

SOCIAL-EMOTIONAL CONTEXT AND ACADEMIC COMPETENCE:
THE MEDIATING EFFECT OF SELF-EFFICACY

By

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ABSTRACT OF THE THESIS

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Within the school setting, it's critical to understand the social and emotional constructs that may affect youth and their ability to achieve academically. During the adolescent developmental phase, youth experience periods of exploration wherein they actively examine values, beliefs, and goals, and experiment with different social roles, plans, and ideologies. From the interaction between the social climate and an individual's character values, such as meaning in life, personal virtues and hope, a social-emotional context construct can be posited. Social-emotional context can be understood as the level of an individual's core identity beliefs in combination with their perceived social environment. The sample analyzed was included 369 participants, 183 Jewish and 186 Arab students. To the first hypothesis, that the disparate elements of school climate, personal virtues, meaning in life and hope would effectively combine into a single construct of social-emotional context the evidence from this study is supportive. A suitably high Cronbach's alpha was found ($\alpha=.88$) and this alpha held to acceptable levels across the two distinct subsamples of Jewish and Arab students ($\alpha=.78$ and $.87$ respectively).

However, the second hypothesis of this study, that the external validation of the social-emotional context construct can be evaluated via a mediation analysis with academic competence and self-efficacy, was not supported. Although social-emotional context had a significant relationship with self-efficacy ($r=.56, p<.001$) and that this significance held across both the Jewish and Arab subsamples ($r=.56$ and $.52$ respectively, $p<.001$ for both), hierarchical regression found that social-emotional context is not mediated by self-efficacy in either subsamples.

This study found that perceptions of school climate, personal virtue, meaning in life and hope can be combined into a valid construct: social-emotional context. And, though the potential to impact academic competence is theoretically supported, further research is needed to evaluate whether this external validation is more than theoretically sound.

Cultural issues in this study relating to both the measures and the ratings suggest that this evaluation may best be done in a more homogeneous population linked more closely to the normative samples of the instruments used to more accurately see the potential activation of theory in practice.

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Introduction

Early adolescence often involves significant increases in adjustment problems, including internalizing problems such as depression and anxiety (Karevold, Roysamb, Ystrom, & Mathiesen, 2009), delinquency, and substance use (Farrington, 2004), in addition to decreases in academic achievement (Dotterer, McHale, & Crouter, 2009; Fredricks & Eccles, 2002; Ryan & Patrick, 2001). Shortcomings in social-emotional competencies have been associated with all of these difficulties (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Social-emotional competencies can be defined as the core competencies to recognize and manage emotions, set and achieve positive goals, appreciate the perspectives of others, establish and maintain positive relationships, make responsible decisions, and handle interpersonal situations constructively (Elias et al., 1997). As an institution, schools are in a unique position to improve the lives of young people as they have the potential to provide access to support, resources, and services (Billy et al., 2000; Conduct Problems Prevention Research Group, 2010; Tomb & Hunter, 2004). Within the school setting, it is critical to understand the social and emotional constructs that may affect youth and their ability to achieve academically. Further, the social-emotional context within which students pursue their goals is important to explore in relation to academic competence.

While evidence exists for the potential relationship between adolescents' social-emotional context and academic outcomes, it is proposed here that self-efficacy is central to the significance of this relationship. Of the areas proposed to make up social-emotional context, prior research has found that school climate (Way, Reddy, & Rhodes, 2007a),

personal virtues (Good & Adams, 2008a), meaning in life (Brassai, Piko, & Steger, 2011), and hope (Ciarrochi, Heaven, & Davies, 2007) could all have an independent impact on academic competence. Though a relationship between self-efficacy and academic outcomes has also been identified (Farrell, Henry, Schoeny, Bettencourt, & Tolan, 2010; Zimmerman, 2000b), self-efficacy is proposed here as the key mediator between academics and the social (school climate) and emotional (personal virtues, meaning in life, hope) context of the lives of youth. The impact of adolescents' social-emotional context on academics is mediated by self-efficacy because, without internal belief in one's own ability to enact a course of action, one's social and emotional concepts cannot be actualized into competence (Bandura, 1995b).

It is possible to look at students as the 'customers' of the educational 'product' where the outcome is 'academic achievement.' However, both the model and the outcome are significantly more complex than this suggests. Teacher preference, the degree to which a teacher positively or negatively perceives a specific student, has been found to predict adjustment of children in school. Longitudinal studies have found a relationship between low teacher preference and negative academic and social outcomes (Mercer & DeRosier, 2008). Because teachers influence the classroom climate, teacher preference can affect a student's general social acceptance as well as peer acceptance of specific social behaviors (e.g., aggressive and prosocial) (Chang et al., 2007; Mercer & DeRosier, 2008). Teachers tend to dislike aggressive and disruptive students and prefer students who are high-achieving, hard-working, and display pro-social behavior (Babad, 1993; Birch & Ladd, 1998; Wentzel & Asher, 1995). Further, there is a positive relationship between students' behavioral engagement and their academic outcome and

evidence to support a positive association between emotional engagement and academic achievement (Fredericks, Blumenfeld, & Paris, 2004). For example, school engagement has been found to involve behavioral and emotional components, and plays a mediational role in the association between individual assets and academic competence (Li, Lerner, & Lerner, 2010).

Thus, while academic achievement is often defined in numeric terms such as standardized tests or grades, academic success is predicated in significant part on academic competence, a multidimensional construct. Academic competence is comprised of the skills, attitudes, and behaviors that contribute to teacher's judgments of academic performance and thus to a student's academic achievement in the classroom (DiPerna & Elliott, 1999). When teachers evaluate a student's academic skills, they look for interpersonal skills, study skills, motivation, and engagement, all key components of academic competence (DiPerna & Elliott, 1999). Academic competence can be understood as the teacher's evaluation of a student's behavioral and emotional engagement, an assessment that critically impacts more standard measures of academic achievement. For the purpose of this study, the academic outcome evaluated is teacher perception of academic competence.

Social-emotional context

The concept of a person-environment fit suggests that behavior is caused by a continuous interaction between the person and the environment (Pervin, 1968; Terborg, 1981). The dissimilarity between a person's needs or self-concept and what is available in their environment can result in dissatisfaction and lowered performance (Pervin, 1968, 1992). However, there are two qualifications to this: (1) the dissimilarity between the

individual and the environment has to be large, and (2) the individual difference variable must be important to the person's self-concept (Parker, Jimmieson, & Amiot, 2009). In application, the idea is that a mismatch between individuals' emotional needs and what is provided by the social environment becomes stressful in and of itself.

The school environment provides a unique opportunity to teach and learn core social, emotional, and academic skills (Zins, Weissberg, Wang, & Walberg, 2004). The school environment is particularly important because students typically do not learn alone but rather in collaboration with their teachers and in the company of their peers. Schools then have an important role to play in supporting children by fostering not only their academic development but also their social and emotional development (Durlak et al., 2011). Programs that aim to improve social-emotional skills aim to foster the development of five interrelated competencies, i.e., self-awareness, self-management, social awareness, relationship skills, and responsible decision making (Collaborative for Academic Social and Emotional Learning, 2005). Occurring alongside the goal of skill development is the concept of character, which can be defined as a constellation of attitudes, behaviors, motivations, and skills that coalesces into the realization of one's positive development as a person, intellectually, socially, emotionally, and ethically (Battistich, 2005). Thus the concept of social-emotional context arises from the dual theoretical backgrounds of school-based person-environment fit and social-emotional skills programming. Social-emotional context can then be understood as the level of an individual's core identity beliefs in combination with their perceived social environment.

From the importance of the interaction between the self and the social environment, a social-emotional context construct can be posited. Thus, the interaction

between the social climate and an individual's character values, such as meaning in life, personal virtues and hope, can potentially be an important concept to evaluate. Within the school setting, academic competence is a critical outcome, and the role that an individual's social-emotional context plays in that outcome can be accessed through self-efficacy.

School Climate

The transition from middle-level school to high school involves a major environmental change that can tax personal efficacy (Wigfield A., Eccles J. S., Schiefele U., Roeser R., & P., 2006). Because this transition can involve new social structural arrangements, adolescents must attempt to reestablish their sense of efficacy, social connectedness, and status within an enlarged network of peers. Thus, the relational contexts of educational environments are significant predictors of students' psychosocial and academic well-being. As students enter adolescence, the importance of the school social atmosphere is particularly important as adolescents' expanding capacity for perspective-taking results in their increased awareness and concern with the opinions of others (Good & Adams, 2008b). School climate can be understood as the shared beliefs, values, and attitudes that shape the interactions between students, teachers, and administrators and further set acceptable behaviors and norms for the school (Kuperminc, Leadbeater, Emmons, & Blatt, 1997). The four areas which can define school climate are safety, relationships, teaching and learning and the institutional environment (Cohen & Geier, 2010). Safety can be understood as both physical and emotional, and encompasses the rules and norms that define the environment (Devine & Cohen, 2007). Relationships can be seen within a context of general social support (e.g. respect for diversity; adults,

students, teachers) and school connectedness and engagement (Ruus et al., 2007; Whitlock, 2006). Teaching and learning is the value placed on learning, teacher support as well as faculty retention (Cohen & Geier, 2010). The Institutional environment is defined as the physical environment of the school including class size (Stevenson, 2006) and other environmental variables such as classroom layout or activity schedules (Conroy & Fox, 1994).

From this definition, it is obvious that a positive school climate is recognized as an important component of successful and effective schools (Brand, Felner, Shim, Seitsinger, & Dumas, 2003; Kreft, 1993; Miller & Fredericks, 1990). School climate can have an impact on a range of academic, behavioral, and socio-emotional outcomes (Anderson, 1982; Haynes, Emmons, & Ben-Avie, 1997). Specifically, school climate can have an impact academic achievement (Brand et al., 2003); student academic, social, and personal attitudes and motives (Battistich, Solomon, Kim, Watson, & Schaps, 1995); attendance and school avoidance (Brand et al., 2003; Welsh, 2000); student delinquency (Gottfredson, Gottfredson, Payne, & Gottfredson, 2005; Welsh, 2000); attitudes and use of illegal substances (Brand et al., 2003), bullying (Nansal et al., 2001); victimization (Gottfredson et al., 2005; Welsh, 2000); depression and self-esteem (Brand et al., 2003; Way, Reddy, & Rhodes, 2007b); and general behavior problems (Battistich & Horn, 1997; Kuperminc, Leadbeater, & Blatt, 2001; Welsh, 2000).

Due to the multidimensionality of the school climate construct, it is important to be aware of both individual and group level factors when assessing school climate. Personal attributes can influence children's perceptions of the school climate. Girls have generally been found to have a more favorable view of the learning environment than

boys (den Brok, Fisher, Rickards, & Bull, 2006; Koth, Bradshaw, & Leaf, 2008).

Minority students can find the environment less safe and report lower levels of achievement motivation than Caucasian youths (Koth et al., 2008), which contributes to negative perceptions of school climate. Overall, children identified as at-risk for school failure tend perceive both themselves and their teachers more negatively (Montague & Rinaldi, 2001).

School-level factors have also been found to be predictors of student perceptions of the school environment. Perceptions of school climate can be related to school size (Griffith, 2000; McNeely, Nonnemaker, & Blum, 2002; Welsh, 2000), student–teacher ratio (Griffith, 1995), and student mobility (Griffith, 2000). Aggregated indicators of student characteristics (e.g., socioeconomic status (Battistich et al., 1995; Vieno, Perkins, Smith, & Santinello, 2005) and school type (public vs. private or urban vs. rural (Vieno et al., 2005) have also been linked with perceptions of school climate. Larger class size as well as high teacher turnover is significantly negatively associated with achievement motivation potentially because these can be related to greater perceptions of chaos (Koth et al., 2008).

From a social cognitive perspective (Bandura, 2001), people tend to react to experiences as they subjectively perceive them, which does not necessarily correspond to the experience objectively. Consequently, it is important to understand that it is the students' perceptions of the school environment that is likely have the significant impact on their behavior at school. Thus, improved perceptions of the classroom environment have been shown to improve social and academic outcomes in children (Battistich,

Schaps, & Wilson, 2004; Blankmeyer, Flannery, & Vazsonyi, 2002; Murray & Greenberg, 2000).

Here, school climate can be understood at the social aspect of the social-emotional context in which a student develops emotionally and academically. It is further proposed that the effect of school climate on the social-emotional context's impact on academics is mediated by self-efficacy. Students with a strong level of belief in their own ability to affect and be affected by the social context are more likely to find a positive environment positively impacting their academic outcomes.

Personal Virtues, Meaning of Life and Hope

Adolescence is considered the most crucial period of identity formation, wherein individuals are afforded a socially sanctioned opportunity to explore different ideals (Adams et al., 2001). During this developmental phase, youth experience periods of exploration wherein they actively examine values, beliefs, and goals, and experiment with different social roles, plans, and ideologies. This process of exploration is assumed to lead to a set of commitments to which one will adhere for the foreseeable future (Bosma & Kunnen, 2001). Young people displaying more advanced forms of identity exploration demonstrate greater confidence in their academic abilities in higher education (Berzonsky & Kuk, 2000; Boyd, Hunt, Kandell, & Lucas, 2003), and are more likely to be in good academic standing or to complete their degrees (Boyd et al., 2003). Identity exploration, particularly regarding core values and life meanings, is therefore an important component of developing commitments that will sustain the person through the transition to adulthood. A positive youth development approach begins with a vision of an able youth whose goal is to explore the world, gain competence, and acquire the

capacity to contribute importantly to the world (Damon, 2004). Such a perspective provides a context in which social-emotional competencies are more likely to be positively developed and valued.

