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Interdistrict Magnet High School Students' Perceived Social Support: An Exploratory Investigation[1]

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Dr. LaRocco was not affiliated in anyway with the district or school in which the data were collected. Ms. Fitzgerald is a student in the University of Hartford, Department of Educational Leadership's Doctoral Program. Under Dr. LaRocco's direct guidance, Ms. Fitzgerald assisted with the data collection and data entry.

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Introduction

The purpose of this action research was to explore and describe urban magnet high school students' perceived social support. The investigation emerged from Lodestone High School's (Lodestone is a pseudonym) school improvement efforts under the No Child Left Behind Act of 2001. Lodestone, a magnet high school in a northeastern state, enrolls students in grades 9-12. The Lodestone 2009–2010 school improvement plan had goals that focused on students' improved behavior and academic performance and development of positive, healthy relationships with adults and peers. Given these goals and evidence pointing to a positive relationship between perceived social support and academic performance (Fredriksen & Rhodes, 2004; Malecki & Demaray, 2006), the principal of Lodestone, in consultation with the first author, determined that gathering data about students' perceived social support would be an important first step towards understanding their relationships with adults and peers.

Guiding Framework

Social support, as defined by House (1981), is the "flow of emotional concern, instrumental aid, information, and/or appraisal between people" (p. 26). It addresses and answers the question: "*Who* gives *what t*o whom regarding *which* problem?" (p. 22). Through extensive research, House established the concept of social support as "an interpersonal transaction involving one or more of the following: (a) emotional concern (liking, love, empathy), (b) instrumental aid (goods or services), (c) information (about the environment), or (d) appraisal (information relevant to self-evaluation)" (p. 39). House cautioned the relevance of both sources and types of support vary with the traits of the recipient and the type of problem

presented. In a similar vein, "support is likely to be effective only to the extent it is perceived" (p. 27).

Table 1 contains a brief description of each type of support.

Table 1

Types of Social Support (House, 1981)

Type	*Description*
Emotional	Demonstrating concern, empathy, and trust
Informational	Giving advice, suggestions, facts or other knowledge that the person can use to solve personal or environmental problems
Instrumental	Providing direct tangible assistance such as materials, money, or one's time
Appraisal	Evaluating effort and success both formally and informally

Interdistrict Magnet Schools

Magnet schools arose nearly 40 years ago as one way of addressing federal court orders to desegregate public schools (U.S. Department of Education, 2008; Yu &Taylor, 1997). By design, they were intended to reduce minority-group isolation and academic segregation by bringing students from different socioeconomic, ethnic, and racial backgrounds together. Magnet schools are ordinarily themed (e.g., social justice, sports, arts) and by extension have specialized curricula and instructional approaches that aim to close the achievement gap between historically disadvantaged student populations and their more affluent peers.

The literature related to magnet schools is most often descriptive. Among other foci, articles provide rich case study information about magnet schools and their successful designs, processes, curriculum, collaborative faculty work, or formative improvement and evaluation efforts (e.g., Buxton, 2005; Pardini, 2007). One recent example concerning magnet high schools

is a U.S. Department of Education (2008) report profiling a national sample of eight successful magnet high schools. Using a cross-case comparison method, five common themes were identified across the schools—innovating for excellence, promoting equity, forging community partnerships, designing rigorous academic programs, and building a culture of high quality teaching. In each case, these successful magnet high schools outperformed their local counterparts on state tests and getting students into college.

Not surprisingly, published empirical research on magnet schools has centered on achievement and cross-racial interactions (e.g., Neild, 2004; Williams, 2010). In an often-cited report of an investigation of magnet schools in three U.S. metropolitan areas, Yu and Taylor (1997) noted, "low-income students in magnet schools perform better on measures of academic performance than their counterparts in non-magnet school" (p. 28). Findings from a more recent study conducted by Cobb, Bilfulco, and Bell (2009) "indicate that interdistrict magnet high schools have had significant, positive effects on both the math and reading achievement of their city students" (p. 46-47). Such positive outcomes aside, little else seems to be known about the students who attend magnet high schools, particularly from the students' perspective.

Adolescents and Social Support

Second only to the first two years of life, adolescence is a time when children undergo rapid and intense physical, psychological, and social growth. Making the transition from childhood and adult direction, to the more demanding world of choice and adulthood can be a stressful time (Krenke-Seiffge, Aunola, & Nurmi, 2009; Pianta, Stuhlman, & Hamre, 2002). Among others daily stressors, adolescents are typically faced with evolving relationships with parents and peers, and the academic challenges, responsibilities, and high expectations associated

with schooling. The Carnegie Council on Adolescent Development (1992) rightly noted, "young people . . . cannot negotiate the passage through adolescence alone" (p. 9). They need the support of parents, school personnel, and peers.

