

---

---

# Implications of Social Supports for Adolescents' Education and Career Aspirations

---

JULIE WALL, KATHERINE COVELL, and PETER D. MACINTYRE,  
University College of Cape Breton

## Abstract

Two hundred and sixty grade 9 through 12 students completed questionnaires designed to examine relations among social support, perception of future opportunity, and education and career aspirations and expectations. Path analyses showed that for both males and females, perception of opportunity predicts educational expectations, which, in turn, predict educational aspirations and career expectations. For females, peer, family and teacher supports predict perception of opportunity, whereas for males only family support is predictive of perception of opportunity. ANOVAs demonstrated that females perceive more teacher and peer support than do males, and that compared to their male peers, females have greater perceived future opportunity, educational aspirations and expectations, and career expectations. Both males and females indicate a greater gap between career aspirations and expectations than between education aspirations and expectations. The possible contributions of socioeconomic conditions and gendered socialization are discussed.

## Résumé

Au total, 260 étudiants de la neuvième à la douzième année ont répondu à des questionnaires conçus pour étudier les rapports entre l'appui social reçu, les perspectives d'avenir telles qu'elles sont perçues, les aspirations et les attentes face aux études et à la carrière. Une analyse causale a démontré, chez les étudiants comme chez les étudiantes, que la perception de l'avenir et ce qu'il réserve annonce les attentes par rapport aux études qui, elles, prédisent les aspirations par rapport aux études et les attentes face à la vie professionnelle. Chez les étudiantes, le soutien des camarades, de la famille et des enseignants est un indice de la perception qu'elles ont de leur avenir et de ce qu'il leur réserve, tandis que chez les étudiants, seul le soutien qu'ils reçoivent de leur famille influence cette perception. Les analyses de la variance ont démontré que les étudiantes ressentent un soutien plus grand de la part de leurs professeurs et camarades que ce n'est le cas chez les étudiants, et que comparativement à leurs camarades

masculins, elles ont un sens plus aigu de ce que l'avenir leur réserve, de leurs aspirations et attentes face à leurs études, et aussi de leurs attentes sur le plan professionnel. Il existe un écart plus grand entre les aspirations et les attentes professionnelles qu'entre les aspirations et les attentes sur le plan de l'éducation, et cela vaut tant pour les filles que pour les garçons. Il est question dans cette étude de l'influence possible des conditions socio-économiques et de la socialisation fondée sur le sexe.

Successful transitions through adolescence are facilitated by social support. Social support during adolescence serves to lessen the adolescent's vulnerability to stress (DuBois, Felner, Meares, & Krier, 1994) and to depression (McFarlane, Bellissimo, & Norman, 1995). Further, social support increases the likelihood of academic achievement (Levitt, Guacci-Franco, & Levitt, 1994). The purpose of the research described here was twofold. First, we examined hypothesized links among social supports and career and education expectations and aspirations. Our second purpose was to assess gender differences in adolescents' perceived social supports in family and school environments.

Social support is defined two ways: (1) as information which affords the perception of being cared for, esteemed and valued by members of one's social network (Dubow, Tisak, Causey, Hryshko, & Reid, 1991; Dubow & Ullman, 1989), and (2) as the availability of people on whom we can rely, and who let us know that we are cared for and valued (Sarason, Levine, Basham, & Sarason, 1983). The major sources of support for adolescents are family, peers, and teachers.

Whereas peers and teachers become increasingly important during adolescence, the family remains an important source of social support (Furman & Buhrmeister, 1992; Levitt et al., 1994). Social support in the family has a direct link with adolescents' experiences at school. Support from the family affects school behaviour patterns (Baker, 1985), and promotes learning