Personal Virtues

An important protective factor for academic success in adolescence may be the development and identification of personal virtues (Good & Adams, 2008a). Virtues can be understood as the core characteristics valued by moral philosophers and religious thinkers: wisdom, courage, humanity, justice, temperance, and transcendence. These six broad categories of virtue were drawn from and appear consistently across historical surveys (Dahlsgaard, Peterson, & Seligman, 2005). These values match well with contemporary lists of traits that predispose individuals to a positive psychological life experience within the context of both positive mental health and psychological well-being (Peterson & Seligman, 2004). Possessing strong, positive personal virtues creates a context in which social-emotional competencies are more likely to be developed, because they are essential for enacting those virtues successfully.

Meaning in Life

Searching for a coherent meaning in life has long been proposed to be a resilience factor in adolescent development (Benson, Roehlkepartain, & Rude, 2003; Davey, Eaker, & Walters, 2003). There is growing evidence of a positive relation between meaning in life and health status in adolescence (Nielsen & Hansson, 2007; R  ty, Larsson, S  derfeldt, & Larsson, 2005). Additionally, meaning in life appears to be a predictor of psychological wellbeing in adolescence (Rathi & Rastogi, 2007). Among other findings, greater meaning in life has been linked with life positive affect (Hicks & King, 2007),

happiness (Siahpush, Spittal, & Singh, 2008), optimism (Steger, Frazier, Oishi, & Kaler, 2006), and life satisfaction (Steger & Kashdan, 2007). Furthermore, greater meaning in life can protect adolescents from risk behaviors such as drug use (Nicholson et al., 1994), and heavy drinking (Brassai et al., 2011; Newcomb & Harlow, 1986). By contrast meaninglessness has been found to be related to increased psychological problems in youth (Brassai et al., 2011). As implied earlier, living one's life with a sense of meaning gives an adolescent greater reason to build skills of interpersonal effectiveness and accomplishment.

Hope

Hope has been a positive psychology concept understood as an overall perception that one has the capabilities meet one's goals (Snyder et al., 1997). Although the construct of hope is dispositional, it is thought that changes in levels of hope can occur over time, potentially through interventions (Valle, Huebner, & Suldo, 2006). This conceptualization incorporates three major components of hope: goals, agency, and pathways. Conscious goals are the cornerstone of the theory. Goals can be short- or long term, and they may vary significantly with respect to their importance and probability of attainment (Snyder, 2000). Pathways represent a person's perceived ability to generate workable routes to goals (Snyder, Rand, & Sigmon, 2002).

High hope scores in school-age students are related to positive social interactions, self-esteem, optimism, and academic achievement (Snyder et al., 1997). Hope was also found to be positively correlated with adolescents' global life satisfaction and inversely correlated with internalizing and externalizing behaviors (Valle et al., 2006). High-hope individuals believe in their ability to succeed (Snyder et al., 1991), and as a result, they

are also better at actually succeeding at school (Ciarrochi et al., 2007). Having high hope also provides an emotional context in which social-emotional competencies are more likely to be important to an individual.

Self-Efficacy

Among the various mechanisms of human agency, perceived self-efficacy is the most crucial and pervasive. Without the personal belief that the desired outcome can be produced by action, there is little incentive to persevere in the face of adversity. While there may be other factors in operation, the belief that one has the power to produce effects by one's actions is at the core of action. Perceived self-efficacy is, therefore, posited as a pivotal factor in the potential relationship between social-emotional context and academic competence.

A basic premise of self-efficacy theory is that it represents an individual's belief in her or his capability to produce the desired effect by their own actions (Bandura, 1997). Self-efficacy is therefore an important component of the core beliefs one holds about one's self. These beliefs have been hypothesized to influence such actions as choice of activity, effort expenditure, and persistence in the face of obstacles, which can then, in turn, influence learning and thus academic outcomes (Bandura, 1986; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Pajares, 1996).

However, self-efficacy is also understood as task, context, and situation specific (Pajares & Miller, 1994) as well as based upon an internal frame of reference (Marsh, Walker, & Debus, 1991). This draws from earlier conceptualizations of internal-external locus of control as a generalized expectancy that was applied as a function of the social learning history of the individual (James & Rotter, 1958; Rotter, 1954). Self-efficacy can

further be characterized as a multidimensional construct that can vary in strength, generality (relating to many or specific situations), and level of difficulty (feeling efficacious for all tasks or only simple tasks) (Bandura, 1997).

Self-efficacy beliefs, therefore, are hypothesized to be acquired and modified rather than being a consistent trait. There are four proposed routes by which this occurs: (1) past performance accomplishment, (2) exposure to and identification with efficacious models, (3) access to verbal persuasion and support from others, and (4) experience of emotional or physiological arousal in the context of task performance (Bandura, 1977, 1986, 1995a). These four sources of efficacy information interact continually and reciprocally, affecting performance judgment that ultimately influences performance itself. Thus, it should be understood that self-efficacy is not a specific trait, but rather the combination of one's generalized expectancies and situational expectancies combining to produce an evolving, context-sensitive belief that one can perform the behavior that produces the outcome.

Self-efficacy beliefs are particularly important to explore within the context of academic competence. Self-efficacy has been positively related to higher levels of competence and learning in addition to a variety of adaptive academic outcomes such as higher levels of effort and increased persistence on difficult tasks (Bandura, 1997). Academic self-efficacy, then, can be understood to represent an individual's confidence that he or she can successfully execute academic tasks based on abilities, attitudes, and previous experiences (Lorsbach & Jinks, 1999; Schunk, 1991). Various reviews of the literature exploring the relationship between self-efficacy beliefs and academic competence have found that across elementary, secondary and higher education,

individuals with high academic self-efficacy tend to approach difficult tasks and activities more willingly (Pajares, 1996; Schunk, 1991). Such reviews of academic self-efficacy have also found a relationship to a variety of academic competence-related outcomes, including grade point average (GPA), standardized test scores, persistence on difficult tasks, and enrollment in challenging courses (Pajares, 1996). Similar reviews also found that low academic self-efficacy can result in less academic engagement, which then can lead to lower success, further reducing academic self-efficacy (Lorsbach & Jinks, 1999). Of particular note is the finding that college students with high self-efficacy for a specific area are likely to attain higher achievement in that area (Cavallo, Potter, & Rozman, 2004).

Bandura (1989) found that those with more efficacious beliefs actually are better able to achieve their desired goals. In a study of high school students, self-efficacy beliefs influenced the setting of goals and further affected the achievement of these goals within the school setting (Zimmerman, Bandura, & Martinez-Pons, 1992). Another study of high school students found that self-efficacy also significantly affected level of motivation which then affected drop-out rates (Alivernini & Lucidi, 2011). In a larger sense, self-efficacy can also aid an individual in persevering despite difficulties and setbacks (Maddux & Volkmann, 2010). The beliefs that adolescents hold regarding their ability to succeed are key to their subsequent successes or failures. These self-efficacy beliefs provide the foundation for motivation, well-being, and personal accomplishment in all areas of life. If perceived self-efficacy beliefs can be defined as the sense of confidence one has regarding one's performance of specific tasks, then without this confidence, accomplishment may be severely limited. For, adolescents, unless there is some belief

that their actions can produce their desired results, adolescents have little reason to act or to persevere in response to any ensuing difficulties. Thus, it is suggested here that the mechanism by which self-efficacy mediates social-emotion context and academic competence is that it encourages perseverance and provides confidence in the realization of personal concepts.

Summary and Hypothesis

Social-emotional context can be understood here as relative value of an individual's perception of their environment in combination with their core identity beliefs, all of which provide a backdrop against which specific social-emotional competencies are more or less likely to be developed. Social-emotional context is defined by four areas: school climate, personal virtues, meaning in life, and hope. Each area represents a set of cognitive-affective processes within the proposed social-emotional context construct that has the independent potential to significantly impact academic competence and school performance (Brassai et al., 2011; Ciarrochi et al., 2007; Good & Adams, 2008a; Way et al., 2007a). However, it is expected that these individual measures also combine effectively into a social-emotional context construct. A teacher's assessment of academic competence reflects the key skills, attitudes, and behaviors that critically impact more standard measures of academic achievement. It includes the quality of a student's behavioral and emotional engagement in the classroom and other aspects of learning-to-learn behaviors that are important to success in school, higher education, and the workplace. It is therefore valuable to evaluate the impact that an individual's social-emotional context can have on their academic competence.

It is posited here, however, that social-emotional context will not have the same level of impact without a correspondingly high level self-efficacy. Given the relationship between self-efficacy and ability to achieve desired goals (Bandura, 1989), it is proposed that a critical level of self-efficacious beliefs are necessary for the full impact of social-emotional context to be felt on academic competence. Thus, self-efficacy is proposed as the mediator between the social-emotional context (as defined by school climate, personal virtues, meaning in life and hope) and academic competence. A positive belief in their own capability to take action can allow an adolescent to take full advantage of their social-emotional context in ways that would be recognizable, and ratable, by teachers in school. While perceptions of school climate, personal virtue, meaning in life and hope all have the potential to impact academic competence, perceived self-efficacy fosters the greatest impact of social-emotional context on academic competence.

This study has two hypotheses:

Hypothesis 1 is that the relationship between measures of school climate, personal virtues, meaning in life, and hope will effectively combine into the social-emotional context construct. Hypothesis 2 is that the relationship between social-emotional context and academic competence is mediated by self-efficacy. A component of Hypothesis 2 is to provide initial external validity for the social-emotional construct by establishing its relationship to academic competence in two distinct samples.

Method

Context and Setting

The current study uses data from the Laws of Life program in Israel, known locally as the Meaning of Life program, which was first implemented in three schools during the 2008-2009 academic year. Year Two, 2009-2010 saw this number increase to 12 schools. The current project will include only Year Two data.

The overall structure of the Meaning of Life program was based in project-based learning, culminating in a specific project demonstrating learning. Students actively work with one another to talk about and create, “products” (i.e., essays, songs, artistic renderings, musical and dance compositions) that represent their Meaning of Life. The demonstration aspect involves community service, in the form of bringing their ideas to populations outside the school, such as parents, senior citizens, business and civic leaders, and members of the higher education community. As part of this process, a number of measures were given pre and post the Meaning of Life program/intervention. The measures represent various concepts including perceptions of school climate by the student, personal value assignment of “virtues,” individual life values “meaning of life,” personal feelings of hopefulness, self-efficacy and finally an evaluation of the student by the teacher.

It should be noted that while this project uses data from the Meaning of Life program, it is not intended to evaluate the efficacy of this program. The purpose of this study is to establish the validity of the social-emotional context construct. Additionally, this study explored the relationship between the measures used and academic

competence, as well as evaluated the hypothesis that the relationship between social-emotional context and academic competence is mediated by self-efficacy beliefs.

Participants

The sample consisted of 672 participants. Of this sample, 276 (41%) of the students were Jewish and 396 (59%) were Arab. The sample was a majority female ($n=416$, 62%) and in 10th grade ($n=443$, 66%). The sample was gathered from 8 schools, 4 Jewish schools that were additionally gender segregated, and 4 Arab schools that were all high schools (See Table 1A).

Table 1A: Demographics Full Sample

	Total Sample $N=672$ $n(\%)$	Arab Sample $N=396$ $n(\%)$	Jewish Sample $N=276$ $n(\%)$
Condition			
Control	201(29.9%)	201(50.8%)	--
Intervention	471(70.1%)	195(49.2%)	276(100%)
Ethnicity			
Arab	396(58.9%)	396(100%)	--
Jewish	276(41.4%)	--	276(41.4%)
Gender			
Male	256(38.1%)	155(39.1%)	101(36.6%)
Female	416(61.9%)	241(60.9%)	175(63.4%)
Grade Level			
8 th	114(17.0%)	--	114(41.3%)
9 th	57(8.5%)	--	57(20.7%)
10 th	443(65.9%)	338(85.4%)	105(38.0%)
11 th	58(8.6%)	58(14.6%)	--
School			
Jewish School1	57(8.5%)	--	57(20.7%)
Jewish School2	61(9.1%)	--	61(22.1%)
Jewish School3	44(6.5%)	--	44(15.9%)
Jewish School4	114(17.0%)	--	114(41.3%)
Arab School1	120(17.9%)	120(30.3%)	--
Arab School2	108(15.3%)	108(27.3%)	--
Arab School3	103(15.3%)	103(26.0%)	--
Arab School4	65(9.7%)	65(16.4%)	--

While the total sample consisted of 672 participants, analysis only included those students upon whom teachers completed the DESSA assessment of student strengths, which was added to the assessment battery at post-intervention. The DESSA sample size was 369 (see Table 1B), with 183 Jewish students and 186 Arab students. The sample was majority female ($n=239$, 65%) and in 10th grade ($n=222$, 60%). A comparison of which students were and were not rated noted no differences by gender or grade and confirmed reports from the research team indicating that teachers in some schools simply did not choose to complete the DESSA-mini.

