Self-efficacy, sense of belonging and social support as predictors of resilience in adolescents

Anna Nowicki
Edith Cowan University

Follow this and additional works at: https://ro.ecu.edu.au/theses_hons

Part of the Cognitive Psychology Commons

Recommended Citation

This Thesis is posted at Research Online.
https://ro.ecu.edu.au/theses_hons/1155
Edith Cowan University

Copyright Warning

You may print or download ONE copy of this document for the purpose of your own research or study.

The University does not authorize you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site.

You are reminded of the following:

- Copyright owners are entitled to take legal action against persons who infringe their copyright.

- A reproduction of material that is protected by copyright may be a copyright infringement. Where the reproduction of such material is done without attribution of authorship, with false attribution of authorship or the authorship is treated in a derogatory manner, this may be a breach of the author’s moral rights contained in Part IX of the Copyright Act 1968 (Cth).

- Courts have the power to impose a wide range of civil and criminal sanctions for infringement of copyright, infringement of moral rights and other offences under the Copyright Act 1968 (Cth). Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.
USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.
COPYRIGHT AND ACCESS DECLARATION

I certify that this thesis does not, to the best of my knowledge and belief:

(i) incorporate without acknowledgement any material previously submitted for a degree or diploma in any institution of higher education;

(ii) contain any material previously published or written by another person except where due reference is made in the text; or

(iii) contain any defamatory material.

Signed....

Date ......................

13.12.08
Self-Efficacy, Sense of Belonging and Social Support as Predictors of Resilience in Adolescents

Anna Nowicki

A Report Submitted in Partial Fulfilment of the Requirements for the Award of Bachelor of Arts (Psychology) Honours,

Faculty of Computing, Health and Science

Edith Cowan University

Submitted October 2008

I declare that this written assignment is my own work and does not include:

(i) material from published sources used without proper acknowledgment; or

material copied from the work of other students.

Date: _
Acknowledgements

I would like to acknowledge the generous assistance and support from a number of people without whose help this thesis would not have been completed.

I wish to thank my supervisor, Associate Professor Lynne Cohen for her knowledge, expertise and guidance. I would also like to acknowledge Bronwyn Harman for all her useful feedback and support.

My thanks are due to the students at Mundaring Christian College and Clarkson Community High School for their willing and informative participation in the study. Also, thanks are due to Vicky Follington, Kim Fragall and Jacqui Ward, for their supportive assistance in the study’s process.

A special thanks to Dr Eyal Gringart for making quantitative research methodology understandable. I would also like to thank Carole Gamsby for her cheerful advise, as well as all the staff from the School of Psychology and Social Science that have assisted me through my undergraduate journey.

I wish to thank my boyfriend Robert for his love and support, in particular I wish to thank him for setting up an on campus mini-kitchen for me. The long nights spent in the computer labs were made all the more bearable knowing I had a constant supply of coffee and toast to sustain me.

Finally, I wish to thank my grandparents, family and friends for their love, encouragement and support.
Table of Contents

Section One: Literature Review
Title  
Acknowledgements  
Table of Contents  
Title page for literature review  
Abstract  
Introduction  
  Adolescent Resilience  
  Life Stressors  
  Biological Perspective to Resilience  
  Resilience  
  Social Support  
  Sense of Belonging  
  Self-Efficacy  
  Promoting Resilience  
  Conclusion and Future Direction  
References  
Guidelines for Contributions by Authors: For Literature Review Only

Section Two: Research Report
Title  
Abstract  
Introduction  
  A systems Approach to Adolescent Development  
  Adolescent Resilience  
  Protective Factors  
  Sense of Belonging as a Protective Factor  
  Social Support as a Protective Factor  
  Self-Efficacy as a Protective Factor  
Method  
  Research Design  
  Participants  
  Materials  
    Sense of Belonging  
    Social Support  
    Self-Efficacy  
    Resilience  
  Procedure  
  Ethics  
Results  
Discussion  
References  
Appendices  
Guidelines for Contribution by Authors: For Research Report Only
Self-Efficacy, Sense of Belonging and Social Support as Predictors of Resilience in Adolescents

Anna Nowicki
Self-Efficacy, Sense of Belonging and Social Support as Predictors of Resilience in Adolescents

Abstract

Adolescence has been described as a period of many physical, cognitive and psychosocial changes. During such a tumultuous time some adolescents cope better than others with life stressors, and these individuals can be considered resilient. The degree to which a person is resilient can be influenced and determined by protective factors, including social support, sense of belonging and self-efficacy. Positive social support has been identified as a buffer that protects individuals from the negative effects of stressful life situations. A strong sense of belonging has positively reflected adolescents’ motivation, participation and ability to relate to their environment. Self-efficacy has also been examined as it is the sense of competence an individual holds when dealing with problems. All protective factors examined yielded positive outcomes when experienced in high degrees. However, conflicting findings were identified. These discrepancies, although minor, indicated a need for further research.

Author: Anna Nowicki

Supervisor: Associate Professor Lynne Cohen

Submitted: August 2008
Self-Efficacy, Sense of Belonging and Social Support as Predictors of Resilience in Adolescents

Adolescence is a transitional developmental period defined by major physical, cognitive, social and emotional changes (Dumont & Provost, 1999). These changes have been identified as major stressors, and although some individuals cope well with these changes, others struggle to adapt (Keys, 2006). These individual differences in coping stem from the ability to be resilient. Resilience can be defined as the ability to bounce back after times of adversity and return to an original level of emotional wellbeing (Noble & McGrath, 2005). The degree to which a person is resilient can be influenced and determined by protective factors (Fergus & Zimmerman, 2005). Protective factors are contributors to positive outcomes during adverse periods (Dumont & Provost, 1999).

Three factors that may be considered as protective factors and predictors of resilience are social support, sense of belonging and self-efficacy. Perceived self-efficacy is a belief in one’s capabilities, it is a determinant of an individual’s choice of activities and how they will persist with dealing with stressful situations (Bandura, 1995). Based on these assumptions individuals who have confidence in their ability to solve problems in different situations are described as having strong self-efficacy. Rutter (1987) claimed that the enhancement of perceived self-efficacy serves as a protective factor in adolescent resilience.

Sense of belonging is the extent to which an individual feels accepted, included and respected in their environment (Goodenow, 1993). Sense of belonging reflects acceptance and this ultimately influences dimensions of an individual’s behaviour (Osterman, 2003). Goodenow (1993) has identified that adolescents with a high sense of belonging are more likely to be resilient through the belief that resources are available to them to overcome difficulties.
A positive social support network has been identified as a factor that allows adolescents to better deal with stressful life situations (Ryan, 2001). Having good social support has also been linked to resilience. Werner (1993) concluded that most of the resilient children in his study not only had good social support networks but would also seek social support when it was lacking through surrogate role models. Rutter (1987) has identified that environmental factors such as social support and cohesive social structures are important stress protectors, thus facilitating resilience. Studies have consistently identified that there are protective factors that promote positive outcomes despite adversity. These include social support, sense of belonging and self-efficacy (Ryan, 2001; Goodenow, 1993).

Adolescent Resilience

Psychosocial development during adolescence is fundamentally linked with the development of self-meaning and self-identity (Swanson, Spencer, & Peterson, 1998). Research has indicated that the need to belong is prevalent during early adolescent development (Isakson & Jarvis, 1999). During adolescence, cognitive functioning progresses to a stage of formal operation wherein the adolescent can perceive themselves in an abstract manner (Berk, 2002). Subsequently, this forms an ability to define the self in relation to societal attitudes, attributes and values (Berk, 2002).

Adolescence is a period where an individual experiences major physical, cognitive, socioaffective changes alongside major life events such the transition from primary school to high school. Through acknowledging these changes it becomes understandable that such events can also affect adolescents' well-being (Dumont & Provost, 1999).

From a developmental perspective, a common theme in theoretical frameworks for adolescent resilience is the consideration of the individual's developmental level and functioning, the multiple levels of influence on developmental pathways, and the connection between the risk and protective factors and the individual's adjustment (Armstrong, Bernie-
Adolescent Resilience

Lefcovitch & Ungar, 2005). Resilience in adolescence occurs through normal adaptive processes, including cognitive development, behaviour regulation and interactions with the environment (Masten, 2001).

Life Stressors

Many studies of resilience rely on the presence of risks or threats (Fergus & Zimmerman, 2005; Masten, 2001). In such cases individuals are usually not considered resilient unless there has been a significant threat to their development. However, life stressors such as daily hassles can also become risks when appropriate coping strategies are not applied (Jackson, 1992).

Fergus and Zimmerman (2005) have claimed that adolescents must have been exposed to some factor or factors (i.e., risks) that increase the likelihood of a poor outcome for promotive factors to be relevant in a study of resilience.

Major life stressors are relatively rare, therefore their effect on well-being may not be as great as minor stressors occurring frequently, such as disruptions, family arguments or taking care of others (Zautra, 2003). Major life stressors are usually associated with prolonged physiological arousal (Zautra, 2003). However, minor daily stressors not only affect well-being by having an immediate and direct effect on emotional and physical functioning, but after many days of cumulating, can create persistent irritations and frustrations that may result in serious stress reactions including anxiety and depression (Zautra, 2003).

In addition to major life events, small daily hassles can also have a negative impact on mental health (Dumont & Provost, 1999). Just as with major life events the repetitiveness of these micro events can have a negative effect on adolescents' health, in particular with their ability to cope (Rowlinson & Felner, 1988).
The frequency and severity of daily hassles are perceived differently by adolescents and adults (Dumont & Provost, 1999). Adolescents seem to be easily bothered by the frequency of daily hassles, whereas adults seem to be better at differentiating between the daily events that are inevitable, and the severity of the annoyance is dependent on the appraisal of the individual (Dumont & Provost, 1999).

It is suggested that if resilience is to be understood adequately it is necessary for there to be a certain level of conceptual clarity when measuring risk factors, as well as an understanding that risk factors do not hold equivalent levels of risk for all adolescents (Armstrong, et al., 2005).

Biological Perspective to Resilience

Almeida (2005) identifies stress as a process that occurs within the individual. Not only are objective characteristics of stressors impacting on an individual’s life but more so the individuals’ subjective appraisal of the stressors (Almeida, 2005). McEwen (1998) has reviewed some of the biological costs of adapting to stress, referred to it as the allostatic load, which is the ability to achieve stability through change. The ability to adjust to repeated stress is mainly determined by the way one perceives the situation (McEwen).

Repeatedly the literature (Scarr & McCartney, 1983; Cowen et al., 1991) has demonstrated that temperamental factors including in part one’s genetic make-up create, and shape the environments experienced. In relation to psychosocial development the dichotomy of nature and nurture has mostly been unclear. Rutter (1985) maintains that it is not accurate to conceptualise individual differences as a result of nature, and stress effects as the result of nurture. Rather, Scarr and McCartney (1983) argue that positive development results from both nature and nurture, however propose that it is one’s genes that forge the experience. In support of this theory, it has also been suggested that positive temperamental or dispositional factors are identified as protective factors (Cowen et al., 1991).
Resilience

An individual’s capacity to transcend adversity and furthermore transform it into an opportunity for growth is encompassed in the concept of resilience (Gillespie, Chaboyer & Wallis, 2007). Cicchetti and Rogosch (1997) have suggested that a resilient person must show positive outcomes across several aspects of life, over periods of time. Alvord and Grados (2005) have also noted that resilience is not a one-dimensional attribute. Rather, it is implied that the possession of multiple skills in varying degrees is what allows the individual to cope.

