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Perceived Social Support and Its Association With Obesity-Specific Health-Related Quality of Life

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Abstract

Objective—To (1) describe type and source of social support perceived by obese youth and examine associations with sociodemographic/anthropometric characteristics, and (2) examine relationships between social support and obesity-specific health-related quality of life (HRQOL).

Methods—Seventy-four obese youth and their primary caregivers participated. Youth completed the Child and Adolescent Social Support Scale and an obesity-specific HRQOL measure, Sizing Me Up.

Results—Close friends and parents provided the most social support and were rated most important, except for teacher informational support. Classmates and schools provided the least social support. Body mass index z-score was correlated with teacher support frequency ($r = -.26$, $p < .05$) and minority youth reported more parent support ($t(72) = -2.21$, $p < .05$). Compared with other support providers, classmate support significantly predicted most HRQOL scales ($p < .001$).

Conclusions—Close friends, parents, and teachers are significant sources of support to youth with obesity; however, classmates play a unique role in the HRQOL of obese youth.

Keywords

overweight; social support; adolescents; children; patient-reported outcomes

It is estimated that ~17% of children and adolescents in the United States are obese (i.e., body mass index [BMI] ≥95th percentile for age and gender) and at significant health¹ and psychosocial risk.² Perceived social support, defined as an individual's perception of supportive behaviors from people in their social network,³ plays a key role in both the practice of healthy lifestyle behaviors (e.g., consuming more fruits and vegetables and skipping fewer meals)⁴ and the psychosocial adjustment in youth.⁵ However, to date our understanding of the perceived social support and its impact on the day-to-day functioning of obese youth is limited.

Social support literature delineates the importance of examining various types of social support, including emotional and informational support.⁶ Furthermore, among healthy children, different support providers (e.g., parents, classmates, friends, and teachers) are found to provide specific types of support (e.g., close friends provide the most emotional and instrumental support).⁷ Initial data from Zeller and Modi² suggest that treatment-seeking obese youth perceive parents, teachers, and friends are providing similar amounts of social support, but parents and friends provided significantly more support than classmates.

However, these researchers did not assess the type of support provided by these various sources.

Two groups of investigators have also demonstrated that obese youth's perceptions of social support are linked to generic health-related quality of life (HRQOL). HRQOL provides a multidimensional view of impact of an illness on patients' lives and has become increasingly recognized as an important patient-reported outcome variable for pediatric patients.⁸ For example, Ingerski et al⁹ found that total social support among overweight youth was a significant predictor of overall generic HRQOL, whereas Zeller and Modi² demonstrated that perceived social support from classmates was a significant predictor of generic HRQOL. Others have similarly shown that poor relationships with peers, or peer victimization, are associated with lower generic HRQOL among overweight youth.¹⁰ Although these investigators provide initial evidence regarding the role of social support and HRQOL, generic HRQOL measures lack the sensitivity and specificity to best understand the impact of a specific condition (e.g., obesity) on daily functioning. Thus, an important future direction is to examine the association between perceived social support and obesity-specific HRQOL (e.g., Sizing Me Up¹¹) among obese youth. Understanding how social support impacts obesity-specific HRQOL may have important implications for weight management treatment retention and weight loss maintenance.

Study aims were to (1) describe the type and source of social support perceived by obese youth using a well-validated generic measure (no obesity-specific measure exists), (2) examine relations between sociodemographic/anthropometric characteristics and importance/frequency of social support, and (3) examine relationships between social support and obesity-specific HRQOL. We hypothesized that (1) parents and close friends would provide the highest frequency and importance ratings of emotional support, (2) teachers and schools the highest levels of informational support, (3) close friends the highest level of appraisal support, and (4) parents the highest level of instrumental support. On the basis of the larger social support literature, girls were hypothesized to endorse more frequent social support from all support providers and higher importance ratings. Relations between youth BMI z-score (zBMI), youth race, socioeconomic status (SES), parental marital status, and social support were exploratory. Finally, on the basis of research using generic HRQOL measures, we hypothesized that social support from close friends and classmates would be most strongly associated with HRQOL.

METHODS

Participants and Procedures

Participants included 74 obese youth and their primary caregiver seeking treatment through a behavioral weight management program requiring a body mass index (BMI) 95th percentile. This program excludes youth with genetic syndromes associated with obesity (e.g., Prader Willi syndrome) and developmental disorders. Inclusion criteria for this study included (1) patients 8 to 13 years of age, (2) ability to read and complete study questionnaires, and (3) provision of written informed consent/assent. Exclusion criteria included parent-reported severe psychopathology (e.g., bipolar disorder) and non-English speaking participants.

