

Fostering School Belonging in Secondary Schools Using a Socio-Ecological Framework

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The benefits of belonging and feeling connected to school for adolescent mental health and wellbeing are well documented, but how belonging is fostered is less understood. The present article puts forward a new conceptual framework of school belonging based on Bronfenbrenner's (1979) sociological model of human development, using evidence from a range of previous peer-reviewed studies to better understand the factors that occur across five levels that affect a students' sense of school belonging (i.e., the individual level, the microsystem, the mesosystem, the exosystem, and the macrosystem). The conceptual framework is used to present a range of evidence-based school belonging strategies (some with examples) that schools can use to enhance student belonging. This article makes an original contribution to the field of psychological and educational research by presenting a socio-ecological framework to explore the themes that influence school belonging within a secondary school system. It broadens the frame of reference of school belonging beyond the individual student to consider features of the broader school system and environment.

■ **Keywords:** belonging, school belonging, school connectedness, academic motivation, school leadership

Belonging has been described as the need for positive regard from others (Rogers, 1951), affiliation motivation (McClelland, 1987), and the desire for relatedness (Vallerand, 1997). Friedman (2007) described a sense of belonging as the development of the self and identity building. It is a well accepted that sense of belonging is not dependent on participation with, or proximity to, others. Rather, it relies on perceptions about the quality of social interactions (Baumeister & Leary, 1995). Therefore, belonging could be considered as one's perception of his or her involvement in a social system or environment (Hagerty, Lynch-Sauer, Patusky, Bouwsema, & Collier, 1992).

An extensive review of the literature demonstrates that belonging is an important construct, not only at a theoretical level, but also at an empirical level (Hagerty, Williams, & Oe, 2002; Hale, Hannum, & Espelage, 2005). A marked proportion of the psychological literature suggests that general belonging is a vital component of psychological and physical health, and these effects are typically sustained (Daley &

Received 30 March 2016; Accepted 11 May 2016; First published online 10 June 2016

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Buchanan, 1999; Poulton, Caspi, & Milne, 2002; Wadsworth, Thomsen, Saltzman, Connor-Smith, & Compas, 2001).

A sense of belonging is considered to play a fundamental role in adolescent development, particularly in respect to identity formation (Brechwald & Prinstein, 2011; Davis, 2012), psychosocial adjustment, and transition to adulthood (O'Connor, 2010). The literature has also demonstrated that *school belonging*, more specifically, is an important factor in the successful psychosocial adjustment of young people and presents a purpose for schools to engage in interventions and strategies that might promote belonging to school (Lonczak, Abbott, Hawkins, Kosterman, & Catalano, 2002; Nutbrown & Clough, 2009; O'Connor, 2010; O'Connor, Sanson, & Frydenberg, 2012; Sari, 2012).

It has been argued that schools play an important role in fostering a sense of belonging for students (Allen & Bowles, 2013) because they are important institutions that can build social networks for young people. Yet, in a review of the literature concerned with school belonging, Allen and Bowles (2013) have argued that the importance of a student's sense of belongingness to school has not been given the same degree of attention as a student's academic success. This finding is consistent with the lower level of attention devoted to other areas of preventive interventions in schools, such as health promotion and social and emotional learning (Collaborative for Academic Social and Emotional Learning [CASEL], 2003; Hagerty et al., 1992; West, Sweeting, & Leyland, 2004). Very few examples of interventions aimed at specifically increasing a student's sense of belonging can be found at the secondary school level in Australian schools (e.g., SenseAbility; Beyond Blue, 2014); however, the absence of school belonging in whole-school intervention programs appears to be a universal issue, with very few examples in the literature (e.g., Centres for Disease Control and Prevention [CDC], 2009). One reason why school belonging is seldom examined in schools could be due to the absence of a model or framework that schools can employ to foster belonging in students. The field of school belonging research in this respect is largely theoretical, and this may be one factor that restricts the development of belongingness interventions (e.g., in addition to definitional and measurement issues).

Clearly, there is a need for frameworks that assist schools to foster school belonging. Yet, only a small number of conceptual frameworks have focused on school belonging at the student level (e.g., motivation, individual characteristics, emotional instability; Brendtro, Brokenleg, & VanBockern, 2002; Connell & Wellborn, 1991; Malti & Noam, 2009; Ryan & Deci, 2000). Further, these frameworks are limited because they have focused on school belonging as an internal, intra-individual phenomenon and, thus, have not accounted for relational factors and broader aspects in the school environment that influence a student's sense of belonging. While a few frameworks have recognised the importance of school resources and support (e.g., CDC, 2009; McMahon et al., 2008; Wallace, Ye, & Chhuon, 2012), very few of these frameworks have presented school belonging as a multidimensional construct within a multilayered social ecology based on empirical evidence (e.g., Rowe, Stewart, & Patterson, 2007; Waters, Cross, & Reunion, 2009).

The Socio-Ecological Framework of School Belonging

We propose that school belonging is a student's sense of affiliation to his or her school, influenced by individual, relational, and organisational factors inside a broader school

community, and within a political, cultural, and geographical landscape unique to each school setting. Put more simply, school belonging is one's feeling of being connected to a school within a school social system.

In this conceptual paper, we propose that school belonging is a multilayered socio-ecological phenomena, and we apply Bronfenbrenner's (1979) ecological framework for human development to school belonging in order to explore the various layers that affect a student's sense of school belonging. Bronfenbrenner's ecological framework for human development is concerned with systems in society and suggests that for young people, the family is the first unit to which children belong. This is followed by school and community, with each student belonging to a broader network of groups and systems.