Table 1B: Demographics DESSA Sample

	DESSA Sample $N=369$ $n(\%)$	Arab Sample $N=186$ $n(\%)$	Jewish Sample $N=183$ $n(\%)$
Condition			
Control	--	--	--
Intervention	369(100%)	186(100%)	182(100%)
Ethnicity			
Arab	186(50.5%)	186(100%)	--
Jewish	183(49.6%)	--	183(100%)
Gender			
Male	130(35.3%)	70(37.6%)	60(33.0%)
Female	239(64.8%)	116(62.4%)	123(67.2%)
Grade Level			
8 th	86(23.3%)	--	86(47.0%)
9 th	36(9.8%)	--	36(19.8%)
10 th	222(60.3%)	161(86.6%)	61(33.5%)
11 th	25(6.8%)	25(13.4%)	--
School			
Jewish School1	36(9.8%)	--	36(19.8%)
Jewish School2	37(10.1%)	--	37(20.3%)
Jewish School3	24(6.5%)	--	24(13.2%)
Jewish School4	86(23.3%)	--	86(47.0%)
Arab School1	54(14.6%)	54(29.0%)	--
Arab School2	39(10.6%)	39(21.0%)	--
Arab School3	49(13.3%)	49(26.3%)	--
Arab School4	44(12.0%)	44(23.7%)	--

Measures

All measures were translated into Hebrew and Arab by the research team at Tel Hai Academic College in Upper Galilee, Israel. Assessments were submitted to the Israeli Ministry of Education for scientific review and were approved.

Teacher Assessment of Student Strengths: Based on the 72-item Devereux Student

Strengths Assessment (DESSA)(LeBuffe, Shapiro, & Naglieri, 2009), a strength-based, norm-referenced, behavior rating scale, the DESSA-mini is comprised of an 8-item parallel form that is designed to be used on a universal (i.e. school- or program-wide) basis to determine the need for social-emotional interventions (Naglieri, LeBuffe, & Shapiro, 2011). The DESSA-mini yields a single score, the Social-Emotional Total (SET) score, which provides an indication of the strength of the child's social-emotional competence based on a comparison to national norms.

Teachers rate individual students on a 5-point scale from *never* to *very frequently*.

Examples: “*Show enthusiasm for classes or school activities*” and “*Respond well when confronted with obstacles.*”

General Self-efficacy Questionnaire: The English version was developed in 1985 and

published by (Schwarzer & Jerusalem, 1995). Participants respond to 10 items on a 4 point scale from: *This does not describe me at all* to *This describes me well*.

Examples: “It is easy for me to stick to my goals and achieve them”, “No matter what happens I can usually handle to the situation.”

Virtues Values Questionnaire: Created for this study based on the work of (Dahlsgaard et

al., 2005), the objective of the questionnaire was to present core examples of values that can be considered universal. Respondent see a list of 18 virtues found in all major

religions on 4 point scale and are asked to rate the extent to which they identify with those values, from *I think of myself as a little* to, *I think of myself as a lot*. Examples: “Fair”, “honest”, and “moderate.”

School Community Survey: Adapted from the Lickona and Davidson’s *School As A Caring Community Profile-II (SCAAP-II)(2001)*

[http://www.mc3edsupport.org/community/kb_files/sccp_II.pdf]: This questionnaire provides a baseline regarding school climate and but also reflects individual children's perception of school life. There are 25 items and participants respond to items on a 5 point scale from *I disagree entirely* to *I agree entirely*. Examples: “Students work well together”; “Students like being in this school.”

Meaning in Life Questionnaire: Created for this study, this questionnaire contained 20 items relating to two concepts: meaning in life and search for meaning. Each theoretical subscale contained 10 questions relating to the presence or search for meaning. All items were rated by participants on a 5 point scale from *completely disagree* to *agree entirely*. Examples include: “I believe I have a moral purpose in life” and “it is worth devoting time to learn about values.”

Combined Hope Scale: The primary instrument to assess hope was the Hope Scale developed by Snyder et al. (1991). This 12-item scale contains 4 items reflecting agency, 4 assessing pathways thoughts and the remaining 4 serve as distracters. The purpose of the measure is assesses a person’s agency and pathways thinking along an 8-point continuum from *Absolutely* to *Absolutely not*. This version was designed for individuals aged 15 or older. Because of a misunderstanding, the Jewish sample only was given the Children’s Sense of Hope Scale, also by Snyder et al. (1997).

Respondents are asked to rank 6 items on a 4-point scale, from *A little of the time* to *All of the time*. Mirroring the adult version, this scale contains two subscales, Agency and Pathway. For the purpose of this study, a 6 item, 4 point scale was created utilizing the items that reflect similar constructs in both measures along the agency and pathways subscales identified in both measures. An example of linked pathways items include, “My past experiences have prepared me well for my future” from the Adult matched to Child item “I think the things I have done in the past will help me in the future.” An example of linked agency items include: “Even when others get discouraged, I know I can find a way to solve the problem” from the Adult version matched to the Child item “Even when others want to quit, I know I can find ways to solve the problem.”

Hypothesis 1: The individual measures of school climate, personal virtues, meaning in life, and hope will combine into the social-emotional context construct.

Construct validity requires both internal and external validity. The initial step of establishing the coherence of the construct involved using factor analysis and item-scale and internal consistency analyses to determine whether the measures converged as expected to form the construct. In addition, the coherence of the construct for two distinct samples, Jewish and Arab, also was examined utilizing T-tests and Analysis of Variance (ANOVA).

Hypothesis 2: The relationship between social-emotional context and academic competence is mediated by self-efficacy.

Mediation hypotheses are frequently tested in both basic and applied psychological research, and mediation analyses are most often guided by the procedures outlined by (Baron & Kenny, 1986). Four steps are involved in the Baron and Kenny approach to establishing mediation. First, a significant relation of the independent variable (IV: Social-emotional context) to the dependent variable (DV: Academic Competence) is required in Equation 1. Second, a significant relation of the Social-emotional context (IV) to the hypothesized mediating variable (MV: self-efficacy) is required in Equation 3. Third, Self-efficacy (MV) must be significantly related to Academic Competence (DV) when both the Social-emotional context (IV) and self-efficacy (MV) are predictors of Academic Competence (DV) in Equation 2. Fourth, the coefficient relating the Social-emotional context (IV) to the Academic Competence (DV) must be larger (in absolute value) than the coefficient relating the Social-emotional context (IV) to the Academic Competence (DV) in the regression model with both the Social-emotional context (IV) and the Self-efficacy (MV) predicting the dependent variable. This causal steps approach to assessing mediation has been the most widely used method to assess mediation (Preacher & Hayes, 2004). In addition to the mediation hypothesis, the external validity of the social-emotional context construct was examined through its relationship to academic competence, as measured by the DESSA-mini.

Results

Because the instruments in this study had not been used extensively with Arab and Jewish Israeli populations, psychometric analyses were performed to ensure that the subscale and total scores would generalize and were adjusted where necessary. Internal consistency reliability was assessed by Cronbach's (1951) alpha. To determine what items would appropriately comprise total scores or subscales, Principal Component Factor Analysis was used. For total scores or subscales, an alpha of .80 - .90 was interpreted to mean that the scale has good reliability; .70 was interpreted to mean that the scale hung together enough to proceed but that it needs substantial revisions in the future (Nunnally & Bernstein, 1994). When reliability was found to be sufficient and the alpha level did not substantially increase when any single item was dropped, creation of a total score for each variable was indicated. Missing values for a given subscale or scale were replaced by the mean of items completed; however, if fewer than half of the items were completed, the individual was dropped from the analysis.

DESSA-Mini:

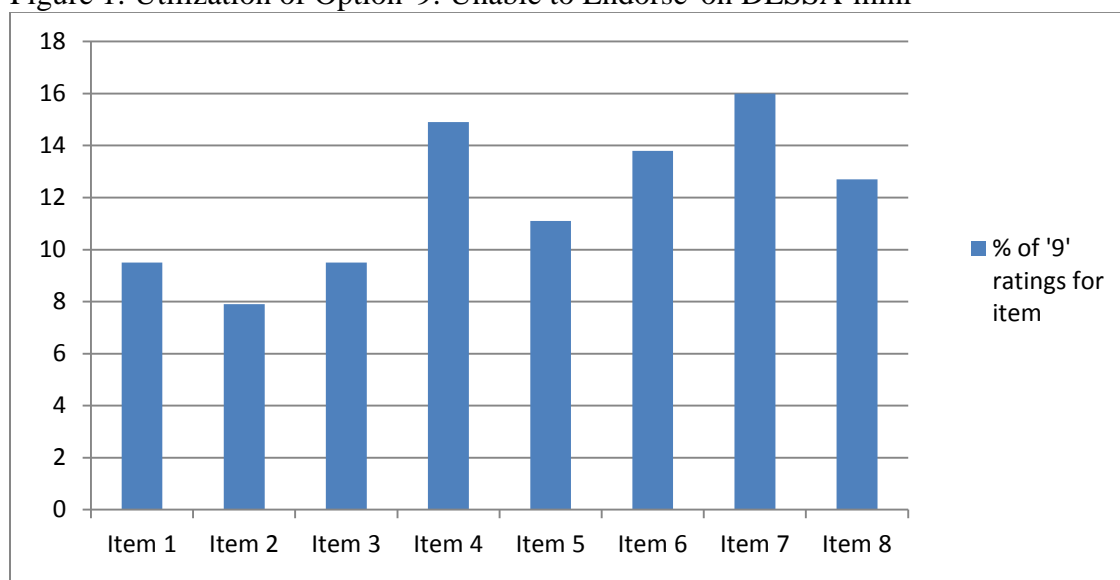
The teachers and Israeli-based research team added an additional rating option to the DESSA measure, that of '9: *unable to assess*.' This addition resulted in a particular issue of missing data. Of the 369 students rated using the DESSA, this rating option was used on 144 students, compromising 39% of the DESSA sample. The majority of students upon whom the rating '9: *unable to assess*' was used were Arab (56%) and female (69%), as well as in 10th grade (79%; see Table 1C).

Table 1C: Demographics DESSA Sample by Utilization of ‘9: unable to endorse’

	DESSA Sample N=369 <i>n</i> row% column%	Used ‘9’ rating Sample N=144 <i>n</i> row% column%	Never Used ‘9’ rating Sample N=225 <i>n</i> row% column%
Condition			
Control	--	--	--
Intervention	369(100%)	143(100%)	225(100%)
Ethnicity			
Arab	186(50.5%)	63 43.5% 56.3%	120 65.6% 53.3%
Jewish	182(49.5%)	81 34.4% 43.8%	105 56.5% 46.7%
Gender			
Male	130(35.3%)	44 33.8% 30.6%	86 66.2% 38.2%
Female	238(64.7%)	100 41.8% 69.4%	129 58.2% 61.8%
Grade Level			
8 th	85(23.1%)	23 26.7% 16.0%	63 73.3% 28.0%
9 th	36(9.8%)	8 22.2% 5.6%	28 77.8% 12.4%
10 th	222(60.3%)	113 50.9% 78.5%	109 49.1% 48.4%
11 th	25(6.8%)	--	25 100% 11.1%
School			
Jewish School1	36(9.8%)	8 22.2% 5.6%	28 77.8% 12.4%
Jewish School2	37(10.1%)	18 48.6% 12.5%	19 51.4% 8.4%
Jewish School3	24(6.5%)	14 58.3% 9.7%	10 41.7% 4.4%
Jewish School4	85(23.1%)	23 26.7% 16.0%	63 73.3% 28.0%
Arab School1	54(14.6%)	--	54 100% 24.0%
Arab School2	39(10.6%)	11 28.2% 7.6%	28 71.8% 12.4%
Arab School3	49(13.3%)	38 77.6% 26.4%	11 22.4% 4.9%
Arab School4	44(12.0%)	32 72.7% 22.2%	12 27.3% 5.3%

The utilization of this rating was analyzed with Pearson's Chi-Square and significant differences were found in grade ($X^2 = 38.88, p < .001$) and school ($X^2 = 102.97, p < .001$). Chi square analysis of the utilization of this option indicates no significant difference by student gender or ethnicity although ethnicity did evidence a trend ($X^2 = 3.23, p = .07$). The majority of teachers utilized this option for Item 7: "Appropriately get help for solving problems of various kinds" ($n=59$; 16%) followed by Item 4: "Spend time showing peers or younger students how to do things" ($n=55$; 14.9%; See figure 1).

Figure 1: Utilization of Option '9: Unable to Endorse' on DESSA-mini



Due to this missing data option, analysis of the DESSA-mini was conducted using the mean score, rather than the sum of items. Further, to correct for over-use of 'unable to assess,' mean scores were only created for those students who were rated on at least 4 items (this excluded 17 children, 5% of the total sample).