Social support research focused on adolescents is quite robust, covering a wide range of issues and ages, in particular middle school students. Researchers have learned that perceived support mitigates the normative developmental stress inherent in adolescence (DuBois, Felner, Brand, Adan, & Evans, 1992; Moran & DuBois, 2002), the demands of school (Kenny, Gallagher, Alvarez-Salvat, & Silsby, 2002), and stressful daily or significant life events (Davidson & Demaray, 2007; Dubois et al., 1992). Malecki and Demaray's (2006) research revealed that, irrespective of socioeconomic status, students who reported higher levels of social support had higher grade point averages. Finally, perceived social support has also been found to positively influence students' self-concept (Demaray, Malecki, Rueger, Brown, & Summers, 2009), adjustment (Demaray & Malecki, 2002), and psychological well-being (Suldo, Friedrich, White, & Farmer, 2009).

Social support research focused solely on high school students seems less prevalent. In one such investigation, Kostelecky and Lempers (1998) found that successful seniors reported high levels of family support. Students in a high school, college preparatory environment that perceived high levels of support reported less academic stress (Ainslie, Shafer, & Reynolds, 1996). Noting the supportive potential of teachers, Fredriksen and Rhodes (2004) stated, "[students'] relationships with their teachers can be a crucially important influence, affecting students' connection to school, motivation, academic performance, and psychosocial well-being" (p. 45). Teacher support has been found to be particularly helpful for high school students from financially disadvantaged backgrounds (DuBois et al., 1992).

While perceived support from parents, teachers, peers, or the school can be predictive of positive outcomes for the adolescent (Demaray et al. 2009; Kenny et al. 2002), student characteristics (e.g., gender, age) can affect the types perceived and their relative importance (Demaray & Malecki, 2003a). Notably, the effect of the frequency of support can vary based on the importance a student places on the source and type of support (Demaray et al., 2009) and children who have certain supports missing in their lives do not necessarily perceive their importance.

In sum, magnet schools are intended to reduce minority-group isolation and academic segregation, and close the racial achievement gap. It comes as no surprise that magnet school research has focused on descriptions of successful schools and the academic achievement of students who attend them. Magnet high school attendance seems to lead to improved academic performance (Cobb et al., 2009; U.S. Department of Education, 2008; Yu & Taylor, 1997). Beyond achievement data and descriptive information, however, little else is known about magnet high school students. At the same time, research has linked perceived social support with positive outcomes for adolescents, including improved academic performance (Rosenfeld, Richman, & Bowen, 2000). In view of this, research exploring urban magnet high school students' perceptions of social support received appears warranted; yet, none seems to exist.

The Present Investigation

As described earlier, Lodestone, a magnet high school in a northeastern state, had school improvement plan goals that not only focused on students' improved academic performance but also aimed to have students develop positive, healthy relationships with adults and peers. Given these goals and evidence pointing to a positive relationship between perceived social support and

academic performance, the principal of Lodestone, in consultation with the first author, determined that gathering data about students' perceived social support would be an important first step towards understanding their relationships with adults and peers. As such, the purpose of this action research was to describe urban magnet high school students' perceived social support. The following research questions were explored.

1. What are magnet high school students' reports of the sources and importance of social support received?
2. What are the differences between grade level groups for magnet high school students' reports of the sources and importance of social support received?
3. What are the differences between magnet high school boys' and girls' reports of the sources and importance social support received?
4. What are magnet high school students' reports of the frequency and importance of the types of support received?
5. What are magnet high school students' reports of the frequency and importance of the type of support received from each source of support?

Method

A cross-sectional survey method was used to assess urban high school students' perceived social support. A survey approach is appropriate when a researcher seeks to collect information from a target population to simply describe what is going on (McMillan & Schumacher, 2006), as was the case in this investigation. In a cross-sectional survey research, data are collected at one point in time. Lodestone's students were surveyed one-time.

Measure. The Child and Adolescent Social Support Scale (CASSS; Malecki, Demaray, & Elliot, 2000) was the measure used in this study. The 60-item self-completion scale, which is based on House's (1981) model, was designed specifically to understand children's and adolescents' (grades 3-12) perceived social support. Items query respondents' perceptions of the frequency and importance of four types of social support (i.e., emotional, informational, appraisal, and instrumental) received from five sources (i.e., parents, teachers, classmates, close friends, and school). The CASSS has five subscales that correspond to one of the five sources of support. Each subscale consists of 12 items with an equal number of items pertaining to each of the four types of support (i.e., 3 items for each type of support).

Students are to respond to sentences about some form of support or help that they might get from a parent, a teacher, a classmate, a close friend, or people in their school. They are to rate how often they receive the support described and then rate how important the support is to them. Concerning frequency, students are to select the point on a 6-point Likert scale that indicates how often they receive the support described. The anchors are: "*never*" (1), "*almost never*" (2), "*some of the time*" (3), "*most of the time*" (4), "*almost always*" (5), and "*always*" (6). With regard to importance, students are to select the point on a 3-point Likert scale that indicates how important the support described is to them. The anchors are "*not important*" (1), "*important*" (2), and "*very important*" (3).