Research into resilience encompasses many areas including individuals’ abilities of recovering to normal functioning during different stages of development after adversity (Alvord & Grados, 2005). This was demonstrated through a study of Romanian children that had experienced severe deprivation during infancy and were later assessed to show significant improvements both physically and cognitively after being adopted into nurturing homes (Rutter & The English and Romanian Adoptees (ERA) Study Team, 1998). The study examined a sample of 111 Romanian orphans that came to the United Kingdom (U.K.) for adoption before the age of 2 years. The extent of developmental deficit was assessed at time of entry to the U.K. and most children were severely developmentally impaired. Further physical and cognitive assessments were carried out on the children at 4 years of age to examine the developmental catch-up. For those children adopted before 6 months of age both physical growth and cognitive levels were almost complete. The developmental catch-up was also very impressive, however not complete for children adopted after 6 months of age (Rutter et al., 1998). Masten (2001) claims such a recovery-to-normal trajectory of development is evidence of resilience.
Masten (2001) suggested that resilience stems from the healthy operation of basic human adaptational systems. Although, Miller (2002) acknowledges that consensus has not been reached in defining or describing what is meant by the term resilience.

The outcomes or consequences of resilience that have been recognised are effective coping, mastery, and positive adaptation (Earvolino-Ramirez, 2007). Another phenomenon of resilience is that of the ability of some individuals to actively create experiences that foster competence (Armstrong, et al., 2005).

In his study of students with disabilities, Miller (2002) aimed to identify several elements of resilience. A predominant difference between the resilient and non-resilient students was the ability of resilient students to identify their experiences of success and more importantly to take the deliberate steps that were necessary to attaining success (Miller, 2002). Resilience is therefore linked to self-efficacy in that both require the process of becoming aware of one’s strengths (Lightsey, 2006).

A study by Grossman et al. (1992) of 179 adolescents aimed to focus on the role of particular risk and protective factors, in particular family cohesion, locus of control and peer relationships. The results were very surprising as the study did not find any significant interactions between protective factors and risk. The authors suggest that such results may be due to the fact that the protective factors were highly content specific and support the view that future research should identify more specific rather than global protective factors (Grossman et al., 1992).

Fergus and Zimmerman (2005) suggest that a key requirement of resilience is the presence of risks, as well as promotive factors and that these factors will either bring positive outcomes or reduce negative outcomes. Furthermore, these promotive factors can be categorised as either assets or resources. It is argued that assets are the positive factors that reside within the individual, such as self-efficacy. Resources are also positive factors, but
they are external to the individual, such as social support and sense of belonging. It is through using assets and resources to overcome risk that resilience can be demonstrated as a process (Fergus & Zimmerman, 2005). Dumont and Provost (1999) have also examined the beneficial role of certain factors, being internal and external.

**Social Support**

Initially social support was regarded as a unidimensional construct, understood as support that was received, however, more recently social support is defined as a multidimensional concept (Dumont & Provost, 1999). It incorporates support that is actually received including, informative, emotional, and conductive, as well as including the sources of support whether it is from friends, family or strangers (Dumont & Provost, 1999).

The social support theory proposes two major models, the main effect model and the buffering effect model to explain the association between social support and well being (Armstrong, Bernie-Lefcovitch & Ungar, 2005). The first, known as the main effect model of social support, is defined through social integration and has a general positive context and beneficial effect on well being regardless of whether or not there is an actual stressful experience (Dumont & Provost, 1999). Secondly, the buffering model hypothesises that social support protects individuals against the negative effects of stressful events (Helsen, Vollebergh & Meeus, 2000; Rowlinson & Felner, 1988).

In examining the stress and coping process, personal and situational variables have been identified as mediating the impact of life stress (Rowlinson & Felner, 1988). Social support, has generated much interest because of findings that demonstrate its potential as buffering the harmful effects of stress (Cohen & Wills, 1985). The social support system incorporates the people with whom the adolescent interacts with, including parents, teachers, friends and peers (Colarossi & Eccles, 2003). Social support acts as a shield against the
negative effects of stressful life events and thus negative effects on mental health (Colarossi & Eccles, 2003; Jackson, 1992).

The effects of social support both directly and indirectly influence mental health (Colarossi & Eccles, 2003). During adolescence friendships become increasingly important and peer support becomes a critical factor contributing to life satisfaction. Failure to obtain peer support, as well as family support, has been found to be a major factor contributing to feelings of worthlessness and depressive symptoms (Harter, Waters, & Whitesell, 1998).

Based on the theory that not all social support is the same Colarossi and Eccles (2003) examined the effects of parent, teacher, and peer social support on the mental health of 217 adolescents. Support received from friends and teachers significantly and positively effected self-esteem. An important part of adolescence is identity formation and in many ways the nonfamily sources are important for self-concept and a sense of worthiness outside parental support. Of all supports examined by Colarossi and Eccles parental support was found to have the largest effect on levels of depression. It is suggested that this is due to the longer-term nature of the relationship on depressive systems (Colarossi & Eccles, 2003). It has been found that parental support may have a cumulative effect over time because of the relatively stable and long-standing parent-child relationship, which has notable effects on levels of depression (Garnefski & Diekstra, 1996). An individual’s perception of support affects mental health outcomes by increasing beliefs of acceptance, self-worth and connectedness to others (Colarossi & Eccles, 2003).

In one study of social support, 297 adolescents were classified into 3 groups: well adjusted, resilient, and vulnerable based on crossing scores of depressive symptoms and frequency of daily hassles (Dumont & Provost, 1999). It was evident from the results of this study that resilient adolescents were better able to solve problems than those in the other groups. However, an important finding from this research was that social support did not
significantly differentiate the groups of adolescents. The authors acknowledged that this was a very surprising result considering the literature (Colarossi & Eccles, 2003; Horton & Wallander, 2001) has placed so much emphasis on the buffering effects of social support on mental health.

The Adolescent Resilience Model (ARM) theoretically proposes an integrative representation of the process of resilience (Haase, 2004). The ARM was aimed at improving short and long term outcomes for adolescents with cancer, by focusing on positive health concepts such as resilience. It was suggested that it could be used as an intervention for improving resilience as the factors that influence resilience such as hope and perceived social support can be improved (Haase, 2004).

*Sense of Belonging*

Goodenow (1993) defines sense of belonging as the extent to which an individual feels accepted, respected and supported in their social environment. The social contexts in which adolescents are involved include their families, neighbourhoods and schools, however in particular the school environment has been identified as perhaps the most important context in which the adolescent strives for a sense of belonging (Berk, 2002). It has been suggested that a sense of belonging within the school is more than just identifying with the school, but feeling connected and part of the activities within that environment (Goodenow, 1993).

Maslow (1968) defines belongingness as a basic human need, and when disparity occurs the individual becomes exposed to maladjustment and emotional illness. Baumeister and Leary (1995) have hypothesised that sense of belonging is a need rather than a want, and as such lack of belongingness may have pathological consequences. They have also suggested that a key feature of one’s need for belonging is to maintain frequency of contact
and interactions with others. Importantly, it has been identified that the need for belonging cannot be satisfied by one relationship alone (Baumeister & Leary, 1995).

As previously discussed the school environment has been identified as perhaps the most important context in which the adolescent strives for a sense of belonging (Berk, 2002). In light of this, sense of school belonging has been identified as having a mediating effect on suicidal ideation (Sun & Hui, 2007). A cross-sectional study of 1,358 secondary Chinese students was conducted measuring self-esteem, depression and suicidal ideation. The results showed that a sense of school belonging was the main predictor of self-esteem and depression, and in turn depression was identified as a strong mediator of suicidal thoughts (Sun & Hui, 2007). Sense of school belonging had a significant positive effect on students' self-esteem and therefore their wellbeing.

Studies have demonstrated that sense of school belonging has also been associated with general motivation, the value placed on academic achievement and an individual's expectations of success (Anderman, 2003; Goodenow & Grady, 1993). In a particular study that examined the association between sense of school belonging and academic achievement, it was found that when demographics, prior achievement, school orientation goals and perceptions of teacher-student relationships were statistically controlled for, then school belonging positively predicted school grades (Roeser, Midgley & Urdan, 1996). Goodenow (1993) also reported that high scores on a sense of school belonging scale were positively correlated with higher grades, more time spent on homework and greater motivation. Students who received higher grades were more likely to experience schooling positively and were more motivated to participate.

It has been identified that sense of belonging contributes to a sense of wellness (Armstrong, et al., 2005). The coping mechanisms adolescents adopt such as planning and problem-solving strategies significantly influences their sense of belonging (Isakson & Jarvis,
In a short term longitudinal study it was found that adolescents that were able to adapt coping strategies in high school were more likely to experience a greater sense of belonging than those students with maladaptive coping strategies (Isakson & Jarvis, 1999). Sense of belonging is recognised as a crucial factor contributing to adolescents’ identity as well as influencing their interactions within the school environment (Beck & Malley, 1998).

During adolescence sense of school belonging and adjustment is interrelated with the dimensions of academic and social acceptance within that institution (Ma, 2003). When these dimensions of academic competence and social relatedness have been examined together as processes experienced as part of high school, the findings have been inconsistent (Anderman, 2002; Goodenow & Grady, 1993; Kagan, 1990; Ma, 2003).

Not only is a sense of school belonging positively related to general wellbeing but it also meets the psychosocial needs of adolescents (Ma, 2003). When a low sense of school belonging is experienced, alienation and lack of trust and understanding are also experienced (Goodenow, 1993).

Based on Baumeister and Leary’s (1995) theory that sense of belonging is a human necessity it becomes easier to understand why adolescents that fail to experience feelings of belonging at school find ways of belonging through different avenues such as forming membership with antisocial groups. Therefore, minority groups at school tend to have a low sense of identity with the school, however in order to achieve their sense of belonging will join other groups, usually marginalised groups outside the school environment (Beck & Malley, 1998).

Adolescents perceived sense of school belonging is associated with various adaptive and maladaptive, motivational, academic, psychosocial and behavioural outcomes (Anderman, 2003; Hagborg, 1998). Based on an extensive review of the literature, Kagan (1990) developed a research model that examined how behaviours, perceptions and
cognitions differ between adolescents at risk of dropping out of high school and those that are not at risk. The findings identified that a sense of school belonging distinguished adolescents’ level of risk. A strong sense of school belonging was an inclination for adolescents to continue schooling as opposed to a weak sense of school belonging (Kagan, 1990).

In contrast, the school environment has also been negatively associated with adolescents’ sense of belonging (Bergin, 1999; Eccles & Midgley, 1993). Negative outcomes for students have commonly been related to the discrepancy between the adolescent’s social needs and the opportunities provided at school to develop these needs (Eccles & Midgley, 1993). Although belonging to the school environment has been shown to be beneficial to the psychosocial development of adolescents (Goodenow, 1993), it has also been suggested that if schools adopt neglectful organisational practices this in turn could be undermining students’ experiences of belonging to a supportive community (Osterman, 2000).

