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Stacey Waters
Edith Cowan University

Leanne Lester
Edith Cowan University

Elizabeth Wenden
Edith Cowan University

Donna Cross
Edith Cowan University

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A Theoretically Grounded Exploration of the Social and Emotional Outcomes of Transition to Secondary School

Stacey K. Waters, Leanne Lester, Elizabeth Wenden, and Donna Cross

Child Health Promotion Research Centre, Edith Cowan University, Australia

Adolescent development involves a complex interplay between genetics, biology, and social and emotional relationships within multiple contexts of home, school and the broader community. The transition from primary to secondary school, coupled with the onset of puberty, can therefore be a difficult period for young people to negotiate at a critical period of their developmental pathway. Using a social ecological perspective, this article examines the impact of the transition experience on adolescent social and emotional health, both immediately following transition to secondary school and at the end of the first year in this new school environment. This 1-year prospective study involving 1,500 Australian Grade 8 secondary school students found that 31% of students in the sample experienced a 'difficult' or 'somewhat difficult' transition to their new school. This third of the student sample were consequently more likely to experience poorer social and emotional health, including higher levels of depression and anxiety at the end of their first year of secondary school, while controlling for these variables at the time of transition. A central message from this work exemplifies the urgent need for a longitudinal intervention trial to develop best practice guidelines for activities that help ameliorate the negative impact a change in education context can create for adolescents negotiating a rapid metamorphosis from childhood to adulthood.

■ **Keywords:** transition, mental health, adolescence, secondary school, social health, emotional health

Over three decades ago Urie Bronfenbrenner (1979) first proposed that human development was shaped by dynamic interactions between the many nested contexts within which a person interacts with others in his socio-ecological framework. From this framework, Developmental Systems models (Lerner & Castellino, 2002) have

ADDRESS FOR CORRESPONDENCE: Stacey Waters, Associate Professor and Head, Child Health Promotion Research Centre, Edith Cowan University, 2 Bradford Street, Mount Lawley WA 6050, Australia. Email: s.waters@ecu.edu.au

enabled the exploration of how an individual's behaviour is expressed through a synthesis of biology, genetics, psychological and contextual processes, rather than in isolation. Woven through these developmental theories is the importance of nurturing and protecting one's health, where the World Health Organization (WHO; 2003) define health as: 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'. This definition of health promotes the importance of context in shaping development and health and provides a foundation for this study.

Adolescence represents a period of rapid personal, social, spiritual and emotional development within a complex web of policies, structures and relationships (Garbarino, 1985) and can be characterised by many physical, social and emotional changes in one's health. The timing of adolescent development is highly individual and varies greatly, leading to a complex interaction of internal and external change in the child (Akos, 2002; Akos, Queen, & Lineberry, 2005; Cauley & Jovanovich, 2006; Neild, 2009; NSW Department of Education and Training, 2006; Parker, 2009). The period of adolescence therefore signifies a critical time to support the positive development of social and emotional health and provide individual as well as contextual supports to positive health outcomes for young people.

Social Health

With an increased reliance on their peer group for social support rather than parents' (Brinthaupt, Lipka, & Wallace, 2007; Parker, 2009), adolescents create extensive social support networks that help to prepare them for adulthood. As such, the 'social health' represents an important construct to protect and enhance during adolescence. One's social health can include a range of skills and attributes, such as the development and maintenance of friendships, growth of feelings of connectedness to peers, family, teachers and school, and a reduction in the likelihood of participating in antisocial behaviours that may jeopardise social relationships, such as bullying (Akos et al., 2005; Cauley & Jovanovich, 2006; Barber & Olsen, 2004; Brinthaupt et al., 2007; Duchesne, Ratelle, Poitras, & Drouin, 2009; Hamm, Farmer, Dadisman, Gravelle, & Murray, 2011; Parker, 2009; Potter, Schlisky, Stevenson, & Drawdy, 2001). Without well-developed relationships to others and feelings of connection to school, peers and family, young people are more likely to be bullied, initiate drug use, be absent from school, and experience more mental health difficulties (Resnick et al., 1997; Shochet, Dadds, Ham, & Montague, 2006).

Emotional Health

The development of a sense of identity, self-esteem and self-worth, establishing personal values, psychological autonomy, decision-making and problem-solving skills, and behavioural regulation represent key emotional skills, tasks and characteristics built during adolescence (Barber & Olsen, 2004; Brinthaupt et al., 2007; Chen & Gregory, 2009; Fenzel, 2000; Parker, 2009; Potter et al., 2001). The absence of some or all of these indicators of emotional health during adolescence can lead to mental health problems. National prevalence studies estimate between 9% and 14% of young people will experience a mental health problem during childhood and early adolescence (Australian Institute of Health and Welfare, 2009; Sawyer et al., 2001).

While the prevalence of mental health problems for adolescents are not regularly monitored and reported in national surveys, the consequences of their poor mental health have been well established. Foremost is that mental health problems experienced by adolescents, during this time of intense social and emotional development often appear to track into adulthood (Australian Department of Health and Ageing, 2004). Young people in Australia who experience mental health problems are also more likely to be bullied (Cross et al., 2009; Lester, Dooley, Cross, & Shaw, 2012c), to experience higher rates of suicidal ideation, and to participate in health risk behaviours such as smoking, drug use and behavioural problems (Sawyer et al., 2001), although these relationships, to date, have no quality longitudinal research to establish temporal associations.