All children are at the centre of multiple levels of influence (i.e., the microsystem, mesosystem, exosystem, and macrosystem) and schools can have a significant effect on their development and psychosocial adjustment (Bronfenbrenner, 1979). Bronfenbrenner's (1979) ecological framework for human development serves as a reminder that within any school setting, each student is a part of a greater whole influenced by formal and informal groupings, and overarching systems that are common and typically represented within all schools.

Socio-ecological frameworks such as Bronfenbrenner's (1979) emphasise the importance of social relationships but also include tangible environmental, physical, and ecological variables, such as classrooms and resources (Bronfenbrenner, 1979). The socio-ecological layers represented in such frameworks may provide a structure for schools to improve school belonging by working at the level of the individual, working with interpersonal relationships (e.g., peer, teacher, and parent), and addressing whole school approaches (Saab, 2009; Waters et al., 2009; Waters, Cross, & Shaw, 2010).

Bronfenbrenner's (1979) ecological framework for human development provides the most widely applied theoretical construct to date with which to investigate belonging in an organisational setting such as a school, while acknowledging the innate desire humans have to belong (Baumeister & Leary, 1995; Saab, 2009; Waters et al., 2009; Waters et al., 2010). This may be because Bronfenbrenner's socio-ecological framework represents the varied layers and systems within a school whereas other models and frameworks may only examine constructs directly related to the individual student (Brendtro et al., 2002; Malti & Noam, 2009).

The current conceptual paper proposes a socio-ecological framework of school belonging (Figure 1) to explore school belonging at the individual (through individual characteristics), microsystem (through relationships with parents, peers, and teachers), mesosystem (through school rules and practices), exosystem (through the extended school community), and macrosystem levels (through legislation, social norms, and government initiatives such as the nationally collected data on academic achievement).

The framework can be used by educators, school leaders, and school psychologists to intervene at various levels across the school to enhance school belonging. It also provides an organising framework for researchers in the field to categorise the many different research findings on school belonging at the individual, classroom, and organisational levels. Such a classification system will benefit schools and shed light on which layers within the schools should be prioritised.

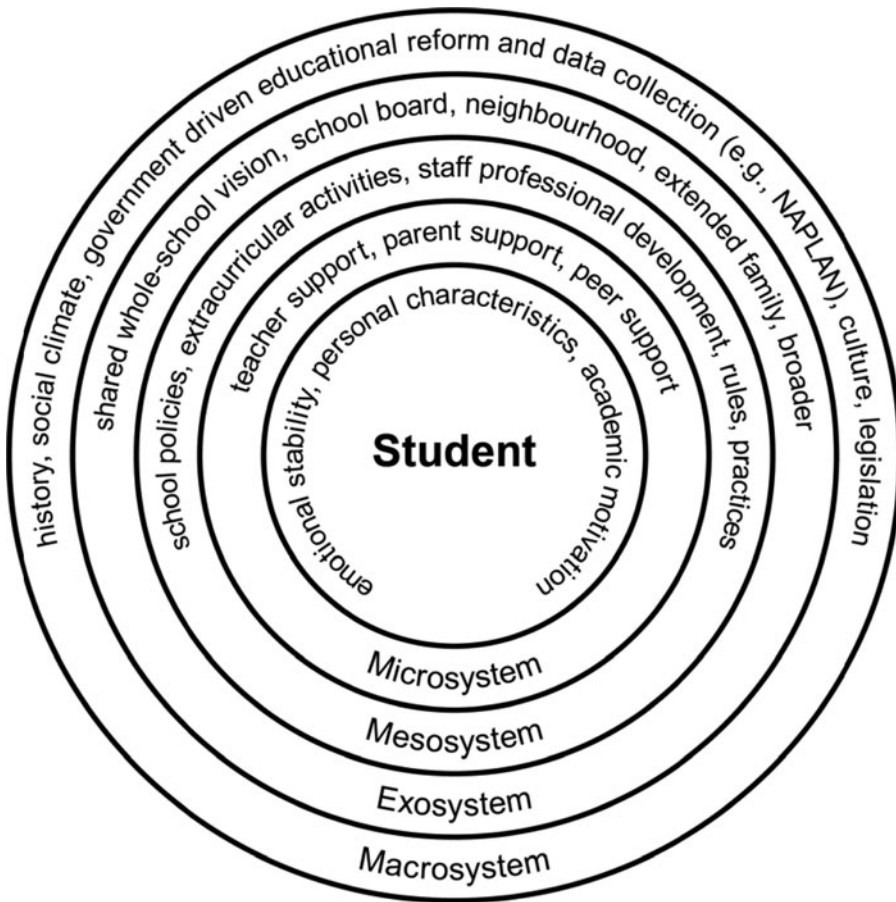


FIGURE 1
The socio-ecological framework of school belonging.

While there is plenty of research supporting the importance of school belonging, very few attempts have been made to understand *how it can be fostered*. Previous studies (Goodenow, 1992; Hurtado & Carter, 1997; Juvonen, 2006) have only focused on the definition, measurement, and importance of school belonging without identifying the precursors and methods for fostering a sense of belonging in school settings. Therefore, this article attempts to address this research-practice gap in schools by specifically looking at the themes that foster school belonging through Bronfenbrenner’s (1979) socio-ecological framework for human development. This article also endeavours to draw upon existing empirical research to support the development of a framework. The translation of findings into an evidence-based framework can assist schools to address the research-practice gap and provide the necessary antecedent conditions for fostering school belonging (Hirschkorn & Geelan, 2008; Rowe & Stewart, 2011). Conceptual frameworks can be viewed as theories in their early stages, according to Sharma and Romas (2008), and as such, they should use empirical evidence and be subject to ongoing testing to further develop an evidence base.