The CASSS (Malecki et al., 2000) was selected because it has proven to be a reliable and valid measure of adolescent social support. It has been found to have "strong internal consistency with $\alpha = .96$ for the Total score and ranging from .92 to .96 on scale scores" (Malecki & Demaray, 2006, p. 8) and good test-retest reliability ($r = .78$) scores. The scale has been used to examine social support in relationship to many different facets of adolescent

development, including students' self-concept (Demaray et al., 2009), academic performance (Malecki, & Demaray, 2006), and adjustment (Demaray, Malecki, Davidson, Hodgson, & Rebus, 2005; Malecki & Demaray, 2003; Rueger, Demaray, & Malecki, 2008). The author requested and received permission to use the CASSS in this study (C. Malecki, personal communication, November 18, 2009).

CASSS administration. Teachers administered the CASSS (Malecki et al., 2000) during a regularly scheduled advisory period in March 2010. The principal, with the assistance of a Lodestone teacher, provided teachers with packets that contained surveys, a copy of a survey administration script, and a large envelope for returning surveys to the principal.

Teachers were to explain that all students' answers, taken together, would be used to create a report that would not contain any teacher names or student names or identification numbers. The report would be shared with all the adults in the school and that the teachers would use the information to help all students at Lodestone. Survey directions were to be read aloud to students and their questions addressed. Teachers were to monitor students to answer any questions, provide guidance with completing both response scales, and collect and return the surveys as indicated above.

On the day teachers administered the survey, 344 students were enrolled at Lodestone, and 319 students were present. The rate of survey returns was 87% ($N = 277$). Of those, only 182 (66%) surveys were complete; 95 (34%) were incomplete. With regard to the incomplete surveys, for the most part, students had not filled in the importance rating scale. Examination of the survey packets showed that incomplete forms were common to certain classes. It is not known whether all the teachers gave students instructions or how well teachers monitored students as they completed the forms.

Table 2 contains a summary of student respondent characteristics.

Table 2

Sample (N = 277) Characteristics: Grade, Gender, and Race

	n	*%*
Grade		
9	60	21.70
10	75	27.10
11	78	28.20
12	56	20.20
Missing	8	2.90
Gender		
Male	156	56.30
Female	110	39.70
Missing	11	4.00
Race		
Asian American	8	2.90
Black/African American	102	36.80
Hispanic American	91	32.90
Native American	2	.07
White	36	13.00
Other	28	10.10
Missing	10	3.60

Data entry and analyses. Ms. Fitzgerald, prepared, organized, and the entered all survey responses into Excel. As such, each survey was numbered and visually inspected for completeness (i.e., missing data or dual responses). Questions that were not answered were assigned a missing data code of "99." If a student inadvertently put a mark between two numbers on the Likert-scale, or circled two of them, the lower number was entered as the response. For example, if a student circled "1" and "2," the researcher highlighted and entered "1." Ms. Fitzgerald provided Dr. LaRocco with the Excel file. To protect students' confidentiality, the file did not contain any personally identifiable information. Although it

contained student identification numbers, Dr. LaRocco had no way of connecting these numbers with students' personal information. All data were imported into the SPSS® program for statistical analysis. All surveys were used in the data analysis. Data were analyzed using descriptive and inferential statistics.

Results

The results of the analyses are presented by research question. The foci are students' reports of the Sources (who) and Types (what) of social support received.

Magnet High School Students' Reports of the Sources and Importance of Social Support Received

Table 3 contains the means and standard deviations for all CASSS (Malecki et al., 2000) total and subscale scores, presented by gender and total sample. To obtain a Total Support score and a Total Importance score, all items relative to each of the CASSS scales are summed. The Total Support score can range from 60–360; the Total Importance score can range from 60–180. The mean Total Support score for all students was 250.20 (SD = 47.17, n = 213). Thus, the students who submitted a survey reported an average rating for frequency of Total Support received that fell between *most of the time* and *almost always*. Concerning the Total Importance score, students' ratings yielded a mean score of 121.33 (SD = 26.68, n = 198), indicating the overall perceived importance of support received was between *important* and *very important.*

To obtain scores for each of the five sources of support subscales, frequency ratings for each source are summed (e.g., Parent item frequency ratings); the possible range of scores for each is 12–72. For the total sample, the highest mean score was for the Close Friend Support

subscale (*M* = 57.29, *SD* = 13.5, *n* = 263). Thus, the average rating for support received from a close friend fell between *most of the time* and *almost always*. The lowest mean score for the total sample was for the School Support subscale (*M* = 42.23, *SD* = 12.90, *N* = 253), which taps students' perceptions of the overall support they receive from people in the school.

Importance subscale scores for each of the five sources of support subscales are obtained by summing importance ratings for each source (e.g., Parent item importance ratings); the range of scores for each is 12–36. Students' ratings on these subscales revealed that they valued Teacher Support (*M* = 26.39, *SD* = 6.00, *n* = 228) and Parent Support (*M* = 26.35, *SD* = 5.87, *n* = 237) the most. The perceived importance of each support fell between *important* and *very important*.