There were other issues with the DESSA ratings that required some adjustments in scoring. A pattern of the use of ratings of zero (not seeing any instance of a behavior) was noted: 55 students, representing 15% of the total sample, received a rating of '0' on at least 1 of the items. The majority received '0' only once or twice (5% and 4% of the total

sample respectively), though one student did receive '0's for all 8 behaviors. However, the utilization of the '0' rating was significantly different ($X^2=54.61$, $p<.001$) for the two ethnic groups, with only 2 Jewish students receiving ratings of 0 (1% of the group; 4% of those receiving this rating) while 53 Arab students received at least one rating of 0 (29% of the group; 96% of those receiving this rating). This also resulted in differential ranges for the two ethnicities; the minimum summation score an Arab student received was 0 while for Jewish students it was 12. Gender did not affect use of the '0' rating. To correct for this issue, scores of '0' were transformed into scores of '1' prior to creating the mean total score. This was done to offset the impact of Jewish teacher's underutilization of the '0' rating which created an artificially high floor for Jewish students in relation to Arab students. While the adjusted mean was highly correlated with the unadjusted score ($r = .99$), the adjusted score was used as a correction for the differential range of scores resulting from rater bias.

Relatedly, an adjustment was made for the use of the total score of the DESSA-mini. The DESSA-mini has established norms (Naglieri et al., 2011). Initial analysis of the DESSA total score (a summed score across the 8 items with ratings of 0 transformed into 1 and excluding participants with four or greater data points missing via either omitted or rated '9') compared to the standardized norms revealed the overall sample score is 'Typical' (and remains so within 1 standard deviation) and reflects a DESSA T-score of 50. However, when the sample is split by ethnicity, the Jewish sample reflects a DESSA T-score of 53 while the Arab sample has a DESSA T-score of 45. Further, the standard deviation of the Jewish sample puts the majority of the sample either in a range or 'Strength' or 'Typical'; while the Arab sample is either in a 'Typical' or 'Need' range.

In response to this, an alternative DESSA score was created: DESSA Endorsed. DESSA Endorsed reflects a transformation where low ratings (0-2; *Never* to *Occasionally*) are equated with non-endorsement of the behavior, while high rating (3-4; *Frequently* and *Very Frequently*) are considered endorsement of the behavior. Thus, each of the 8 items was rated as a dichotomous endorsed/not endorsed variable with the goal of eliminating ethnicity based-rater bias of the purpose of a total score that more accurately represents the level of a student's academic competence. These 8 dichotomous items were then summed to create a total score with a range of 0-8. Again, the 17 participants with greater than 4 items missing (either via omission or utilization of '9') were not included in this score. The purpose of the DESSA Endorse variable is to attempt to correct for variations in rating styles among the ethnic groups by reducing the DESSA to the core ideology, that of: is the student academically competent. The DESSA Endorse variable provides a range of 0-8, where 8 is a student who is highly academically competent and 0 is student who is academically not competent.

In addition, for the purposes of interpretation, the mean score across DESSA items was used rather than the summary score. The purpose of the DESSA Mean variable is to provide a score which attempts to correct for missing data and ethnic rating style differences and provides a range of response, in this case on a scale from 1-4. The range of 1-4 is due this score reflecting the overall mean of the ratings which were on a 1-4 scale; should this score be multiplied by 8 (the number of items) it would reflect the average of the total measure on a 8-36 scale. However, for the purpose of this analysis the range 1-4 will stand. Both DESSA Mean and DESSA Endorse will be used in the current analysis.

Finally, for the DESSA-mini, teacher ratings of 22 students (6% of the sample) had missing data in the form of omitted responses, and the majority ($n=20$, 90%) of these were missing 7 items. As a result, all 22 were excluded from analysis.

To determine whether the basic structure of the DESSA translated from the American sample to the Israeli context, Principal Component Factor Analysis was used with the DESSA Mean scores (ratings of 0 transformed into 1 and excluding participants with four or greater missing data points). Only 1 component was extracted, indicating that a DESSA-mini score across all of the items could be calculated. Cronbach's alpha for the 8 items was .88 indicating good internal reliability. When Cronbach's alpha was evaluated independently by ethnicity, the alpha for the Jewish sample was .80, and for the Arab sample .88, indicating good internal reliability for both.

Self-Efficacy: Principal component Factor Analysis extracted 2 components using Varimax with Kaiser Normalization. Component 1 is comprised of 5 items that explained 36.37% of the total variance:

- item 1 “I can always manage to solve difficult problems if I try hard enough,”
- item 6 “I can solve most problems if I invest the necessary effort,”
- item 7 “I can remain calm when facing difficulties because I can rely on my coping abilities,”
- item 8 “When I am confronted with a problem, I can find several solutions”
- item 9 “If I am in trouble, I can think of a good solution.”

The Cronbach's alpha for the 5 items was .74 indicating adequate internal reliability. Component 2 is comprised of 4 items that explained 11.32% of the total variance:

- item 2 “If someone opposes me, I can find the means and ways to get what I want,”
- item 4 “I am confident that I could deal efficiently with unexpected events,”
- item 5 “Thanks to my resourcefulness, I can handle unforeseen situations”
- item 10 “I can handle whatever comes my way.”

The Cronbach's alpha for the 4 items was .66 indicating low internal reliability. Item 3 “I am certain that I can accomplish my goals” did not load onto either component. The Cronbach's alpha for the 10 item full measure was .80, indicating acceptable reliability. Due to the low internal reliability for the components of this measure, all the item scores rather than the components were used for the total score. The total score for the Efficacy measure was created by summing the item scores for those students who responded to half or more of the items. Missing values were replaced by the mean in those cases in which they occurred for under half of the responses.

Virtues Values: Principal component Factor Analysis extracted 3 components using Varimax with Kaiser Normalization. Component 1 is comprised of 5 items that explained 29.44% of the total variance:

- item 1 “Fair,”
- item 3 “Honest,”
- item 4 “Help Others,”
- item 5 “Loving”
- item 6 “Kind.”

The Cronbach's alpha for the 5 items was .74 indicating acceptable internal reliability. Component 2 is comprised of 3 items that explained 9.30% of the total variance:

- item 9 “Wise,”
- item 10 “Able to control myself,”
- item 11 “Creative.”

The Cronbach's alpha for the 3 items was .62 indicating low internal reliability.

Component 3 is comprised of 3 items that explained 6.98% of the total variance:

- item 14 “Generous,”
- item 15 “Good at giving advice,”
- item 10 “Able to control myself.”

The Cronbach's alpha for the 3 items was .52 indicating low internal reliability. Due to the low internal reliability for the components of this measure, these components were not used. The Virtues Values measure originally contained 16 items; however item 2: "Virtue 2: *Don't give up*" was removed to increase reliability. The Cronbach's alpha for the remaining 15 items was .84, indicating good internal reliability for the Virtues Values measure. The total score for the Virtues Values measure was created by summing the item scores for those students who responded to half or more of the items. Missing values were replaced by the mean in those cases in which they occurred for under half of the responses.

Climate: Principal component Factor Analysis extracted 3 components using Varimax with Kaiser Normalization. Component 1 is comprised of 10 items which explained 22.42% of the total variance:

- item 1: ‘Students treat classmates with respect’
- item 3: ‘Students help each other, even if they are not friends’
- item 4: ‘When students do something hurtful, they try to make up for it’

- item 6: 'Students work well together'
- item 8: 'Students help new students feel accepted'
- item 9: 'Students pick on other students'(reversed)
- item 10: 'Students are willing to forgive each other'
- item 11: 'Students resolve conflicts without fighting, insults, or threats'
- item 22: 'Students are often bullied or teased in my school' (reversed)
- item 25 'Children in my class threaten and bully other children' (reversed).

The Cronbach's alpha for the 10 items of Component 1 was .79 indicating acceptable internal reliability. Component 2 is comprised of 8 items and explained 8.14% of the total variance:

- item 12: 'Students like being in this school'
- item 13: 'Staff or teachers are effective with preventing or stopping bullying and teasing'
- item 14: 'Students can talk to their teachers about problems that are bothering them'
- item 16: 'Teachers go out of their way to help students who need extra help'
- item 17: 'Teachers in this school like to come here'
- item 18: 'In this school you can count on adults to try to make sure students are safe'
- item 20: 'Students here have a lot of school pride'
- item 21: 'I have learned strategies in school to confront bullying and teasing'.

The Cronbach's alpha for the 8 items of Component 2 was .74 indicating acceptable internal reliability. Component 3 is comprised of 3 items and explained 6.23% of the total variance:

- item 15: 'In this school, students don't feel like they learn anything useful' (reversed)
- item 19: 'Teachers are unfair in their treatment of students' (reversed)
- item 24: 'I never bully or tease anyone while at school'.

The Cronbach's alpha for the 3 items of Component 3 was .51 indicating poor internal reliability. The total scores for Climate Component 1 and Climate Component 2 were created by summing the item scores for those students who responded to half or more of the items for each component. Missing values were replaced by the mean in those cases in which they occurred for under half of the responses.

Hope: Principal component Factor Analysis extracted only 1 component indicating the total score for the 6 item combined Child and Adult measure could be calculated by summing the item scores for those students who responded to half or more of the items. Missing values were replaced by the mean in those cases in which they occurred for under half of the responses. The Cronbach's alpha for the 8 items was .81 indicating acceptable internal reliability.

Meaning: Principal component Factor Analysis extracted 3 components using Varimax with Kaiser Normalization. Component 1 is comprised of 8 items that explained 19.84% of the total variance:

- item 1: 'I am very interested in talking about morality'
- item 8: 'It is worthwhile to devote time in life to learn about values'

- item 9: 'My way to happiness is also by directing my life towards moral goals'
- item 11: 'The more I think deeply about values that are important to me the more meaning I find in them'
- item 13: 'I have a clear set of values that help me live my life as I believe I should'
- item 17: 'It is very important to me to develop a moral purpose to life'
- item 19 'I want to develop a strong sense of moral purpose to my life'.

These items all correspond to the 'Presence' subscale theorized by the measure's authors.

The Cronbach's alpha for the 8 items of Component 1 was .79, indicating acceptable internal reliability. Component 2 is comprised of 7 items that explained 14.54% of the total variance:

- item 4: 'Life is too short to waste time on trying to find a meaning to life' (reversed)
- item 10: 'I don't spend much time thinking about a moral purpose to life' (reversed)
- item 12: 'Living according to a moral purpose is in my opinion a weakness' (reversed)
- item 14: 'In the modern world there is no time for thinking about a moral purpose (reversed)
- item 16: 'Young people need to spend their time getting ahead not wasting their energy discussing morality' (reversed)
- item 18: 'Life is based on competition and only the strong can succeed' (reversed)
- item 20: 'It is more important to be strong than just' (reversed).

These items all correspond to the ‘Search’ subscale theorized by the measure’s authors. The Cronbach's alpha for the 7 items of Meaning Component 2: Search was .74, indicating acceptable internal reliability. Component 3 is comprised of 4 items that explained 6.35% of the total variance:

- item 3: ‘I cannot live a happy life without strong values’
- item 5: ‘My beliefs and principles will determine my future’
- item 6: ‘There are values that I totally reject’
- item 7: ‘I won't be happy without finding meaning in life.’

The Cronbach's alpha for the 4 items of Component 3 was .44 indicating poor internal reliability. Total scores for the Meaning Component 1: Presence and Meaning Component 2: Search were created for these measure components by summing the item scores for those students who responded to half or more of the items. Missing values were replaced by the mean in those cases in which they occurred for under half of the responses.

Analyses for Hypothesis 1:

Creation of the Social-emotional context construct began with a review of the six measures (Virtues Values, Climate Component 1, Climate Component 2, Hope, Meaning Component 1: Search and Meaning Component 2: Presence) for any overlapping items with the Self-Efficacy and DESSA measures. This review revealed that Efficacy item 6: ‘I can solve most problems if I invest the necessary effort’ and Hope item 4 “There are lots of ways around any problem/ When I have a problem, I can come up with lots of ways to solve it” as well as Hope item 5: ‘Even when others get discouraged, I know I can find a way to solve the problem/Even when others want to quit, I know I can find

ways to solve the problem' had significant theoretical and correlational ($r=.46$ and $.47$ respectively; $p<.001$ for both) overlap. Thus, Hope items 4 and 6 were removed from the creation of the Social-emotional context construct.

Principal Component Factor Analysis was then used on the remaining 52 items from the six measure scales and extracted 6 components using Varimax with Kaiser Normalization and coefficients smaller than $.40$ suppressed. The rotated matrix did not indicate that any items needed to be removed for the Social-emotional context construct and that the 6 components together explained 40.98% of the total variance. Cronbach's alpha for the 52 items was $.85$ indicating good reliability, however removal of 3 items from Meaning Component 2: Presence (item 4: 'Life is too short to waste time on trying to find a meaning to life', item 16 'Young people need to spend their time getting ahead not wasting their energy discussing morality' and item 18 'Life is based on competition and only the strong can succeed') and 1 item from Climate Component 1 (item 9: 'Students pick on other students') improved the alpha to $.86$. When the sample is analyzed independently by Ethnicity, Cronbach's alpha is different for the two samples (Jewish $\alpha = .79$; Arab $\alpha = .87$) though both exhibit acceptable reliability. A scale total score for Social-emotional context was created by summing the scores for the remaining 48 items; for those respondents who did not fill out all items but completed greater than half of the items, a total score was created by summing the items with missing values replaced by the individual's mean score.