(Gilbert, Barr, Clark, Blue, & Sunter, 1993). Students who are high in family social supports display a higher scholastic self-esteem (Dubow & Ullman, 1989). In contrast, a lack of social support in adolescence is related to greater vulnerability to the effect of stress and depression (Cauce, Hannan, & Sargeant, 1992; Hirsch & DuBois, 1992; Moran & Eckenrode, 1991), and is a contributor to difficulties in school (Baker, 1985; Gilbert et al., 1993). Early school leavers are characterized by a lack of family cohesion, with little or no support from family members (Streeter & Franklin, 1991). Further, although economic disadvantage has been linked to early school leaving (e.g., Zimiles & Lee, 1991), family support is more predictive of school involvement than is economic level (Connell, Spencer, & Aber, 1994). A lack of social support, then, may be among the more important predictors of early school leaving (c.f., Fortune, Bruce, William, & Jones, 1991; Price, Cioci, Penner, & Trautlein, 1993). Parental support may affect the adolescent's school experiences by increasing planning for future education and occupation (Nurmi, 1987).

Support from peers complements but does not compensate for a lack of parental support. Nonetheless, peer support does become increasingly important through adolescence (Furman & Buhrmester, 1992). Both parent and peer support remain necessary because both correlate with self-worth (East & Rook, 1992), and because the two sources of support are used differentially (Windle, Miller-Tutzaver, & Barnes, 1991). Increasingly through adolescence, peers provide support for the daily life of the adolescent (friendships, dating, clothing, hairstyles, leisure activities and so forth), whereas parents continue to be the major source of support for issues of long-term life style choice such as personal values and career considerations (Jurkovic & Ulrici, 1985; O'Brien, 1990). The complementary qualities of parent and peer support are well exemplified in a study of social support during the transition to a new school (Dunn, Putallaz, Sheppard, & Lindstrom, 1987). Family support predicted the behavioural dimensions of adaptation (grades and attendance), whereas peer support predicted the affective dimensions of adaptation (levels of anxiety and depression). Successful adaptation to the new school, then, depended on the two sources of support, which were mutually reinforcing.

How teacher support interacts with parent and peer support is less clear from the available literature. Teacher support has been found to be directly beneficial to the achievement expectations of adolescents (Cheung, 1995), and there is evidence that the school environment takes on increasing importance through adolescence (Jurkovic & Ulrici, 1985). We might expect then that, like peer support, teacher support also complements parental support. However, there are data suggesting that at least

in extreme cases, the role of teacher support can be compensatory.

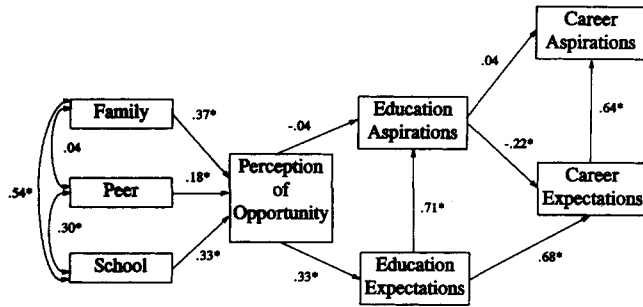
In the absence of a supportive home environment, a positive school environment appears to be effective in offsetting the impact of a non-supportive family background (Gilbert et al., 1993). Preliminary outcome data from Full Service Schools (e.g., Dryfoos, 1995) — schools designed to provide needed social as well as other supports — demonstrate the powerful effect of school support in overcoming its lack in the family. It is those adolescents most in need who show the greatest potential to benefit from social support in schools (DuBois et al., 1994). This compensatory effect may exist because it is not only the number of social supports that individuals have that is important, but also how satisfied individuals are with the support that they receive (Dubow & Ullman, 1989; Sarason, Levine, Basham, & Sarason, 1983).

Students who express satisfaction with at least one source of social support are more optimistic about their lives, and believe they have more control over their present life and their future (Dubow & Ullman, 1989). In contrast, students who are dissatisfied with or experience little social support are more pessimistic both about their present and their future. An adolescent's orientation toward the future, then, develops in both school and family contexts where it is influenced by perceived support (Nurmi, 1991).