Between August 2004 and January 2007, patients scheduled for an initial appointment in the pediatric weight management program were mailed brochures describing a study about health-related quality of life (HRQOL) in obese youth. Potential participants were then approached during the initial appointment, a medical screening visit at the General Clinical Research Center, or an intake evaluation with the treatment team. Eighty youth between the ages of 8 and 13 years were recruited for participation in this study. Of those, 78 (98%)

agreed to participate. The final sample ($n = 74$) reflects the exclusion of 4 participants (e.g., 3 children were 1 of 2 siblings and 1 child had difficulty understanding the questionnaires due to reading difficulties).

All personnel were trained to recruit and screen participants, administer consent/assent forms, and instruct or administer questionnaires to children and parents. For purposes of this study, parents completed a demographics questionnaire and youth completed a social support measure. Height/weight of youth and their parents were obtained by trained research staff at the same time questionnaires were administered. Approval was obtained from the Institutional Review Board at the institution.

Measures

Demographic Background Questionnaire—Primary caregivers completed a background questionnaire documenting the youth's race/ethnicity, parental marital status, and parental level of education. Adequate data were available to calculate the Revised Duncan (TSEI2¹²), which is an occupation-based measure of socioeconomic status (SES). Scores range from 15 to 97; higher scores represent greater occupational attainment.¹³ For 2 caregiver households, the higher Duncan score was used in analyses.

Child and Adolescent Social Support Scale—The Child and Adolescent Social Support Scale (CASSS)¹⁴ is a 60-item measure of perceived social support for children and adolescents (grades 3–12). Items target 5 different sources of social support (Parents, Teachers, Classmates, Close Friend, and School) and 4 types of social support (Emotional [i.e., trust, love, empathy], Informational [i.e., giving advice and suggestions to assist an individual in responding to personal or situational demands], Appraisal [i.e., giving evaluative information in the form of affirmation, feedback and social comparison], and Instrumental [i.e., helping behaviors in the form of money, time, assistance, and other explicit interventions]).¹⁵ Sample items include Emotional (“My close friend understands my feelings”), Informational (“My parents give me good advice”), Appraisal (“My teacher tells me how well I do on tasks”), and Instrumental (“My classmates help me with projects in class”). Respondents rate how often they perceive that type of support from that source and how important it is to them. Frequency ratings are on a 6-point scale ranging 1 (never) to 6 (always). Importance ratings are on a 3-point scale ranging from 1 (not important) to 3 (very important). Internal consistency coefficients for our sample ranged from 0.83 to 0.94 for Frequency and 0.77 to 0.89 for Importance subscales. The CASSS has also demonstrated excellent convergent validity with other behavioral and social support scales for children.

Sizing Me Up—This is an obesity-specific self-report HRQOL measure developed specifically for obese children aged 5 to 13 years.¹¹ It contains 22-items that characterize the impact of children's size on their daily functioning across 5 scales: Emotion (feelings or emotions), Physical (ability to keep up with physical activities and teasing while being physically active), Social Avoidance (comfort in and avoidance of social activities), Positive Social Attributes (positive qualities and strengths), and Teasing/Marginalization (whether they were teased or left out because of their weight) and Total QOL. Sizing Me Up has shown good convergent validity with the PedsQL ($rs = 0.35$ – 0.65 , $p < 0.01$), and internal consistency coefficients for this sample were as follows: Emotion ($\alpha = 0.86$), Physical ($\alpha = 0.81$), Social Avoidance ($\alpha = 0.63$), Positive Social Attributes ($\alpha = 0.65$), Teasing/Marginalization ($\alpha = 0.82$), and Total QOL ($\alpha = 0.86$). Scaled scores range from 0 to 100, with higher scores representing better HRQOL.