The intersection of early adolescence with transition between primary and secondary school contexts has created a unique area of research interest. Many adolescents experience positive emotional and social health changes over the transition between primary and secondary school, as well as greater motivation and engagement with the secondary school and its staff (Anderman & Leake, 2007; Hamm et al., 2011; Neild, 2009; NSW Department of Education and Training, 2006; Rice, Frederickson, & Seymour, 2011; Turner, 2007; Zeedyk et al., 2003).

For some young people, the change in context from primary to secondary school can be a challenging time for their social and emotional health as it often coincides with the rapid onset of puberty (Akos, 2002; Frey, Ruchkin, Martin, & Schwab-Stone, 2009; Neild, 2009). Poorer social health outcomes such as feelings of disengagement from school and negative peer relationships have been linked with a poor transition (Akos, 2002; Anderman & Leake, 2007; NSW Department of Education and Training, 2006; Rice et al., 2011). Other cross-sectional studies have also identified a clear association between a poor transition experience and emotional problems, such as the increased use of antisocial behaviours, feelings of depression and anxiety, lack of wellbeing and general psychological distress (Akos, 2002; Blackwell, Trzesniewski, & Dweck, 2007; Frey et al., 2009; Kingery & Erdley, 2007; Qualter, Whiteley, Hutchinson, & Pope, 2007; Rice et al., 2011; Zeedyk et al., 2003). Limited international longitudinal evidence suggests some of these emotional health problems continue beyond the initial transition period, including elevated levels of depression, anxiety, and poorer wellbeing (Rice et al., 2011; Zeedyk et al., 2003). The lack of longitudinal evidence to describe the full effect of a poor transition experience forms a major limitation of the current literature (Lester, Cross, Dooley, & Shaw, 2012a).

In our other recent studies of transition in Western Australian schools, girls report being more worried about the impending transition and report a more difficult transition experience than boys (Waters, Lester, & Cross, 2012) and is consistent with research in American student populations (Akos, 2002). Moreover, while girls demonstrate higher levels of friendship quality and social skills over the transition period (Kingery & Erdley, 2007), they may also experience greater psychological distress than boys due to the disruption of friendship groups during the transition into a new school.

Given the wealth of information describing the outcomes of a poor transition experience, there remain surprisingly many limitations associated with the research relating to transition. Most of the recent research investigating the predictors and

correlates of a poor transition to secondary school was conducted in the United States and the United Kingdom, making translation of their findings to the Australian context problematic due to differences in age of transition, school context and pastoral supports. Further, much of the literature is cross-sectional. The few studies that investigated the impact of a poor transition on adolescent health over time did not involve Australian schools. Finally, much of the literature has focused on the impact of transition on students' school related outcomes, such as academic achievement, retention and truancy, with little attention on the impact of transition on students' own social and emotional health.

Therefore, this article aims to explore the impact of students' experience of the transition to secondary school on their social and emotional health, accounting for school level clustering, in a large study sample over two time points (beginning and end of first year of secondary school). We hypothesise that students who experience a poorer transition to secondary school will have poorer social and emotional health outcomes than students who have a positive transition experience. Using a cohort of over 1,500 students drawn from 20 Western Australian secondary schools, data collected immediately after the transition to secondary school in Term 1 of Grade 8 (about 13 years of age) will be modelled with data from these same students at the end of Grade 8 (Term 4).

Method

Study Design

The data used in this article were drawn from the Supportive Schools Project (SSP) (Cross, Hall, Waters, & Hamilton, 2008), a 3-year, randomised cluster intervention comparison trial, testing the impact of a whole-school approach, including curriculum materials on students' experiences of bullying in secondary school. To avoid potential intervention effects from the SSP, only data from students in the comparison cohort of the intervention trial were used in this study. Self-administered surveys were completed by a cohort of students in their first and fourth terms (February and November) of Grade 8. In Western Australia students transition from primary school at the end of Grade 7 and commence secondary school in Grade 8.

Sample Selection and Recruitment

All Western Australian secondary Catholic Education Office (CEO) schools located in the metropolitan area of Perth, Western Australia were invited to participate in this research. Of the 28 eligible CEO schools, 20 agreed to participate in the study. After being recruited into the project, schools were stratified according to total population size of the school (above and below median school size of 811 students) and the school's Socio-Economic Status (SES; above and below the 'SES Index Modified' median score of 100) and allocated to four strata and randomly assigned to the intervention or comparison condition. Hence the 'comparison' schools used in this study were randomly selected from the pool of Catholic Education Office schools in Western Australia and they did not receive any intervention as part of the larger Supportive Schools Project.

Participation

Each secondary school recruited into the SSP was asked to provide a list of students who were enrolled to attend their school the following year as Grade 8 students. The parents of these students were sent a letter seeking approval for their child to participate in the study while they were in Grade 7 at primary school and continuing into Grades 8 and 9 at the participating secondary schools. In Term 1 of the first year of secondary school (when students were in Grade 8), 3,382 12- to 13-year-old students were enrolled in each of the study schools. A combination of active (opt-in) and passive (opt-out) parental consent was used to recruit students. Three weeks after the first active consent letter was sent to parents, a second letter was again mailed seeking active consent. All parent non-respondents were sent a final letter seeking their passive consent for their child to participate in the study. Approval for this study and the consent procedures explained above was granted by Edith Cowan University's Human Research Ethics Committee and permission was also granted to conduct the research by the Catholic Education Office of Western Australia.