There are also findings that suggest that students’ experiences of acceptance influence multiple dimensions of their behaviour (Osterman, 2000). When adolescents do not have a strong sense of belonging, they become at risk of alienation (Goodenow, 1993) or risk forming relations with antisocial groups (Beck & Malley, 1998). Battistich and Hom (1997) investigated the relationship between students’ sense of school community and problem behaviours. The results of the study showed that students with a weak sense of school community were more likely to engage in antisocial behaviour such as drug use and delinquency. As previously mentioned in the literature sense of belonging is identified as being part of a community (Goodenow, 1993), therefore this study demonstrate the negative effects that are present when there is a weak sense of belonging.

Therefore, a strong sense of belonging is related to positive outcomes (Goodenow, 1993), especially in the school context where it promotes motivation and participation. A
weak sense of belonging manifests disengagement; boredom and can lead to alienation (Beck & Malley, 1998).

**Self-Efficacy**

Self-efficacy can be defined as the sense of competence an individual holds when dealing with problems (Armstrong, et al., 2005). Initially White (1959) developed the concept of effectance motivation or, in other terms, the intrinsic satisfaction obtained from exploring the environment and realising one's capabilities. Harter (1982) later went on to argue that White's definition was too broad and too difficult to operationally define or test. It was suggested by Harter (1982) that the concept of effectance be broken down into more specific components, this lead to the development and evaluation of measures for more specific components of effectance. However, some have argued the importance of maintaining the generalised concept of efficacy, as it assists with the explanation of behaviour and adaptation in various situations (Deci, 1975).

Bandura (1977) proposed the concept of self-efficacy as central to behaviour change. Self-efficacy beliefs have been identified as fundamental in establishing an individual's capacity to initiate behaviour and produce outcomes (Passmore, 2004). Based on these assumptions of self-efficacy, individuals self-reflect and self-regulate according to the situation.

It is proposed that the developing concept of self-efficacy is especially important during the early adolescent years when individuals are faced with a wide range of challenging opportunities (Passmore, 2004). Importantly, perceived self-efficacy is the belief in one's capabilities to produce a particular attainment (Bandura, Pastorelli, Barbaranelli & Capara, 1999). A longitudinal study of 282 young adolescents examined the different facets of perceived self-efficacy that operate in combination with a network of sociocognitive influences (Bandura et al., 1999). The results demonstrated that perceived inefficacy, both
socially and academically contributed to depression. The adolescents in this study were mostly depressed over beliefs of their academic inefficacy rather than their actual academic performance (Bandura et al., 1999). This is an important observation, as the focus of perceived efficacy is on the process not the outcome.

As part of their initial study Cowen et al. (1991) interviewed 74 children who had experienced major life stress and had either, stress-affected or stress-resilient adjustment outcomes. The results showed that the stress-resilient group had significantly higher self-efficacy scores than the group of children that was stress-affected.

In their study Dumont and Provost (1999) found that using avoidance strategies places the individual at risk for developing depressive symptoms, because although avoidance may be used to lower psychological discomfort it does not resolve the problem. Unrealistic goal structures and negative feedback in the school social context elicits social comparison processes that are associated with decreased self efficacy (Anderman, 2003).

Kavussanu and Harnisch (2000) have argued that children that are task oriented have a good perception of the effort required, and this is important as it results in greater ability. In their study of 907 young adolescents, Kavussanu and Harnisch (2000) found that high task orientation corresponded with high levels of self-worth regardless of ability in relation to others. This is congruent with previous findings of self-efficacy that demonstrate the importance of the process of focusing on the task and motivation (Goodnow, 2003).

However, in contrast a study that focused on Bandura’s (1977) theory of success found that pessimistic ratings of success expectations were actually linked to better performance outcomes (Christensen, Fogarty & Wallace, 1999). In the study, 214 students were asked to indicate their awareness of their success for academic results they had not yet received. Less optimistic personal assessments of success were related to higher results (Christensen et al., 1999). It was concluded that students’ inaccurate estimates were
indicators of success, that extremes of either optimism or pessimism could have less useful outcomes and that self-regulatory behaviour increased successful outcomes (Christensen et al., 1999).

The relationship between resilience and self-efficacy is such that both factors have been identified as requiring the same processes of realisation and awareness of one’s strengths in order to produce beneficial outcomes (Lightsey, 2006).

Promoting Resilience

Alvord and Grados (2005) have recognised the importance of practitioners being able to understand the environmental factors that place children and adolescents at risk as well as understanding what protective factors may be fostered to enhance and strengthen resilience.

Although some attributes are biologically determined, Alvord and Grados (2005) believe that resilience skills can be strengthened as well as learned. In light of resilience research, Masten (2001) noted that what seems to be most surprising is the commonness of the phenomena, as resilience is the result of the operation of basic human motivation.

When evaluating the prevention of potential problems and risks, Masten (2001) claims it is important to incorporate the promotion of competence as part of the prevention strategy, including the enhancement of assets. Graziano (2008) maintains that working with clients from resilience based therapy is not about simply giving action directions, rather helping the individual to look at the problem differently and identifying options that will lead to a resolution.

Johnson and Wiechelt (2004) identify that protective factors are contextual and individual and therefore lead to varying outcomes. Protective factors that may be present or beneficial for one individual may not be present or beneficial to another.
Conclusion and Future Direction

In review, adolescence has been described as a time of many physical, cognitive and psychosocial changes. It is a stage wherein the adolescent cognitively develops to perceive themselves in an abstract manner, forming an ability to define the self in relation to attitudes, attributes and values (Berk, 2002).

Self-efficacy (Cowen et al., 1991), social support (Dumont & Provost, 1999), and sense of belonging (Passmore, 2004) have all been identified as protective factors yielding positive outcomes that are linked to resilience.

Social support is provided in many forms including, informative, emotional, and conductive (Dumont & Provost, 1999). Social support is mainly defined as social integration and generally has a positive context that in turn has a beneficial effect on well-being regardless of whether or not there is an actual stressful experience (Dumont & Provost, 1999). However, in a particular study of adolescents that had been identified as resilient and non-resilient there were no significant differences in received social support (Dumont & Provost, 1999). It was acknowledged that such a finding was unusual considering that there is much literature that places so much emphasis on the buffering effects of social support on mental health (Colarossi & Eccles, 2003; Horton & Wallander, 2001).

Sense of belonging was identified as a fundamental human need (Maslow, 1977). It was also identified as a protective mechanism against mental health problems such as depression (Anderman, 2002; Sun & Hui, 2007). Sense of belonging is recognised as a crucial factor contributing to adolescents’ identity especially within the school environment (Beck & Malley, 1998). However, the school environment has also been negatively associated with adolescents’ sense of belonging due to the organisational nature that rarely caters to individual needs (Eccles & Midgley, 1993).
Self-efficacy was defined as the sense of competence an individual holds when dealing with problems (Armstrong, Bernie-Lefcovitch & Ungar, 2005). Individuals with perceived high levels of self-efficacy have also been identified as stress-resilient (Cowen et al., 1991). It has been suggested that the relationship between resilience and self-efficacy is such that both factors have been identified as requiring the same processes of realisation in order to produce beneficial outcomes (Lightsey, 2006).

However, as illustrated by Gecas (1989) although protective factors such as sense of belonging, social support and self-efficacy may lead to favourable or beneficial consequences for the individual such as resiliency, causality is not always clear and may be reciprocal in many situations.

Based on results from their study Dumont and Provost (1999) suggest that in future research designs social support should be considered with other factors that may have been neglected in the past. Cowen et al. (1991) have identified that there is a need to examine the antecedents of positive outcomes and Grossman et al. (1992) have identified the need for examining specific rather than global protective factors.

Armstrong, Bernie-Lefcovitch and Ungar (2005) suggest that further understanding of the protective mechanisms for resilience can contribute to effective prevention, assessment and beneficial intervention models.
References


Adolescent Resilience


Guidelines for Contributions by Authors

For Literature Review Only

Instructions To Authors
Psychology in the Schools requires adherence to the stylistic guidelines of the fifth edition of the Publication Manual of the American Psychological Association. A cover letter must accompany each submission indicating e-mail address, mailing address, telephone number, and fax number of the author to whom all future correspondence will be addressed. Four copies of each manuscript should be submitted to David E. McIntosh, Editor, Psychology in the Schools, Department of Special Education, Teachers College Room 722, Ball State University, Muncie, IN 47306-1099. E-mail: mjlpyscho@bsu.edu.

Format
Manuscripts must be double-spaced with one-inch margins. This includes tables, references, and footnotes. A 100–150 word abstract communicating the essence of the paper is required. The title should be short and informative. The main text of the manuscript should be reasonably divided into sections whenever appropriate. Authors are responsible for the accuracy of all written material.

References
References are styled according to the fifth edition of the Publication Manual of the American Psychological Association.

A sampling of the most common entries in reference lists appears below. Please note that for journal articles, issue numbers are not included unless each issue in the volume begins with page one. Hence, it is Psychology in the Schools, 41, 431–442, not Psychology in the Schools, 41(4), 431–442. Entries not exemplified below are modeled in the Publication Manual. Please note that the use of italics has been eliminated from the print publication (this is a departure from the Publication Manual style).


References should be typed double-spaced, in alphabetical order starting on a separate page following the manuscript. References should refer only to material listed within the text. Do not abbreviate journal names. Authors should review and verify references before manuscripts are submitted for consideration, because they alone are responsible for accuracy and completeness. Material that is not retrievable, such as papers presented at meetings and symposia, unpublished works, personal communications, and reports available from the Educational Resources Information Center (ERIC), should be limited to material absolutely essential to the article.

Anthologies and collections must include names of editors and pages on which the reference appears. Books in a series must include series title and number/volume if applicable. Because of the large quantity of conference proceedings available, it is critical to give as much information as possible when citing references from proceedings. Please include the complete title of the meeting, symposium, etc. (do not abbreviate titles), and the city and dates of the meeting. If a proceeding has been published, please provide the editors’ names, publisher, city, and year of publication, and pages on which the article appears.

Tables
Each table must be cited in the text, but the tables themselves should not be embedded in the text. With the hard copy of the manuscript, group together the copies of tables at the end, each new table starting on a fresh page. All tables should be numbered consecutively with Arabic numerals and should include an explanatory heading. The Publication Manual has helpful guidelines for both tables and figures. For the final, accepted, electronic manuscript, tables are best
grouped together in a separate electronic file and clearly labeled either with the manuscript number or with your last name, followed by an underscore and the word "tables" (e.g., 2447_tables).

Figures and Artwork
Gray Scale Art & Line Art. As with tables (see above), figures should not be embedded in the text. Please cite the figure in the text and provide a list of figure captions at the end of the manuscript, after the references. With the hard copy of the manuscript, group together the figures at the end, each starting on a fresh page. Figures must be numbered consecutively with Arabic numerals.

For the final, accepted manuscript submitted electronically, figures are best submitted in TIFF or EPS (with preview) formats. If these formats are not possible, use JPEG. (Tip: TIFF files can be created from PowerPoint by choosing "Save As" and then selecting "Tag Image File Format.") Please do not submit proprietary graphics formats such as Corel Draw or Adobe Illustrator. Figures can be submitted in Microsoft Word, but please include them as a separate document from the article text file, following the naming convention suggested above for tables. For best quality printing, ensure that gray scale figures (e.g., screen shots, photos, or charts requiring shades of gray) are high resolution (above 300 dpi). Figures pasted directly from the Web are low resolution (72 dpi). Bitmaped line art (made only of black & white lines—often simple charts or graphs) should be submitted at higher resolutions yielding 600-1200 dpi.