Descriptive data for Social-emotional context is presented in Table 2.

Table 2: Social-Emotional Context Descriptives

	<i>N</i>	Min	Max	M	SD
Social-Emotional Context	308	109	216	162.32	19.29
Arab Students	155	114	216	168.43	19.28
Jewish Students	153	109	203	156.14	17.27

Additionally, test-retest reliability was assessed by Pearson's correlation coefficient (r), where the Social-emotional context measure from pre-test was compared to the measure at post-test for each respondent. Test-retest reliability for the Social-emotional context construct was found to be $r=.39, p<.001$.

Analysis of the Social-emotional context measure revealed significant differences across demographic groups (See Table 3).

Table 3: Social-Emotional Context Construct Demographic Effects

	DESSA Sample <i>N</i> =358 M(SD)	Arab Sample <i>N</i> =176 M(SD)	Jewish Sample <i>N</i> =182 M(SD)
Ethnicity***			
Arab	168.43(19.28)	168.43(19.28)	--
Jewish	156.14(17.27)	--	156.14(17.27)
Gender**			
Male	157.42(17.95)	161.13(19.57)	153.15(14.98)
Female	164.72(19.51)	172.33(18.05)	157.46(18.10)
Grade Level***			
8 th	153.36(16.62)	--	153.36(16.62)
9 th	156.77 (16.12)	--	156.77(16.11)
10 th	167.40(18.95)	169.59(18.71)	160.84(18.35)
11 th	160.60(21.72)	160.60(21.72)	--

** $p<.01$ *** $p<.001$

T-tests revealed a significant effect of both ethnicity ($t=-5.89, p<.001$) and gender ($t=-3.16, p=.002$). ANOVA tests revealed a significant difference across grade level ($F=12.00, p<.001$) with a post hoc Bonferroni identifying a significant mean difference between 8th and 10th grade (M-diff = 14.04, $p<.001$). When Social-Emotional Context

was assessed within the ethnic subsample, gender was not significant for the Jewish group though it was for the Arab group ($t=-3.57, p<.001$). Although an ANOVA revealed no significant difference for grade level in the Jewish group, a trend between the 8th and 10th grades was in evidence ($F=2.82, p=.06$; Mean Difference = $-7.48, p=.06$). A t-test found no significant relationship for grade level in the Arab students.

Analyses for Hypothesis 2:

Table 4A represents the mean and standard deviation for the total score for each measure overall and also by ethnicity.

Table 4A: Measure Descriptives by Ethnicity

	DESSA Sample			Arab Sample			Jewish Sample		
	<i>n</i>	M	SD	<i>n</i>	M	SD	<i>n</i>	M	SD
DESSA-Mean ^a	329	2.58	.72	169	2.27	.72	160	2.91	.54
DESSA-Endorse ^b	329	3.84	2.39	169	2.91	2.24	160	4.82	2.14
Efficacy ^c	303	31.34	4.93	155	33.09	4.52	148	29.51	4.67
Virtues ^d	306	45.16	7.64	155	48.34	7.59	151	41.89	6.21
Climate 1 ^e	310	36.39	6.81	158	36.68	7.26	152	36.09	6.32
Climate 2 ^f	310	27.43	5.85	158	28.28	6.10	152	26.56	5.46
Hope ^g	305	19.51	3.70	156	21.76	2.96	149	17.16	2.83
Meaning 1 ^h	306	29.49	5.42	155	30.67	5.59	151	28.27	4.97
Meaning 2 ⁱ	306	23.69	5.71	155	21.19	5.69	151	26.26	4.48

Note:

^aDESSA-Mean range = 1-4

^bDESSA-Endorse range = 0-8

^cEfficacy range = 10-50

^dVirtues range = 15-60

^eClimate Component 1 range = 10-50

^fClimate Component 2 range = 8-40

^gHope range = 6-24

^hMeaning Component 1 range = 8-40

ⁱMeaning Component 2 range = 7-35

T-test comparison by ethnicity of the measures revealed a significant difference between Arab and Jewish students on the DESSA Mean ($t=9.13, p<.001$), DESSA Endorse ($t=7.88, p<.001$), Efficacy ($t=-6.77, p<.001$), Virtues Values ($t=-8.12, p<.001$), Climate Component 2 ($t=-2.62, p=.009$), Hope ($t=-13.84, p<.001$), Meaning Component

1 ($t=-4.03, p<.001$), and Meaning Component 2 ($t=8.66, p<.001$). Table 4B represents the mean and standard deviation for the total score for each measure overall and also by gender. *T*-test comparison by gender of the measures revealed a significant difference between male and female students on the Climate Component 1 ($t=-4.67, p<.001$), Meaning Component 1 ($t=-2.22, p=.03$) and Meaning Component 2 ($t=-3.24, p=.001$).

Table 4B: Measure Descriptives by Gender

	DESSA Sample			Male Sample			Female Sample		
	<i>n</i>	M	SD	<i>n</i>	M	SD	<i>n</i>	M	SD
DESSA-Mean ^a	329	2.58	.72	122	2.52	.72	207	2.62	.71
DESSA-Endorse ^b	329	3.84	2.39	122	3.66	2.36	207	3.94	2.40
Efficacy ^c	303	31.34	4.93	101	31.07	4.62	202	31.48	5.08
Virtues ^d	306	45.16	7.64	101	44.27	8.18	205	45.59	7.34
Climate 1 ^e	310	36.39	6.81	102	33.90	6.43	208	37.62	6.67
Climate 2 ^f	310	27.43	5.85	102	27.56	5.54	208	27.37	6.01
Hope ^g	305	19.51	3.70	101	19.23	3.75	204	19.65	3.67
Meaning 1 ^h	306	29.49	5.42	101	28.51	5.41	205	29.97	5.37
Meaning 2 ⁱ	306	23.69	5.71	101	22.20	5.75	205	24.42	5.56

Note:

^aDESSA-Mean range = 1-4

^bDESSA-Endorse range = 0-8

^cEfficacy range = 10-50

^dVirtues range = 15-60

^eClimate Component 1 range = 10-50

^fClimate Component 2 range = 8-40

^gHope range = 6-24

^hMeaning Component 1 range = 8-40

ⁱMeaning Component 2 range = 7-35

Table 4C represents the mean and standard deviation for the total score for each measure overall and also by grade level. *T*-test comparison by grade level of the measures revealed a significant difference between middle school and high school students on DESSA Mean ($t=4.80, p<.001$), DESSA Endorse ($t=4.12, p<.001$), Efficacy ($t=-5.65, p<.001$), Virtues Values ($t=-4.77, p<.001$), Climate Component 2 ($t=-4.07, p<.001$), Hope ($t=-13.84, p<.001$), Meaning Component 1 ($t=-3.62, p<.001$), and Meaning Component 2 ($t=4.08, p<.001$).

Table 4C: Measure Descriptives by Grade Level

	DESSA Sample			Middle School			High School		
	<i>n</i>	M	SD	<i>n</i>	M	SD	<i>n</i>	M	SD
DESSA-Mean ^a	329	2.58	.72	65	2.91	.58	264	2.50	.72
DESSA-Endorse ^b	329	3.84	2.39	65	4.91	2.37	264	3.58	2.32
Efficacy ^c	303	31.34	4.93	78	28.76	4.80	225	32.24	4.65
Virtues ^d	306	45.16	7.64	80	42.15	6.02	226	46.22	7.88
Climate 1 ^e	310	36.39	6.81	82	35.44	5.42	228	36.74	7.23
Climate 2 ^f	310	27.43	5.85	82	25.24	5.61	228	28.23	5.74
Hope ^g	305	19.51	3.70	79	16.86	3.02	226	20.44	3.46
Meaning 1 ^h	306	29.49	5.42	81	27.65	4.63	225	30.14	5.54
Meaning 2 ⁱ	306	23.69	5.71	81	25.55	4.26	225	23.02	6.02

Note:

^a.DESSA-Mean range = 1-4

^b.DESSA-Endorse range =0-8

^c.Efficacy range = 10-50

^d.Virtues range = 15-60

^e.Climate Component 1 range = 10-50

^f.Climate Component 2 range = 8-40

^g.Hope range = 6-24

^h.Meaning Component 1 range = 8-40

ⁱ.Meaning Component 2 range = 7-35

Pearson's correlation was utilized to assess the relationship between the 7 social emotional measures total scores and academic competence. A significant negative relationship between DESSA Mean and Efficacy ($r=-.16, p=.009$), DESSA Mean and Hope ($r=-.24, p<.001$), and DESSA Mean and Meaning Component 2 ($r=.29, p<.001$) was found. Additionally, as expected, there was a significant positive relationship between DESSA Mean and DESSA Endorse ($r=.91, p<.001$). Since DESSA Mean and DESSA Endorse were so highly positively correlated, the expected significant negative relationship between DESSA Endorse and Efficacy found for DESSA Mean with these two measures ($r=-.15, p=.01$) and Hope ($r=-.23, p<.001$) was also found as was the significant positive relationship between DESSA Endorse and Meaning Component 2

($r=.23, p<.001$). Finally, significant relationships between all the other measures excepting Meaning Component 2 were found (see Table 5A).

Table 5A: Measure Correlations: DESSA Sample

	1	2	3	4	5	6	7	8
1. DESSA Mean	--	--	--	--	--	--	--	--
2. DESSA Endorse	.91***	--	--	--	--	--	--	--
3. Efficacy	-.16**	-.15*	--	--	--	--	--	--
4. Virtues	-.10	-.10	.51***	--	--	--	--	--
5. Climate 1	.03	.05	.24***	.19**	--	--	--	--
6. Climate 2	-.05	-.03	.26***	.18**	.41***	--	--	--
7. Hope	-.24***	-.23***	.68***	.52***	.23***	.32***	--	--
8. Meaning 1	-.01	-.01	.40***	.31***	.21***	.31***	.40***	--
9. Meaning 2	.29***	.23***	-.01	-.14*	.23***	.05	-.18**	.17**

* $p<.05$ ** $p<.01$ *** $p<.001$

Pearson's correlation was also utilized to independently assess the relationship between the 7 social emotional measures total scores and academic competence for the Jewish and Arab subsamples. In the Jewish sample, the relationship between DESSA Mean and DESSA Endorse was significant ($r=.88, p<.001$) but neither had a significant relationship with any of the other measures. Significant relationships between all the other measures excepting Meaning Component 2 were found (see Table 5B).

Table 5B: Measure Correlations: Jewish Sample

	1	2	3	4	5	6	7	8
1. DESSA Mean	--	--	--	--	--	--	--	--
2. DESSA Endorse	.88***	--	--	--	--	--	--	--
3. Efficacy	-.08	-.05	--	--	--	--	--	--
4. Virtues	-.02	-.02	.49***	--	--	--	--	--
5. Climate 1	.08	.12	.19*	.18*	--	--	--	--
6. Climate 2	.03	.05	.21*	.26**	.24**	--	--	--
7. Hope	-.06	-.06	.60***	.44***	.24**	.30***	--	--
8. Meaning 1	.01	-.01	.37***	.36***	.27**	.23**	.30***	--
9. Meaning 2	-.01	-.04	.18*	.05	.39***	.15	.12	.56***

* $p<.05$ ** $p<.01$ *** $p<.001$

In the Arab sample, the relationship between DESSA Mean and DESSA Endorse was significant ($r=.92, p<.001$) and DESSA Mean had a significant relationship with

Virtues Values ($r=.17, p=.03$) and Meaning Component 2 ($r=.19, p=.03$). Significant relationships between all the other measures excepting Climate Component 2 and Meaning Component 2 were found (see Table 5C).

Table 5C: Measure Correlations: Arab Sample

	1	2	3	4	5	6	7	8
1. DESSA Mean	--	--	--	--	--	--	--	--
2. DESSA Endorse	.92***	--	--	--	--	--	--	--
3. Efficacy	.05	.02	--	--	--	--	--	--
4. Virtues	.17*	.14	.37***	--	--	--	--	--
5. Climate 1	.05	.04	.28***	.18*	--	--	--	--
6. Climate 2	-.003	.00	.22**	.04	.54***	--	--	--
7. Hope	.11	.10	.63***	.32***	.27**	.27**	--	--
8. Meaning 1	.16	.15	.34***	.17*	.16*	.33***	.40***	--
9. Meaning 2	.19*	.16	.19*	.07	.21*	.13	.16**	.13

* $p<.05$ ** $p<.01$ *** $p<.001$

Mediation Hypothesis Analysis:

As seen in Table 6A, Pearson's correlations indicate a significant relationship between the social-emotional context construct and Self-Efficacy ($r=.56, p<.001$) but no significant relationship with either DESSA Mean or DESSA Endorse.