The framework used to support the socio-ecological framework of school belonging is based on the work of Wingspread Declaration on School Connections (2004), the Centers for Disease Control and Prevention (2009), as well as other research and various measurement instruments of school belonging (Appleton, Christenson, Kim, & Reschly, 2006; Goodenow, 1992; Libbey, 2004; McNeely, Nonnemaker, & Blum, 2002). This thematic framework represents a sample of important tiers in the literature on school belonging to broadly explore the question: *What themes influence school belonging?* The studies that informed the development of the socio-ecological framework of school belonging were sourced from electronic databases such as EBSCO's Discovery search layer, including Ovid Medline, Mental Health Abstracts, PsycINFO, Social Sciences Abstracts, Sociological Abstracts via SocioFile, Academic Search Premier, Social Sciences Citation Index, and ERIC. Studies were sourced from English-speaking countries and published within the last 20 years. Therefore, a broad range of studies have been used to support the development of the socio-ecological framework of school belonging.

The Layers and Their Interactions

The socio-ecological framework of school belonging outlines five levels of interconnected layers within an *ecology* that supports school belonging. The levels start with the individual and move in concentric rings outwards through the microsystem, mesosystem, exosystem, and macrosystem. The five layers of the socio-ecological framework of school belonging and associated evidence based practices will be discussed below.

Individual

The inner portion of the socio-ecological framework of school belonging represents the individual student and associated individual-level themes that relate to his or her sense of school belonging. Past literature indicates three distinct aspects within an individual student that have been found to correlate with school belonging: academic motivation, emotional stability, and personal characteristics (social and emotional competencies).

Academic motivation includes variables related to performance, objective measures (e.g., test scores and grades), classroom engagement, and perceived value and usefulness of the curriculum and school (Wingspread Declaration on School Connections,¹ 2004). Gillen-O'Neel and Fuligni (2013) performed longitudinal within-person analyses with 572 young people aged between 13 and 19 years over a 4-year period. The results suggested that school belonging was positively associated with a higher level of perceived academic value. The authors suggest that when young people feel connected to their school, they are more likely to find school useful and be academically motivated.

Emotional stability is defined as the absence of maladaptive behaviour, psychopathology, or persistent distress, thus including the absence of mental illness (Cole, Llera, & Pemberton, 2009). One example of an emotional instability variable that has been studied in the literature on school belonging is anxiety where a consistent inverse relationship has been found within its association with school belonging (Williams & Galliher, 2006; Lee & Robbins, 2000). It is unlikely that schools will use the term *emotional instability* in policy and practice. Instead, schools are more likely to build *emotional stability* and use terminology based on psychological health and

wellbeing (Donovan, 2011). This is why the term emotional stability has been used in the framework of school belonging rather than emotional instability. Emotional stability has not been examined in previous frameworks of school belonging; therefore, the socio-ecological framework of school belonging is unique in that it represents this important theme.

The third theme at the student level that has been shown to relate to school belonging involves personal characteristics (i.e., social and emotional competencies), such as coping skills, positive affect, self-efficacy, self-esteem, and self-concept (Hawkins & Weis, 1985; Faircloth, 2009; Reschly, Huebner, Appleton, & Antaramian, 2008; Samdal, Nutbeam, Wold, & Kannas, 1998; Sirin & Rogers-Sirin, 2004). Frydenberg, Care, Freeman, and Chan (2009) found that students who engaged in productive coping (i.e., the ability to successfully regulate behaviours, cognitions, and emotions in response to daily stressors) were more likely to exhibit a greater sense of belonging to their school. Other research (e.g., Reschly et al., 2008; Ryzin, Gravelly, & Roseth, 2009) has demonstrated that positive emotions like optimism, hope, and hopefulness are positively associated with school belonging as well. Reschly et al. (2008) identified that social and emotional competencies such as having a positive affect and productive coping skills play an important role in fostering school belonging and vice versa. Therefore, when schools engage in practices that encourage academic motivation, build emotional stability, and foster certain personal characteristics (e.g., coping skills, self-efficacy, self-esteem, and self-regulation), this will likely increase the students' sense of school belonging.

The direction of the relationships between academic motivation, emotional stability, and personal characteristics with school belonging has not been accurately determined from past research, but it is likely the relationship is bidirectional (e.g., Goodenow & Grady, 1993; Ryan, 1995; Klem & Connell, 2004; Zimmer-Gembeck, Chipuer, Hanisch, Creed, & McGregor, 2006). As such, it is suggested that while academic motivation, emotional stability, and personal characteristics may increase a sense of school belonging, school belonging may also lead to an increase in academic motivation, emotional stability, and personal characteristics (such as self-esteem and self-efficacy). Schools seeking to build school belonging can do so by creating high academic motivation, building strong emotional stability, and fostering personal characteristics of students.

Table 1 outlines a set of evidence-based practices designed to increase school belonging at the individual (student) level, based on the three themes of academic motivation, emotional instability, and personal characteristics (Caraway, Tucker, Reinke, & Hall, 2003; Zimmer-Gembeck et al., 2006; Sirin & Rogers-Sirin, 2004). That is, these practices are directed at the student and designed to boost his or her academic motivation, cultivate emotional stability, and foster personal characteristics such as coping skills, self-esteem, positive affect, and prosocial goal behaviour. Future intervention studies are needed to confirm the potential for academic motivation, emotional stability, and personal characteristics to increase school belonging, but Table 1 represents key independent variables found in studies that have examined school belonging that have reported a significant and positive relationship and have reported medium to large effect sizes (medium $\geq .30$, large $\geq .50$, Cohen, 1988) ranging from $r = .32$ to $r = .72$. These variables are presented alongside effective evidence-based practices identified in previous research derived from the literature.