For the final, accepted manuscript, figures submitted only in hard copy are acceptable if they have been printed with a high-quality laser printer. Authors are cautioned to provide lettering of graphs and figure labels that is large, clear, and open so that letters and numbers do not become illegible when reduced. Likewise, authors are cautioned that very thin lines and other fine details in figures may not successfully reproduce. Original figures should be created with these precautions in mind.

Copyright Information
After the manuscript has been accepted, authors will be asked to complete a copyright transfer agreement (CTA). No article can be published unless accompanied by a signed CTA, which serves as a transfer of copyright from author to publisher. A CTA will be sent to the author from the editor when the manuscript is accepted. All authors must sign the CTA. The senior author cannot sign for other authors. A CTA also can be obtained here. Only original papers will be accepted, and copyright of published papers will be vested in the publisher. It is the author's responsibility to obtain written permission to reproduce material (often, figures) from another publication. Please keep in mind that getting permissions can sometimes take several weeks. A form for this purpose can be obtained from the top of this page.

Author Page Proofs
After the manuscript is sent to the publisher, it will be copyedited and typeset. After being typeset, page proofs will be e-mailed in PDF format to the designated corresponding author. Authors have 48 hours after receiving page proofs to return them with any corrections. Authors may be charged for alterations to the proofs beyond those needed to correct typesetting errors. Authors are advised to keep a copy of the original manuscript to refer to when checking the page proofs. The manuscript and artwork sent to the publisher will not be returned unless a request is made when the manuscript is originally submitted. Authors with no e-mail access will be mailed their page proofs.

Copies of the Published Article
A complimentary copy of the journal for each co-author will be mailed to the corresponding author after publication. Additional copies of an article can be ordered in bulk (100 copies minimum). A reprint order form will be supplied with the page proofs for bulk orders. Reprints are shipped approximately six weeks after publication of the issue in which the article appears.

Disk Submission Instructions
After the manuscript has been accepted, authors will be asked to submit a final, revised manuscript on disk as well as hard copy. Please note: This journal does not accept Microsoft WORD 2007 documents at this time. Please use WORD's "Save As" option to save your document as an older (.doc) file type. The hard copy must match the disk.

Please return the disk submission slip below with your manuscript and labeled disk(s) after the manuscript has been accepted for publication.

Storage medium. 3-1/2" high-density disk, Zip disk, or CD-ROM in Windows, Macintosh, or Linux format. At authors' requests, disks will be returned after publication.

Software and format. Microsoft Word 6.0 is preferred, although manuscripts prepared with any other microcomputer word processor are acceptable. Other word processing programs and LaTeX are less preferable. If you use software other than Microsoft Word, please provide a plain text file of the manuscript. Most applications support the export of plain text files. Please do not submit text files in PDF format, Adobe PageMaker, Quark Xpress, or other desktop
If you prepared your manuscript with desktop publishing software, export the text to a word processing format. Refrain from complex formatting; the publisher will style your manuscript according to the Journal design specifications. Please make sure your word processing program's "fast save" feature is turned off. Please do not deliver files that contain hidden text. For example, do not use your word processor's automated features to create footnotes or reference lists.

File names. Files can be named with your manuscript number or last name, an underscore, and a very brief description of the file's contents (e.g., "2774_text" or "Smith_tables1to4").

Labels. Label all disks with the journal name, author name, file name, and the word processing program and version used. For figures or artwork, label disks with author name, file names, formats, and compression schemes (if any) used. Hard copy output must accompany all files.
Self-Efficacy, Sense of Belonging and Social Support as Predictors of Resilience in Adolescents

Anna Nowicki
Self-Efficacy, Sense of Belonging and Social Support as Predictors of Resilience in Adolescents

Abstract

Adolescence is a transitional period defined by major physical, cognitive, social and emotional changes. These changes have been identified as major stressors, although some individuals cope well with these changes, others struggle to adapt. These individual differences in coping stem from the ability to be resilient. The degree to which a person is resilient can be influenced and determined by protective factors. Social support, sense of belonging and self-efficacy are factors that may be considered as protective against risk. The current study aimed to examine whether social support, sense of belonging and self-efficacy would predict resilience. Sixty grade nine and ten students completed self-report questionnaires to measure levels of social support, sense of belonging, self-efficacy and resilience. Standard multiple regression analysis revealed that the predictor variables in combination significantly predicted resilience scores. However, independently only social support presented as having a significant predictive relationship to resilience. Avenues for future research were identified, including further exploration of school policies and strategies to ensure a strengths based approach is adopted.

Author: Anna Nowicki

Supervisor: Associate Professor Lynne Cohen

Submitted: October 2008
Self-Efficacy, Sense of Belonging and Social Support as Predictors of Resilience in Adolescents

Introduction

During the transition into high school young adolescents are not only experiencing physical changes, but they are also experiencing cognitive and social changes (Bee, 2000). Adolescence has also been defined as a period of important transitions. For example, the transition to high school has been considered as a key component of an individual's entry into adolescence (Berk, 2002). It is suggested that high schools in which positive adolescent psychosocial development is facilitated, students in turn demonstrate positive outcomes both academically and socially (Beck & Malley, 1998; Ma, 2003).

A Systems Approach to Adolescent Development

Changes that adolescents experience during this stage are considered to take place within a dynamic environment (Bee & Boyd, 2007). From an ecological perspective it is considered that the individual interacts with complex environmental systems and continually evolves by adapting to the changing environment (Bronfenbrenner, 1979). The ecological theory compromises four levels of influences that are structured within each other similar to the structure of 'Russian dolls' (Hutchins & Sims, 1999).

The first level of the system is the microsystem; this is the immediate environment in which an adolescent participates, such as the home, family, neighbourhood and school (Garbariano & Abramowitz, 1992). A healthy microsystem would involve the opportunity for the adolescent to participate in diverse relationships as well as provide stimulating experiences (Garbariano & Abramowitz, 1992). The second level, the mesosystem is the connection between the microsystems, for example, the communication between home and school (Berk, 2002). When there is a strong mesosystem, for example parents and teachers are both enthusiastic, positive and share similar goals, the adolescent benefits. With a strong
mesosystem the adolescent is better able to develop, as there is an understanding of what is expected of them. With a weak mesosystem there may be differing interests and values, leading the adolescent to conflicting ideations which may suppress the development of their individual full potential (Garbariano & Abramowitz, 1992). The exosystem is a setting in which the adolescent does not participate, but involves decision making that can affect the adolescent's experience (Berk, 2002). The exosystem may be the school board and the decisions it makes about certain policies, for example how bullying is dealt with. Finally, the macrosystem includes the dominant culture and institutions in which the micro, meso and exosystems are embedded.

Pooley, Pike, Drew and Breen (2002) suggest that adopting a systems approach to development allows for a more holistic perspective on adolescents' experiences. Bronfenbrenner (1977) identified that during the period of adolescence the adolescent assumes various roles and expectations. Important changes within the parent-adolescent relationship also transpire during this period as the adolescent strives for independence and develops a greater reliance on peer relationships (Bee & Boyd, 2007).

**Adolescent Resilience**

In the past decade there has been a dramatic increase in the amount of literature referring to the concept of resilience in the field of developmental psychology (Fallon, 2007; Hjemdal, Aune, Reinfjell, Stiles & Friborg, 2007; Lightsey, 2006). Resilience is an individual's capacity to transcend adversity and furthermore transform it into an opportunity for growth (Gillespie, Chaboyer & Wallis, 2007). Research into resilience encompasses many areas including individuals' abilities of recovering to normal functioning during different stages of development after adversity (Alvord & Grados, 2005). Cicchetti and Rogosch (1997) have suggested that a resilient person must show positive outcomes across several aspects of life, over periods of time.
Resilience is a quality evident during times of transition where there is a great deal of stress. Adolescence is recognised as a developmental life stage that can be associated with high levels of stress (Earvolino-Ramirez, 2007). There have been claims that to measure resilience, it is necessary that a traumatic event presenting risks and threats needed to be experienced by an individual. In such cases individuals are usually not considered resilient unless there has been a significant threat to their development (Fergus & Zimmerman, 2005; Masten, 2001). However, life stressors such as daily hassles can also become risks when appropriate coping strategies are not applied.

Risk factors can exist at the individual level (e.g., genetics, biology, affect, cognition and behaviour) and broader contextual levels (e.g., family, friends, school and community). When these risks interact it may result with an individual experiencing poor mental health outcomes (Shortt & Spence, 2006).

**Protective Factors**

The degree to which a person is resilient can be influenced and determined by protective factors. Protective factors are contributors to positive outcomes during adverse periods. Three factors that may be considered as protective factors and predictors of resilience are social support, sense of belonging and self-efficacy.

**Sense of Belonging as a Protective Factor.** Social acceptance and a sense of belonging are important throughout life (Maslow, 1968). One of the strongest indicators of psychological health in adolescence is a sense of belonging, especially with peers (Qualter & Munn, 2002). Sense of school belonging in particular has been identified as a protective factor against various mental health issues, including anxiety, depression and suicidal ideation (Anderman, 2002; Resnick, Harris & Blum, 1993; Sun & Hui, 2007; Ueno, 2005). Children that experience a sense of belonging in their microsystems (e.g., family, school) are less likely to experience mental health problems (Resnick et al., 1997; Routt, 1996).
Sense of school belonging has been defined as students' sense of being accepted, valued, included and encouraged within the school environment, as well as allowing for personal autonomy (Goodenow, 1993). Sense of school belonging is recognised as more than just identifying with one's school but also includes feeling that contributions made within the school and classroom are important (Osterman, 2000; Pittman & Richmond, 2007). Newman, Lohman and Newman (2007) found a strong relationship between a sense of belonging and mental health, with adolescents reporting fewer internalising and externalising problems when they experienced a sense of belonging.

Research suggests that social exclusion has far-reaching social consequences. In certain peer environments, the high status of popular groups may create conditions of fear and inferiority for low-status adolescents (Kinney, 1993). These groups will use relational aggression such as teasing, snubbing and gossip as a means of enforcing social exclusion (Alder & Alder, 1998). Such methods of exclusion are targeted at adolescents who are considered outsiders, and such actions further attribute to the reluctance of these individuals to interact with others as they fear they will become targets of hostility (Newman, Lohman, & Newman, 2007). In a series of experiments it was demonstrated that social rejection caused declines in self-regulation (Baumeister, DeWall, Ciarocco, & Twenge, 2005). Within the school environment the role of teachers is paramount to facilitating an environment of acceptance and belonging (Goodenow, 1993). Osterman (2002) provided an extensive review outlining the important role that teachers play in ensuring students feel accepted and valued within the school context. This finding is important considering that students have identified specific teacher characteristics, such as lack of respect, as not being conducive to a positive sense of belonging (Beck & Malley, 1998).