Trained personnel administered student questionnaires within Grade 8 classrooms according to a strict procedural and verbal protocol. An individually coded questionnaire was given to each student with parental consent for their completion during class time. Confidentiality of respondents was maintained by the use of identification numbers and teachers were asked not to look at students' responses. Student questionnaires were collected by the administrators upon completion. Data were collected from students using the same procedure at the end of Grade 8.

Measures

This study comprised measures relating to students transition experience as well as their social and emotional health. Social health was determined using victimisation, peer support, loneliness, connectedness to school and safety at school measures and emotional health was assessed using the Strengths and Difficulties questionnaire (SDQ) and the Depression Anxiety Stress Scale (DASS).

Transition experience. Students were asked to rate their transition experience from primary to secondary school on a 5-point scale (1 = *difficult*, 2 = *somewhat difficult*, 3 = *somewhat easy*, 4 = *easy*, 5 = *don't know*). A continuous variable was calculated for students responses ranging from difficult to easy (1–4). Those answering 'don't know' were significantly different from all other students on most of the outcomes variables used in this study and were excluded from the analyses.

Social health. To assess physical, relational and verbal *victimisation*, a seven-item categorical index adapted from items/scales developed by Rigby and Slee (1998) and Olweus (1996) was used. The items assessed physical (Hit, kicked and pushed around; Had money or other things broken or taken away from them; Made to feel afraid they would get hurt), verbal (Made fun of and teased in a hurtful way; Called mean and hurtful names), and relational (Students ignored them, didn't let them join in, or left them out on purpose; Students told lies about them and tried to make other students not like them) bullying during the current term (10 weeks) at school. Students were asked how often they were bullied and rated each item

on a 5-point scale (1 = *never*, 2 = *once or twice*, 3 = *every few weeks*, 4 = *about once a week*, 5 = *most days*). A definition of bullying, supported by illustrations of the behaviours, was provided in the questionnaire. A factor analysis performed on the victimisation scale confirmed its unidimensionality (Time 1: CFI = 0.921, SRMR = 0.044; Time 2: CFI = 0.935, SRMR = 0.047). A victimisation score was calculated at each time point for each student by averaging the seven items with a higher score reflecting more experiences of victimisation (Time 1: alpha = 0.983; Time 2: alpha = 0.988).

The peer support at school scale (adapted from the 24-item Perceptions of Peer Social Support Scale; (Ladd, Kochenderfer, & Coleman, 1996) comprised 11 items (how often would students: choose you on their team; tell you you're good at things; explain something if you didn't understand; invite you to do things with them; help you if you are hurt; miss you if you weren't at school; help you if something is bothering you; ask to work with you; help you if other students treat you badly; ask you to join in when alone; and share things with you?) measured on a three-point scale (1 = *never*, 2 = *sometimes*, 3 = *lots of times*). A factor analysis performed on the adapted peer support scale confirmed its unidimensionality (Time 1: CFI = 0.951, SRMR = 0.033; Time 2: CFI = 0.933, SRMR = 0.037). A peer support score at each time point was calculated for each student by averaging all items, higher scores reflecting greater feelings of peer support (Time 1: alpha = 0.976; Time 2: alpha = 0.991).

Loneliness was measured using seven items adapted from Cassidy and Asher's 15-item Loneliness at School Scale (Cassidy & Asher, 1992). The seven items (I feel alone at school; I have lots of friends to talk to at school; It's hard for me to make friends at school; I have nobody to talk to in my classes; I don't have anyone to spend time with at school; I'm lonely at school; I feel left out of things at school) were measured on a 5-point scale ranging from strongly disagree to strongly agree. A factor analysis performed on the adapted loneliness scale confirmed its unidimensionality (Time 1: CFI = 0.981, SRMR = 0.022; Time 2: CFI = 0.978, SRMR = 0.022). A mean loneliness score was calculated at each time point for each student, with higher scores reflected greater feelings of loneliness (Time 1: alpha = 0.981; Time 2: alpha = 0.986).

The Connectedness To School Scale comprised four items adapted from the Resnick and McNeely (1997) five-item School Connectedness Scale (I feel close to people at school, I feel like I am part of this school, I am happy to be at school, The teachers treat students fairly) measured on a five-point scale (1 = *unsure*, 2 = *never*, 3 = *sometimes*, 4 = *usually*, 5 = *always*). A factor analysis performed on the adapted connectedness scale confirmed its unidimensionality (Time 1: CFI = 0.966, SRMR = 0.031; Time 2: CFI = 0.952, SRMR = 0.040). For each student at each time point an average school connectedness score was calculated, with a higher score reflecting greater feelings of connectedness (Time 1: alpha = 0.975; Time 2: alpha = 0.977).

Safety at school was a single item adapted from the Rigby and Slee's Peer Relations Questionnaire (1998) and measured on a three-point scale (1 = *No, I never feel*

safe at school, 2 = *Yes, some of the time*, 3 = *Yes, all or most of the time*) for each time point with a higher value reflecting greater feelings of safety at school.