Weight and height—Trained clinic nurses obtained anthropometric measures, including height and weight from youth. Weight was measured (0.1 kg) on a digital Scaletronix scale

(Wheaton, IL). Standing height was measured with a Holtain stadiometer (Holtain, Crymych, United Kingdom). Participants were weighed and measured in street clothing without shoes. These data were used to calculate BMI (kg/m^2) and BMI z-score (zBMI) values. zBMI was calculated for participants using age- (to the nearest month) and sex-specific median, standard deviation, and power of the Box-Cox transformation (Lambda-Mu-Sigma [LMS] method¹⁶) on the basis of national norms from the Centers for Disease Control and Prevention.¹⁷

Statistical and Data Analyses

Descriptive statistics (i.e., means and standard deviations) were calculated. Repeated measures multivariate analyses of variance (RM MANOVA) were used to examine mean differences between types and sources of social support. Three levels of analyses were conducted for (a) frequency and (b) importance of social support. First, main effects for type and source of social support and the interaction between these 2 factors were tested. Next, if the overall RM MANOVA was significant, post hoc analyses were conducted controlling for Type I error rates. Specifically, because statistically significant interaction effects were detected for the RM MANOVAs, simple effects within each of the 2 factors were examined and tested using a familywise Type I error rate of 0.05 within each factor. Finally, within each statistically significant simple effect, pairwise comparisons were conducted with per comparison Type I error rates of 0.01.

Pearson correlations and independent *t*-tests were used to examine the relations between social support frequency and importance ratings, sociodemographic characteristics (i.e., child gender, minority status, SES, and marital status), and anthropometric characteristics (i.e., zBMI).

Forward stepwise regression analyses were conducted for each Sizing Me Up scale to examine relationships with social support. Stepwise regression identifies a subset of predictor variables that statistically contribute most to an outcome variable; variables that significantly contribute to the outcome are retained in the model, whereas those that do not are omitted from the regression equation.¹⁸ For each HRQOL scale, frequency of social support from parents, teachers, classmates, close friends, and school, were entered into the stepwise regression model, allowing us to identify which social support sources were the primary predictors of Sizing Me Up scales. zBMI was entered as a covariate for all regression analyses because of its association with obesity-specific HRQOL.¹¹ Analyses were conducted using SAS version 9.2 (SAS Institute, Cary, NC). Significance was defined as $p < 0.01$ because of multiple comparisons.

RESULTS

Descriptive Data for Participants and Types and Sources of Social Support

Participants had a mean age of 10.9 ± 1.7 years; 66% were girls; and 60.8% were black, 31.1% white, non-Hispanic, and 8.1% other. The mean body mass index (BMI) was $32.9 \pm 6.5 \text{ kg/m}^2$, and mean BMI z-score (zBMI) was 2.4 ± 0.3 . Primary caregiver were predominately mothers (81%) and single (69%). Mean family socioeconomic status (SES) was 42.9 ± 22.2 , representing occupations such as bank tellers, teacher's aides, and cleaning staff.

Means are presented in Figures 1A and 1B for the frequency and importance, respectively, of each combination of type and source of social support. Results indicated that classmates and schools provided the least social support and less importance was placed on social support provided by these sources. Close friends and parents typically provided the highest

levels of social support and were rated most important with one exception; informational support was rated to be most frequent and most important from teachers.

Comparison of Types and Sources of Social Support

Repeated measures multivariate analyses of variances (RM MANOVAs) were conducted to compare the frequency and importance ratings by both source and type. With frequency of social support as the dependent variable, the main effects of type were not statistically significant ($F_{(3,70)} = 1.67, p = .18$), whereas the main effect of source ($F_{(4,69)} = 10.56, p < .0001$) and the type by source interaction ($F_{(12,61)} = 2.94, p = .0028$) were statistically significant. Given the statistically significant type by source interaction, the main effects were not interpreted¹⁹; however, the simple effects of source within type and type within source were examined. All simple effects of source within type were statistically significant for the frequency ratings: Emotional ($F_{(4,70)} = 9.49, p < .0001$), Informational ($F_{(4,70)} = 7.66, p < .0001$), Appraisal ($F_{(4,69)} = 10.49, p < .0001$), and Instrumental ($F_{(4,70)} = 9.86, p < .0001$). For the simple effects of type within source, only the simple effect for teachers ($F_{(3,70)} = 7.25, p = .0003$) was significant. Table 1 provides results for pairwise comparisons conducted within statistically significant simple effects only.

