy in changing societies*. New York: Cambridge University Press.
- Bandura, A., Barbaranelli, C., Caprara, G.V., & Pastorelli, C. (1999). Self-efficacy pathways to childhood depression. *Journal of Personality and Social Psychology*, 76 (2), 258-269.
- Baron, R.M., & Kenny, D.A. (1984). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51 (6), 1173- 1182.
- Beightol, J., Jeverson, J., Gray, S., Carter, S., & Gass, M. (2009). The effect of an experiential, adventure-based "Anti-Bullying Initiative" on levels of resilience: A mixed methods study. *Journal of Experiential Education*, 31 (3), 420-424.
- Benight, C.C., and Cieslak, R.(2013) "Cognitive factors and resilience: how self-efficacy contributes to coping with adversities", *Resilience and Mental Health*. 1st ed. Cambridge: Cambridge University Press, 2011. 45-55. *Cambridge Books Online*. Web. 26 June 2013. <http://dx.doi.org/10.1017/CBO9780511994791.005>
- Bowes, L., Maughan, B., Caspi, A., Moffitt, T.E., & Arseneault, L. (2010). Families promote emotional and behavioural resilience to bullying: evidence of an environmental effect. *Journal of Child Psychology and Psychiatry*, 51 (7), 809-17. doi: 10.1111/j.1469-7610.2010.02216.
- Buhs, E. S., McGinley, M., & Toland, M. D. (2010). Overt and relational victimization in Latinos and European Americans: Measurement equivalence across ethnicity, gender, and grade level in early adolescent groups. *The Journal of Early Adolescence*, 30, 171-197. doi:10.1177/0272431609350923

- Bryant, F. B., & Yarnold, P. R. (1995). Principal-components analysis and exploratory and confirmatory factor analysis. In L. G. Grimm & P. R. Yarnold (Eds.), *Readings and understanding multivariate statistics* (pp. 99-136). Washington, DC: American Psychological Society.
- Byrne, B. M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Compas, B.E., Conner-Smith, J.K., Saltzman, H., Thomsen, A.H., & Wadsworth, M.E. (2001). Coping with stress during childhood and adolescence: problems, progress, and potential in theory and research. *Psychological Bulletin*, *127* (1), 87-127.
- Dehue, F., Bolman, C., & Vollink, T. (2008). Cyberbullying: Youngsters' experiences and parental perception. *CyberPsychology & Behavior*, *11*, 217-223. doi: 10.1089/cpb.2007.0008.
- Diehl, M., Semegon, A. B., & Schwarzer, R. (2006). Assessing attention control in goal pursuit: A component of dispositional self-regulation. *Journal of Personality Assessment*, *86*, 306-317. doi: 10.1207/s15327752jpa8603_06 [PMID: 16740114]
- Eatman, D. (2009). A case study of resilience based on mathematics self-efficacy and social identity. In Swars, S. L., Stinson, D. W., & Lemons-Smith, S. (Eds.). (2009). *Proceedings of the 31st annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Atlanta, GA: Georgia State University.
- Eslea, M., Menesini, E., Morita, Y., O'Moore, M., Mora-Merchan, J.A., Pereira, B., et al. (2004). Friendship and loneliness among bullies and victims: Data from seven countries. *Aggressive Behavior*, *30* (1), 71-83.
- Espelage, D. L., & Swearer, S. M. (2003). Research on school bullying and victimization: What have we learned and where do we go from here? *School Psychology Review*, *32* (3), 365-383.