Emotional health. Two measures of mental health were used in this study to describe different constructs of a young person's emotional health. Self-reported depression and anxiety were assessed using the Depression Anxiety Stress Scale (DASS; Lovibond & Lovibond, 1995) which comprised seven items relating to depression (e.g., pessimistic about future, lacking in initiative) and seven items related to anxiety (e.g., apprehensive, dryness of the mouth) measured on a four point scale (scores ranged from 0 = *not at all* to 3 = *applied to me very much, or most of the time*). A continuous depression score and an anxiety score were calculated at each time point using the scale authors' guidelines for each student by adding the items, with higher scores reflecting greater feelings of depression (Time 1: alpha = 0.899; Time 2: alpha = 0.850) and anxiety (Time 1: alpha = 0.917; Time 2: alpha = 0.880).

The Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) comprises 25 items measured on a 3-point scale (0 = *not true*, 1 = *somewhat true*, 2 = *certainly true*) and explores constructs such as emotional difficulties (eg: many worries, easily scared), conduct problems (e.g., generally obedient, has temper tantrums), hyperactivity (e.g., constantly fidgeting, easily distracted), peer problems (e.g., plays alone, liked by other children) and prosocial skills (e.g., considerate of others' feelings, shares readily). An overall score was calculated in accordance with the scale author's instructions with a range of possible scores from 0–10. A higher score indicates greater problems for the emotional difficulties, conduct problems, hyperactivity and peer problems subscales. A higher score for the prosocial subscale indicates strong social skills; emotional difficulties (Time 1: alpha = 0.751; Time 2: alpha = 0.760), conduct problems (Time 1: alpha = 0.626; Time 2: alpha = 0.667), hyperactivity (Time 1: alpha = 0.707; Time 2: alpha = 0.734), peer problems (Time 1: alpha = 0.562; Time 2: alpha = 0.581) and prosocial skills (Time 1: alpha = 0.653; Time 2: alpha = 0.706).

Statistical Analysis

Confirmatory factor analysis was performed on all scale variables within MPlus v 6.0. The CFI (Comparative Fit Index) and SRMR (Standardised Root Mean Residual) were used to determine model fit. Models having CFI > 0.9 and RMSEA < 0.05 were determined to have good model fit (ref). Analyses were conducted using STATA v10 and PASW v18. A series of individual multilevel regression models with random effects were used to determine each of the social and emotional health outcomes at the end of Grade 8 as a function of the transition experience. Each of the predictor variables and gender at Time 1 were controlled for in the time two analyses.

Results

The Experience of Transition to Secondary School

For most students, the transition from primary to secondary school was reported to be a positive experience (*easy* or *somewhat easy*). However, 31% of students reported the transition was difficult or somewhat difficult for them and significantly

TABLE 1

Transition Experience by Gender

	Male <i>n</i> (%)	Female <i>n</i> (%)	Total <i>n</i> (%)
Transition experience*			
Positive experience	575 (72.9)	560 (64.7)	1135 (68.6)
Other experience	214 (27.1)	306 (35.3)	520 (31.4)

Note: * $p < .01$; $\chi^2 = 12.921$, $p < .001$ **TABLE 2**

Sample Characteristics

	Beginning of Grade 8		End of Grade 8	
	Mean (SD)	Mean (SD)	<i>t</i> value	<i>p</i>
Social health				
Loneliness	1.95 (.51)	1.96 (.57)	.512	.609
Connectedness	4.22 (.77)	4.14 (.76)	-4.401	< .001**
Peer support	2.53 (.35)	2.56 (.40)	4.015	< .001**
Safety at school	2.79 (.43)	2.70 (.51)	-6.680	< .001**
Victimisation	1.31 (.51)	1.44 (.62)	9.772	< .001**
Mental health				
Depression	4.98 (8.09)	5.15 (8.60)	1.263	.207
Anxiety	4.34 (6.91)	4.19 (7.36)	-.181	.856
Emotional health				
Emotional problems	2.34 (2.36)	2.41 (2.44)	2.072	.038*
Conduct problems	1.73 (1.78)	1.93 (1.92)	5.031	< .001**
Hyperactivity	3.26 (2.31)	3.47 (2.44)	4.241	< .001**
Peer problems	1.47 (1.62)	1.47 (1.67)	.265	.791
Prosocial	7.85 (1.83)	7.73 (1.98)	-2.734	.006**
Total SDQ	8.79 (6.24)	9.28 (6.50)	4.230	< .001**

Note: * $p < .01$, ** $p < .05$

more of these students were female. A paired *t* test was used to test the differences between social health, victimisation, mental health and emotional health measured at the beginning and end of Grade 8. Connectedness to school, feeling safe at school, and prosocial tendencies were all significantly higher at the beginning of Grade 8 than at the end of Grade 8, whereas peer support, victimisation, emotional problems, conduct problems, hyperactivity, and total SDQ was higher at the end of Grade 8 than at the beginning of Grade 8.