With importance ratings of social support as the dependent variable, the main effect for type ($F_{(3,65)} = 2.52, p = .066$) was not statistically significant, whereas the main effect of source ($F_{(4,64)} = 8.89, p < .0001$) and the type by source interaction ($F_{(12,56)} = 3.44, p = .0008$) were statistically significant. For the simple effects of source within type, only Emotional ($F_{(4,69)} = 11.31, p < .0001$) and Informational ($F_{(4,70)} = 7.08, p < .0001$) types yielded statistical significance (Table 1). In contrast, the simple effects of type within source yielded statistical significance for the teacher ($F_{(3,67)} = 7.58, p = .0002$) and close friend ($F_{(3,71)} = 4.57, p = .006$) sources only. Table 1 presents statistically significant simple effects from pairwise comparisons.

Relations Between Sociodemographic/Anthropometric Characteristics and Social Support

Pearson correlations revealed a significant negative relation between zBMI and frequency of teacher support ($r = -0.26, p < .05$). Independent *t*-tests also indicated that minority youth reported a higher frequency of parental support ($t(72) = -2.21, p < .05$, 95% confidence interval: $-9.80, -.50$) compared to nonminority youth. No other significant relationships or differences were found.

Relations Between Social Support and HRQOL

Table 2 provides a summary of forward stepwise regression analyses. After controlling for zBMI, stepwise regression revealed that classmate support was the only significant positive predictor of the Emotion subscale. For the Physical subscale, classmate support was a positive predictor of the Physical health-related quality of life (HRQOL) subscale, whereas school support acted as a significant negative predictor of Physical HRQOL. This finding suggests that school support acted as a negative net suppressor variable (i.e., small positive correlation with outcome variable but negative beta weight [A suppressor variable has a zero (i.e., very small) correlation with the outcome variable, but is correlated with the predictor variable. Such variables increase the effect size and predictive validity of other variables in the regression equation because they account for some of the variance in these predictor variables not found in the outcome variable.²⁰]). For the Social Avoidance subscale, classmate support was a positive predictor, whereas close friend support was a significant negative predictor. For the Social Avoidance model, close friend support acted as a negative classical suppressor (i.e., zero [small] correlation with outcome but negative beta weight).²¹ For the Teasing subscale, classmate support was a significant positive predictor, whereas close friend support was a negative predictor of the Teasing subscale. Close friend support

acted as a negative classical suppressor. Finally, classmate support was the only significant positive contributor of Total QOL. No sources of support significantly predicted the Positive Social Attributes scale.

DISCUSSION

Overall, this study demonstrated that obese youth perceive varying levels of social support based on source. Specifically, obese youth not only derived the greatest level of social support from parents and close friends but also placed the most value on these sources. In contrast, obese youth seemed to perceive the least amount of social support from classmates and schools. The latter finding is interesting given that classmate support seemed to have the strongest influence on obesity-specific health-related quality of life (HRQOL).

Close friends, closely followed by parents, play a significant role in providing support to obese youth. These findings are consistent with prior research, suggesting that parents and friends are primary sources of social support for children and adolescents.²² These individuals are significant sources of empathy and love (i.e., emotional support), assistance with daily tasks (i.e., instrumental support), and evaluative feedback (i.e., appraisal support). Although generic, not obesity-specific social support, was examined, close friends and parents may be key agents of change for obesity intervention and prevention efforts, by supporting treatment-seeking obese youth in their weight loss attempts, making healthier food choices, engaging in physical activity, and maintaining healthy self-esteem. Preliminary research with children who are overweight suggests that including peers²³ and parents²⁴ in treatment is promising. For example, Janicke et al²⁴ found that children assigned to a parent-only intervention, as well as a family-based group intervention (parent and child), demonstrated greater decreases in body mass index (BMI). Including close friends and parents in clinical interventions may be an important area for future research, given that enlisting friend support has shown positive effects for self-care in other pediatric conditions, such as Type 1 diabetes.²⁵

As hypothesized, teachers were identified as an important source of support, particularly informational support. In terms of giving advice and problem solving, obese youth identified teachers as providing the highest level of support. Receiving such support was also deemed more important from teachers than classmates and school. Although overall teacher support is likely not specific to weight management, given their perceived importance, teachers and other adult figures in the school (e.g., coaches, school nurses, health counselors) may be in a unique position to first, receive education and training on the psychosocial and nutritional aspects of childhood obesity and second, provide developmentally-appropriate education on nutrition and healthy lifestyle behaviors in the classroom. School-based obesity interventions have mostly been provided by external sources (e.g., volunteers and students) and demonstrate some improvements on BMI and healthy lifestyle practices.^{26–27} Receiving intervention from a teacher who is familiar and whom obese youth value may be a promising avenue. In contrast, obese youth rated classmates and schools as providing the least social support and also placing little importance on support from these sources. This may be due to factors identified in the literature, which document that (a) obese youth self-report greater victimization/bullying by school peers,²⁸ and (b) school peers perceive them as less socially competent²⁹ relative to youth who are not overweight.