TABLE 1
Individual Level Practices Associated With Socio-Ecological Framework of School Belonging

| Target area | Evidence-based practices that can increase school belonging | Independent variables | Related studies |
|---|--|--|---|
| Academic motivation | Encourage students to have high (developmentally appropriate) expectations of their own academic ability. Engage in practices that motivate students to aim to do well. Communicate expectations concerned with learning and behaviour. Apply flexible teaching methodologies and personalise learning. Use consistent positive messages that encourage students to achieve their personal best. | Self-academic rating and education goals | Heaven, Mak, Barry, and Ciarrochi (2002) Klem and Connell (2004) Guthrie and Davis (2003) |
| | Assist students to understand the benefit and purpose of what they are learning in relation to long- and short-term outcomes (i.e., perceived instrumentality) and lesson goals. | Perceived Instrumentality | Walker (2012) |
| | Express a belief that what is being taught is important and valuable. Ensure that teachers are allocated to subject areas that they are interested and passionate about. Relate information to the students' real world and experiences. | Valuing academics | Battistich, Schaps, Watson, and Solomon (1996) Whitlock (2006) |
| | Apply mastery goal orientation in the classroom so that students have opportunities to set goals, acquire skills to master those goals, and set further goals. Use teacher feedback to motivate students towards their goals. Emphasise student progress and help students have a good understanding of where they are in their progress and where they are headed next. | Mastery Goal Orientation | Wentzel (1998) Dweck, 1986) |
| | Foster motivation through specific classroom interventions designed to motivate students (e.g., student-directed and strength-based learning). In addition, present novel and interesting learning opportunities to students that are based on student interests and abilities. Engage students through interactive approaches such as role play, group work, and problem solving. Teach skills and strategies related to academic motivation, competence and effective study (i.e., positive self-talk, goal setting, time management, organisation, help seeking). Encourage intrinsic rewards from learning by seeking feedback of student work from other students, teachers, parents, and the local school community. | Motivation | Battistich et al. (1996) Goodenow and Grady (1993) Patton et al. (2006) |
| Teach students skills related to self-regulation to assist in self-monitoring of their academic behaviour and motivating themselves. These skills can be taught by using reward systems and checklists to ensure they are on task and/or working towards acquiring the skills to achieve their goals. Enable students to develop skills that will assist them to prepare for class with the right material and resources. | Academic self-regulation | Ryzin et al. (2009) | |

TABLE 1
Continued

| Target area | Evidence-based practices that can increase school belonging | Independent variables | Related studies |
|--|--|---|--|
| Emotional stability | Provide career guidance and counselling services to students in respect to setting long-term goals and career ambitions. | Future aspirations | Reschly et al. (2008) |
| | Implement mental health promotion activities and interventions using a whole-school approach (e.g., Act Belong Commit, www.actbelongcommit.org.au). Adopt specific evidence-based programs that target skills related to self-care, resiliency, social connectedness, managing stressors, and resolving conflict. Some specific examples include Mindmatters (www.mindmatters.edu.au), Coping for Success (Frydenberg, 2011), and Thinking Skills for Peak Performance (Brandon, 2012). | Depressive symptoms | Kaminski et al. (2010) Kelly et al. (2012) Kuperminc, Leadbeater, and Blatt (2001) Shochet, Dadds, Ham, and Montague (2006) Shochet, Smith, Furlong, and Homel (2011) |
| | Educate staff to identify early warning signs of mental illness, implement mental health first aid, and understand appropriate referral and response pathways for students at risk. Train key staff members in postvention (i.e., interventions conducted after a critical incident, to restore wellbeing when managing a critical incident). Encourage staff to proactively reach out to students who may be exhibiting signs of stress or distress. | Emotional distress/problem Stress Fear of failure Psychoticism | Education Development Center (2008) Waters et al. (2010) Wentzel (1998) Wilkinson-Lee, Zhang, Nuno, and Wilhelm (2011) Roche & Kuperminc (2012) Caraway et al. (2003) Heaven et al. (2002) |
| Encourage student help seeking behaviours across the school. Enable students to know where to access key staff members to seek personal support when needed (i.e., school counsellor, psychologist, chaplain). Ensure that these individuals are known within the school community (e.g., they may participate actively in other school-based activities that are not directly related to counselling) to reduce stigma for students seeking these services. | | | |

TABLE 1
Continued

| Target area | Evidence-based practices that can increase school belonging | Independent variables | Related studies |
|--------------------------|--|--------------------------------------|--|
| Personal characteristics | Ensure that students understand that they have a role to play in fostering their own sense of school belonging. This can be done through psychoeducational opportunities provided by the school, social and emotional learning, small group interventions, or individual counselling that specifically address the key themes found to foster school belonging (e.g., academic motivation, emotional stability, personal characteristics, and support from others) as well as boosting individual social and emotional competencies. | Self-esteem | Ryan, Stiller, and Lynch (1994) Sirin & Rogers-Sirin (2004) |
| | Encourage students to identify their individual character strengths and provide opportunities for them to apply them within curricula and co-curricula activities. Character education has been shown to increase self-efficacy and self-esteem. | | Proctor et al. (2011) |
| | Teach students about the benefits associated with a positive mindset (i.e., their beliefs and attitudes). For example, encourage students to view errors and mistakes as learning opportunities. | | Dweck (1986) |
| | Engage students in setting personal goals related to their wellbeing in addition to goals set around their academic outcomes. Interventions can occur within the school that foster positive relationships, coping skills, adaptability, resilience, and positive prosocial behaviour. | Prosocial goal pursuit and behaviour | Wentzel (1998) Zimmer-Gembeck et al. (2006) |
| | Consider the use of positive psychology interventions to foster optimism, hopefulness, and happiness (see Seligman, 2011). These interventions can include gratitude curricula, giving to others, and savouring what went well routines (Nielsen, 2011). | Positive affect | Heaven et al. (2002) Reschly et al. (2008) Ryzin et al. (2009) Stoddard, McMorris, and Sieving (2011) |

Note: Practices are derived from the literature as indicated.