As a protective factor school belonging is associated with lower rates of risky behaviour (Sun & Hui, 1997) and lower dropout rates (Kagan, 1990; Rumberger, 1995).
Sense of belonging is a meaningful component of the developmental process that may lead to providing adolescents with group experiences in different contexts that can lead to effective group participation in adulthood (Newman & Newman, 2001).

Sense of belonging reflects acceptance and this ultimately influences dimensions of an individual’s behaviour (Osterman, 2003). Goodenow (1993) has identified that adolescents with a high sense of belonging are more likely to be resilient through the belief that resources are available to them to overcome difficulties.

**Social Support as a Protective Factor.** During adolescence social support has been identified as a protective factor (Cornwell, 2003; Harter, 1993; Helsen, Vollebergh & Meeus, 2000). Social support is primarily categorised as an exchange of resources between two individuals where the primary intent is to enhance the relationship (Shumaker & Brownell, 1984). Social support systems during adolescence include family, teachers, friends and significant others, these networks have been shown to enhance positive outcomes for adolescents (Colarossi & Eccles, 2003). It is the degree to which the adolescent feels connected within these contexts that yields positive outcomes (Baumeister & Leary, 1995).

Research confirms that even positive peer group membership does not replace attachment to parents or the relationship to family. The adolescent’s supportive network is primarily grounded with the family and expands into other domains, such as meaningful peer relationships (Newman & Newman, 2001).

Previous research portrays a preference for measuring perceived social support as opposed to objective measures of social support (Zimet, Dahlem, Zimet & Farley, 1988). It has also been suggested that the size of the social support system and actual satisfaction of received support are two independent dimensions of social support, each of which can be viewed as independent protective factor (Sarason, Levine, Bashman & Sarason, 1983).
The effects of social support both directly and indirectly influence mental health (Colarossi & Eccles, 2003). During adolescence friendships become increasingly important and peer support becomes a critical factor contributing to life satisfaction. Failure to obtain peer support, as well as family support, has been found to be a major factor contributing to feelings of worthlessness and depressive symptoms (Harter, Waters & Whitesell, 1998).

An Australian national project “Mind Matters” (2006) is a strategy that aims to provide secondary schools with programs that promote interpersonal, social and emotional skills that enhance resilience and mental health. The majority of schools involved in the project have reported seeing effective approaches to health and well-being amongst their students, with 75% having made changes to their provision for students' well being. Mental health has been established as a key concern for secondary schools. Since individuals' perception of support affects mental health outcomes by increasing beliefs of acceptance, self-worth and connectedness to others such strategies are of great validity when implemented correctly (Colarossi & Eccles, 2003).

A positive social support network has been identified as a factor that allows adolescents to better deal with stressful life situations (Ryan, 2001). Having good social support has also been linked to resilience (Werner, 1993)

*Self-efficacy as a Protective Factor.* Adolescents have complex developmental needs for peer relationships, connectedness and social acceptance (Goodenow, 1993). Another associated developmental task for the adolescent is attaining personal levels of competence (Berk, 2002). Adolescents' personal perceptions of competence or self-efficacy are influenced by their willingness to engage in activities in which they are competent and have been acknowledged (Bergin, 1999). In the event that these factors are not met by the adolescent, negative psychosocial consequences may arise including disengagement from school and further any sense of belonging to the institution (Berk, 2002).
Also, adolescents who perceive school environments as emphasising task mastery goals use higher levels of cognitive strategies and demonstrated higher self-efficacy (Midgley, Anderman, & Hicks, 1995). Research in motivation suggests the negative feedback in schools social structures elicits social comparison processes that are associated with decreased self-efficacy in adolescents (Anderman, 2003).

Fallon (2007) has outlined that within the school setting focus should be placed on student-centred approaches that require collective efficacy to allow development of resiliency in student attitudes. The relationship between resilience and self-efficacy is such that both factors have been identified as requiring the same processes of realisation and awareness of one’s strengths in order to produce beneficial outcomes (Lightsey, 2006).

Therefore, the degree to which a person is resilient can be influenced and determined by protective factors (Fergus & Zimmerman, 2005). Protective factors have been identified as contributors to positive outcomes during adverse periods (Dumont & Provost, 1999).

The transition to high school is a critical period in developing school belonging. This period of adjustment is a function of cumulative change related effects including biopsychosocial challenges and potential stressors (Akos, 2002).

Studies have consistently identified that there are protective factors that promote positive outcomes despite adversity. These include social support, sense of belonging and self-efficacy (Rutter, 1999; Ryan, 2001; Goodenow, 1993). However, a need has been demonstrated to consider factors in combination, as well as to examine particular protective factors so that antecedents to positive outcomes can be identified. The purpose of the present study was to investigate the predictive power of sense of belonging, social support and self-efficacy on resilience during adolescence.

The following research question was examined. Do social support, sense of belonging and self-efficacy significantly and independently predict resilience?
Method

Research Design

This study used a quantitative within-subjects research design. The independent variables were the participants' scores obtained from measures of social support, sense of belonging and self-efficacy. The dependent variable was measured by participant’s scores on the resilience scale.

Participants

Sixty-one grade nine and ten students participated in the current study. The participants consisted of 22 grade nine students from a government high school in a northern suburb of the Perth metropolitan region, as well as 14 grade nine students from an independent high school in an eastern suburb of the Perth metropolitan region. The remaining 25 participants were recruited through personal contacts. Initially, families of grade nine students were approached to participate in the study; this method of recruitment was later extended to families of grade ten students to ensure the minimum sample size of 60 was reached. Tabachnick and Fidell (1989) recommend for standard multiple regression obtaining 20 times more cases than independent variables (20 x IVs), in this case 20 x 3 = 60, therefore a sample size of 60 was desirable.

Materials

Data was collected from participants using various self-report measures.

Sense of Belonging. The Psychological Scale of School Membership (PSSM) scale was used to measure sense of belonging (Goodenow, 1993). The PSSM scale has been specifically designed for use with adolescents and assesses perceptions of acceptance, respect and involvement within the school environment. The PSSM scale consists of 18 statements (Appendix A); to which participants indicate their level of agreement or disagreement on a five point Likert scale. Response options range from, ‘Not at all True’ (1) to ‘Very True’ (5).
To avoid the development of a ‘response set’ from participants, approximately a third of the items are reversed. The scale has yielded acceptable internal consistency and reliability with Cronbach’s alpha ranges from .77 to .88 (Goodenow, 1993).

**Social Support.** Adolescent’s perceived social support was measured using the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988). The scale consists of 12 items (Appendix B) that address different sources of support including family, friends and significant other(s). Participants rate the statements on a seven point Likert scale with responses ranging from “Very Strongly Disagree” to “Very Strongly Agree”. Good internal reliability was obtained for the scale with Cronbach’s alpha ranging from .85 to .91 (Zimet, Dahlem, Zimet & Farley, 1988).

**Self-efficacy.** Self-efficacy was measured using the Generalized Scale of Self-Efficacy (Schwarzer & Jerusalem, 1995). The scale assesses the strength of an individual’s belief in his or her own ability to respond to difficult situations. The measure has ten-items (Appendix C), for each item there is a four choice response from ‘Not at all true’ which scores 1 to ‘Exactly true’ which scores 4. High internal consistency ratings have been demonstrated with Cronbach’s alpha ranges from .82 to .93 (Schwarzer & Jerusalem, 1995).

**Resilience.** The Resilience Scale for Adolescents (Appendix D) will be used to measure resilience (Hjemdal, Aune, Reinfjell, Stiles & Friborg, 2007; Hjemdal, Friborg, Stiles, Martinussen & Rosenvinge, 2006). The scale consists of 28 statements; participants mark their opinion on a five point Likert scale, with responses ranging from “Totally Agree” to “Totally Disagree”.

All measures involved a similar method of scoring, raw scores were summed and means derived. The PSSM scale (Goodenow, 1993) was the only measure that required reverse scoring for a portion of the items.
Procedure

Once ethics approval was obtained from Edith Cowan University and the Department of Education and Training was satisfied that all requirements were met information letters (Appendix E) were sent to the principals of 10 high schools in the Perth metropolitan region. This was followed-up by a telephone call to determine the schools willingness to participate. Two high schools agreed to participate in the study, a government high school with 220 enrolled year nine students and an independent high school with 35 enrolled year nine students, meetings were arranged with either the principal or year nine coordinator. At these meetings formal consent from the schools' principal was obtained (Appendix F) and informed consent letters for parents (Appendix G) and students (Appendix H) were provided in envelopes for the school to distribute. A mutually acceptable time was arranged with the year nine coordinators to conduct the study.

The study was conducted during scheduled Health Education classes. Students that had returned a full set of consent forms (student and parental consent) were taken by the researcher and year nine coordinator to a quiet location to complete the questionnaires. After an initial, introduction participants were briefed with information regarding the study and what is expected of them. Participants were informed how to record responses, they were also encouraged to ask any questions and clarify any misunderstandings. Participants were given an envelope containing the four questionnaires with an individual number corresponding to their consent form. This was to ensure that the participant could be identified if they decided to withdraw their consent at a later date. Once questionnaires were completed participants were debriefed and thanked for their participation and contribution.

As the return rate of consent forms at the schools was very low a decision was made to adopt an alternate method of recruitment, using personal contacts. The Ethics Committee was informed of the alternate method of participant recruitment and provided approval.
Families of students in year nine and ten were approached by the researcher to determine willingness to participate. Families that agreed to participate were provided with addressed reply paid envelopes containing the informed consent forms as well as the four questionnaires. Some of these families also agreed to take additional questionnaire packages to distribute to other families with adolescents. Therefore, participants were also recruited through snowballing.

Ethics

Ethics approval was obtained from the Faculty of Computing, Health and Science. Informed consent was obtained from participants and their caregivers. Participants were assigned individual codes, to ensure anonymity and confidentiality. The study was also approved by the Department of Education and Training (DET) and followed all the outlined requirements.

Results

A standard multiple regression was performed with the scores obtained from a resilience measure as the dependent variable and the scores obtained from social support, sense of belonging and self-efficacy measures as the independent variables. Data was entered using the forced entry method in which all predictors are forced into the model simultaneously. It was reasoned that other methods of data entry, for example hierarchical, would not be appropriate as with such a method known predictors would be entered into the model in order of their importance (Field, 2005). The research literature did not support that any of the predictor variables maybe more important than another.

The Shapiro-Wilkes test of normality indicated that assumptions were violated for responses to social support (= .899, significance = 0.000 < 0.05) and resilience (= .936, significance = 0.004 < 0.05). However, examination of the normal probability plot of regression standardised residuals and scatter plots of resilience ($M = 3.77, SD = 0.64$), social
support \( (M = 5.73, SD = 0.94) \), sense of belonging \( (M = 3.68, SD = 0.57) \) and self-efficacy \( (M = 3.07, SD = 0.49) \) appeared relatively normal, adhering to normal assumptions of linearity and homoscedasticity. A decision was made to retain these variables and to not transform the data. Only 1 case with a standardised score in excess of \( \pm 3.00 \) was found as an univariate outlier which was removed from the analysis. An examination of the descriptive statistics indicated that no cases had missing data \( (N = 60) \).

Mahalanobis distance did not exceed the critical \( \chi^2 \) for \( df = 3 \) (at \( \alpha = .001 \)) of 16.27 for any cases in the data file (see Appendix I), indicating that multivariate outliers were not of concern. Also relatively high tolerances (see Appendix J) for all predictors in the regression model indicated that multicollinearity would not interfere with the ability to interpret the outcome of the multiple regression analysis.