Table 6A: Social-Emotional Context Construct Correlations

	1	2	3
1. Social-Emotional Context	--	--	--
2. DESSA Mean	-.04	--	--
3. DESSA Endorse	-.03	.91***	--
4. Efficacy	.56***	-.16**	-.15**

** $p<.01$ *** $p<.001$

When these relationships are analyzed independently within ethnicity, the same relationship holds true for the Jewish subsample: there is a significant relationship between the Social-emotional context construct and Self-Efficacy ($r=.49, p<.001$) but no significant relationship with either DESSA Mean or DESSA Endorse. (See Table 6B.)

Table 6B: Social-Emotional Context Construct Correlations: Jewish Sample

	1	2	3
1. Social-Emotional Context	--	--	--
2. DESSA Mean	.02	--	--
3. DESSA Endorse	-.04	.88***	--
4. Efficacy	.49***	-.08	-.05

*** $p < .001$

Within the Arab sample, while the significant relationship between the Social-emotional context construct and Self-Efficacy ($r = .49$, $p < .001$) remains, additionally a significant relationship occurs with DESSA Mean ($r = .18$, $p = .03$). DESSA Endorse fails to reach statistical significance in the Arab group. See Table 6C.

Table 6C: Social-Emotional Context Construct Correlations: Arab Sample

	1	2	3
1. Social-Emotional Context	--	--	--
2. DESSA Mean	.18*	--	--
3. DESSA Endorse	.15	.92***	--
4. Efficacy	.52***	.05	.02

* $p < .05$ ** $p < .01$ *** $p < .001$

Multivariate Prediction of Academic Competence by Social-Emotional Context:

Hierarchical Linear Regression was conducted to identify what factors predicted DESSA Mean in the full DESSA sample. In Step 1 of the model, the demographic factors of ethnicity, gender and grade level were entered, in Step 2 of the model the Social-emotional context construct was entered, and finally, in Step 3 Self-Efficacy was entered. The delta R^2 , b , $SE\ b$, and β values for this model are presented in Table 7A.

Table 7A: Summary of Hierarchical Regression Analysis Predicting DESSA Mean

	Model 1			Model 2			Model 3		
Predictor	B	SE B	β	B	SE B	β	B	SE B	β
Ethnicity	-.668	.112	-.463***	-.693	.113	-.480***	-.674	.114	-.467***
Gender	.067	.088	.045	.023	.090	.015	.021	.090	.014
Grade Level	.014	.064	.017	-.004	.064	-.005	.001	.064	.001
Social-Emotional Context				.004	.002	.111	.006	.003	.151*
Self-Efficacy							-.012	.010	-.079
R^2		.21			.22			.22	
F for R^2 change		22.59***			3.51			1.35	

The analysis found that the demographic factors present a ΔR^2 of .21 at Step 1 representing a small effect size for Step 1. Neither Step 2 nor Step 3 found a significant ΔR^2 , although Step 2's ΔR^2 was .01 which nearly reached a significant F change ($p=.06$). Ethnicity, entered in Step 1, is significant ($\beta=-.46$, $p<.001$) and remains so across both Step 2 ($\beta=-.48$, $p<.001$) and Step 3 ($\beta=-.47$, $p<.001$). When entered in Step 2 the Social-emotional context construct fails to reach statistical significance, though it does evidence a trend ($\beta=.11$, $p=.06$). Following the introduction of Self-Efficacy in Step 3 the Social-emotional context construct does reach significance ($\beta=.15$, $p=.03$) although Self-Efficacy fails to reach significance ($\beta=-.08$, $p=.25$).

Subsequently, hierarchical Linear Regression was conducted to identify what factors predicted DESSA Endorse in the full DESSA sample. In Step 1 of the model, the demographic factors of ethnicity, gender and grade level were entered, in Step 2 of the model the Social-Emotional Context construct was entered, and finally, in Step 3 Self-Efficacy was entered. The delta R^2 , b, SE b, and β values for the model are presented in Table 7B.

Table 7B: Summary of Hierarchical Regression Analysis Predicting DESSA Endorse

	Model 1			Model 2			Model 3		
Predictor	B	SE B	β	B	SE B	β	B	SE B	β
Ethnicity	-2.03	.383	-.424***	-2.10	.384	-.439***	-2.03	.388	-.425***
Gender	.158	.299	.032	.034	.309	.007	.025	.308	.005
Grade Level	.094	.217	.036	.045	.219	.017	.061	.219	.023
Social-Emotional Context				.012	.008	.094	.017	.009	.137
Self-Efficacy							-.041	.034	-.085
R^2		.16			.17			.17	
F for R^2 change		16.75***			2.38			1.45	

The analysis found that the demographic factors present a ΔR^2 of .16 at Step 1 representing a small effect size for Step 1. Neither Step 2 nor Step 3 found a significant ΔR^2 . Ethnicity, entered in Step 1, is significant ($\beta = -.42$, $p < .001$) and remains so across both Step 2 ($\beta = -.44$, $p < .001$) and Step 3 ($\beta = -.43$, $p < .001$). When entered in Step 2 the social-emotional context construct fails to reach statistical significance. Following the introduction of Self-Efficacy in Step 3 the social-emotional context construct does not reach significance though it does evidence a trend ($\beta = .14$, $p = .05$). Self-Efficacy fails to reach significance ($\beta = -.09$, $p = .23$).

Each ethnicity was then assessed independently. In the Jewish subsample hierarchical Linear Regression was conducted to identify what factors predicted DESSA Mean in the full DESSA sample. In Step 1 of the model, the demographic factors of gender and grade level were entered, in Step 2 of the model the Social-emotional context construct was entered, and finally, in Step 3 Self-Efficacy was entered. The delta R^2 , b , SE b , and β values for the model are presented in Table 7C.

Table 7C: Summary of Hierarchical Regression Analysis Predicting DESSA Mean: Jewish Students

Predictor	Model 1			Model 2			Model 3		
	B	SE B	β	B	SE B	β	B	SE B	β
Gender	-.021	.117	-.019	-.033	.122	-.029	-.046	.122	-.041
Grade Level	.003	.063	.004	-.004	.066	-.007	.001	.066	.001
Social-Emotional Context				.001	.003	.034	.003	.004	.099
Self-Efficacy							-.016	.013	-.130
R²		.00			.04			.12	
F for R² change		.03			.13			1.54	

The analysis found that none of the Steps found a significant ΔR^2 . Neither of the factors entered in Step 1 are found to be significant and they remain non-significant across both Step 2 and Step 3. When entered in Step 2 the Social-emotional context construct fails to reach statistical significance. Following the introduction of Self-Efficacy in Step 3 the Social-emotional context construct continues to be non-significant and Self-Efficacy also fails to reach significance.

In the Jewish subsample hierarchical Linear Regression was then conducted to identify which factors predicted DESSA Endorse in the full DESSA sample. In Step 1 of the model the demographic factors of gender and grade level were entered, in Step 2 of the model the Social-emotional context construct was entered, and finally, in Step 3 Self-Efficacy was entered. The delta R^2 , b , SE b , and β values for the model are presented in Table 7D.

Table 7D: Summary of Hierarchical Regression Analysis Predicting DESSA Endorse: Jewish Students

	Model 1			Model 2			Model 3		
Predictor	B	SE B	β	B	SE B	β	B	SE B	β
Gender	.123	.461	.027	.081	.480	.018	.044	.482	.010
Grade Level	.038	.249	.016	.014	.261	.006	.028	.262	.011
Social-Emotional Context				.004	.012	.031	.010	.014	.076
Self-Efficacy							-.044	.050	-.091
R^2		.00			.00			.01	
F for R^2 change		.04			.10			.75	

The analysis found that none of the Steps found a significant ΔR^2 . Neither of the factors entered in Step 1 are found to be significant and they remain non-significant across both Step 2 and Step 3. When entered in Step 2 the Social-emotional context construct fails to reach statistical significance. Following the introduction of Self-Efficacy in Step 3 the Social-emotional context construct continues to be non-significant and Self-Efficacy also fails to reach significance.

In the Arab subsample hierarchical Linear Regression was conducted to identify what factors predicted DESSA Mean in the full DESSA sample. In Step 1 of the model the demographic factors of gender and grade level were entered, in Step 2 of the model the Social-emotional context construct was entered, and finally, in Step 3 Self-Efficacy was entered. The delta R^2 , b , SE b , and β values for the model are presented in Table 7E.

Table 7E: Summary of Hierarchical Regression Analysis Predicting DESSA Mean: Arab Students

Predictor	Model 1			Model 2			Model 3		
	B	SE B	β	B	SE B	β	B	SE B	β
Gender	.133	.128	.089	.066	.132	.044	.069	.132	.046
Grade Level	-.043	.176	-.021	-.002	.175	-.001	-.004	.176	-.002
Social-Emotional Context				.006	.003	.166 ^t	.007	.004	.195 ^t
Self-Efficacy							-.009	.015	-.057
R²		.01			.03			.04	
F for R² change		.61			3.53			.33	

The analysis found that none of the Steps found a significant ΔR^2 although Step 2 did evidence a ΔR^2 of .03 which represented a trend for the significance of the F change ($p=.06$). None of the factors entered in Step 1 are found to be significant and they remain non-significant across both Step 2 and Step 3. When entered in Step 2 the Social-emotional context construct fails to reach statistical significance although it evidences a trend ($\beta=.17$, $p=.06$). Following the introduction of Self-Efficacy in Step 3 the Social-emotional context construct continues to be non-significant with a trend ($\beta=.20$, $p=.06$). Self-Efficacy fails to reach significance when entered in Step 3 ($\beta=-.06$, $p=.57$).

Finally, in the Arab subsample hierarchical Linear Regression was conducted to identify what factors predicted DESSA Endorse in the full DESSA sample. In Step 1 of the model, the demographic factors of gender and grade level were entered, in Step 2 of the model the Social-emotional context construct was entered, and finally, in Step 3 Self-Efficacy was entered,. The delta R^2 , b , $SE b$, and β values for the model are presented in Table 7F.

Table 7F: Summary of Hierarchical Regression Analysis Predicting DESSA Endorse: Arab Students

	Model 1			Model 2			Model 3		
Predictor	B	SE B	β	B	SE B	β	B	SE B	β
Gender	.169	.396	.037	-.037	.408	-.008	-.027	.409	-.006
Grade Level	.369	.543	.058	.497	.543	.078	.491	.544	.077
Social-Emotional Context				.019	.010	.166 ^t	.023	.012	.205[*]
Self-Efficacy							-.036	.047	-.076
R²	.00			.03			.03		
F for R² change	.29			3.50			.59		

The analysis found that none of the Steps found a significant ΔR^2 although Step 2 did evidence a ΔR^2 of .03 which represented a trend for the significance of the F change ($p=.06$). None of the factors entered in Step 1 are found to be significant and they remain non-significant across both Step 2 and Step 3. When entered in Step 2 the Social-emotional context construct fails to reach statistical significance although it evidences a trend ($\beta=.17$, $p=.06$). Following the introduction of Self-Efficacy in Step 3 the Social-emotional context construct reaches significance ($\beta=.21$, $p=.047$). Self-Efficacy fails to reach significance when entered in Step 3 ($\beta=-.08$, $p=.44$).

Discussion

Adolescence is a critical period of social and emotional growth and it is during this time that self-concepts and personal belief systems are codified within the context of the children's social environments, of which the school (along with family) is primary. Thus, the construct of social-emotional context was hypothesized and defined here as an individual's perception of their environment in combination with their level of core identity beliefs. The four areas proposed to make up social-emotional context are school climate, personal virtues, meaning in life, and hope. It was hypothesized that these separate areas of emotional development in fact combine within the social context of the school into the proposed construct of social-emotional context. Because a critical outcome evaluated during this time period is the quality of a student's behavioral and emotional engagement in the classroom, a subsequent goal of analysis was to evaluate the impact that an individual's social-emotional context has on their academic competence. Prior research has found that effective mastery of social-emotional competencies is associated with greater well-being and better school performance, whereas the failure to achieve these competencies can lead to a variety of personal, social, and academic difficulties (Guerra & Bradshaw, 2008; Masten & Coatsworth, 1998; Weissberg & Greenberg, 1998). Thus, it was expected that these individual measures would not only combine effectively into the social-emotional context construct but that this construct itself will be significantly related to academic competence as an external validity check.

Additionally, this study theorized that that social-emotional context will not have the same level of impact without a correspondingly high level self-efficacy. Given the

relationship between self-efficacy and ability to achieve desired goals (Bandura, 1989), it was proposed that a critical level of self-efficacious beliefs are necessary for the full impact of social-emotional context to be felt on academic competence. Thus, self-efficacy was proposed as the mediator between the social-emotional context and academic competence.

To the first hypothesis that the disparate elements of school climate, personal virtues, meaning in life and hope would effectively combine into a single construct of social-emotional context the evidence from this study is supportive. Principal Components Factor Analysis for the four independent measures found six reliable scales that then coalesced into a single construct. While factor analysis revealed that the separate measures loaded separately and to their origins, a suitably high Cronbach's alpha was found ($\alpha=.88$). Further, this alpha held to acceptable levels across the two distinct subsamples of Jewish and Arab students ($\alpha=.78$ and $.87$ respectively). This is a valuable outcome particularly given the finding that the means for Social-Emotional Context varied significantly by ethnicity ($t=-5.89, p<.001$). Additionally, the construct revealed that it was able to reflect differences in gender ($t=-3.16, p=.002$) and grade level ($F=12.00, p<.001$).