The concordance between frequency and importance ratings should also be considered. Adult research suggests that individuals do not necessarily receive the type of support they value or seek out, which can lead to dissatisfaction and distress.³⁰ However, in our sample, obese youth reported receiving the type of support they value most from the people they seek it from. Although youth may have greater difficulty discerning the differences between

these 2 constructs (i.e., frequency and importance), it is also possible that the support needs of obese youth are being met.

Results regarding relations between sociodemo-graphic variables, anthropometric characteristics, and importance/frequency ratings of social support partially supported our hypotheses. Contrary to the developmental literature, no gender differences were noted on social support. The presence of a chronic condition (e.g., obesity) may play a more salient role than gender, with boys and girls reporting similar levels of support. Minority youth also reported greater support from parents, compared with nonminority youth. This extends prior research showing that African-American youth, which made up more than half of our sample (e.g., 60.8%), often derive large amounts of support from family networks relative to outside sources.³¹ Cultural differences regarding weight and body size beliefs may contribute to these findings. For example, research shows that African-Americans prefer a significantly heavier body size compared with whites,³² with obesity being more acceptable in African-American families.³³ Finally, higher BMI z-score (zBMI) in this exclusively obese sample was associated with less perceived teacher support. Previous work has demonstrated that treatment-seeking youth with extreme obesity (BMI > 40 kg/m²) reported greater impairments in school functioning than nontreatment-seeking obese youth.³⁴ It is possible that youth in the present sample with higher BMIs were experiencing such difficulties and perceived their teachers as less supportive.

Our hypothesis on the relation between social support and obesity-specific HRQOL was partially supported. Close friends did not significantly predict the HRQOL of children with obesity, but support from classmates was the main predictor of most dimensions of QOL. As perceptions of support from classmates increased, obese youth endorsed better emotional and physical functioning, greater comfort in and less avoidance of social situations, less marginalization/teasing, and greater overall QOL. This is consistent with research on generic HRQOL, linking greater classmate support to higher HRQOL.² This finding is ironic, given that obese youth reported receiving little support from classmates and placing little importance on their support. However, perceptions of social support from classmates may indirectly reflect the degree to which obese youth are teased or bullied by classmates; that is, low classmate support may reflect greater teasing by classmates, which is related to lower HRQOL. The higher frequency of peer bullying documented among children who are obese and overweight³⁵ suggests that negative or minimal peer interactions may lead to perceptions of not being supported and lead to less value placed on classmate support. Yet, classmates appear highly salient to how obese children feel about themselves and how comfortable they feel in their surroundings. This may be due to the large amount of time children spend with classmates during the school day or the role classmates play in creating peer norms and/or social status that children who are obese may not “fit” into.

Our findings must be interpreted within the context of study limitations. Future research that compares the support networks of obese youth across various support providers with those of healthy children may provide a better representation of whether obese youth differ significantly from nonobese counterparts in the amount of support they receive and the type of support they value. Second, the Child and Adolescent Social Support Scale (CASSS) assesses general social support, not support specific to the demands of a chronic condition like pediatric obesity. Although an obesity-specific social support measure does not currently exist, an important future direction would be to assess supportive behaviors related to engagement in healthy eating, physical activity, and dieting behaviors. Prior research in obese young adults illustrates the importance of examining support for specific weight-related behaviors (e.g., physical activity) because lack of support has been linked to greater BMI.³⁶ Third, this study focused on treatment-seeking youth with obesity; the possibility that obese children and adolescents who are not involved in weight management treatment