Table 3

Means and Standard Deviations for All CASSS Total and Subscale Scores

CASS Scales	Boys			Girls			Total Sample		
Frequency	*n*	*Mean*	*SD*	*n*	*Mean*	*SD*	*n*	*Mean*	*SD*
Parent	142	51.32	13.61	106	51.13	13.10	259	51.02	13.55
Teacher	142	49.22	13.91	101	51.86	11.69	254	49.94	13.48
Classmates	145	42.59	13.79	104	47.84	12.99	260	44.71	13.74
Close Friend	145	54.35	14.24	108	61.31	11.57	263	57.29	13.51
School	139	41.20	13.15	104	43.80	12.71	253	42.23	12.90
Total	117	245.81	49.63	86	258.41	42.00	213	250.20	47.17
Importance									
Parent	133	25.87	6.19	97	27.09	5.50	237	26.35	5.87
Teacher	122	25.88	6.17	98	26.97	5.89	228	26.39	6.00
Classmates	130	22.32	6.84	101	24.27	6.62	239	23.08	6.75
Close Friend	130	22.32	6.84	101	24.27	6.62	239	23.08	6.75
School	122	21.45	6.93	99	22.58	7.08	230	21.95	6.93
Total	105	118.64	27.11	87	124.86	26.51	198	121.33	26.68

Note. The possible range on the Frequency scale for each Source of Support is 12–72. On the Importance scale, the possible range for each Source of Support is 12–36.

Differences Between Grade Level Groups for Magnet High School Students' Reports of the Sources and Importance of Social Support Received

To determine if significant differences existed among mean subscale scores between grade level groups, a separate one-way analysis of variance (ANOVA) was conducted for each subscale. There were no significant group differences observed. Table 4 contains the results.

Table 4

Grade-Level Results of One-Way Analysis of Variance for All CASSS Total and Subscale Scores

CASS Scales		*df*	*SS*	*MS*	*F*	*P*
Frequency						
Parent	Between Groups	3	1152.66	384.22	2.20	.089
	Within Groups	247	43121.50	174.58		
Teacher	Between Groups	3	1104.06	368.02	2.19	.090
	Within Groups	242	40656.08	168.00		
Classmates	Between Groups	3	173.03	57.68	.30	.823
	Within Groups	248	47120.63	190.00		
Close Friend	Between Groups	3	42.41	14.14	.08	.973
	Within Groups	252	46946.60	186.30		
School	Between Groups	3	124.42	41.47	.24	.866
	Within Groups	242	41263.57	170.51		
Total	Between Groups	3	766.41	255.47	.11	.952
	Within Groups	202	451799.95	2236.63		
Importance						
Parent	Between Groups	3	129.15	43.05	1.24	.297
	Within Groups	228	7934.97	34.80		
Teacher	Between Groups	3	117.37	39.13	1.08	.359
	Within Groups	219	7938.20	36.25		
Classmate	Between Groups	3	54.66	18.22	.39	.761
	Within Groups	230	10761.27	46.79		
Close Friend	Between Groups	3	54.66	18.22	.39	.761
	Within Groups	230	10761.27	46.79		
School	Between Groups	3	54.89	18.30	.37	.772
	Within Groups	220	10788.23	49.04		
Total	Between Groups	3	121.27	39.14	.17	.919
	Within Groups	190	138725.75	36.25		

Differences Between Magnet High School Boys' and Girls' Reports of the Sources and Importance of Social support Received

Independent samples *t*-tests were conducted to compare boys' and girls' mean scores on all subscales. Table 5 contains a summary of the results. There were significant differences between the boys' and girls' mean scores on the Frequency scales for Close Friend, $t(249.07) = -4.28$, $p = .000$, and Classmates, $t(247) = -3.06$, $p = .002$. Likewise, significant differences were observed between the boys' and girls' mean scores on the Importance scales for Close Friend, $t(229) = -2.17$, $p = .031$, and Classmates, $t(229) = -2.17$, $p = .031$.

Table 5

Independent t-Tests by Gender All CASSS Total and Subscale Scores

CASS Scales	Boys			Girls					
Frequency	*n*	*Mean*	*SD*	*n*	*Mean*	*SD*	*t*	*Df*	*P*
Parent	142	51.32	13.61	106	51.13	13.10	.11	246	.914
Teacher	142	49.22	13.91	101	51.86	11.69	-1.56	241	.121
Classmates	145	42.59	13.79	104	47.84	12.99	-3.06	247	.002**
Close Friend	145	54.35	14.24	108	61.31	11.57	-4.28	249.07	.000***
School	139	41.20	13.15	104	43.80	12.71	-1.55	241	.124
Total	117	245.81	49.63	86	258.41	42.00	-1.91	201	.058
Importance									
Parent	133	25.87	6.19	97	27.09	5.50	-1.55	228	.123
Teacher	122	25.88	6.17	98	26.97	5.89	-1.33	218	.185
Classmates	130	22.32	6.84	101	24.27	6.62	-2.17	229	.031*
Close Friend	130	22.32	6.84	101	24.27	6.62	-2.17	229	.031*
School	122	21.45	6.93	99	22.58	7.08	-1.19	219	.236
Total	105	118.64	27.11	87	124.86	26.51	-1.60	190	.111

Note. The possible range on the Frequency scale for each Source of Support is 12–72. On the Importance scale, the possible range for each Source of Support is 12–36.
*$p < .05$. ** $p < .01$. ***$p < .001$.