Table 1 displays the correlations between the variables. There was a positive correlation between resilience and the three factors sense of belonging \( r(58) = .274, p < .05 \), social support \( r(58) = .480, p < .05 \) and self-efficacy \( r(58) = .387, p < .05 \). It is also apparent that sense of belonging and social support \( r(58) = .604, p < .05 \) were similarly, positively correlated with each other, and with self-efficacy \( r(58) = .572, p < .05 \) and \( r(58) = .590, p < .05 \), respectively.

Table 1

<table>
<thead>
<tr>
<th>Variables</th>
<th>Resilience</th>
<th>Sense Belonging</th>
<th>Social Support</th>
<th>Self-Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resilience</td>
<td>1</td>
<td>.274*</td>
<td>.480*</td>
<td>.387*</td>
</tr>
<tr>
<td>Sense Belonging</td>
<td>.274*</td>
<td>1</td>
<td>.604*</td>
<td>.572*</td>
</tr>
<tr>
<td>Social Support</td>
<td>.480*</td>
<td>.604*</td>
<td>1</td>
<td>.590*</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>.387*</td>
<td>.572*</td>
<td>.590*</td>
<td>1</td>
</tr>
</tbody>
</table>

\( *p < .05 \)
In combination, social support, sense of belonging and self-efficacy accounted for a significant 25.2% of the variability in resilience, $R^2 = .252$, adjusted $R^2 = .212$, $F(3, 56) = 6.28, p = .001$. Unstandardised ($B$) and standardised ($\beta$) regression coefficients, squared semi-partial correlations ($sr^2$), $t$ values and significance for each predictor in the regression model are reported in Table 1.2.

Table 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$\beta$</th>
<th>$sr^2$</th>
<th>$t$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sense of Belonging</td>
<td>-.100</td>
<td>-.089</td>
<td>.004</td>
<td>-.577</td>
<td>.566</td>
</tr>
<tr>
<td>Social Support</td>
<td>.287</td>
<td>.423</td>
<td>.098</td>
<td>2.704</td>
<td>.009*</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>.245</td>
<td>.188</td>
<td>.020</td>
<td>1.238</td>
<td>.221</td>
</tr>
</tbody>
</table>

$*p < .05$.

Examination of the predictor variables revealed that only social support significantly and independently predicted resilience $t(59) = 2.704, p < .05$. Sense of belonging $t(59) = -.577, p > .05$ and self-efficacy $t(59) = 1.238, p > .05$ however did not significantly and independently predict resilience.

Discussion

The present study examined the predictive power of sense of belonging, social support and self-efficacy on resilience during adolescence. The research question sought to determine if sense of belonging, social support and self-efficacy would significantly and independently predict resilience.

The results indicated that in combination, sense of belonging, social support and self-efficacy did significantly predicted resilience, accounting for 25.2% of the variance in
adolescents' resilience. However, the results also demonstrated that independently only social support was identified as a statistically significant predictor of resilience. Independently adolescent's sense of belonging and self-efficacy did not significantly predict resilience.

Thus, in response to the research question, sense of belonging, social support and self-efficacy are predictors of resilience, when the factors were examined in combination. This finding is consistent with the literature that suggests protective factors are contributors to positive outcomes. Sense of belonging, social support and self-efficacy are considered as protective factors. The positive outcomes gained as a result of the protective factors influence the degree to which a person is resilient (Dumont & Provost, 1999; Ferguson & Zimmerman, 2005).

When examined independently sense of belonging was not a significant predictor of resilience. This finding is inconsistent with Ma's (2003) study which demonstrated that a sense of school belonging and participation was an important component in positive outcomes and achievement that promotes resilience. Qualter and Munn (2002) suggested that sense of belonging, especially with peers is considered one of the strongest indicators of psychological health in adolescents. Further, Maslow (1968) claimed that the need of belonging had to be fulfilled before other needs could be fulfilled. Therefore, as much of the literature pertaining to sense of belonging underlines the positive outcomes and resiliency fostering attributes of the protective factor, possible explanations for the discrepant finding of the present study will be examined.

Newman, Lohman and Newman (2007) have recognised that not all adolescents equally view membership to a group and have different views on wanting to belong to one. They have also suggested that feelings of social distress are usually greatest for those adolescents who strongly desire to have group membership but do not experience a sense of group belonging. It is possible that participants that struggle to have group membership, yet
have a strong desire for group membership may have provided responses to the questionnaire that reflected their want of belonging. Tourangeau, Rips and Rasinski (2000) stated that in survey responses children and adolescent participants may provide responses that are desirable to them. In their study Newman, Lohman and Newman (2007) highlighted that there is a difference between an individual’s perception of group belonging and the actual experience of group belonging.

When examined independently self-efficacy was not a significant predictor of resilience. This finding is inconsistent with the literature that suggests that self-efficacy is central to resilience (Lightsey, 2006). Smith (2006) even argued for operationalising psychological resilience as generalised self-efficacy. It is possible that in participants’ responses, where adolescents were uncertain of their competencies, that they may have provided inaccurate measures and this may have confounded their overall efficacy scores. However, in light of these inconsistent findings it is suggested that further research in this area is necessary.

Social Support when examined independently significantly predicted resilience. This is consistent with previous literature (Cohen & Wills, 1985; Dumont & Provost, 1999; Rowlinson & Felner, 1988). Adolescents who display signs of positive mental health and resilience have been described as having positive communication skills and trusting relationships with parents or close family members as well as feelings of trust and security among friends (Levitt, Guacci-Franco & Levitt, 1993). Previous research portrays a preference for measuring perceived social support as opposed to objective measures of social support (Zimet, Dahlem, Zimet & Farley, 1988).

Direct relationships between the variables of adolescents’ general self-efficacy, sense of belonging and social support has previously been unexplored. Therefore, further research is required in this area.
Some limitations of the current study must be taken into account as the implications of the results are considered. The active parental consent process most probably biased the sample to those adolescents and their families who have positive relationships. To the extent that it was required for the adolescents to take home the informed-consent forms, explain the study and return the forms to school. Families that are disorganised or where parent-adolescent conflict is present would be less likely to return the forms (Bronfenbrenner, 1977). Therefore, it is likely the sample consists of fewer adolescents that have serious externalising and internalising problems (Newman, Lohman & Newman, 2007).

The data was gathered from a single source, the adolescents, data on key variables was not gathered from parents, teachers or peers. Research has found that adolescents tend to report fewer problems than parents, teachers and peers when using behaviour checklists (Achenbach, Dumenci & Rescorla, 2002). No validating information was obtained to determine student’s claims of participation and belonging at school. However, as this study examined perceived sense of belonging, it is considered an acceptable means to understand belonging from the adolescent’s point of view (Kiesner, Cadinu, Poulin & Bucci, 2002). It is recommended that further research in this area incorporate longitudinal study designs and consider additional variables for analysis, such as including the variables of self-esteem, gender or academic performance. Such inclusions would provide for a more holistic approach to the study area of protective factors and fostering resilience.

In this study, social support was found to be an important determinant of resilience in adolescence. This underlines the importance of policies and strategies, such as “Mind Matters” (2006). This strategy provides support to secondary schools in Australia, organising programmes to enhance interpersonal skills and resilience. Through developing more social dimensions in the school environment, such as breakfast clubs or peer mentoring programmes adolescents would be able to engage with peers, teachers and other adults. These
environments would allow for the adolescents to feel accepted, respected and supported as well as feel that they are either part of a group or making a contribution.

There are positive implications for adopting a strength based approach. The identification of strengths and the development of strength-competence building can be applied to counselling to effectively approach the needs of adolescents. Armstrong, Bernie-Lefcovitch and Ungar (2005) propose that through harnessing the protective mechanisms that foster resilience effective prevention, assessment and intervention models can be applied with specific direction. The experience of different life transitions is highly individual, thus an individual approach to helping adolescents overcome times of transition or adjustment is necessary.
References


Appendix A

Questionnaire 1 (Sense of belonging)

Please read the following statements and on the following page mark the box that best describes your response to each particular statement number.

1. I feel like a real part of (name of your school).
2. People here notice when I'm good at something.
3. It is hard for people like me to be accepted here.
4. Other students in this school take my opinions seriously.
5. Most teachers at (name of your school) are interested in me.
6. Sometimes I feel as if I don't belong here.
7. There's at least one teacher or other adult in this school I can talk to if I have a problem.
8. People at this school are friendly to me.
9. Teachers here are not interested in people like me.
10. I am included in lots of activities at (name of your school)
11. I am treated with as much respect as other students are.
12. I feel very different from most other students here.
13. I can really be myself at this school.
14. The teachers here respect me.
15. People here know I can do good work.
16. I wish I were in a different school.
17. I feel proud of belonging to (name of your school).
18. Other students here like me the way I am.
Questionnaire 1 (Sense of Belonging) cont.

<table>
<thead>
<tr>
<th></th>
<th>Not at all true</th>
<th>Hardly ever true</th>
<th>Sometimes true</th>
<th>Usually true</th>
<th>Always true</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B

Questionnaire 2 (Social Support)

Focus on one traumatic life-altering event that has occurred. How true were the following statements at the time of the crisis event? Please mark your response on the table below.

1. There is a special person who is around when I am in need.
2. There is a special person with whom I can share my joys and sorrows.
3. My family really tries to help me.
4. I get the emotional help and support I need from my family.
5. I have a special person who is a real source of comfort to me.
6. My friends really try to help me.
7. I can count on my friends when things go wrong.
8. I can talk about my problems with my family.
9. I have friends with whom I can share my joys and sorrows.
10. There is a special person in my life who cares about my feelings.
11. My family is willing to help me make decisions.
12. I can talk about my problems with my friends.

<table>
<thead>
<tr>
<th></th>
<th>Very Strongly Disagree</th>
<th>Strongly Disagree</th>
<th>Mildly Disagree</th>
<th>Neutral</th>
<th>Mildly Agree</th>
<th>Strongly Agree</th>
<th>Very Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix C

Questionnaire 3 (Self-efficacy)

Please circle the number that best describes your response to the statement.

1. I can always manage to solve difficult problems if I try hard enough.
   1 2 3 4

2. If someone opposes me, I can find means and ways to get what I want.
   1 2 3 4

3. It is easy for me to stick to my aims and accomplish my goals.
   1 2 3 4

4. I am confident that I could deal efficiently with unexpected events.
   1 2 3 4

5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
   1 2 3 4

6. I can solve most problems if I invest the necessary effort.
   1 2 3 4

7. I can remain calm when facing difficulties because I can rely on my coping abilities.
   1 2 3 4

8. When I am confronted with a problem, I can usually find several solutions.
   1 2 3 4

9. If I am in a bind, I can usually think of something to do.
   1 2 3 4

10. No matter what comes my way, I’m usually able to handle it.
    1 2 3 4
Appendix D
Questionnaire 4 (Resilience)

Please think about how the last month has been for you. Your thoughts about how you have felt about yourself and important people in your life. Please mark the opinion that best describes your thoughts and feelings. There are no right or wrong answers.