Outcomes of a Positive Transition Experience

A more positive transition experience was associated with future positive social and emotional health. Students who had a more positive transition experience at the beginning of Grade 8 reported less loneliness and greater feelings of peer support and safety at school at the end of Grade 8 (Table 3). They also had significantly

TABLE 3
 Transition Experience as a Predictor of Victimization and Social, Mental and Emotional Outcomes

IV: Transition experience	Coefficient	95% confidence interval	P value
Social health			
Loneliness (n = 1491)	-0.03	(-0.06, 0.04)	0.021*
Connectedness (n = 1425)	-0.01	(-0.05, 0.02)	0.517
Peer support (n = 1474)	0.02	(0.0, 0.03)	0.050*
Safety (n = 1449)	0.03	(0.01, 0.06)	0.017*
Mental health (n = 1446)			
Depression	-0.25	(-0.66, 0.15)	0.222
Anxiety	-0.38	(-0.73, -0.13)	0.032*
Victimization (n = 1490)	-0.03	(-0.06, -0.01)	0.018*
SDQ (n = 1444-1448)			
Emotion	-0.04	(-0.15, 0.07)	0.455
Conduct problems	0.06	(-0.03, 0.14)	0.173
Hyper	-0.05	(-0.15, 0.05)	0.356
Peer problems	-0.12	(-0.19, -0.04)	0.004**
Prosocial	0.06	(-0.02, 0.15)	0.147
Total	0.09	(-0.18, 0.37)	0.488

Note: *significant at 5% level, **significant at 1% level.
 Measures at beginning of Grade 8 and gender controlled for in all models.
 Sigma_u range (0.06%-2.47%); Sigma_i range (0.02%-0.51%)

lower anxiety, victimisation, and peer problems than those who experienced a less positive transition.

Discussion

The transition from primary to secondary school can be a positive experience for over two thirds of Western Australian school children in our sample. For the third of students who did not experience a positive transition, many reported experiencing social and emotional health challenges as they progress through secondary school. This study explored a range of social and emotional health outcomes for young people during the first year of secondary school following transition. These variables included school contextual social health outcomes such as loneliness, connectedness, peer support, victimisation and safety at school as well as depression, anxiety and other internalising and externalising emotional health markers. Within this study, almost all outcome variables, with the exception of connectedness to school, conduct and peer problems, hypothesised to be associated with a positive post transition experience were supported by these data while accounting for school level clustering and controlling for these characteristics at the beginning of Grade 8.

Difficulties negotiating the transition from primary to secondary school can have a significant impact on the lives of students. These relationships may be explained considering the complex interplay between adolescent development and context. First, adolescence represents one of the most significant, rapid periods of development a person will experience in their lifetime (Lerner & Castellino,

2002). As children enter adolescence they experience major physical, social and emotional changes which can be closely linked with the emergence of puberty (Short & Rosenthal, 2008) and further compounded by an adolescent's context and his or her social interactions. They move from a relatively structured primary school into a larger secondary school where students move between classes and teachers across the school day. These data suggest for a third of Western Australian secondary school students enrolled in Catholic schools, this presents a significant change in context which may be difficult to adapt to. Recent research investigating school bullying behaviour has determined that the transition to secondary school may be a critical period to intervene on bullying (Lester, Cross, Dooley, & Shaw, 2012b; Patton et al., 2000; Sourander, Helstela, Helenius, & Piha, 2000; Stevens, Bourdeaudhuij, & Van Oost, 2000). It has been suggested that compared with primary schools, the change in friendship structures that accompany the move to secondary school, large student numbers and the less consistent contact, and fewer close relationships between students and staff remain factors contributing to the increase in bullying at this age (Patton et al., 2000; Sourander et al., 2000).

Social health comprises one of three key concepts at the foundation of the WHO (2003) definition of health and central to adolescent development theories (Garbarino, 1985; Lerner & Castellino, 2002). In this study we sought to understand how a change in school context affected students' social health using measures of school connectedness, loneliness, safety and experiences of being bullied. Our data contradict previous UK and US research linking a poor transition to secondary school with reduced feelings of connectedness to school (Anderson, Jacobs, Schramm, & Splittgerber, 2000; Blackwell et al., 2007; Kingery & Erdley, 2007; Rice et al., 2011). Some Australian reports have also identified this relationship (NSW Department of Education and Training, 2006); however, our study found, after controlling for feelings of connectedness immediately post transition (Term 1 of Grade 8), that connectedness to school is no longer significantly associated with the transition experience at the end of Grade 8. These data suggest that school connectedness appears to be linked with transition, but that students who feel disconnected at the start of Grade 8 are therefore more likely to still be disconnected at the end of Grade 8, regardless of the transition experience. In contrast, other research conducted in a similar sample of Western Australian schools found poor transition to secondary school, while controlling for other predictors of connectedness to school, was found to significantly affect students' feelings of connectedness to their new school environment at 9 months and 17 months later (Waters, Cross, & Shaw, 2010). These contrasting findings require further investigation, particularly in relation to the influence connectedness to primary school has on students' feelings of connectedness in secondary school.

This study also found students who experience a poor transition to secondary school feel less safe than students who did not have a poor transition, 9 months later. While this conceptual relationship has been previously discussed (NSW Department of Education and Training, 2006), our study presents the first investigation into the impact of transition from primary to secondary school on students' perception of safety. Similarly, little research attention has addressed the impact of transition on feelings of loneliness, as an outcome of poor transition. While some studies have reported students who have a poor transition experience feel more isolated

(Howard & Johnson, n.d.; NSW Department of Education and Training, 2006), our study provides the first reported empirical relationship between transition and loneliness.

While another indicator of adolescent social health relates to their experience of bullying, there exists a paucity of evidence related to the impact of a poor transition experience in secondary school on bullying victimisation. This current study sought to extend other attempts to understand this relationship (Anderson et al., 2000; NSW Department of Education and Training, 2006; Qualter et al., 2007) and found that while controlling for victimisation at the start of Grade 8, students' experiences of a poor transition to secondary school predicted an increase in victimisation 9 months later at the end of the first year in their new school. As much is known about the negative academic, social, emotional and physical implications of being bullied (Hemphill et al., 2011), this link between transition and victimisation presents an important consideration for future research investigating secondary school students' bullying.