Magnet High School Students' Reports of the Frequency and Importance of the Types of Support Received

To obtain a total score for the Frequency and Importance of the Type of Support (i.e., emotional, informational, appraisal, and instrumental), all items relative to each type are summed. The scores on the Frequency scale for Type of Support can range from 15–90; the scores on the Importance scale for Type of Support can range from 15–45. Table 6 contains mean total scores, standard deviations, and total number of participants with complete responses related to their reports of the Frequency and Importance of the Types of Support that they received.

Students' highest mean score for Frequency of the Type of Support was for Emotional support (M = 63.41, SD = 12.22, n = 244), which fell between *most of the time* and *almost always*. Appraisal support was rated the lowest (M = 49.98, SD = 12.25, n = 230), with that value falling between *some of the time* and *most of the time.*

With reference to the Importance of the Type of Support, students also rated Emotional support (M = 32.57, SD = 6.58, n = 226) the highest, with an average rating between *important* and *very important*. Again, Appraisal support had the lowest mean score (M = 29.17, SD = 7.29, n = 222), with a value that fell between *not important* and *important*.

Table 6

Means and Standard Deviations for Frequency and Importance for Type of Support All Students

Type of Support	Frequency			Importance		
	n	*M*	*SD*	*n*	*M*	*SD*
Emotional	244	63.41	12.22	226	32.57	6.58
Informational	244	62.71	12.78	223	32.43	6.12
Appraisal	230	49.98	12.25	222	29.17	7.29
Instrumental	255	61.74	13.67	226	31.10	6.54

Note. Total Frequency score for Type of Support can range from 15–90. Total Importance score for Type of Support can range from 15–45.

Grade level differences in magnet high school students' reports of the frequency and importance of the type of support received. To determine if significant differences existed among Type of Support mean scores between grade level groups, a separate ANOVA was conducted for each. Table 7 contains the results. There were no significant group differences observed.

Table 7

Grade-Level Results of One-Way Analysis of Variance for Type of Support

CASS Scales		*df*	*SS*	*MS*	*F*	*P*
Frequency						
Emotional	Between Groups	3	167.77	55.92	.37	.772
	Within Groups	233	34831.03	149.49		
Informational	Between Groups	3	58.90	19.63	.12	.949
	Within Groups	233	38430.10	164.94		
Appraisal	Between Groups	3	172.56	57.52	.38	.769
	Within Groups	220	33511.17	152.32		
Instrumental	Between Groups	3	398.03	132.68	.71	.546
	Within Groups	244	45524.64	186.58		
Importance						
Emotional	Between Groups	3	47.88	15.96	.36	.779
	Within Groups	218	9566.16	43.88		
Informational	Between Groups	3	35.64	11.88	.31	.818
	Within Groups	215	8232.61	38.29		
Appraisal	Between Groups	3	32.71	10.91	.20	.896
	Within Groups	214	11661.29	54.49		
Instrumental	Between Groups	3	24.53	8.18	.19	.904
	Within Groups	218	9424.09	43.23		

Gender differences in magnet high school students' reports of the frequency and importance of the type of support received. Independent samples *t*-tests were conducted to compare boys' and girls' mean scores for Type of Support received. There were significant differences between the boys' and girls' mean scores on the Frequency scale for three of the four Types of Support: (a) emotional support, $t(232) = -2.83$, $p = .005$; (b) informational support, $t(232) = -2.98$, $p = .003$; and (c) instrumental support, $t(243) = -2.10$, $p = .037$. Concerning the Importance of the Type of Support received, there was a significant difference between the boys'

and girls' mean scores for emotional support, $t(218) = -2.39$, $p = .018$. Table 8 contains the results of the independent samples *t*-test for type of support by gender.

Table 8

Independent Samples t-Test Scores for Type of Support by Gender

Type of Support	Boys			Girls				
Frequency	*n*	*M*	*SD*	*n*	*M*	*SD*	*t*	*df*
Emotional	135	61.71	12.97	99	66.21	10.62	-2.83**	232
Informational	131	60.80	13.36	103	65.71	11.36	-2.98**	232
Appraisal	125	48.92	12.26	96	51.54	12.11	-1.58	219
Instrumental	141	60.40	14.06	104	64.08	12.77	-2.10*	243
Importance								
Emotional	123	31.67	6.91	97	33.79	6.07	-2.39*	218
Informational	120	31.83	6.24	97	33.20	6.05	-1.62	215
Appraisal	120	28.52	7.27	95	30.08	7.44	-1.55	213
Instrumental	122	30.42	6.66	98	31.98	6.39	-1.76	218

Note. Total Frequency score for Type of Support can range from 15–90. Total Importance score for Type of Support can range from 15–45. *$p < .05$. ** $p < .01$.