Microsystem

The importance of a student's relationship with parents, peers, and teachers has been illustrated through various frameworks incorporating school belonging (e.g., CDC, 2009; Connell & Wellborn, 1991). One example is the Self-System Process Model applied to educational settings by Connell and Wellborn (1991). Elements of this model include relationship skills with peers and adults, self-awareness of feelings, emotional regulation, and conflict resolution skills. Thus, it is clear that both the individual and microsystem levels work together to foster school belonging.

Brophy (2004) encourages educators to enhance students' positive dispositional traits such as initiative and self-perceived competence, which contribute to social interactions and relatedness to adults and peers within a school setting. Through Brophy's work, based on a systematic review of motivational literature, the findings suggest that the individual and microsystem levels of the socio-ecological framework interact, because when a school builds the personal characteristics of self-perceived competence (e.g., self-efficacy, self-esteem, and self-concept), this increases the students' relational skills. This in turn strengthens relationships within the students' microsystem (e.g., with parents, peers, and teachers).

Peer support has been found to be an important variable in influencing a sense of school belonging (Goodenow & Grady, 1993; Hamm & Faircloth, 2005; Reschly, Busch, Betts, Deno, & Long, 2009; Osterman, 2000). Libbey (2004) found this variable to be especially valid on measures that looked at school connectedness. The literature suggests that peers may facilitate adolescent students' feelings of being connected to school through social and academic support (Wentzel, 1998), acceptance (Wang & Eccles, 2012), trust (Garcia-Reid, Reid, & Peterson, 2005), or merely being present (e.g., having friends at school; Whitlock, 2006).

In the literature, parents are also found to play an important role in fostering school belonging (Brewster & Bowen, 2004; Wang & Eccles, 2012). Studies have shown that when parents provide support and show care, compassion, and encouragement towards academic endeavours, young people are more likely to exhibit greater connectedness to school (Benner et al., 2008; Brewster & Bowen, 2004; Carter, McGee, Taylor, & Williams, 2007; Wang & Eccles, 2012).

The importance of teachers towards student outcomes has been widely studied (e.g., Anderman, 2002; Hattie, 2009; Wang & Eccles, 2012). In a large-scale synthesis of research, Hattie (2009) ranked a teacher-student relationship (large effect size, $d = .72$) as an important contributor to enhancing academic outcomes in students. In respect to school belonging, a study by Brewster and Bowen (2004) involving 699 high school students in the United States likewise established that while support from others (e.g., parents) was indeed beneficial for students, teacher support was the more important factor. This finding has been widely supported by other studies (e.g., Anderman, 2003; Garcia-Reid, 2007; Johnson, 2009; Sakiz, 2012).

Table 2 outlines examples of evidence-based strategies that specifically target the microsystem layer of the socio-ecological framework. Similar to Table 1, the approaches outlined are derived from the literature, as indicated in the table, and developed from key independent variables found in the literature that reported a significant and positive relationship with school belonging, with effect sizes ranging from medium to large strength, $r = .30$ to $r = .86$ (Cohen, 1988). Future research is needed to evaluate what specific interventions are needed for the themes of peer, parent, and teacher support to increase school belonging, but this table

TABLE 2
 Microsystem Level Practices Associated With Socio-Ecological Framework of School Belonging

| Target area | Evidence-based practices that can increase school belonging | Independent variables | Related studies |
|----------------|--|-------------------------------------|--|
| Parent support | Provide opportunities for parents to be involved in the school in meaningful ways, such as through family events and parent led committees. Enable strong communication between school staff and parents through the use of newsletters, information nights, and email correspondence. Encourage parents to feel comfortable in approaching staff members about their child's schooling. Consider disseminating information to parents that specifically provides information and strategies for supporting their child's learning and sense of belonging to the school. | Family support for learning | Reschly et al. (2008) |
| | Offer parenting courses and information nights that promote ways to foster positive parent-child relationships and positive communication skills. Ensure parents are aware of school support staff and teaching staff that may be able to provide appropriate referral pathways and support to parents when there has been a breakdown in the relationship between the adolescent and the parent. | Parent-student relationship | Brookmeyer, Fanti, and Henrich (2006) Carter et al. (2007) Henrich, Brookmeyer, and Shahar (2005) Kelly et al. (2012) Mo and Singh (2008) Shochet, Smyth, and Homel (2007) Stoddard et al. (2011) Waters et al. (2010) Wentzel (1998) Whitlock (2006) |
| Peer support | Enable multiple opportunities for students to know each other. Offer extracurricular activities, such as clubs, that can operate during lunchtimes and after school. Provide school sanctioned activities that foster social connectedness and school bonding (i.e., sports days, House activities). Encourage students to engage in these activities and ensure staff and parents model participatory behaviours. | Having friends and feeling accepted | Jennings (2003) Shochet et al. (2011) Whitlock (2006) Zimmer-Gembeck et al. (2006) |
| | Encourage student peers to be academically supportive towards each other. Create opportunities for study groups and peer-to-peer study support to assist homework and peer support learning. Encourage students to be inclusive, respectful, and tolerant towards the learning needs of others. | Peers are academically supportive | Goodenow and Grady, (1993) Reschly et al. (2008) |
| | Consider formal peer mentoring and peer support programs within the school. New students, for example, may be assigned to a peer group or buddy system. | Peers are emotionally supportive | Ryzin et al. (2009) |