- Gillis, S.A. (2011). A structural equation model of resiliency in adolescence. PhD Dissertation submitted to University of Wisconsin-Milwaukee.
- Harel-Fisch, Y., Walsh, S.D., Fogel-Grinvald, H., Amitai, G., Pickett, W., Molcho, M., Due, P., Matos, M.G., Craig, W., & Members of the HBSC Violence and Injury Prevention Focus Group. (2011). Negative school perceptions and involvement in school bullying: A universal relationship across 40 countries. *Journal of Adolescence*, 34 (4):639-52. doi: 10.1016/j.adolescence.2010.09.008.
- Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry*, 41 (4), 441-455.
- Jerusalem, M. & Mittag, W. (1995). "Self-efficacy in Stressful Life Transitions". In A. Bandura (Ed.), *Self-efficacy in Changing Societies* (pp. 177-201). New York: Cambridge University Press.
- Joseph, S. J., Maltby, J., Wood, A. M., Stockton, H., Hunt, N., & Regal, S. (2012). The psychological well-being-post traumatic changes questionnaire (PWB-PTCQ): Reliability and validity, *Psychological Trauma: Theory, Research, Practice, and Policy*, 4, 420-428
- Kyriakides, L., Kaloyirou, C., & Lindsay, G. (2006). An analysis of the Revised Olweus Bully/Victim Questionnaire using the Rasch Measurement Model. *British Journal of Educational Psychology*, 76, 781-801. doi:10.1348/000709905X53499.
- Lindell, M. K., & Whitney, D. J. (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*, 86 (1), 114-21.
- Luthar, S.S., & Zigler, E. (1991). Vulnerability and competence: A review of research on resilience in childhood. *American Journal of Orthopsychiatry*, 61 (1), 6-22.

- Luther, S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development, 71*(3), 543-562.
- Masten, A.S., Best, K.M., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology, 2* (4), 425-444.
- Mynard, H., & Joseph, S. (2000). Development of the multidimensional peer-victimization scale. *Aggressive Behavior, 26* (2), 169-178.
- Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among U.S. youth: Prevalence and association with psychosocial adjustment. *The Journal of the American Medical Association, 285*(16), 2094-2100.
- National Middle School Association. (2001). *Safe passages* (video and guide). Westerville, OH: National Middle School Association.
- Olweus, D. (1978). *Aggression in the schools: Bullies and whipping boys*. Washington, D.C.: Hemisphere (Wiley).
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Oxford, UK: Blackwell Publishers.
- Olweus, D. (2003). A profile of bullying at school. *Educational Leadership, 60* (6), 12-17.
- Overbeek, G., Zeevalkink, H., Vermulst, A.A., & Scholte, R.H.J. (2010). Peer Victimization, self-esteem, and ego resilience types in adolescents: A prospective analysis of person-context interactions. *Social Development, 19* (2), 270-284.
- Özer, A., Totan, T., & Atik, G. (2011). Individual correlates of bullying behaviour in Turkish middle schools. *Australian Journal of Guidance and Counselling, 21* (2), 186-202. DOI: <http://dx.doi.org/10.1375/ajgc.21.2.186>.

- Pajares, F. (2001). Current Directions in Self-efficacy Research. In M. Maehr & P. R. Pintrich (Eds.) *Advances in motivation and achievement* (Vol. 10, pp. 1-49). Greenwich, CT: JAI Press.
- Pellegrini, A. S., Bartini, M., & Brooks, F. (1999). School bullies, victims, and aggressive victims : Factors relating to group affiliation and victimization in early adolescence. *Journal of Educational Psychology, 91* (2), 216-224. doi: 10.1037//0022-0663.91.2.216.
- Pöyhönen, V., Juvonen, J., & Salmivalli, C. (2010). What does it take to defend the victimized peer? The interplay between personal and social factors. *Merrill-Palmer Quarterly, 56*, 143–163.
- Parada, R. H. (2000). Adolescent Peer Relations Instrument: A theoretical and empirical basis for the measurement of participant roles in bullying and victimization of adolescence: An interim test manual and a research monograph: A test manual. Sydney, Australia: Publication Unit, Self-concept Enhancement and Learning Facilitation (SELF) Research Centre, University of Western Sydney.
- Raykov, T., & Marcoulides, G. A. (2006). On multilevel model reliability estimation from the perspective of structural equation modeling. *Structural Equation Modeling, 13*, 130-141. doi:10.1207/s15328007sem1301_7
- Rigby, K. (2002). *New perspectives on bullying*. London: Jessica Kingsley Publishers.
- Rutter, M. (1990). Psychosocial resilience and protective mechanisms. In J.Rolf, A. S. Masten, D. Cicchetti, K. H. Nuechterlein, & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* (pp. 181–214). Cambridge, England: Cambridge University Press.

- Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, 57, 316–331.
- Schumacker, R. E., & Lomax, R. G. (1996). *A beginner's guide to structural equation modeling*. Mahwah, NJ: Erlbaum.
- Schwarzer, R., and Warner, L.M. (2013). Perceived Self-Efficacy and its Relationship to Resilience. In Schwarzer, R., and Warner, L.M. *Resilience in Children, Adolescents, and Adults*. The Springer Series on Human Exceptionality, pp 139-150. NY: Springer.
- Sapouna, M. (2010). Collective efficacy in the school context: does it help explain victimization and bullying among Greek primary and secondary school Students? *Journal of Interpersonal Violence*, 25 (10), 1912–27. doi: 10.1177/0886260509354509.
- Shakeshaft, C., Mandel, L., Johnson, Y. M., Sawyer, J., Hergenrother, M. A., & Barber, E. (1997). Boys call me cow. *Educational Leadership*, 55 (2), 22-25.
- Sherer, M., Maddux, J.E., Mercandante, B., Prentice-Dunn, S., Jacobs, B. and Rogers, R.W. (1982). The self-efficacy scale: Construction and validation. *Psychological Reports*, 51, 663-671.
- Smith, P. K. (2009). Cyberbullying: Abusive relationships in cyberspace. *Journal of Psychology*, 217, 180–181. doi: 10.1027/0044-3409.217.4.180.
- Speight, N.P. (2009). The relationship between self-efficacy, resilience and academic achievement among African-American urban adolescent students. ProQuest Dissertations and Theses. <http://udini.proquest.com/view/the-relationship-between-self-pqid:1923086631/>
- Svence, G., and Greaves, V. (2013). Factors of Resilience, Wisdom and Self-Efficacy as Positive Resources of Leaders in Sample of Latvian Business Manager. *Problems of Psychology in the 21st Century*, 5, 96-108.

- Tedeschi, R. G., & Calhoun, L. G. (1995). Trauma and transformation: Growing in the aftermath of suffering. Thousand Oaks, CA: Sage.
- Thijs, J. & Verkuyten, M. (2008) Peer victimization and academic achievement in a multi-ethnic sample: The role of perceived academic self-efficacy. *Journal of Educational Psychology*, 100, 754-764.
- Unnever, J., & Cornell, D. G. (2003). Bullying, self control, and ADHD. *Journal of Interpersonal Violence*, 18 (2), 129-147.
- Wessler, S. L. (2003). It's hard to learn when you're scared. *Educational Leadership*, 61(1), 40-43.
- Werner, E. E. & Smith, R. S. (1982). *Vulnerable but invincible: A study of resilient children*. New York: McGraw-Hill.
- Werner, E.E. & Smith, R.S. (1992). *Overcoming the odds: High risk children from birth to adulthood*. Ithaca, NY: Cornell University Press.
- Williams, F., & Cornell, D. (2006). Student willingness to seek help for threats of violence. *Journal of School Violence*, 5, 35-49.
- Wimmer, S. (2009). Views on gender differences in bullying in relation to language and gender role socialization. *Griffith Working Papers in Pragmatics and Intercultural Communication*, 2 (1), 18-26.