may perceive social support networks differently must be considered. For example, obese youth whose families do not seek treatment may perceive receiving greater social support from all networks and consequently might not pursue treatment. Alternately, an obese child or adolescent whose QOL is impaired by their excess weight may perceive lower social support from adults and age-mates if their family is unable to pursue care or minimizes its impact. Future research should explore the role of perceived social support in the process of a child or adolescent's consideration of intervention and the family's pursuit of care. Fourth, this study was descriptive and did not assess the causal link between obese youth's perceptions of social support and other salient outcome variables (e.g., healthy lifestyle behaviors). Future research evaluating the relations between perceptions of support from different sources and lifestyle behaviors may prove particularly beneficial. For example, if close friends are influential in supporting or sabotaging healthy eating behaviors, weight management interventions can focus on enlisting the help of these individuals and/or problem solving with obese youth about the social pressures of eating with friends. Fifth, these data characterize a clinically referred sample of obese youth. Obese children who present to multidisciplinary weight management programs may differ from obese youth in the broader community who lack access to care. Finally, suppressor variables, which we identified, may reflect interrelations or redundancy among items or subscales on the CASSS; for example, classmates may be interpreted by our sample as being subsumed under the larger school support variable. This is possible because the CASSS provides no instructions, definition, or specifications to the respondent regarding which individuals are subsumed into the school subscale; rather, respondents are asked to answer items based on "people in my school." Suppressor variables can consequently be useful for altering research instruments.³⁷ Future research is needed to first replicate these suppressor effects to determine whether these are instrument specific, and next, make any modifications to this instrument to reduce potential redundancy or interrelatedness between subscales and better distinguish between school and classmate support.

This study represents an initial step in describing the social support networks of obese youth and examining its association to obesity-specific HRQOL. Overall, findings suggest that obese youth perceive themselves as being well supported by close friends, parents, and teachers, and valuing support from these sources. In contrast, although obese youth did not perceive classmates as providing high levels of support nor being a highly valued source of support, classmate support seems to be the only significant predictor of HRQOL. Findings may inform weight management interventions by identifying which individuals to include in treatment surrounding healthy eating behaviors, physical activity, and obesity-specific HRQOL.

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Figure 1.

A, Mean frequency ratings of social support as a function of type and source of social support. B, Mean importance ratings of social support as a function of type and source of social support.

Table 1

Frequency and Importance Ratings by Type and Source of Social Support

Type	Source									
	Parents		Teachers		Classmates		Close Friends		School	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Frequency										
Emotional	14.59 ^{c,s}	2.75 ^{c,s}	13.65	3.86	11.89 ^{p,f}	4.37 ^{p,f}	15.23 ^{c,s}	3.55 ^{c,s}	12.42 ^{p,f}	4.22 ^{p,f}
Informational	14.51 ^{c,s}	2.83 ^{c,s}	14.70 ^{c,s,a,i,s}	3.44 ^{c,s,a,i,s}	11.99 ^{p,t,f}	4.57 ^{p,t,f}	14.42 ^{c,s}	3.60 ^{c,s}	12.53 ^{p,t,f}	4.27 ^{p,t,f}
Appraisal	14.36 ^c	3.12 ^c	13.71 ^{c,i,f}	3.28 ^{c,i,f}	11.43 ^{p,t,f}	4.38 ^{p,t,f}	14.68 ^{c,s}	3.71 ^{c,s}	12.68 ^f	4.15
Instrumental	13.91 ^s	3.07 ^s	13.30 ^{f,i,f}	3.74 ^{f,i,f}	12.65 ^f	4.55 ^f	14.91 ^{t,c,s}	3.20 ^{t,c,s}	11.91 ^{p,f}	4.29 ^{p,f}
Importance										
Emotional	7.66 ^{c,s}	1.05 ^{c,s}	7.23 ^{c,i,f}	1.34 ^{c,i,f}	6.33 ^{p,t,f}	1.88 ^{p,t,f}	7.78 ^{c,s}	1.47 ^{c,s}	6.78 ^{p,f}	1.61 ^{p,f}
Informational	7.38	1.38	77.7 ^{c,s,e,a}	1.30 ^{c,s,e,a}	6.57 ^{t,f}	1.68 ^{t,f}	7.35 ^c	1.48 ^c	6.86	1.83 ^f
Appraisal	7.27	1.40	6.90 ^{i,f}	1.69 ^{i,f}	6.50	1.79	7.19	1.69	6.80	1.80
Instrumental	7.26	1.39	7.32	1.46	6.88	1.80	7.53	1.42	6.82	1.74

Superscripts indicate that the mean for the specified type/source of social support is significantly different based on a familywise Type I error rate of 0.05.

^p parents;

^t teachers;

^c classmates;

^f close friends;

^s school;

^e emotional;

^{i,f} informational;

^a appraisal;

^{i,s} instrumental.

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