TABLE 2
Continued

| Target area | Evidence-based practices that can increase school belonging | Independent variables | Related studies |
|-----------------|---|---------------------------------------|---|
| Teacher support | Encourage teachers to provide pastoral support to students. Allow teachers time to be available to students for personal support as well as academic support. Provide opportunities for teachers to get to know and understand their students (and at least know them by name). This can show their students that they care about them. Encourage teachers to seek feedback from students regarding their relationship and rapport. Consider structuring classes, tutorials, or home groups within the school so that teachers stay with the same students for a number of years. | Positive student-teacher relationship | Anderman (2003) Bowen, Richman, and Bowen (1998) Garcia-Reid (2007) Garcia-Reid et al. (2005) National Research Council and the Institute of Medicine (2004) Reschly et al. (2008) Shochet et al. (2007) Shochet et al. (2011) Waters et al. (2010) Zimmer-Gembeck et al. (2006) |
| | Demonstrate fair practices within the classroom. Teachers should model respectful behaviour towards each other and to students, and implement reasonable and consistent disciplinary procedures that are agreed upon by students and other staff. Teachers can create student-led groups that provide mechanisms and pathways for student voice (e.g., student representative committee or a quality of teaching committee). | Teachers show fairness | Sakiz (2012) |
| | Offer support for the academic learning of students. Consider implementing a tutoring program for students to seek additional support over their academic learning or extended learning opportunities after school or during the school holidays. Teachers can provide students with autonomy, support, and involvement over their own learning. They can use learning interactions, visible learning practices, and formative feedback (Hattie, 2009). | Academic support | Patton et al. (2006) Ryzin et al. (2009) Wentzel (1998) |

Note: Practices are derived from the literature as indicated.

represents some examples of approaches found in the previous literature worth exploring.

Mesosystem

The mesosystem can be seen as a byproduct of the interactions among the layers in the socio-ecological framework, and thus not only represents school processes, practices, policy, and pedagogy (Libbey, 2004; Saab, 2009), but also highlights the unique bidirectional interactions of the features within the microsystem layer. Tillery, Varjas, Roach, Kuperminc, and Meyers (2013) suggested that support for others within a school system (parents, peers, and teachers), may be made stronger or weaker by aspects of the mesosystem, such as the organisational structure and practices within the school. For example, schools promote safety at the mesosystem level through school rules and policies (Saab, 2009). *Feeling safe at school* has been identified in the literature as an important factor in a student's sense of belonging to school (CDC, 2009; Samdal et al., 1998; Wingspread Declaration on School Connections, 2004; Whitlock, 2006) and has also been found to be a central theme in measures of school connectedness and school belonging (Libbey, 2004).

School vision and mission statements are another example of one element of the mesosystem in the socio-ecological framework of school belonging. School vision and mission statements that outline a school's purpose may provide a school with an opportunity to create a shared vision in respect to how school belonging is prioritised. School vision and mission statements are, therefore, appropriate to include in a socio-ecological framework specific to a school setting due to their ability to offer a vehicle to promote a school's commitment to fostering school belonging. The development of school vision and mission statements that prioritise school belongingness can be created by schools to promote the school's approach to fostering school belonging and assist the development of goals and objectives around creating a stronger school community (CDC, 2009).

A number of studies have explored the importance of students' belief in school rules, discipline, and fairness upon school belonging (Brown & Evans, 2002; Libbey, 2004). A review of the literature on the subject shows strong evidence for school engagement and retention in schools where discipline is enforced consistently and fairly (Finn & Voelkl, 1993; Rumberger, 1995), therefore policies concerned with these variables should be an important consideration for all schools.

Multiple group memberships, such as those provided by extracurricular activities, are another example of a prevalent theme in the literature on school belonging. Researchers have found that a sense of school belonging can be positively influenced by the number of group memberships (Drolet & Arcand, 2013) and number of extracurricular activities a student may subscribe to (Dotterer, McHale, & Crouter, 2007; Libbey, 2004). One example is a study by Soria, Lingren Clark, and Coffin Koch (2011), who found that students' perceived sense of school belonging was influenced by whether or not they participated in extracurricular groups. The researchers investigated 1,865 students who participated in a range of student groups formed during orientation week activities. Results showed that students who attended these activities reported a higher sense of school belonging than those who did not. Furthermore, these students were more likely to have a higher grade point average than the respective cohort of non-participants. A similar relationship between a sense of belonging and

extracurricular activities has been found in other research (Blomfield & Barber, 2010; Dotterer et al., 2007; Knifsend & Graham, 2012; Waters et al., 2010).

As well as fostering themes that positively correlate to school belonging at the individual and microsystem levels, it is clear from the literature that school leaders may also intervene at the mesosystem of the socio-ecological system. Table 3 outlines a set of evidence-based practices for schools derived from the past studies, as outlined below. These practices aim to foster school belonging primarily at the policy and practice level. The mesosystem level can include many variables, and it can be difficult for researchers to disentangle the multiple causal relationships. These practices should therefore be interpreted with some degree of caution and may serve as a source of further research.

Exosystem

The exosystem represents the community surrounding the school and encompasses the local neighbourhood, grandparents and extended families (although depending on the family structure they may also reside in the microsystem), local businesses, and community groups (Saab, 2009). Like the mesosystem, this layer is facilitated by the opportunities provided by schools that bring these groups together. Cemalcilar (2010) suggests that changing school-level practices at the exosystem level (or macro-level through reforms and laws) is a valid recommendation for interventions designed to foster school belonging. Some concrete examples would be for schools to connect with local businesses or other schools within the neighbourhood, or to implement school activities that involve the broader school community and the extended families of its students. Schools may also consider engaging with local community partners who are willing to provide a range of services within the school (e.g., a visiting GP, nurse health checks, dental services; CDC, 2009).