Nurmi (1991) emphasizes the importance of anticipated lifespan development on adolescents' future orientation, particularly with regard to the setting of and working toward goals. Career and educational goals are set based on the adolescent's expectations concerning his/her future. Many studies have demonstrated the general impact of a supportive family and or school environments on educational and career aspirations (e.g., Bo, 1994; Coleman, 1987; Shavit & Williams, 1985). Such expectations and aspirations likely result from perception of opportunity that is in general a function of social context (Nurmi, Poole, & Kalakoskis, 1994; Poole & Cooney, 1987), and specifically is a concomitant of perceived social support (Dubow & Ullman, 1989). Adolescents high in social support are high in perceived opportunity; they believe they will have access to opportunity for both educational and occupational advancement; they anticipate future success. In contrast, adolescents low in social support may perceive their access to, or ability to pursue, future opportunities for career and educational development to be more limited.

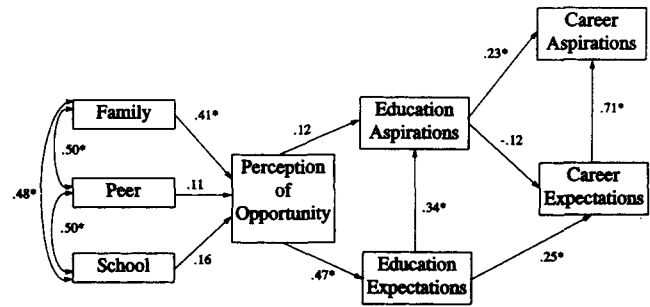
Adolescents' future aspirations and expectations may not only vary with social support but also with gender. For example, Day (1990) found that whereas many female adolescents do have high aspirations, such as to be lawyers, doctors and RCMP officers, they do not *expect* to have the careers that they desire. Day (1990) reported

Females



Note: \* p < .05

Males



Note: \* p < .05

Figure 1. Education aspirations and expectations

that 44% of the girls lowered their reported career goals when the question changed from what they desired to what they expected. This gap between aspirations and expectations has been attributed to gender discrimination and gendered socialization in which girls are encouraged to pursue traditional female careers (e.g., Davey & Stoppard, 1993). Frequently, however, an inability to afford the education required is cited rather than gender discrimination as the reason for lowered career goals (e.g., Day, 1990; Davey, 1993). These latter data suggest that perception of opportunity may affect future expectations.

Although no gender differences have been found in patterns of support seeking (O'Brien, 1990), there is some indication in the existing literature that there are gender differences in perceived teacher and school support. Robinson (1995), for example, obtained gender differences in adolescents' perceived school supports. Among the high school students they sampled, females reported higher levels of approval from teachers than did males, and males reported lower levels of teacher than family support. Similarly, Ryan, Stiller and Lynch (1994) obtained data indicating that Grade 7 and 8 girls perceived significantly more support from their teachers and were significantly more likely to emulate their teachers than were their male peers. The gender differences in perceived school support may, in part, account for higher dropout rates among males (Allaire & Campbell, 1994; Gilbert et al., 1993), if perceived support does predict future orientation.

In sum, the literature converges to suggest that perceived opportunity might be a key mediator of the relation between perception of social support and educational and occupational aspirations. Based on the literature discussed above, the following general model is proposed. Perceived social supports are expected to influence the perception of opportunities available which, in turn, affect education and career aspirations and

expectations. Specifically, it is hypothesized that all three support variables (family, peer, and teacher) will show direct effects on the perception of future opportunity. In turn, perception of opportunity helps to generate education expectations and aspirations. Because aspirations are potentially unlimited, it seems reasonable to propose that expectations play a role in constraining those aspirations, both in the education and career domains. Career expectations should be related to both educational expectations and aspirations. Finally, career aspirations should be associated with educational aspirations as well as constrained by career expectations. These are proposed as direct effects and are represented by arrows in Figure 1. By extension, indirect effects are proposed between social support and both education and career goals, with perception of opportunity being the mediating variable. Further, social support and perception of opportunity are expected to affect career goals indirectly. This group of hypotheses will be evaluated using path analysis.

The issue of gender differences in adolescents' level of social support as well as perception of opportunity and future aspirations and expectations will be examined because these relations remain unclear in the existing literature.