In this study, the relationship between a poor transition to secondary school and negative emotional health outcomes of depression and anxiety (measured through the DASS) and internalising and externalising problems (measured by the SDQ) were substantiated and are consistent with previous research in this area (Akos, 2002; Fenzel, 2000; Kingery & Erdley, 2007; Qualter et al., 2007; Rice et al., 2011; Wampler, Munsch, & Adams, 2002; Zeedyk et al., 2003). This study provides the first insight into the impact of a poor transition on Australian adolescents' emotional health beyond the immediate transition period and has been further supported by our efforts to control for the influence of mental health problems during transition when assessing its impact at the end of Grade 8.

There exist several urgent implications for future policy and practice arising from this study. Most importantly, Australian schools systems and sectors need to examine and respond to the impact their transition strategies have on their student cohort. Where the primary to secondary transition strategy (pre- and post transition) remains not well defined in a school, inquiry into how best to integrate young people into the new school system is paramount. This can be achieved, for example, by asking incoming Grade 7 students about their thoughts leading to transition, and asking recently transitioned Grade 8 students about their experiences and what they could suggest should be maintained and improved for other students.

In the more immediate future, recommendations for school counsellors are evident in the findings of this study. The most salient finding of this study is the early detection of young people who may not be managing the transition into secondary school (e.g., socially, academically) to enable additional supports to be deployed to assist in the transition to the new academic and social environment. The way in which these students are supported should be tailored to their particular needs, with the aim of increasing their connection to the new school environment to minimise the potential for long-term implications of poor school transition such as school drop-out and poor academic achievement. Moreover, school counsellors and other support services need to be fully integrated into school transition programs so students, and their families, are aware of the supports available to them over the transition period and the entire secondary school experience. The unique skills of school counsellors can be used to empower classroom teachers to build positive

relationships with incoming students to help create a sense of connection to adults in the school community immediately following the transition period.

This study contributes to the growing literature exploring the impact of transition from primary to secondary school on students' social and emotional health. Its strengths lie in the systematic investigation of the impact of a poor transition on key markers of healthy adolescent development. The size of the study sample, the random selection and assignment of schools and quality of the measures used in this study help to provide useful descriptive data about transition and social and emotional health.

While these represent important strengths, there remain several limitations of this current study. The data used were drawn from a larger intervention trial, and while we only used data from comparison students (to avoid potential intervention effects), the schools in this study were drawn from the Catholic Education system only. The decision to use Catholic Education schools in the larger Supportive Schools study was based on the need to recruit students while they were in primary school. Also, in Western Australia, many students entering Catholic secondary schools come from the Catholic primary feeder schools. While the selection of only Catholic schools in this study presents a limitation, it has raised very interesting study outcomes. In Western Australia, most Catholic Education schools provide significant transition activities and supports, yet in this study, we have found that over and above these supports, students who experience a poor transition continue to experience negative emotional and social health outcomes.

Second, we have only explored a limited number of social and emotional health variables that could be influenced by an adolescent's transition experience. Future research should consider mapping a range of social and emotional health indicators as well as school and family effects at the school level, such as academic achievement, attendance, school retention and other intra-personal characteristics related to academic motivation and decision-making skills. Third, our data do not allow for an exploration of the potential differential impact of transition experienced by students from different cultural backgrounds, including those with English as a second language.

To provide empirical evidence about the most effective ways to support young people as they move into secondary school, there exists a need for a national longitudinal intervention trial to monitor the transition experience for students while testing the feasibility and impact of evidence-based formal and informal whole-school strategies that may help enhance this transition experience. This would enable a critical understanding of the successful transition practices which could inform the development of guidelines for transition activities across Australian schools.