Magnet High School Students' Reports of the Frequency and Importance of the Type of Support Received from Each Source of Support

Data analyses were conducted on students' reports of the frequency and importance of each Type of Support (i.e., emotional, informational, appraisal, and instrumental) received from five different Sources of Support (i.e., parent, teacher, classmates, close friend, and people in the school). For each Source of Support, there are three items corresponding to each Type of Support. The frequency score for the Type of Support within each Source can range from 3–18. The importance score for the Type of Support within each Source can range from 3–9.

To gain a better understanding of students' reports of the Types of Support (i.e., emotional, informational, appraisal, and instrumental) received from each Source of Support (i.e., parent teacher, teacher, classmates, close friend, and people in the school), two series of repeated-measures ANOVAs were conducted. The Bonferonni correction was used on the ANOVAs to examine differences between and among the subscales. First, Frequency scores for each Type of Support within each Source of Support were examined. Then analyses of the Importance scores for each Type of Support within each Source of Support were conducted. The descriptive data derived from these analyses are presented in Table 9, along with a summary of the post hoc comparisons.

Table 9

Mean Scores and Standard Deviations for the Frequency and Importance by Type of Support within Source of Support

	Frequency			Importance Scores		
Source and Type of Support	*n*	*M*	*SD*	*n*	*M*	*SD*
Parent						
Emotional	259	13.28	3.68	237	7.04	1.67
Informational	259	13.33	3.67	237	6.55	1.79
Appraisal	259	12.41	3.83	237	6.37	1.75
Instrumental	259	12.00	3.76	237	6.38	1.67
	E > A & INS; INF > A & INS			E > INF, A, & INS		
Teacher						
Emotional	254	12.72	3.77	228	6.63	1.67
Informational	254	13.28	3.63	228	7.03	1.59
Appraisal	254	12.49	3.75	228	6.27	1.83
Instrumental	254	11.46	3.88	228	6.46	1.73
	INF > E, A, & INS; E > INS; A > INS			INF > E, A, & INS; E > A		
Classmates						
Emotional	260	12.41	3.38	239	5.98	1.93
Informational	260	11.28	3.86	239	5.90	1.86
Appraisal	260	9.52	4.10	239	5.33	1.95
Instrumental	260	11.50	4.24	239	5.87	1.88
	E > INF, A, & INS; INF >A; INS > A			E > A; INF> A; INS >A		
Close Friend						
Emotional	263	14.56	3.76	236	7.15	1.84
Informational	263	14.30	3.74	236	6.98	1.78
Appraisal	263	13.76	3.85	236	5.93	1.84
Instrumental	263	14.66	3.57	236	7.00	1.77
	E > A; INF> A; INS >A			E > A; INF> A; INS >A		
School						
Emotional	253	10.35	3.84	230	5.70	1.95
Informational	253	10.22	4.10	230	5.61	1.86
Appraisal	253	9.58	4.15	230	5.32	1.87
Instrumental	253	12.08	3.72	230	5.31	1.89
	E > A; INF > A; INS > E, INF, & A			E > A & INS; INF> A & INS		

Note. Frequency scores can range from 3–18. Importance scores can range from 3–9. E = Emotional; INF – Informational; A = Appraisal; INS = Instrumental. The Bonferonni correction was used on the ANOVAs.

Differences within frequency type scores for within source. With regard to the examination of the four types of support within the Parent subscale, Mauchly's test indicated that the assumption of sphericity had been violated, $\chi^2(5) = 13.84$, $p < .05$; therefore, multivariate tests are reported ($\varepsilon = .97$). The ANOVA for Parent as the Source of Support for the four types of support was significant, Wilks' $\lambda = .730$, $F(3, 256) = 31.51$, $p < .001$; thus, indicating significant differences among the mean scores. Follow-up comparisons showed that students' mean score on the Frequency scale for parent emotional support was significantly higher than the mean scores for appraisal support, $p < .001$, and instrumental support, $p < .001$. Parent informational support was significantly higher than appraisal support, $p < .001$, and instrumental support, $p < .001$.

Concerning the four types of support within the Teacher subscale, Mauchly's test indicated that the assumption of sphericity had been violated, $\chi^2(5) = 21.99$, $p < .01$; therefore, multivariate tests are reported ($\varepsilon = .95$). The ANOVA for Teacher as the Source of Support was significant, Wilks' $\lambda = .717$, $F(3, 251) = 32.96$, $p < .001$; thus, indicating significant differences among the mean scores. Follow-up comparisons showed students' mean score on the Frequency scale for teacher informational support was significantly higher than the mean scores for emotional support, $p < .01$; appraisal support, $p < .001$; and instrumental support, $p < .001$. Likewise, students' mean scores for teacher emotional support and appraisal support were both significantly higher than the mean score for instrumental support, $p < .001$.