Less empirical information is available for the exosystem and macrosystem levels on school belonging (Brown Kirschman & Karazsia, 2014). This is because it can be difficult to examine the exosystem or macrosystem, especially through studies concerned with preventative interventions like school belonging. These layers do not have a direct association with the student (or individual) where most studies are focused. Studies at the exosystem and macrosystem level on preventative interventions have traditionally engaged whole neighbourhoods at a considerable cost of time and resources (Brown Kirschman & Karazsia, 2014). Furthermore, publically available data concerned with the exosystem are not available as they are for other systems (e.g., mesosystem, microsystem).

Macrosystem

The macrosystem layer represents broader legislation and public policies at the federal level and includes factors such as regulations, guidelines, and government-driven initiatives and data collection (Saab, 2009) as well as the historical (e.g., past events, climate, collective attitudes, and conditions) and cultural (e.g., language, norms, customs, beliefs) context unique to each school. The macrosystem can be influential in the processes of daily school practice, particularly on how schools orient their priorities and goals. The macrosystem layer may influence a student's sense of belonging, although further research is needed to substantiate this claim. One example for this assertion can be seen in Australia, where the use of NAPLAN testing has been controversial and intertwined with debates around teacher effectiveness and performance

TABLE 3
Mesosystem Level Practices Associated with Socio-Ecological Framework of School Belonging

| Evidence-based practices | Related studies |
|--|--|
| Develop a whole-school shared vision that prioritises school belonging | |
| The development of a shared vision that prioritises school belongingness can be created by schools to promote the school's approach to fostering school belonging and assist the development of goals and objectives around creating a stronger school community (CDC, 2009). A school's vision or mission statement may be an appropriate vehicle to do this. | Bryson (2004) Legters, Balfanz, and McPartland (2002) Owings and Kaplan (2003) Stemler, Bebell, and Sonnabend (2011) Teddlie and Reynolds (2000) |
| Provide staff professional development | |
| Provide teachers opportunities to receive professional development in the area of student school belonging that will allow them to enhance their relationships with students, foster a positive, safe, and fair classroom environment, and implement a student-centred pedagogy. | Allen, Pianta, Gregory, Mikami, and Lun (2011) |
| Facilitate staff development through mentoring programs that are aimed at fostering student school belonging. Mentoring programs have been found to encourage teacher retention, increase job satisfaction, enhance teaching quality, as well as have positive implications for students' outcomes. Mentoring programs allow teachers to share strategies and techniques, learn from one another, and create a positive collaborative environment. | Ingersoll and Strong (2011) National Research Council and the Institute of Medicine (2004) Quint, Bloom, Black, Stephens, and Akey (2005) Sherin and Han (2004) |
| School policies | |
| Apply policies and practices that are concerned with student safety, discipline, and fairness (e.g., anti-bullying policies) as these variables have been found to be important for fostering school belonging. Seek input from students, parents, school staff, and community members to develop school policies. Use policies to create foundations for school rules/classroom rules that can be promulgated to create a fair and safe school climate. Ensure they are understood, and implemented by all staff members. | Hawkins, Von Cleve, and Catalano (1991). Garcia-Reid et al. (2005) Whitlock (2006) |
| Ensure policies and practices are created that are concerned with staff wellbeing and connectedness to the school, which may promote whole-school belongingness, not just student belongingness. If the wellbeing and belongingness of staff members is taken into account, teachers may be more effective educators, which may enhance the student-teacher relationship found to be an important theme for fostering school belonging. One example is the Positive Educational Practices (PEPS) Framework (Noble & McGrath, 2008) which applies an optimistic approach to educational planning for school-wide wellbeing. Concepts such as positive emotions for students and teachers, social-emotional learning, focusing on ideal characteristics and strengths, and developing a sense of meaning are emphasised. | Noble (2006) Noble and McGrath (2008) |

TABLE 3

Continued

| Evidence-based practices | Related studies |
|--|--|
| School curricular and extracurricular activities | |
| <p>Create school curricular and extracurricular activities that implement practices that foster school belonging. Allow for sufficient curriculum time to be available to teach social and emotional learning (SEL) found to increase school belonging. An example of such a program is MindMatters, which is a mental health program designed for Australian schools (Wyn Cahill, Holdsworth, Rowling, and Carson, 2000). One of the objectives of the MindMatters program is to include mental health promotion and education in the school curriculum. Another example could be for schools to introduce programs and interventions in the school curriculum targeting the personal characteristics of students (e.g., coping skills and resiliency skills) as well as mental health promotion initiatives shown to foster school belonging. For instance, research using interventions on coping techniques has demonstrated that adaptive coping styles are positively related to perceived sense of school belonging (Frydenberg et al., 2009). Another example is Mindfulness-Based Education programs (Schonert-Reichl & Lawlor, 2010), adapted from the practice of mindfulness to assist socio-emotional competence and encourage positive emotions.</p> | <p>Frydenberg et al. (2009) Schonert-Reichl and Lawlor, (2010) Wyn et al. (2000)</p> |
| <p>Extracurricular activities have been found to be an important theme for school belonging. Aim to provide opportunities for students to join multiple groups within the school system (e.g., lunch time and afterschool activities) and offer school sanctioned groups for students to belong to (e.g., home group/tutorial groups, school house groupings).</p> | <p>Blomfield and Barber (2010) Dotterer et al. (2007) Shochet et al. (2007)</p> |