1= Totally Disagree
2=Disagree
3= Average
4= Agree
5= Totally Agree

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I reach my goals if I work hard</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) I am at my best when I have clear aims and objectives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) I have some friends/family members that usually encourage me</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) I am satisfied with my life up till now</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) In my family we share views of what is important in life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) I easily make others feel comfortable around me</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7) I know how to reach my goals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8) I always make a plan before I start something new</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9) My friends always stick together</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10) I feel comfortable with my family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11) I easily find new friends</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12) When it is impossible for me to change certain things I stop worrying about them</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13) I am good at organising my time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14) I have some close friends/family members that really care about me</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15) In my family we agree on most things</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16) I am good at talking to new people</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17) I feel competent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18) In my family we have rules that simplify everyday life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19) I always have someone that can help me when I need it</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20) When I have to chose between several options I almost always know what will be right for me</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
21) My family view the future as positive, even when very sad things happen  

| | 1 | 2 | 3 | 4 | 5 |
---|---|---|---|---|---|
22) I always find something fun to talk about.  

| | 1 | 2 | 3 | 4 | 5 |
---|---|---|---|---|---|
23) My belief in myself gets me through difficult times  

| | 1 | 2 | 3 | 4 | 5 |
---|---|---|---|---|---|
24) In my family we support each other  

| | 1 | 2 | 3 | 4 | 5 |
---|---|---|---|---|---|
25) I always find something comforting to say to others when they are sad  

| | 1 | 2 | 3 | 4 | 5 |
---|---|---|---|---|---|
26) When things go badly I have a tendency to find something good that can come out of it  

| | 1 | 2 | 3 | 4 | 5 |
---|---|---|---|---|---|
27) In my family we like to do things together  

| | 1 | 2 | 3 | 4 | 5 |
---|---|---|---|---|---|
28) I have some close friends/family members that value my qualities  

| | 1 | 2 | 3 | 4 | 5 |
Appendix E

Dear Sir/Madam,

My name is Anna Nowicki and I am a 4th year psychology student at Edith Cowan University undertaking an honours degree. As part of my course, I will be conducting a study that aims to examine the influences of social support, sense of belonging and self-efficacy on resilience in young adolescents. The ethics committee of the Faculty of Computing, Health and Science has approved the study. In order to do this research I am seeking your support and assistance.

What does participation in the research project involve?

To collect data for my study I would require year nine students to complete a series of self-report questionnaires. Completing the questionnaires will take one session of between 20 to 30 minutes. I will keep the school’s involvement in the administration of the research procedures to a minimum. However, it will be necessary for the school to send home with students the information letters and consent forms for students and their parents.

To what extent is participation voluntary, and what are the implications of withdrawing that participation?

Participation in this study is completely voluntary and I will seek permission from both students and their parents/guardians prior to the study. All students and parents will have the right to withdraw from the study at any time. If any member of a participant group decides to participate and then later changes their mind, they are able to withdraw their participation. All contributions they have made to the research will be destroyed unless explicitly agreed to after the intent to withdraw has been indicated. If the project has already been published at the time a participant decides to withdraw, their contribution that was used in reporting the project can not be removed from the publication.

There will be no consequences relating to a decision by an individual or the school to participate or not, or to participate and then withdraw, other than those already described in this letter. These decisions will not affect the relationship with the researcher or Edith Cowan University.

What will happen to the information collected, and is privacy and confidentiality assured?

Information that identifies anyone will be removed from the data collected. The data is then stored securely in a locked filing cabinet at Edith Cowan University premises and can only be accessed by the researcher or supervisor. The original materials will be shredded after five years. The data is maintained in a way that enables us to re-identify an individual’s data and destroy it if participation is withdrawn. This done by using a system of individual codes,
known only to the researcher, which is used to link each individual’s consent form to all data that relate to that individual.

The identity of participants and the school will not be disclosed at any time, except where the research team is legally required to disclose that information. Participant privacy, and the confidentiality of information disclosed by participants, is assured at all other times.

The data will be used only for this project, and will not be used in any extended or future research without first obtaining explicit written consent from participants.

*Do all members of the research team who will be having contact with children have their Working with Children Check?*

Yes. As part of this research I alone will require contact with children. I have a Working with Children Check, the notice number being: __________. I will present my card upon entry to the school.

Your permission and support to undertake this study would be greatly appreciated. I have attached a consent form on the following page. If you require any further information or would like to discuss this research further, please do not hesitate to call me, on __________ or ____________, or my supervisor listed below.

This information letter is for you to keep.

Anna Nowicki  
Psychology Honours Student  
Edith Cowan University

Associate Professor Lynne Cohen  
Telephone: 6304 5575  
School of Psychology and Social Science  
Edith Cowan University
Principal Consent Form

I, the Principal of ______________________ have read the information letter provided. I give consent for this research, examining the influences of social support, sense of belonging and self-efficacy on resilience in young adolescents to be conducted at ______________________.

I understand that the school’s participation in this study is completely voluntary and that consent may be withdrawn at any time.

Signed: ______________________

Date: ______________________
Parent/Carer Information Letter

Dear Parent/Carer,

My name is Anna Nowicki and I am a 4th year psychology student at Edith Cowan University undertaking an honours degree. As part of my course, I will be conducting a study that examines adolescent’s social support, self-efficacy and perceived sense of belonging and how these factors may influence adolescents’ resilience. The ethics committee of the Faculty of Computing, Health and Science at Edith Cowan University has approved the study.

What does participation in the research project involve?

In order to collect information for my study, questionnaires will be given to year nine students at Clarkson Community High School. Completing the questionnaires will take between 20-30 minutes and will explore resilience, your child’s sense of belonging, their sense of personal efficacy (belief in their capabilities) and social support.

Does my child have to take part?

Your child’s participation is voluntary and they and you may withdraw at any time. The information gathered will be kept confidential. Since the project will take part during normal class time, another novel activity will be arranged for children not taking part, in conjunction with their teacher.

What if either of us was to change our mind?

Once a decision is made to participate, either you or your child can change your mind at any time within the minimum 5-year storage period of the research data (see below). All contributions made to the project will be destroyed unless explicitly agreed to by you.

If the project has already been published at the time you and your child decide to withdraw, your child’s contribution that was used in reporting the project can not be removed from the publication.

There will be no consequences relating to a decision by you and your child to participate or not, or to participate and then withdraw, other than those already described in this letter. These decisions will not affect your family’s relationship with your child’s teacher or your child’s school.
What will happen to the information collected, and is privacy and confidentiality assured?

Information that identifies anyone will be removed from the data collected. The data is then stored securely in a locked filing cabinet at Edith Cowan University premises and can only be accessed by the researcher or supervisor. The original materials will be shredded after five years. The data is maintained in a way that enables us to re-identify an individual's data and destroy it if participation is withdrawn. This done by using a system of individual codes, known only to the researcher, which is used to link each individual's consent form to all data that relate to that individual.

The identity of your child and the school will not be disclosed at any time, except in circumstances that require reporting under the Department of Education and Training Child Protection policy, or where the research team is legally required to disclose that information. Participant privacy, and the confidentiality of information disclosed by participants, is assured at all other times.

The data will be used only for this project, and will not be used in any extended or future research without first obtaining explicit written consent from you and your child.

The findings of this study will be submitted for assessment as part of an honours degree. A summary of the research findings can be made available to you by emailing me: anowicki@student.ecu.edu.au It is anticipated that findings will be available by December, 2008.

What are the benefits of this research for my child's education?

Students participating in this research will gain an understanding of how research in the field of psychology is conducted, as well as have the opportunity to be exposed to university study.

Are there any risks associated with participation?

When answering some of the questions, your child may find it discomforting because it may touch on personal or sensitive issues for them. Participants will be reminded they should only participate if they want to. Also, they will be informed that they may contact myself or my supervisor with any questions and will be reminded that they have access to a school counsellor if any issues arise.

How do I know that the people involved in this research have all the appropriate documentation to be working with children?

Under the Working with Children (Criminal Record Checking) Act 2004, people undertaking research that involves contact with children must undergo a Working with Children Check. Evidence that these Checks are current for each member of the research team who will be having contact with children have been provided to the Principal of your school. I am also happy to provide you with copies if you have any concerns.

If you would like to discuss any aspect of this study with a member of the research team, please contact me on ____________ or more supervisor listed below. If you wish to speak with an independent person about how the project is being conducted or was conducted, please contact Tamara Harold from Research and Higher Degrees on 6304 3450.
How does my child become involved?

Please ensure that you:

• discuss what it means to take part in the project with your child before you both make a decision; and
• take up my invitation to ask any questions you may have about the project.

Once all questions have been answered to your satisfaction, and you and your child are both willing for him/her to become involved, please complete the Consent Form on the following page (your child is also asked to complete the Consent Form attached to his/her letter).

This project information letter is for you to keep.

Yours sincerely,

Anna Nowicki
Researcher
Edith Cowan University

Supervisor:

Associate Professor Lynne Cohen
6304 5575
School of Psychology and Social Science
Edith Cowan University
Parent/Carer Consent Form

- I have read this document, or have had this document explained to me in a language I understand, and I understand the aims, procedures, and risks of this project, as described within it.

- For any questions I may have had, I have taken up the invitation to ask those questions, and I am satisfied with the answers I received.

- I understand that participation in the project is entirely voluntarily.

- I am willing for my child to become involved in the project, as described.

- I have discussed with my child what it means to participate in this project, and he/she has explicitly indicated a willingness to take part, as indicated by his/her completion of the child consent form.

- I understand that both my child and I are free to withdraw that participation at any time within 5 years of project completion, without affecting the family’s relationship with my child’s teacher or my child’s school.

- I give my permission for the contribution that my child makes to this research to be published in a journal, provided that my child or the school is not identified in any way.

- I understand that a summary of findings from the research will be made available to me and my child upon its completion.

Name of Child (printed): __________________________

Name of Parent/Carer (printed): __________________________

Signature of Parent: __________________________ Date: / /
Dear Student,

I am a 4th year student at Edith Cowan University undertaking an honours degree. As part of my course, I will be conducting a study on adolescents' sense of belonging, their belief in their capabilities, social support and ways of coping during difficult life changes. The ethics committee of the Faculty of Computing, Health and Science at Edith Cowan University has approved the study.

In order to collect information for my study, I would like you to complete a few questionnaires. Completing the questionnaires will take between 30 to 45 minutes and will take place during class time.

Do I have to take part?

No. You are completely free to say yes or no. You either volunteer or you don’t volunteer. If you do not want to volunteer, then simply don’t write your name on the space provided on the next page. It is that easy. I will respect your decision whichever choice you make, and I will not question it.

Participating in this research will not affect your grades, your relationship with your teacher(s), or your school.

What if I wanted to change my mind?

If you say no, but then change your mind and want to take part, you will need to do this within the next week for you to be part of the project.

If you say yes, but then change your mind, you are free to stop participating in the project and withdraw. When you withdraw, what you have given to the project will be destroyed, unless you and your parents agree that I can use it. The period in which you can withdraw is any time within 5 years after the project takes place.

If the project has already been published at the time you decide to withdraw, your contribution that was used in that publication can not be removed from the publication.
What will happen to the information I give - is it private and confidential?