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References

- Akos, P. (2002). Student perceptions of the transition from elementary to middle school. *Professional School Counseling, 5*(5), 339–345.
- Akos, P., Queen, J., & Lineberry, C. (2005). *Promoting a successful transition to middle school*. New York: Eye on Education.
- Anderman, L., & Leake, V. (2007). The interface of school and family in meeting the belonging needs of young adolescents. In S. Mertens, V. Anfara Jr., & M. Caskey (Eds.), *The young adolescent and the middle school* (pp. 163–182). Charlotte, NC: Information Age Publishing.
- Anderson, L.W., Jacobs, J., Schramm, S., & Splittgerber, F. (2000). School transitions: beginning of the end or a new beginning? *International Journal of Educational Research, 33*(4), 325–339. doi:10.1016/S0883-0355(00)00020-3
- Australian Department of Health and Ageing. (2004). *Responding to the mental health needs of young people in Australia*. Retrieved from <http://www.health.gov.au/internet/main/publishing.nsf/Content/mental-pubs-r-respond>
- Australian Institute of Health and Welfare. (2009). *A picture of Australia's children 2009*. Canberra, Australia: Author.
- Barber, B.K., & Olsen, J.A. (2004). Assessing the Transitions to Middle and High School. *Journal of Adolescent Research, 19*(1), 3–30. doi:10.1177/0743558403258113
- Blackwell, L.S., Trzesniewski, K.H., & Dweck, C.S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development, 78*(1), 246–263. doi:10.1111/j.1467-8624.2007.00995.x
- Brinhaupt, T., Lipka, R., & Wallace, M. (2007). Aligning student self and identity concerns with middle school practices. In S. Mertens, V. Anfara Jr., & M. Caskey (Eds.), *The young adolescent and the middle school* (pp. 201–218). Charlotte, NC: Information Age Publishing.
- Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.
- Cassidy, J., & Asher, S. (1992). Loneliness and peer relations in young children. *Child Development, 63*(2), 350–365. doi:10.2307/1131484
- Cauley, K., & Jovanovich, D. (2006). Developing an effective transition program for students entering middle school or high school. *The Clearing House, 80*(1), 15–25. doi:10.3200/TCHS.80.1.15-25
- Chen, W.-B., & Gregory, A. (2009). Parental involvement as a protective factor during the transition to high school. *The Journal of Educational Research, 103*(1), 53–62. doi:10.1080/00220670903231250
- Cross, D., Hall, M., Waters, S., & Hamilton, G. (2008). *A randomised control trial to reduce bullying and other aggressive behaviours in secondary schools: Final report to the Western Australian Health Promotion Foundation*. Perth, Australia: Edith Cowan University.
- Cross, D., Shaw, T., Hearn, L., Epstein, M., Monks, H., Lester, L., & Thomas, L. (2009). *Australian Covert Bullying Prevalence Study (ACBPS)*. Perth, Australia: Child Health Promotion Research Centre, Edith Cowan University.
- Duchesne, S., Ratelle, C. F., Poitras, S.-C., & Drouin, E. (2009). Early adolescent attachment to parents, emotional problems, and teacher-academic worries about

- the middle school transition. *The Journal of Early Adolescence*, 29(5), 743–766. doi:10.1177/0272431608325502
- Fenzel, L.M. (2000). Prospective study of changes in global self-worth and strain during the transition to middle school. *The Journal of Early Adolescence*, 20(1), 93–116. doi:10.1177/0272431600020001005
- Frey, A., Ruchkin, V., Martin, A., & Schwab-Stone, M. (2009). Adolescents in transition: School and family characteristics in the development of violent behaviors entering high school. *Child Psychiatry & Human Development*, 40(1), 1–13. doi:10.1007/s10578-008-0105-x
- Garbarino, J. (1985). *Adolescent development: An ecological perspective*. Columbus, OH: Charles E. Merrill Publishing Company.
- Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, 38(5), 581–586. doi:10.1111/j.1469-7610.1997.tb01545.x
- Hamm, J.V., Farmer, T.W., Dadisman, K., Gravelle, M., & Murray, A.R. (2011). Teachers' attunement to students' peer group affiliations as a source of improved student experiences of the school social-affective context following the middle school transition. *Journal of Applied Developmental Psychology*, 32(5), 267–277. doi:10.1016/j.appdev.2010.06.003
- Hemphill, S.A., Kotevski, A., Herrenkohl, T.I., Bond, L., Kim, M.J., Toumbourou, J.W., & Catalano, R.F. (2011). Longitudinal consequences of adolescent bullying perpetration and victimisation: A study of students in Victoria, Australia. *Criminal Behaviour and Mental Health*, 21, 107–116. doi:10.1002/cbm.802
- Howard, S., & Johnson, B. (n.d.). *Transition from primary to secondary school: Possibilities and paradoxes*. Retrieved from <http://www.aare.edu.au/04pap/how04184.pdf>
- Hu & Bentler (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55.
- Kingery, J., & Erdley, C. (2007). Peer experiences as predictors of adjustment across the middle school transition. *Education and Treatment of Children* 30(2), 73–88. doi:10.1353/etc.2007.0007
- Ladd, G., Kochenderfer, B., & Coleman, C. (1996). Perceptions of peer social support scale. *Child Development*, 67(3), 1103–1118.
- Lerner, R.M., & Castellino, D.R. (2002). Contemporary developmental theory and adolescence: Developmental systems and applied developmental science. *Journal of Adolescent Health*, 31, 122–135. doi:10.1016/S1054-139X(02)00495-0
- Lester, L., Cross, D., Dooley, J., & Shaw, T. (2012a). Adolescents bully-victims: Social health and the transition to secondary school. *Cambridge Journal of Education*, 42(2), 213–233. doi:10.1080/0305764X.2012.676630
- Lester, L., Cross, D., Dooley, J., & Shaw, T. (2012b). *Bullying victimisation and adolescents: Implications for school based intervention programs*. Manuscript submitted for publication.
- Lester, L., Dooley, J., Cross, D., & Shaw, T. (2012c). *Internalising symptoms: An antecedent or precedent in adolescent peer victimisation?* Manuscript submitted for publication.
- Lovibond, S., & Lovibond, P. (1995). *Manual for the Depression Anxiety Stress Scales*. Sydney, Australia: Psychology Foundation.