Figure 1 The hypothesized model

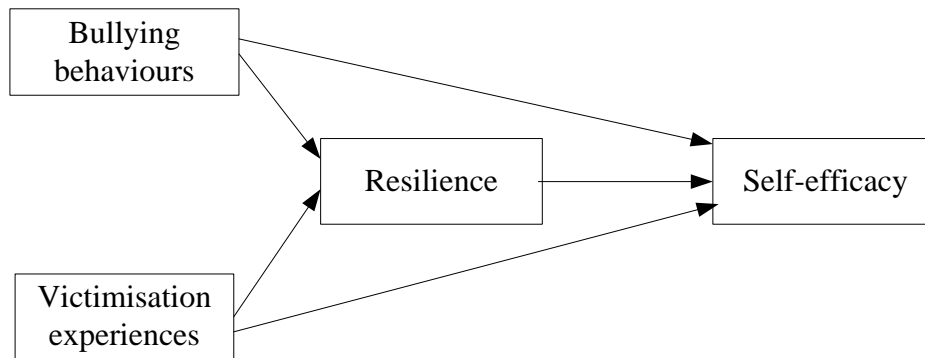


Figure 2 The model with standardized coefficients for males

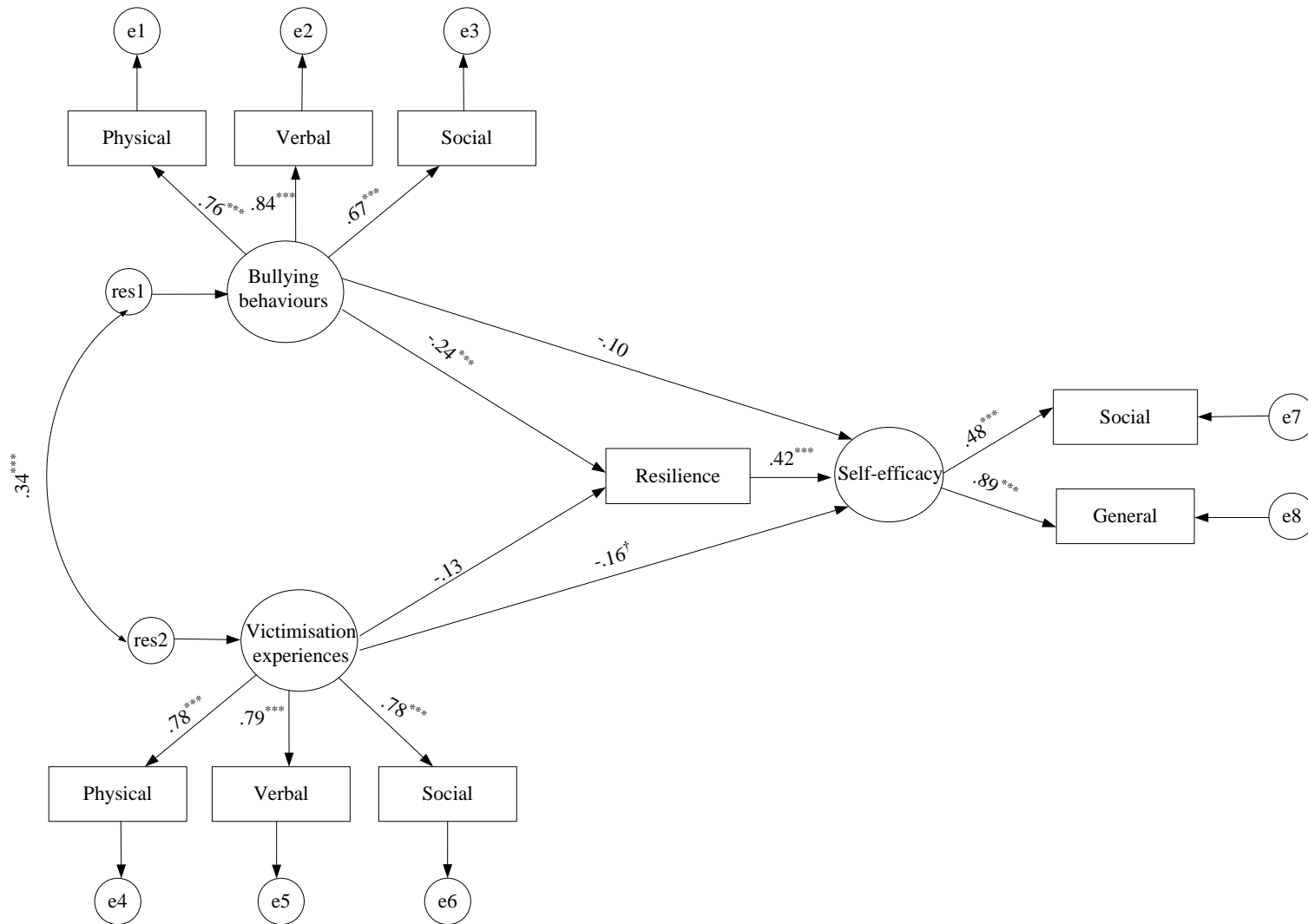


Figure 3 The model with standardized coefficients for females