The finding regarding gender is an indication that the social-emotional context construct reflects the reality that, within the social context, the self-concepts and personal belief systems of males and females are distinctly different (Rose & Rudolph, 2006). That grade level, and by proxy, age, would affect social-emotional context is also supportive of the validity of the construct. This is supported given the prior findings that the age-level demands and opportunities youth experience frame and influence the goals

they construct and that these goals influence the way choices are made and the direction of development (Salmela-Aro, Aunola, & Nurmi, 2007).

However, the second hypothesis of this study, that the external validation of the social-emotional context construct can be evaluated via a mediation analysis with academic competence and self-efficacy, was not supported. Although social-emotional context had a significant relationship with self-efficacy ($r=.56, p<.001$) and that this significance held across both the Jewish and Arab subsamples ($r=.49$ and $.52$ respectively, $p<.001$ for both), a significant relationship was found with the DESSA only in the Arab sample with DESSA Mean ($r=.18, p=.03$). The hierarchical regression used to evaluate the mediation hypothesis suggests that social-emotional context is not mediated by Self-Efficacy and that this finding holds true for both DESSA Mean and DESSA Endorse (Tables 7A and 7B) and that this is true for both Jewish and Arab subsamples (Tables 7C-F). Indeed, only the relationship between social-emotional context and the DESSA is illustrated in Table 7A when, though the model remains non-significant, controlling for Self-Efficacy results in a significant beta coefficient for social-emotional context ($\beta=.15, p=.03$).

These results particularly indicate an issue with the application of the DESSA, specifically the ethnicity differences evidenced in the ratings for the DESSA. Arab raters were more likely to use the non-standardized option of '9-unable to rate' ($X^2 = 3.23, p=.07$), though not significantly so and significantly more likely to utilize the rating score of '0' on any of the 8 items ($X^2=54.61, p<.001$). This suggests that the Jewish teachers were less likely to want to be negative about their students, which is further combined with the potential that they see the student as better adjusted. While the Arab teachers are

more inclined to rate their student's with zero's their students see themselves as significantly better along most dimensions of the social-emotional construct as well as the overall construct itself ($t=-5.89, p<.001$), which appears paradoxical. This, in conjunction with puzzling negative relationship between the DESSA and self-efficacy (DESSA-Mean: $r=-.16, p=.009$; DESSA-Endorse: $r=-.15, p=.01$), one that only holds true in the Jewish subsample (DESSA-Mean: $r=-.08, p=.38$; DESSA-Endorse: $r=-.05, p=.56$) suggests there may be a significant influence of culture and ethnicity on the DESSA ratings. This issue may further be affecting the hypothesized mediation relationship.

As this program was implemented in the nation of Israel, some contextual information on that country is necessary with regard to the educational system. Arab education amounts to a separate system within the larger Israeli one (Zuzovsky, 2008), which may result in a lack of focus on the inequalities that exist between the Arab and Jewish education systems. In 2005/6, 22% of the Israeli students studied in the Arab education system (The State of Israel, 2009). Criticism concerning discrimination against the Arab-speaking schools (Eisikovits, 1997; Shavit, 1990) has resulted in two government plans during the 1990s (Zuzovsky, 2008). However, inequalities between Israel's Jewish and Arab populations in regards to educational attainment persist (Lewin & Stier, 2002).

Suggestions for Further Research

Further research should evaluate, in particular, the issues that arose in relation to a study done in a population with the distinct ethnicity issues of this sample. This should include exploration of a U.S. sample, particularly with regards to the original structure of the DESSA-mini. Further studies should examine the construct as related to existing

youth measures of self-concept as well as exploring additional sources of external validity for academic competence such as test scores or grades. The current study found cause to suggest that social-emotional context is theoretically and experimental valid construct, although an external validation through mediation analysis with academic competence and self-efficacy was not supported. Future research should explore the methodological issues, detailed above, that when resolved may support the mediation analysis in other cultural or measurement contexts.

A positive belief in their own capability to take action can allow adolescents to take full advantage of their social-emotional context in ways that would be recognizable, and ratable, by teachers in school. This study found that perceptions of school climate, personal virtue, meaning in life and hope can be combined into a valid construct: social-emotional context. And, though the potential to impact academic competence is theoretically supported, particularly through the impact of perceived self-efficacy, further research is needed to evaluate whether this external validation is more than theoretically sound. Cultural issues in this study relating to both the measures and the ratings suggest that this evaluation may best be done in a more homogeneous population linked more closely to the normative samples of the instruments used to more accurately see the potential activation of theory in practice.

References

- Adams, G. R., Munro, B., Doherty-Poirer, M., Munro, G., Peteraen, A. R., & Edwards, J. (2001). Diffuse-avoidance, normative, and informational identity styles: Using identity theory to predict maladjustment. *Identity, 1*, 307-320.
- Alivernini, F., & Lucidi, F. (2011). Relationship between Social Context, Self-Efficacy, Motivation, Academic Achievement, and Intention to Drop Out of High School: A Longitudinal Study. *Journal of Educational Research, 104*(4), 241-252.
- Anderson, C. S. (1982). The search for school climate: A review of the research. *Review of Educational Research, 52*, 368-420.
- Babad, E. (1993). Teachers' differential behavior. *Educational Psychology Review, 5*, 347-376.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review of Educational Research, 84*, 191-215.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist, 44*, 1175-1184.
- Bandura, A. (1995a). Experience of personal and collective efficacy in changing societies. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 1- 45). New York: Cambridge University Press.
- Bandura, A. (1995b). *Experience of personal and collective efficacy in changing societies. Self-efficacy in changing societies*. New York: Cambridge University Press.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*, 1-26.
- Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. *Child Development, 67*, 1206-1222.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.
- Battistich, V. (2005). *Character Education, Prevention, and Positive Youth Development*. Washington, DC: Character Education Partnership.
- Battistich, V., & Horn, A. (1997). The relationship between students' sense of their school as a community and their involvement in problem behaviors. *American Journal of Public Health, 87*, 1997-2001.
- Battistich, V., Schaps, E., & Wilson, N. (2004). Effects of an elementary school intervention on students' "connectedness" to school and social adjustment during middle school. *Journal of Primary Prevention, 24*, 243-262.
- Battistich, V., Solomon, D., Kim, D., Watson, M., & Schaps, E. (1995). Schools as communities, poverty levels of student populations, and students' attitudes, motives, and performance: A multilevel analysis. *American Educational Research Journal, 32*, 627-658.

- Benson, P., Roehlkepartain, E., & Rude, S. (2003). Spiritual development in childhood and adolescence: toward a field of inquiry. *Appl Dev Sci*, 7, 205-213.
- Berzonsky, M. D., & Kuk, L. S. (2000). Identity status, identity processing style, and the transition to university. *Journal of Adolescent Research*, 15, 81-98.
- Billy, J. O. G., Grady, W. R., Wenzlow, A. T., Brener, N. D., Collins, J. L., & Kann, L. (2000). Contextual influences on school provision of health services. *Journal of Adolescent Health*, 27(1), 12-24.
- Birch, S. H., & Ladd, G. W. (1998). Children's interpersonal behaviors and the teacher-child relationship. *Developmental Psychology*, 34, 934-946.
- Blankmeyer, M., Flannery, D. J., & Vazsonyi, A. T. (2002). The role of aggression and social competence in children's perceptions of the child-teacher relationship. *Psychology in the Schools*, 39, 293-304.
- Blum, R. W., & Libbey, H. P. (2004). School connectedness-Strengthening health and education outcomes for teenagers. *Journal of School Health*, 74, 229-299.
- Bosma, H. A., & Kunnen, E. S. (2001). Determinants and mechanisms in ego identity development: A review and synthesis. *Developmental Review*, 21, 39-66.
- Boyd, V. S., Hunt, P. F., Kandell, J. J., & Lucas, M. S. (2003). The relationship between identity processing style and academic success in undergraduate students. *Journal of College Student Development*, 44, 155-167.
- Brand, S., Felner, R., Shim, M., Seitsinger, A., & Dumas, T. (2003). Middle school improvement and reform: Development and validation of a school-level assessment of climate, cultural pluralism, and school safety. *Journal of Educational Psychology*, 95, 570-588.
- Brassai, L., Piko, B. F., & Steger, M. F. (2011). Meaning in Life: Is It a Protective Factor for Adolescents' Psychological Health? *International Journal of Behavioral Medicine*, 18(1), 44-51.
- Cavallo, A. M. L., Potter, W. H., & Rozman, M. (2004). Gender differences in learning constructs, shifts in learning constructs, and their relationship to course achievement in a structured inquiry, yearlong college physics course for life science majors. *School Science and Mathematics*, 104, 288-301.
- Chang, L., Liu, H., Fung, K. Y., Wang, Y., Wen, Z., Li, H., & al., e. (2007). The mediating and moderating effects of teacher preference on the relations between students' social behaviors and peer acceptance. *Merrill-Palmer Quarterly*, 53, 603-630.
- Ciarrochi, J., Heaven, P. C. L., & Davies, F. (2007). The impact of hope, self-esteem, and attributional style on adolescents' school grades and emotional well-being: A longitudinal study. *Journal of Research in Personality*, 41(6), 1161-1178. doi: 10.1016/j.jrp.2007.02.001
- Cohen, J., & Geier, V. K. (2010). School Climate Research Summary: January 2010. New York, NY: Center for Social and Emotional Education.
- Collaborative for Academic Social and Emotional Learning. (2005). *Safe and sound: An educational leader's guide to evidence-based social and emotional learning programs*. Chicago.
- Conduct Problems Prevention Research Group. (2010). The Effects of a Multiyear Universal Social-Emotional Learning Program: The Role of Student and School Characteristics *Journal of Consulting and Clinical Psychology*, 78(2), 156-168.

- Conroy, M. A., & Fox, J. J. (1994). Setting events and challenging behaviors in the classroom: Incorporating contextual factors into effective intervention plans. *Preventing School Failure*, 38, 29-34.
- Dahlsgaard, K., Peterson, C., & Seligman, M. E. P. (2005). Shared virtue: The convergence of valued human strengths across culture and history. *Review of General Psychology*, 9, 203-213.
- Damon, W. (2004). What Is Positive Youth Development? *Annals of the American Academy of Political and Social Science*, 591, 13-24.
- Davey, M., Eaker, D., & Walters, L. (2003). Resilience processes in adolescents: personality profiles, self-worth, and coping. *J Adolesc Res*, 18, 347-362.
- den Brok, P., Fisher, D., Rickards, T., & Bull, E. (2006). Californian Science Students' Perceptions of Their Classroom Learning Environments. *Educational Research and Evaluation*, 12(1), 3-25.
- Devine, J., & Cohen, J. (2007). *Making your school safe: Strategies to protect children and promote learning*. New York: Teachers College Press.
- DiPerna, J. C., & Elliott, S. N. (1999). The development and validation of the academic competence evaluation scales. *Journal of Psychoeducational Assessment*, 17, 207-225.
- Dotterer, A. M., McHale, S. M., & Crouter, A. C. (2009). The Development and Correlates of Academic Interests From Childhood Through Adolescence. *Journal of Educational Psychology*, 101(2), 509-519.
- Durlak, J. A., & Weissberg, R. P. (2007). *The impact of after-school programs that promote personal and social skills*. Chicago: Collaborative for Academic, Social, and Emotional Learning (CASEL).
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions. *Child Development*, 82(1), 405-432.
- Eisikovits, R. A. (1997). The educational experience and performance of immigrant and minority students in Israel. *Anthropology of Education Quarterly*, 28, 394-410.
- Farrell, A. D., Henry, D. B., Schoeny, M. E., Bettencourt, A., & Tolan, P. H. (2010). Normative Beliefs and Self-Efficacy for Nonviolence as Moderators of Peer, School, and Parental Risk Factors for Aggression in Early Adolescence. *Journal of Clinical Child & Adolescent Psychology*, 39(6), 800-813. doi: 10.1080/15374416.2010.517167
- Farrington, D. (2004). Conduct disorder, aggression, and delinquency. In R. M. L. L. Steinberg (Ed.), *Handbook of adolescent psychology* (Vol. 2, pp. 627-664). Hoboken, NJ: Wiley.
- Fredericks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School Engagement: Potential of the Concept, State of the Evidence *Review of Educational Research*, 74(1), 59-109.
- Fredricks, J. A., & Eccles, J. S. (2002). Children's competence and value beliefs from childhood through adolescence. *Developmental Psychology*, 38(519-533).
- Good, M., & Adams, G. R. (2008a). Linking Academic Social Environments, Ego-Identity Formation, Ego Virtues, and Academic Success. *Adolescence*, 43(170), 221-236.