Note: Practices are derived from the literature as indicated.

pay. A teacher's ability to implement a curriculum or bolster the study scores of students is not reported in the literature as a concern for students, yet it can often be a pressing burden for teachers in modern-day schools (Roffey, 2012; Thompson, 2013). This is perhaps a reflection of the pressure by governments and legislation to prioritise academic outcomes at the macrosystem level, above other important factors in the school system. Roffey's (2012) Wellbeing Australia Survey found that 'The additional stress on teachers working in unrealistic performance-driven environments has a negative impact on them, which in turn must impact [on the] health and wellbeing of the students in their classrooms' (p. 4). Increased teacher stress may affect the student-teacher relationship found to be important for fostering school belonging in this article. The absence of a positive student-teacher relationship may result in a reduction in school belonging. Therefore, schools should be mindful of the effect of government-driven initiatives and data collection and the effect this may have on the other socio-ecological layers common to schools.

Unless government bodies become aware of the growing pressure on schools and teachers from over-prioritising academic outcomes, schools may be reluctant to implement positive, proactive interventions related to school belonging or other areas (e.g.,

coping, resiliency, positive psychology) due to an already overcrowded curriculum (Thompson, 2013). Government bodies concerned with schools should therefore ensure that school belonging (and wellbeing more generally) is prioritised in major sources of information disseminated about schools; for example, including a school belonging measure on the *My School* website². How students perceive their sense of belonging to their school may be information parents wish to seek about a school, in addition to academic scores. This is particularly relevant for addressing school drop-out rates and student retention at school. Given that school life generally encompasses a diverse range of outcomes and experiences for students, it seems reasonable to argue that a school's educational practices should not be reduced to a set of standardised scores based on one element of the school's performance (Hardy & Boyle, 2012). At the school level, schools must be mindful of these macrosystem level influences from government reform and policy. It is paramount that schools set realistic and inclusive expectations for academic outcomes for their students, while being mindful of the needs of teachers (Roffey, 2012).

Strengths and Limitations of the Framework

The socio-ecological framework of school belonging is based on empirical evidence derived from past literature. The framework is designed as a comprehensive way for schools to foster school belonging. While the framework itself has been developed from peer-reviewed empirical studies, the inclusion of mainly correlational findings means that the direction of the relationship between the themes found to be strongly correlated with school belonging require further analysis. An important caveat of the framework, therefore, is that the influence of themes associated with school belonging cannot be regarded as causal.

Future Research

The framework and suggested evidence-based school practices would be strengthened if they were tested or evaluated using other methods of research. For example, a case study would refine the understanding of how context affects: (a) what practices are implemented, (b) how the practices are implemented, and (c) the success of the practices. A deeper understanding of the evidence-based socio-ecological framework and accompanying school practices would be gained by investigating the experiences, values, and preferences of school leaders, educators, students, and school psychologists (Dollaghan, 2004). Further research should aim to use longitudinal designs with objective measures (e.g., observation) for a more detailed understanding of school belonging.

Questions also remain about how school belonging may differ within specific populations. How does the framework apply to young people who do not belong? How does the framework apply to minority groups? While it is clear that social support is essential to improve belonging among students, this appears to be even more salient for minority groups; for example, individuals of different racial and ethnic backgrounds, persons with disabilities (McMahon et al., 2008), and students who identify themselves as having GLBTQI orientation (Aerts, Van Houtte, Dewaele, Cox, & Vincke, 2012). For these students, the acceptance of their peers, teachers, and parents has been found to be an important variable in developing prosocial behaviour and a positive attitude towards school (Galliher, Rostosky, & Hughes,

2004). Assessing the socio-ecological framework of school belonging's usefulness for specific populations can be examined by future research. Further investigation of the relationship between the broader school community, neighbourhoods, and extended families on the perceived sense of belonging by young people may yield more information on how school belonging can be fostered through a whole-school approach.

Empirical evaluation of the framework in different samples would allow identification of the direction of the relationships of the various individual, microsystem, mesosystem, exosystem, and macrosystem levels with school belonging, thus creating a clearly identified pathway for fostering this construct (e.g., what layers are interdependent, how are they weighted, and what combinations are especially important for school belonging to occur?). Therefore, further research is needed to empirically validate the framework and associated evidence-based school practices and further understand the importance of school belonging and how to increase and/or maintain it in secondary school settings.

Conclusions

This article presented a new socio-ecological framework of school belonging using an ecologically oriented school perspective. The socio-ecological framework of school belonging, in its present form, extends Bronfenbrenner's (1979) ecological framework for human development and represents school belonging as a multidimensional construct. Schools may be better equipped to prioritise school belonging more effectively if they have the appropriate and accessible resources by which they could base interventions on fostering and maintaining school belonging at *multiple levels*. Therefore, the socio-ecological framework of school belonging aims to bridge research and practice through equipping schools with evidence-based information on how school belonging can be increased or maintained.

Financial Support

This work did not receive financial support.

Conflict of Interest

None.

Ethical Standards

This review did not involve human and/or animal experimentation.

Endnotes

- 1 In 2003 the Centers for Disease Control and Prevention's (CDC) Division of Adolescent and School Health, and the Johnson Foundation convened an international gathering of educational leaders and researchers at the Wingspread conference centre in the United States. The Wingspread Declaration on School Connections (2004) was the result of a 'detailed review of research and in-depth discussions across two days' (p. 233).
- 2 My School Website (ACARA, 2009), which publishes National Assessment Program — Literacy and Numeracy (NAPLAN) results, a standardised measure of academic achievement, for all primary and secondary schools in the country

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