We decided to sample from adolescents aged 15 through 18 (grades 9-12). Whereas occupational goals start to be defined in a realistic manner as young as age 11, it is at middle adolescence that issues of future education and occupation become salient (Nurmi, 1991). In addition, the most common age for drop out is between 16 and 18 years (Clifford, 1990; Gilbert et al., 1993).

METHOD

Participants

The participants were 260 students ranging in age from 15 to 18 years. The sample was composed of 150 males (mean age = 15.37 years) and 110 females (mean

TABLE 1  
Sex differences in social support, aspirations and expectations: Univariate results

	Mean: Male	Mean: Female	SD: Male	SD: Female	Eta- Squared	F	Sig. of F
Peer Support	38.97	42.08	6.98	4.38	.247	16.61	< .001
Teacher Support	32.16	34.40	6.32	6.22	.184	8.17	< .01
Family Support	41.52	42.46	9.16	9.11	.052	0.65	n.s.
Perception of Opportunity	68.58	73.95	12.47	10.63	.222	13.18	< .001
Ed. Aspirations	5.78	6.33	1.91	1.63	.022	5.90	< .05
Ed. Expectation	5.79	6.16	1.51	1.39	.120	3.91	< .05
Car. Aspirations	5.32	5.69	2.03	1.58	.101	2.48	n.s.
Car. Expectations	4.57	5.69	2.00	1.65	.144	4.89	< .05

Note: Ed. = Education; Car. = Career

age = 15.64 years). The breakdown of gender by age was as follows: 46 % male at age 15, 57% male at age 16, 58% male at age 17, and 69% male at age 18. A  $2 \times 4$  (age by gender)  $\chi^2$  indicated there was no relation between age and gender ( $\chi^2(3) = 4.47, p > .05$ ). All of the students were white, and their socioeconomic status is best described as working to middle class. The schools are located in or close to a small city in Atlantic Canada.

#### Materials

The following measures were used to assess social support, perceived opportunities, aspirations and expectations.

*Limited Access to Opportunity Scale (LAOS)* (Covell & Howe, 1995). The measure is a 20-item scale designed to assess the degree of perceived legitimate access to opportunities for educational and career development among adolescents. Sample items are: "The world is usually good to kids like me," "Someone like me has a pretty good chance of going to college or university." Respondents rate their agreement with each item on a 5-point Likert scale. High scores indicate perception of greater opportunity. It is an updated modified version of the Landis, Dinitz and Reckless (1963) measure of perceived opportunity (Covell & Howe, 1995). In the present sample, test scores showed adequate reliability using Cronbach's coefficient alpha (alpha = .88, scale  $M = 70.67$ ,  $SD = 12.97$ , maximum score = 100).

*Social Support Appraisals Scale (APP)* (Dubow & Ullman, 1989). This is one of three scales taken from Dubow and Ullman's (1989) Survey of Children's Social Support (SOCCS). The APP is a 31-item scale which measures the subjective appraisal of family, peer and teacher support. High scores indicate greater perceived support. This scale was developed to reflect Cobb's (1976) definition of social support, and measures whether the child feels loved, cared for and valued by his/her social support network. To limit social desirability, questions were worded in a modified "structure alternative format," where each item describes two types of children so as to legitimize the subjects' response. This scale was developed to corre-

spond with the reading abilities of elementary school-aged children. This format was useful because some of the students were at an elementary-aged reading level. Sample items are: "Some people feel that their teachers make them feel like they are not good enough, but others do not. Do your teachers make you feel like you are not good enough?"; "Some people have friends who like to hear their ideas, but others do not. Do your friends like to hear your ideas?"; and "Some people feel left out by their family, but others do not. Do you feel left out by your family?" Cronbach's alpha reliability for the peer subscale was .83 ( $M = 40.17$ ,  $SD = 6.42$ , maximum score = 50), for the family subscale it was .88 ( $M = 41.87$ ,  $SD = 9.23$ , maximum score = 55), and for the teacher subscale it was .72 ( $M = 33.15$ ,  $SD = 6.38$ , maximum score = 50).