- Good, M., & Adams, G. R. (2008b). Linking Academic Social Environments, Ego-Identity Formation, Ego Virtues, and Academic Success. *Adolescence (San Diego): an international quarterly devoted to the physiological, psychological, psychiatric, sociological, and educational aspects of the second decade of human life*, 43(170), 221.
- Gottfredson, G. D., Gottfredson, D. C., Payne, A. A., & Gottfredson, N. C. (2005). School climate predictors of school disorder: Results from a national study of delinquency prevention in schools. *Journal of Research in Crime and Delinquency*, 42, 412–444.
- Griffith, J. (1995). An empirical examination of a model of social climate in elementary school. *Basic and Applied Social Psychology*, 17, 97–117.
- Griffith, J. (2000). School climate as group evaluation and group consensus: Student and parent perceptions of the elementary school environment. *Elementary School Journal*, 101, 35–61.
- Guerra, N. G., & Bradshaw, C. P. (2008). Linking the prevention of problem behaviors and positive youth development: Core competencies for positive youth development and risk prevention. *New Directions for Child and Adolescent Development*, 122, 1–17.
- Haynes, N. M., Emmons, C., & Ben-Avie, M. (1997). School climate as a factor in student adjustment and achievement. *Journal of Educational and Psychological Consultation*, 8, 321–329.
- Hicks, J., & King, L. (2007). Meaning in life and seeing the big picture: positive affect and global focus. *Cogn Emot*, 21, 1577–1584.
- James, E. H., & Rotter, J. B. (1958). Partial and 100% reinforcement under chance and skill conditions. *Journal of Experimental Psychology*, 55, 397–403.
- Karevold, E., Roysamb, E., Ystrom, E., & Mathiesen, K. (2009). Predictors and pathways from infancy to symptoms of anxiety and depression in early adolescence. *Developmental Psychology*, 45(4), 1051–1060.
- Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health*, 74(7), 262–273.
- Koth, C. W., Bradshaw, C. P., & Leaf, P. J. (2008). A Multilevel Study of Predictors of Student Perceptions of School Climate: The Effect of Classroom-Level Factors. *Journal of Educational Psychology*, 100(1), 96–104.
- Kreft, I. G. G. (1993). Using multilevel analyses to assess school effectiveness: A study of Dutch secondary school. *Sociology of Education*, 66, 104–129.
- Kuperminc, G. P., Leadbeater, B. J., & Blatt, S. J. (2001). School social climate and individual differences in vulnerability to psychopathology among middle school students. *Journal of School Psychology*, 39, 141–159.
- Kuperminc, G. P., Leadbeater, B. J., Emmons, C., & Blatt, S. J. (1997). Perceived school climate and difficulties in the social adjustment of middle school students. *Applied Developmental Science*, 1, 76–88.
- LeBuffe, P., Shapiro, V., & Naglieri, J. (2009). *Devereux Student Strengths Assessment*. Lewisville, NC: Kaplan.
- Lewin, A. C., & Stier, H. (2002). Who benefits the most? The unequal allocation of transfers in Israel. *Welfare State Social Science Quarterly*, 83(2), 488–503.

- Li, Y., Lerner, J., & Lerner, R. (2010). Personal and Ecological Assets and Academic Competence in Early Adolescence: The Mediating Role of School Engagement. *Journal of Youth and Adolescence*, 39(7), 801-815. doi: 10.1007/s10964-010-9535-4
- Lickonam, T., & Davidson, M. (2001). School As A Caring Community Profile-II (SCAAP-II). from http://www.mc3edsupport.org/community/kb_files/sccp_II.pdf
- Lorsbach, A. W., & Jinks, J. L. (1999). Self-efficacy theory and learning environment research. *Learning Environments Research*, 2, 157-167.
- Maddux, J. E., & Volkmann, J. (2010). *Self-Efficacy Handbook of Personality and Self-Regulation* (pp. 315-331): Wiley-Blackwell.
- Marsh, H. W., Walker, R., & Debus, R. (1991). Subject-specific components of academic self-concept and self-efficacy. *Contemporary Educational Psychology*, 16, 331-345.
- Masten, A. S., & Coatsworth, J. D. (1998). The development of competence in favorable and unfavorable environments: Lessons from research on successful children. *American Psychologist*, 53, 205-220.
- McNeely, C. A., Nonnemaker, J. M., & Blum, R. W. (2002). Promoting school connectedness: Evidence from the National Longitudinal Study of Adolescent Health. *Journal of School Health*, 72, 138-146.
- Mercer, S. H., & DeRosier, M. E. (2008). Teacher preference, peer rejection, and student aggression: A prospective study of transactional influence and independent contributions to emotional adjustment and grades. *Journal of School Psychology*, 46, 661-685.
- Miller, S. I., & Fredericks, J. (1990). The false ontology of school climate effects. *Educational Theory*, 40, 333-342.
- Montague, M., & Rinaldi, C. (2001). Classroom dynamics and children at risk: A follow-up. *Learning Disabled Quarterly*, 24, 75-83.
- Murray, C., & Greenberg, M. T. (2000). Children's relationship with teachers and bonds with school: An investigation of patterns and correlates in middle childhood. *Journal of School Psychology*, 38, 423-445.
- Naglieri, J., LeBuffe, P., & Shapiro, V. (2011). Universal Screening for Social-Emotional Competencies: A Study of the Reliability and Validity of the DESSA-Mini. *Psychology in the Schools*, 48(7), 660-671.
- Nansal, T. R., Overpeck, M., Pilla, R. S., Raun, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among U.S. youth-Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association*, 285, 2094-2100.
- Newcomb, M., & Harlow, L. (1986). Life events and substance use among adolescents: mediating effects of perceived loss of control and meaninglessness in life. *J Pers Soc Psychol.*, 51, 564-577.
- Nicholson, T., Higgins, W., Turner, P., James, S., Stickle, F., & Pruitt, T. (1994). The relation between meaning in life and the occurrence of drug abuse: a retrospective study. *Psychol Addict Behav*, 8, 24-28.
- Nielsen, A., & Hansson, K. (2007). Associations between adolescents' health, stress and sense of coherence. *Stress Health*, 23, 331-341.

- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66, 543-578.
- Pajares, F., & Miller, M. D. (1994). Role of self-efficacy and self-concept beliefs in mathematical problem solving: A path analysis. *Journal of Educational Psychology*, 86, 193-203.
- Parker, S. L., Jimmieson, N. L., & Amiot, C. E. (2009). The Stress-Buffering Effects of Control on Task Satisfaction and Perceived Goal Attainment: An Experimental Study of the Moderating Influence of Desire for Control. *Applied Psychology*, 58(4), 622-652. doi: 10.1111/j.1464-0597.2008.00367.x
- Pervin, L. A. (1968). Performance and satisfaction as a function of individual-environment fit. *Psychological Bulletin*, 69, 56-68.
- Pervin, L. A. (1992). Transversing the individual-environment landscape: A personal odyssey. In W. B. Walsh, K. H. Craik & R. H. Price (Eds.), *Person-environment psychology: Models and perspectives* (pp. 71-88). Englewood Cliffs, NJ: Lawrence Erlbaum Associates.
- Peterson, C., & Seligman, M. E. (2004). *Character strengths and virtues: A handbook and classification*. New York, Washington, DC: American Psychological Association, Oxford University Press.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, 36(4), 717-731.
- Rathi, N., & Rastogi, R. (2007). Meaning in life and psychological well-being in pre-adolescents and adolescents. *J Ind Acad Appl Psychol*, 33, 31-38.
- Räty, L., Larsson, G., Söderfeldt, B., & Larsson, B. (2005). Psychosocial aspects of health in adolescence: the influence of gender, and general self-concept. *J Adolesc Health*, 36(530), e21-530.e528.
- Rose, A. J., & Rudolph, K. D. (2006). A Review of Sex Differences in Peer Relationship Processes: Potential Trade-offs for the Emotional and Behavioral Development of Girls and Boys. *Psychol Bull*, 132(1), 98-131.
- Rotter, J. B. (1954). *Social learning and clinical psychology*. Englewood Cliffs, N.J.: Prentice-Hall.
- Ruus, V., Veisson, M., Leino, M., Ots, L., Pallas, L., Sarv, E., & Veisson, A. (2007). Students' well-being, coping, academic success, and school climate. *Social Behavior & Personality: An International Journal*, 35(7), 919-936.
- Ryan, A. M., & Patrick, H. (2001). The classroom social environment and changes in adolescents' motivation and engagement during middle school. *American Educational Research Journal*, 38(437-460).
- Salmela-Aro, K., Aunola, K., & Nurmi, J.-E. (2007). Personal goals during emerging adulthood: A 10-year follow-up. *Journal of Adolescent Research*, 22, 690-715.
- Schunk, D. (1991). Self-efficacy and academic motivation. *Educational Psychologist*, 26, 207-231.
- Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy Scale. In J. Weinman & S. Wright (Eds.), *Measures in Health Psychology: A Users Portfolio. Causal and Control Beliefs*. Windsor, UK: NFER-NELSON.

- Shavit, Y. (1990). Arab and Jewish minorities in Israeli Education. *American Sociological Review*, 55, 115-126.
- Siahpush, M., Spittal, M., & Singh, G. (2008). Happiness and life satisfaction prospectively predict self-rated health, physical health, and the presence of limiting, long-term health conditions. *Am J Health Prom*, 23, 18-26.
- Snyder, C. R. (2000). The past and future of hope. *Journal of Social and Clinical Psychology*, 19, 11- 28.
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., . . . Harney, P. (1991). The will and the ways: development and validation of an individual-differences measure of hope. *Journal of Personality & Social Psychology*, 60, 570-585.
- Snyder, C. R., Hoza, B., Pelham, W. E., Rapoff, M., Ware, L., Danovsky, M., . . . Stahl, K. J. (1997). The Development and Validation of the Children's Hope Scale. *Journal of Pediatric Psychology*, 22(3), 399-421.
- Snyder, C. R., Rand, K. L., & Sigmon, D. R. (2002). Hope theory: A member of the positive psychology family. In C. R. Snyder & S. Lopez (Eds.), *Handbook of positive psychology*. New York Oxford University Press.
- Steger, M., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: assessing the presence of and search for meaning in life. *J Couns Psychol.*, 53, 80-93.
- Steger, M., & Kashdan, T. (2007). Stability and specificity of meaning in life and life satisfaction over one year. *J Happiness Stud.*, 8, 161-179.
- Stevenson, K. R. (2006). School size and its relationship to student outcomes and school climate: A review and analysis of eight South Carolina state-wide studies. Washington, D.C.: National Clearinghouse for Educational Facilities.
- Terborg, J. R. (1981). Interactional psychology and research on human behavior in organizations. *Academy of Management Review*, 6, 569-576.
- The State of Israel. (2009). *Section A: Educational Legislation and the Structure of the Education System*.
- Tomb, M., & Hunter, L. (2004). Prevention of Anxiety in Children and Adolescents in a School Setting: The Role of School-Based Practitioners. *Children & Schools*, 26(2), 87-101.
- Valle, M. F., Huebner, E. S., & Suldo, S. M. (2006). An analysis of hope as a psychological strength. *Journal of School Psychology*, 44(5), 393-406. doi: 10.1016/j.jsp.2006.03.005
- Vieno, A., Perkins, D. D., Smith, T. M., & Santinello, M. (2005). Democratic school climate and sense of community in school: A multilevel analysis. *American Journal of Community Psychology*, 36, 327-341.
- Way, N., Reddy, R., & Rhodes, J. (2007a). Students' perceptions of school climate during the middle school years: Association with trajectories of psychological and behavioral adjustment. *American Journal of Community Psychology*, 40, 194-213.
- Way, N., Reddy, R., & Rhodes, J. (2007b). Students' perceptions of school climate during the middle school years: Association with trajectories of psychological and behavioral adjustment. *American Journal of Community Psychology*, 40, 194-213.

- Weissberg, R. P., & Greenberg, M. T. (1998). School and community competence-enhancement and prevention programs. In E. Siegel & K. A. Renninger (Eds.), *Handbook of child psychology. Vol. 4. Child psychology in practice* (5th ed ed., pp. 877-954). New York: Wiley.
- Welsh, W. N. (2000). The effects of school climate on school disorder. *Annals of the American Academy of Political and Social Science*, 567, 88–107.
- Wentzel, K. R., & Asher, S. R. (1995). The academic lives of neglected, rejected, popular, and controversial children. *Child Development*, 66, 754 - 763.
- Whitlock, J. L. (2006). Youth perceptions of life in school: Contextual correlates of school connectedness in adolescence. *Applied Developmental Science*, 10(1), 13-29.
- Wigfield A., Eccles J. S., Schiefele U., Roeser R., & P., D.-K. (2006). Development of achievement motivation. In W. Damon & N. Eisenberg (Eds.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (Vol. 6th ed, pp. 933-1002). New York: John Wiley.
- Zimmerman, B. J. (2000b). Self efficacy: An essential motive to learn. *Contemporary Educational Psychology*, 25, 82-91.
- Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (1992). Self-Motivation for Academic Attainment: The Role of Self-Efficacy Beliefs and Personal Goal Setting. *American Educational Research Journal*, 29(3), 663-676.
- Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J. (Eds.). (2004). *Building academic success on social and emotional learning: What does the research say?* New York: Teachers College Press.
- Zuzovsky, R. (2008). Capturing the Dynamics behind the Narrowing Achievement Gap between Hebrew-Speaking and Arabic-Speaking Schools in Israel: Findings from TIMSS 1999 and 2003. *Educational Research and Evaluation*, 14(1), 47-71.