Examining the four types of support within the Classmates subscale, Mauchly's test indicated that the assumption of sphericity had been violated, $\chi^2(5) = 18.61$, $p < .01$; therefore, multivariate tests are reported ($\varepsilon = .95$). The ANOVA for Classmates as the Source of Support was significant, Wilks' $\lambda = .555$, $F(3, 257) = 68.95$, $p < .001$; thus, indicating significant

differences among the mean scores. Follow-up comparisons showed students' mean score on the Frequency scale for classmate emotional support was significantly higher than the mean scores for informational support, $p < .01$; appraisal support, $p < .001$; and instrumental support, $p < .001$. Students' mean scores for informational support and instrumental support were both significantly higher than the mean score for appraisal support, $p < .001$.

Significant differences were also found among the four types of support mean scores within the Close Friend subscale, Wilks' $\lambda = .887$, $F(3, 260) = 11.01$, $p < .001$. The mean scores for Frequency of Close Friend emotional support, informational support, and instrumental support were each higher than the mean score for appraisal support, $p < .001$.

Examining the four types of support within the People in My School subscale, Mauchly's test indicated that the assumption of sphericity had been violated, $\chi^2(5) = 206.54$, $p < .001$; therefore, multivariate tests are reported ($\varepsilon = .64$). The ANOVA for the People in My School as the Source of Support was significant, Wilks' $\lambda = .755$, $F(3, 250) = 27.01$, $p < .001$; thus, indicating significant differences among the mean scores. Follow-up comparisons showed students' mean scores on the Frequency scale for people emotional support and informational support were both significantly higher than the mean score for appraisal support, $p < .001$. Students' mean score for instrumental support was significantly higher than the mean scores for emotional support, $p < .001$; informational support, $p < .001$; and appraisal support, $p < .001$.

Differences within importance type scores for within source. Examining the Importance scores for the four types of support within the Parent subscale, Mauchly's test indicated that the assumption of sphericity had been violated, $\chi^2(5) = 32.08$, $p < .05$; therefore, multivariate tests are reported ($\varepsilon = .92$). The ANOVA for Parent as the Source of Support was

significant, Wilks' $\lambda = .786$, $F(3, 234) = 21.18$, $p < .001$; thus, indicating significant differences among the mean scores. Follow-up comparisons showed students' mean score on the Importance scale for parent emotional support was significantly higher than the mean scores for informational support, $p < .001$; appraisal support, $p < .001$; and instrumental support, $p < .001$.

Concerning the four types of support within the Teacher subscale, Mauchly's test indicated that the assumption of sphericity had been violated, $\chi^2(5) = 36.39$, $p < .001$; therefore, multivariate tests are reported ($\varepsilon = .90$). The ANOVA was significant, Wilks' $\lambda = .799$, $F(3, 225) = 18.83$, $p < .001$; thus, indicating significant differences among the mean scores. Follow-up comparisons showed students' mean score on the Importance scale for Teacher informational support was significantly higher than the mean scores for emotional support, $p < .001$; appraisal support, $p < .001$; and instrumental support, $p < .001$. Students' mean score for teacher emotional support was significantly higher than the mean score for appraisal support, $p < .001$.

The ANOVA for the four types of support within the Classmates subscale was significant, Wilks' $\lambda = .777$, $F(3, 236) = 22.53$, $p < .001$. Follow-up comparisons revealed the mean scores for Importance of Classmate emotional support, informational support, and instrumental support were each higher than the mean score for appraisal support, $p < .001$.

Examining the four types of support within the Close Friend subscale, Mauchly's test indicated that the assumption of sphericity had been violated, $\chi^2(5) = 95.40$, $p < .001$; therefore, multivariate tests are reported ($\varepsilon = .77$). The ANOVA was significant, Wilks' $\lambda = .666$, $F(3, 233) = 38.87$, $p < .001$; thus, indicating significant differences among the mean scores. Follow-up comparisons showed students' mean scores on the Importance scale for Close Friend emotional support, informational support, and instrumental support were each significantly higher than the mean score for appraisal support, $p < .001$.

With regard to the four types of support within the People in My School subscale, Mauchly's test indicated that the assumption of sphericity had been violated, $\chi^2(5) = 16.76$, $p < .001$; therefore, multivariate tests are reported ($\varepsilon = .96$). The ANOVA was significant, Wilks' $\lambda = .887$, $F(3, 227) = 9.70$, $p < .001$; thus, indicating significant differences among the mean scores. Follow-up comparisons showed students' mean score on the Importance scale for People emotional support was higher than the mean scores for appraisal support, $p < .001$, and instrumental support, $p < .001$. Information support was also higher than appraisal support, $p < .001$, and instrumental support, $p < .001$.

Discussion

This action research study emerged from a discussion between the first author and Lodestone's principal about school improvement plan goals, more specifically students' development of positive, healthy relationships with adults and peers. Largely, the CASSS (Malecki et al., 2000) scores suggest that Lodestone's students perceived that they had social support and they valued the support received. Both boys and girls reported receiving the most support from close friends, followed by parents and teachers, in that order. Lodestone's students valued teacher support, followed by parent and close friend, respectively. For the most part, these findings are similar to previous research that has shown that parent support continues to be important to boys and girls as they navigate adolescence (Dubois et al., 1992; Kenny et al., 2002; Reuger et al., 2008). The overall importance finding mirrors those from other studies in which adolescents viewed parent support as the most important source (Demaray & Malecki, 2003a; Demaray et al., 2009).