*Aspirations and Expectations.* This scale was designed to assess the students' educational and career aspirations, and their actual expectations for achieving them. The education questions asked: "How important is it to you that you graduate?" and "How likely do you think it is that you will graduate?" Each question was accompanied by a 7-point Likert scale, on which students rated the personal importance (aspiration) (extremely unimportant to extremely important) and perceived likelihood (expectation) of achieving high school graduation (extremely unlikely to extremely likely). The career questions asked first, "What kind of job/career do you hope to have?," then "How important is it to you to be able to do this job/career?" (career aspirations) and "How likely do you think it is that you will do this career/job?" These latter two questions also were accompanied by the 7-point Likert scale.

The final page of the questionnaire requested demographic information.

#### Coding

The occupations listed by the students in response to the first career question were coded into one of four categories: 1) professional, defined as those requiring university education (e.g., doctor, lawyer, teacher, veterinarian, engineer), 2) blue/pink collar, defined as those requiring

TABLE 2  
Correlation matrices used for path analyses

Females								
	PEER	FAMILY	TEACHER	POP	EDASP	EDEXP	CARASP	CAREXP
PEER	1.0							
FAMILY	.045	1.0						
TEACHER	.298*	.544**	1.0					
POP	.294*	.556**	.581**	1.0				
EDASP	.134	.046	.126	.196	1.0			
EDEXP	.063	.164	.195	.331**	.693**	1.0		
CARASP	.136	.245	.208	.333**	.201	.322**	1.0	
CAREXP	.118	.281*	.206	.325**	.250*	.527**	.646**	1.0

Males								
	PEER	FAMILY	TEACHER	POP	EDASP	EDEXP	CARASP	CAREXP
PEER	1.0							
FAMILY	.460**	1.0						
TEACHER	.499**	.477**	1.0					
POP	.392**	.536**	.405**	1.0				
EDASP	.293**	.159	.205	.279**	1.0			
EDEXP	.350**	.422**	.323**	.564**	.393**	1.0		
CARASP	.080	.039	.012	.156	.212	.201	1.0	
CAREXP	.008	.116	-.036	.191	-.022	.199	.706**	1.0

Note: \* significant at .01; \*\* significant at .001

POP = perception of opportunity, EDASP/CARASP = education/CAREER aspirations, EDEXP/CAREXP = expectations

training but not university (e.g., clerk, mechanic, carpenter, cook, hairdresser), 3) other, educational requirements unclear (e.g., artist, musician), and 4) don't know.

#### Procedure

Students were randomly drawn from across various levels of the academic stream, including adjusted and vocational, university preparatory, and honours classes, such that there was approximately equal representation across academic streams and grade levels, and such that they were drawn approximately equally in terms of sex and number of students in each group. During testing, students completed a four-part questionnaire in their classroom with their regular classroom teacher in attendance. No names of students were collected, and they were assured of the confidentiality of their responses.

#### RESULTS

In order to test for gender differences in social support, aspirations and expectations, a multivariate *t*-test was performed on the variables listed in the materials section. Multicollinearity was judged not to be a threat to this analysis as the highest obtained communality ( $h^2 = .76$  for career aspiration) was well below the cutoff value ( $h^2 = .90$ ) suggested by Tabachnick and Fidell (1996). Gender differences were obtained at the Multivariate level (Hotellings = .126,  $F(8,248) = 3.89$ ,  $p < .001$ ). Inspection of the univariate results revealed significant differences ( $p$ 's  $< .05$ ) between male and female students'

ratings of peer support, teacher support, perception of opportunity, educational aspirations, educational expectations, and career expectations. Non-significant gender differences were obtained on the measures of career aspirations and family support. The results of these univariate tests are presented in Table 1. They can be summarized by noting that for every variable in the analysis, females obtained higher scores than did males.

A  $2 \times 4$  chi-square (Gender  $\times$  Occupational Aspiration) indicated a significant gender difference in type of career aspired to,  $\chi^2(3) = 50.67$ ,  $p < .001$ . The differences were most apparent in aspirations to professional and blue/pink collar careers. Seventy-eight percent of the females aspired to a professional career whereas only 35% of the males did. In contrast, 26% of the males and only 2% of the females reported aspirations to blue/pink collar employment. Males also were more likely to report not yet having a career goal (28%) compared to females (12%).