- Neild, R. (2009). Falling off track during the transition to high school: What we know and what can be done. *The Future of Children* 19(1), 53–76.
- NSW Department of Education and Training. (2006). *Transition Project*. Sydney, Australia: Author.
- Olweus, D. (1996). *The Revised Olweus Bully/Victim Questionnaire*. Bergen, Norway: Mimeo Research Center for Health Promotion (HEMIL), University of Bergen.
- Parker, A.K. (2009). Elementary organizational structures and young adolescents' self-concept and classroom environment perceptions across the transition to middle school. *Journal of Research in Childhood Education*, 23(3), 325–339. doi:10.1080/02568540909594664
- Patton, G.C., Glover, S., Bond, L., Butler, H., Godfrey, C., Di Pietro, G., & Bowes, G. (2000). The Gatehouse Project: A systematic approach to mental health promotion in secondary schools. *Australian and New Zealand Journal of Psychiatry*, 34, 586–593. doi:10.1046/j.1440-1614.2000.00718.x
- Potter, L., Schlisly, S., Stevenson, D., & Drawdy, D. (2001). The transition years: When it's time to change. *Principal Leadership*, 1(7), 52–55.
- Qualter, P., Whiteley, H.E., Hutchinson, J.M., & Pope, D.J. (2007). Supporting the development of emotional intelligence competencies to ease the transition from primary to high school. *Educational Psychology in Practice*, 23(1), 79–95. doi:10.1080/02667360601154584
- Resnick, M.D., Bearman, P.S., Blum, R.W., Bauman, K.E., Harris, K.M., Jones, J., . . . Udry, J.R. (1997). Protecting adolescents from harm: Findings from the National Longitudinal Study on Adolescent Health. *Journal of the American Medical Association*, 278(10), 823–832. doi:10.1001/jama.278.10.823
- Rice, F., Frederickson, N., & Seymour, J. (2011). Assessing pupil concerns about transition to secondary school. *British Journal of Educational Psychology*, 81(2), 244–263. doi:10.1348/000709910x519333
- Rigby, K., & Slee, P. (1998). *The Peer Relations Questionnaire*. Adelaide, Australia: University of South Australia.
- Sawyer, M.G., Arney, F.M., Baghurst, P.A., Clark, J.J., Graetz, B.W., Kosky, R.J., . . . Zubrick, S.R. (2001). The mental health of young people in Australia: key findings from the child and adolescent component of the national survey of mental health and well-being. *Australian and New Zealand Journal of Psychiatry*, 35(6), 806–814.
- Shochet, I.M., Dadds, M.R., Ham, D., & Montague, R. (2006). School connectedness is an underemphasized parameter in adolescent mental health: Results of a community prediction study. *Journal of Clinical Child & Adolescent Psychology*, 35(2), 170–179. doi:10.1207/s15374424jccp3502_1
- Short, M. B., & Rosenthal, S. L. (2008). Psychosocial development and puberty. *Annals of the New York Academy of Sciences*, 1135(1), 36–42. doi:10.1196/annals.1429.011
- Sourander, A., Helstela, L., Helenius, H., & Piha, J. (2000). Persistence of bullying from childhood to adolescence — A longitudinal 8-year follow-up study. *Child Abuse and Neglect*, 24(7), 873–881. doi:10.1016/S0145-2134(00)00146-0
- Stevens, V., Bourdeaudhuij, I.D., & Van Oost, P. (2000). Bullying in Flemish schools: An evaluation of anti-bullying intervention in primary and secondary schools. *British Journal of Educational Psychology*, 70, 195–210. doi:10.1348/000709900158056
- Turner, S. (2007). Preparing inner-city adolescents to transition into high school. *Professional School Counseling* 10(3), 245–252.

- Wampler, R.S., Munsch, J., & Adams, M. (2002). Ethnic differences in grade trajectories during the transition to junior high. *Journal of School Psychology, 40*(3), 213–237. doi:10.1016/S0022-4405(02)00098-5
- Waters, S., Cross, D., & Shaw, T. (2010). Does the nature of schools matter? An exploration of selected school ecology factors on adolescent perceptions of school connectedness. *British Journal of Educational Psychology, 80*(3), 381–402. doi:10.1348/000709909x484479
- Waters, S., Lester, L., & Cross, D. (2012). *Transition to secondary school: Experience vs. expectation*. Manuscript submitted for publication.
- World Health Organization. (2003). WHO definition of Health. Retrieved 1 June, 2012, from <http://www.who.int/about/definition/en/print.html>
- Zeedyk, M., Gallacher, S., Henderson, M., Hope, G., Husband, B., & Lindsay, K. (2003). Negotiating the transition from primary to secondary school: Perceptions of pupils, parents and teachers. *School Psychology International, 24*(1), 37–79. doi:10.1177/0143034303024001010

About the Authors

Associate Professor **Stacey Waters** is Head of Edith Cowan University's Child Health Promotion Research Centre (CHPRC) in Perth, Western Australia. She has a strong track record in health promotion intervention research, focusing on bullying prevention, mental health promotion, road safety and injury control, and social skill development in children and adolescents. Her recent PhD research aimed to investigate the active components of a school's environment, or ecology, which influence the extent to which young people feel connected to their school and the role this plays in promoting mental health. Stacey has won over \$1 million in competitive research funding and has published her PhD research widely in the scientific literature. She has also provided extensive expert consultation for government and non-government organisations preparing formative intervention designs and program evaluations.

Elizabeth Wenden is a Masters student and research assistant at Edith Cowan University's Child Health Promotion Research Centre in Perth, Western Australia. Her areas of interest include the mental health and wellbeing of children and adolescents, FIFO families, and rural health. She is currently undertaking a Masters of Public Health investigating the rural context of alcohol and tobacco use in regional and remote adolescents.