Concerning sources of support and gender differences, girls perceived more support and valued it more than boys for all sources. Gender differences were statistically significant for the frequency and importance of the support received from classmates and close friend. These results are similar to those in which data have been disaggregated by gender (Demaray & Malecki, 2003; Reuger et al., 2008).

Students' ratings for type of support revealed that emotional support was most often received and valued, followed by informational support. Emotional support, House (1981) discovered, is the type of support most recognized by individuals. The results of this study confirm previous research in which emotional support and informational were also rated as most received and valued (Demaray & Malecki, 2003b). With regard to gender and the types of perceived support, statistically significant differences were found, with girls perceiving more emotional, informational, and instrumental support and valuing each more than the boys did. Here again these findings confirm previous research in which gender-specific differences in perceived support and its importance were found (Demaray & Malecki, 2003a).

Examination of students' perceptions related to the type of support within each source showed that with regard to parents, emotional and information were received the most and it was parent emotional support that was the most valued. Unlike students in Suldo et al.'s study (2009) in which students valued teacher emotional and instrumental support the most, the students in the present investigation valued teacher informational support more than any other type, second only to emotional support. Classmate emotional support was received the most and appraisal support from classmates was deemed the least important. Respectively, instrumental, emotional, and informational supports were rated as being received from a close friend and each was more important than close friend appraisal support. Instrumental support from school was received the

most and emotional support was valued most. For the most part, Lodestone students' ratings for the type of support within each source are consistent with the work of Malecki and Demaray (2003) and Demaray and Malecki (2003b).

Although analyses of students' academic performance relative to students' reports of the social supports received were not a part of the present investigation, it is interesting to note that the most recent reports on the urban district's website indicate that Lodestone is performing well on the state's high stakes test when compared with its district non-magnet school counterparts. The relationship between improved academic performance and perceived support, particularly parent and teacher support, has been established (Ainslie et al., 1996; Malecki & Demaray, 2006; Fredriksen & Rhodes, 2004; Kenny et al., 2002; Kostelecky & Lempers, 1998).

Translating Research to Practice

It is well established that supportive relationships with parents, peers, and school personnel are critically important assets for healthy adolescent development. Supportive relationships are also critical to college readiness and future work success (Lippman, Atienza, Rivers, & Keith, 2008). Adolescents who perceive they have others available to them and are cared for and valued are better able to cope with the demands of school (Kenny et al., 2002), the normative stress inherent in adolescence (DuBois et al., 1992; Moran & DuBois, 2002), and stressful daily or significant life events (Davidson & Demaray, 2007; Dubois et al., 1992). Having said that, it is students' reports of the support received that really matter because support has little effect unless it is actually perceived (Cohen & Willis, 1985; House, 1981; Demaray & Malecki, 2003b). Moreover, the effectiveness of support sources and types will vary based on individual characteristics such as gender and age (Cohen & Willis, 1985; Demaray & Malecki,

2003a; Malecki & Demaray, 2003). Partnering with the principal of Lodestone to gauge students' perceptions of the support received and analyzing the results in various ways was a first step toward meeting school goals.

The results of the present investigation have been shared with the Lodestone's principal. Next steps could include analyzing relationships between CASSS (Malecki et al., 2000) scores and students' grade point averages, their performance on the state's high stakes test under No Child Left Behind, attendance, or college going rates. Such analyses could lead to tailored interventions for those students who perceived low levels of social support and who perform poorly academically.

More generally, schools and districts would do well to consider using empirically validated measures like the CASSS (Malecki et al., 2000) to provide school personnel with critically important data about students' perceptions of their relationships with teachers, classmates, and the school overall. School-wide CASSS data could be used to inform school improvement efforts, as was the case in this study. Results could be used in the development of a school-wide comprehensive system of social-emotional learning and positive behavioral supports (Simonsen, Sugai, & Negron, 2008). Likewise, teachers could query students' perceptions of the supports received through advisory programs and smaller learning communities and use the results to adjust the group composition, strategies, and curriculum according to student needs. Concerning response to intervention systems, which are multi-level prevention programs designed to maximize student achievement and to reduce behavior problem model (Griffiths, Parson, Burns, VanDerHeyden, & Tilly, 2007), CASSS scores could be used to clarify and target the social support needs of individual students, where appropriate.

Limitations

In every research study, limitations must be acknowledged. The study findings are limited by the sample and method of data collection. The sample is constrained to a single interdistrict, magnet high school in a northeastern state. A single instrument, the CASSS (Malecki et al., 2000), was used to simply describe participants' reports of the social supports received. Additional mixed methods studies that include a national sample of magnet high schools should be conducted. The study's narrow focus is a limitation; other researchers should examine the relationship between magnet high school students' perceived social support and academic outcomes. Self-reporting provides information about past or likely actions; it may not have provided an adequate picture of what was actually happening for the Lodestone students. Finally, there were high numbers of incomplete surveys. As noted earlier, the scale administration procedures likely contributed to this limitation.

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