Using path analyses, we next examined the structure underlying the correlations among the variables. The observed gender differences led us to generate separate correlation matrices for male and female students (see Table 2). To help summarize these correlations, and to test the hypothesized underlying structure, a path analysis was conducted. Using AMOS 3.5 (Arbuckle, 1995), the hypothesized structure was evaluated simultaneously for the correlation matrices of male and female students. This analytic procedure allows for tests of the difference

between model coefficients obtained for boys and girls.

The path coefficients are presented in Figure 1, which shows the results for male and female students separately. The model fit the data well with a non-significant chi-square ( $\chi^2(30) = 41.3$ , n.s.), a ratio of  $\chi^2/df$  of 1.4 and a goodness of fit of 0.96. Other fit indices, as described by Arbuckle (1995), show that the model fits the data well (Adjusted GFI = 0.910, Tucker-Lewis Index = .966; Normed Fit Index = .939; and Comparative Fit Index = .982). Ten of the 13 path coefficients in the data from the female students, and 9 of the 13 paths in the data from the male students, were significant ( $t > 2.0$ ).

Examining Figure 1 (the data from the female students) from left to right, we see that two of the three correlations among the exogenous support variables were significant; peer support with teacher support ( $t = 3.0$ ) and family support with teacher support ( $t = 5.0$ ). The correlation between peer support and family support was not significant ( $t = 0.5$ ). All three paths leading from the social support variables to perception of opportunity were significant, including paths from family support ( $t = 4.3$ ), peer support ( $t = 2.4$ ), and teacher support ( $t = 3.6$ ). Also, the path from perception of opportunity to educational expectations was significant ( $t = 3.6$ ), as was the path from education expectations to education aspirations ( $t = 9.6$ ). The path from perception of opportunity to education aspirations ( $t = 0.5$ ) was non-significant. Career expectations were predicted significantly by both educational expectations ( $t = 6.1$ ) and education aspirations ( $t = 2.0$ ), although the latter shows a negative influence. Finally, the career aspirations of these female students were significantly predicted by their career expectations ( $t = 8.4$ ); education aspirations showed a non-significant path ( $t = 0.6$ ).

The second part of the path analysis, conducted on the data provided by the male participants, is shown in Figure 1. In this case, 9 of the 13 path coefficients in this model were significant ( $t > 2.0$ ). Examining this model from left to right, we see that all three correlations among the exogenous support variables were significant; peer support with teacher support ( $t = 5.4$ ), family support with teacher support ( $t = 5.2$ ), and peer support with family support ( $t = 5.4$ ). Only one of the paths leading from the social support variables to perception of opportunity was significant, that being the path from family support ( $t = 4.9$ ). Neither peer support ( $t = 1.4$ ), nor teacher support ( $t = 1.9$ ) were significant. Also, the path from perception of opportunity to education expectations was significant ( $t = 6.4$ ), as was the path from education expectations to education aspirations ( $t = 4.0$ ). The path from perception of opportunity to education aspirations ( $t = 1.4$ ) was non-significant. Career expectations were predicted by education expectations ( $t = 2.8$ ); education aspirations again showed a negative relation but it was

not significant among the males ( $t = 1.4$ ). Finally, the career aspirations of the male students were significantly predicted by both their career expectations ( $t = 12.8$ ) and their education aspirations ( $t = 4.1$ ).

Comparing the path coefficients generated for female students with those of their male counterparts, we obtain only two significant differences ( $t > 2.0$ ). The paths from educational expectations to educational aspirations ( $t = 3.3$ ,  $p < .05$ ) and from educational expectations to career expectations ( $t = 3.1$ ,  $p < .05$ ) were significantly higher among female students compared to male students.