Information that identifies anyone will be removed from the data collected. The data is then stored securely in a locked filing cabinet at Edith Cowan University premises and can only be accessed by myself or my supervisor. The original data will be shredded after five years, unless the law requires them to be held longer.

All information you provide is stored in a way that enables us to re-identify what you contributed to the project and destroy it if you withdraw your participation. This is done by using a system of individual codes, known only to the research team, which is used to link each individual’s consent form to all data that relate to that individual.

After I have collected what each student has given to the project and analyse all of it, I intend to write about what I found and submit it for assessment as part of the research project component of my degree. It is also possible that the findings may be published in a journal, which is like a magazine, so that other people can read about it. But when I do this, I won’t write or tell anyone your name, or the names of any other students or your school.

A summary of the project will also be made available to you when it is completed. You can access the findings by emailing me: anowicki@student.ecu.edu.au it is anticipated that findings will be available by December, 2008.

What you provide for this project will be used only for this project, and will not be used in any extended or future research without first obtaining an agreement from you and your parents/carers.

Will you tell anyone what I say while I am contributing to the project?

In almost all cases no. If you tell me something that later I need to tell someone else because the law requires me to do so, then I will have to. I may also have to reveal something you say to me if I think that you might be being mistreated by someone. If this happens I will make sure that someone who can discuss this with you further will come to talk with you. In all other situations, I will treat what you tell me as being private and confidential (I won’t tell anyone unless you agree that I should).

What are the benefits of this research for me as a student?

By participating in this research you will gain an understanding of how research in the field of psychology is conducted, as well as have the opportunity to be exposed to university study.

Are there any risks associated with participation?

No. However, when answering some of the questions, you may find it discomforting because it may touch on personal or sensitive issues for you. Therefore, you should only participate if you want to. Please contact myself or my supervisor with any questions or concerns you may have. If any issues arise for you please be reminded that your school councillor is available for you to talk to.
Who do I contact if I wish to talk about the project further?

Please talk about the project with your parents first. Then, if you would like to talk with me more, please contact me on ________________, or my supervisor listed below. If you do want to be a part of the project, please read the next page and write your name in the space provided. This letter is for you to keep.

Yours Sincerely,

Anna Nowicki  
Researcher  
Edith Cowan University

Associate Professor Lynne Cohen  
6304 5575  
School of Psychology and Social Science  
Edith Cowan University
Student Consent Form

- I know that I don’t have to be involved in this project, but I would like to.

- I know that I will be completing four questionnaires as part of the project.

- I understand I am free to stop and withdraw from the project at any time within 5 years and my contribution to the project will be destroyed, unless my parents and I agree that you can use it in your reporting of the project.

- I understand that participating in this project will not affect my grades, my relationship with my teacher(s) or my school.

- I understand that I need to write my name in the space below, before I can be a part of the project.

Your name: _______________________________ Today’s Date: / /
## Appendix I

### Residuals Statistics(a)

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predicted Value</td>
<td>2.8199</td>
<td>4.1958</td>
<td>3.7658</td>
<td>.32019</td>
<td>60</td>
</tr>
<tr>
<td>Std. Predicted Value</td>
<td>-2.954</td>
<td>1.343</td>
<td>.000</td>
<td>1.000</td>
<td>60</td>
</tr>
<tr>
<td>Standard Error of Predicted Value</td>
<td>.074</td>
<td>.237</td>
<td>.140</td>
<td>.042</td>
<td>60</td>
</tr>
<tr>
<td>Adjusted Predicted Value</td>
<td>2.5707</td>
<td>4.2005</td>
<td>3.7616</td>
<td>.33091</td>
<td>60</td>
</tr>
<tr>
<td>Residual</td>
<td>-2.21863</td>
<td>1.25011</td>
<td>.00000</td>
<td>.55211</td>
<td>60</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>-3.915</td>
<td>2.206</td>
<td>.000</td>
<td>.974</td>
<td>60</td>
</tr>
<tr>
<td>Stud. Residual</td>
<td>-4.010</td>
<td>2.416</td>
<td>.004</td>
<td>1.009</td>
<td>60</td>
</tr>
<tr>
<td>Deleted Residual</td>
<td>-2.32823</td>
<td>1.49932</td>
<td>.00426</td>
<td>.59234</td>
<td>60</td>
</tr>
<tr>
<td>Stud. Deleted Residual</td>
<td>-4.708</td>
<td>2.530</td>
<td>-.010</td>
<td>1.075</td>
<td>60</td>
</tr>
<tr>
<td>Mahal. Distance</td>
<td>.023</td>
<td>9.361</td>
<td>2.950</td>
<td>2.374</td>
<td>60</td>
</tr>
<tr>
<td>Cook's Distance</td>
<td>.000</td>
<td>.291</td>
<td>.019</td>
<td>.047</td>
<td>60</td>
</tr>
<tr>
<td>Centered Leverage Value</td>
<td>.000</td>
<td>.159</td>
<td>.050</td>
<td>.040</td>
<td>60</td>
</tr>
</tbody>
</table>

a Dependent Variable: Resilence
## Appendix J

<table>
<thead>
<tr>
<th>Model</th>
<th>Correlated Statistics</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
<td></td>
<td></td>
<td>1.773</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>0.644</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sense of Belonging</td>
<td>0.554</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Support</td>
<td>0.548</td>
<td></td>
<td></td>
<td>1.631</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>0.578</td>
<td></td>
<td></td>
<td>1.730</td>
</tr>
</tbody>
</table>

*Dependent Variable: Resilience*
Guidelines for Contribution by Authors

For Research Report Only

Child Development

*Child Development* publishes empirical, theoretical, review, applied, and policy articles reporting research on child development. Published by the interdisciplinary Society for Research in Child Development (SRCD), the journal welcomes relevant submissions from all disciplines. Further information is available at [http://www.srcd.org/cd.html](http://www.srcd.org/cd.html).

Types of Articles

*Child Development* considers manuscripts in formats described below. Inquiries concerning alternative formats should be addressed to the Editor prior to submission. All submissions are expected to be no more than 40 manuscript pages, including tables, references, and figures (but excluding appendices). Authors should provide a justification if the submission is substantially longer. Unless the Editor finds that justification compelling, the submission will be returned to the author for shortening prior to editorial review.

**Empirical articles** comprise the major portion of the journal. To be accepted, empirical articles must be judged as being high in scientific quality, contributing to the empirical base of child development, and having important theoretical, practical, or interdisciplinary implications. Reports of multiple studies, methods, or settings are encouraged, but single-study reports are also considered. Empirical articles will thus vary considerably in length (approximately 8 to 40 manuscript pages); text and graphics should be as concise as material permits. All modes of empirical research are welcome.

**Reviews** focus on past empirical and/or on conceptual and theoretical work. They are expected to synthesize or evaluate a topic or issue relevant to child development, should appeal to a broad audience, and may be followed by a small number of solicited commentaries.

**Essays** describe original concepts, methods, trends, applications, and theories; these may also be accompanied by solicited commentaries.

**Child Development and ...** are articles that provide readers with tutorials about some new concept or academic specialty pertinent to research in child development. These papers should review the major definitions, methods, and findings of the concept or specialty and discuss past or potential links to child development.

**From another perspective** is a format in which papers on a focal topic, written by different authors, are published simultaneously. Papers represent diverse perspectives (e.g., authors whose work represents different populations; different disciplines; different theories, methods, or analytic tools). In some cases, calls for submissions on particular topics will be disseminated through SRCD (via e-mail or SRCD publications), and submissions will undergo normal editorial review. In some cases, a submitted manuscript (e.g., an empirical article) may be selected as a lead article for this format, with invited commentaries providing additional perspectives. The editors also welcome suggestions from readers for topics for this format.

**Manuscript Submission**

Please follow submission requirements carefully, as deviations may slow processing. *Child Development* will not consider for publication any manuscript under review elsewhere or substantially similar to a manuscript already published. At submission, please inform the Editor if the paper has been or is posted on a website. For more information on the SRCD policy on web publications, please visit [http://www.srcd.org/webposting.html](http://www.srcd.org/webposting.html). Editors retain the right to reject manuscripts that do not meet established ethical standards.
Manuscripts should be submitted electronically to the Child Development Online Submission Site at www.srcd.org/CDsubmit as a Word or WordPerfect file. Please also submit a cover letter that contains the name(s) of the author(s) and affiliation(s), and the street address, telephone, fax, and electronic mail address of the corresponding author. A corresponding author's submission to Child Development implies that all co-authors have agreed to the content and form of the manuscript and that the ethical standards of SRCD have been followed (see the Child Development website or pp. 283-284 of the 2000 SRCD Directory). Any financial interest or conflict of interest must be explained to the Editor in the cover letter. The corresponding author is responsible for informing all co-authors, in a timely manner, of manuscript submission, editorial decisions, reviews, and revisions.

The manuscript file should be formatted with double spaced, 12-point type, and should include a single paragraph abstract of 100-120 words. Please follow all guidelines on format, style, and ethics provided in the Publication Manual (5th ed.) of the American Psychological Association. Figures included with initial submissions will not be returned. Therefore, please submit only electronic files or copies of figures. Authors should keep a copy of all correspondence, files, and figures to guard against loss.

**Manuscript Review**

If you have any questions about your submission, please inquire at cdev@srcd.org or call (734) 926-0615. Each manuscript is handled by the Editor or an Associate Editor who consults with one or more Consulting Editors and/or ad hoc reviewers who have relevant expertise. To ensure blind review, cover sheets are removed before review; authors should avoid including any other information about identity or affiliation in submissions. Copies of the submission and associated correspondence are retained in the SRCD archives. For accepted manuscripts, authors are required to prepare a 300-500 layperson's summary for public dissemination purposes. Details are provided to authors as part of final processing.

There is no charge for publication in *Child Development* unless tabular or graphic materials exceed 10% of the total number of pages. Charges are also levied for changes in proofs other than correction of printer's errors. Any inquiries relating to charges or business matters (including reprint orders) should be addressed to Wiley-Blackwell, *Child Development*, Production Coordinator, 350 Main Street, Malden, MA 02148, (781) 388-8200.

Inquiries and suggestions regarding editorial policy may be addressed to: Dr. Jeffrey J. Lockman, Incoming Editor, *Child Development*, Department of Psychology, Tulane University, 2007 Percival Stern Hall, New Orleans, LA 70118-5698, lockman@tulane.edu. Please do not send electronic or paper manuscripts to the above address. Doing so will delay the processing of your manuscript.

Either an Exclusive Licence Form or an Online Open Exclusive Licence Form (see below) must be sent to the Editorial Office immediately upon acceptance.

**OnlineOpen** is a pay-to-publish service from Wiley-Blackwell that offers authors whose papers are accepted for publication the opportunity to pay up-front for their manuscript to become open access (i.e. free for all to view and download) via the Wiley InterScience website. Each OnlineOpen article will be subject to a one-off fee of $3000 to be met by or on behalf of the Author in advance of publication. Upon online publication, the article (both full-text and PDF versions) will be available to all for viewing and download free of charge. The print version of the article will also be branded as OnlineOpen and will draw attention to the fact that the paper can be downloaded for free via the Wiley InterScience service.

Should authors not be interested in Online Open publication, they should submit the Exclusive Licence Form. Authors are not asked to submit either form until immediately upon acceptance, and the choice of publication model will not affect the chances of acceptance.