#### DISCUSSION

Overall, the data generally are consistent with our hypothesis that social support predicts perception of opportunity which, in turn, predicts education expectations, education aspirations, and career expectations. The results also point to some gender differences in the social support, perception of opportunity, education aspirations and expectations, and the career aspirations and expectations among adolescents. It is clear from the results of the analysis of variance that the female students consistently report higher levels of support, from sources other than family, a greater perception of future opportunity, and higher expectations for both education and career, as well as higher education aspirations than do their male peers. The path analysis indicates further differences between the genders in the relations among these variables. First, the female students' perceptions of opportunity is related to family, peer, and teacher support whereas males' perception of opportunity is related only to family support. Secondly, among the male but not the female students, career aspirations were related to education aspirations. However, whereas the males showed a nonsignificant relation between their education aspirations and their career expectations, the female students in this sample showed a significant negative association between these two variables. Finally, the hypothesized role of educational expectations in generating both educational aspirations and career expectations was significantly higher among girls, as compared to boys, in this study.

The pattern of gender differences supports previous findings that females perceive more social supports at school than do their male peers (Robinson, 1995; Ryan et al., 1994). We should note that achievement may play a role here also.<sup>1</sup> Females outperform their male peers across subjects throughout school (Allaire & Campbell, 1994; Kimball, 1989; Marsh, 1989). It is possible that greater achievement elicits greater support which, in turn, impels greater achievement and affords a more

1 Our thanks to an anonymous reviewer for this point.

positive future orientation. Unfortunately we did not obtain achievement data. The illumination of a relation between achievement and support would be an important focus for future research on the importance of social support at school. It is noteworthy also that for females, but not males, perception of opportunity was related to support from teacher, peers, and family. Only family support was related to perception of opportunity for males. These data indicate that sources of support may have an additive effect on perceived opportunity. In addition, compared to females, males may be particularly vulnerable to the effects of low levels of family support if they perceive less support from peers and teachers.

The relation between education aspirations and career expectations among females requires further study. Table 2 shows that these variables were significantly positively correlated, but the path coefficient was significant and negative. In this case, education expectations appears to act as a suppressor variable (Marascuilo & Levin, 1983). Given the pattern of relations among these three variables represented in Figure 1, a reversal in the sign of a coefficient can occur. Essentially, the correlations between education expectations and both education aspirations and career expectations leave negative residual covariance between education aspirations and career expectations. One must interpret regression (path) coefficients with caution because the introduction of other variables into the analysis might change the coefficients dramatically. However, contemplating suppressor effects can be useful in opening the door to interpreting unexpected results. Paraphrasing Pedhazur (1997, p. 186), whatever these latter two variables have in common is evidently different from what the other variables share and points to "...the hazards of relying on zero-order correlations for judging the worth of variables" (p. 188).

Following Pedhazur's admonishment to pursue a theoretical rationale for suppressor effects, some potential explanations are offered. These results might reflect current socioeconomic conditions and high unemployment in the region in which this study took place. The university in the community allows for high education aspirations, but the lack of local employment opportunity for professionals combined with an ideology that discourages leaving the community makes fulfilling professional career goals difficult.

An alternate explanation is that the negative relation between females' education aspirations and career expectations reflects a cohort in a transitional phase of gender opportunities. It is possible that the females have high education aspirations and career expectations in response to current emphasis in high schools on opportunities for females, but because of historic discrimination believe there are limits on what they can expect to achieve at the upper end of employment types (i.e., the

professional occupations to which they aspire).

A third explanation is that the data reflect gender differences in thinking about the future. Nurmi (1991), in a review of the literature on adolescents' future orientation, provided evidence that males' thinking about the future extends further into the future than does that of females. It may be that when girls imagine their future, the time after education completion is less clear because of the potential career interruptions of childbirth and child rearing. Males, on the other hand, may be able to extend their thinking about the future further because they anticipate uninterrupted linear occupational development. If this were the case, then career counselors at high schools might teach students ways to combine family and career. Replication of the finding followed by interviews or focus groups with male and female adolescents are needed to shed light on these possible explanations.

In summary, from a methodological perspective, our data underscore the need to include both males and females in research of this type. From a practical perspective, our study highlights the importance of perceived social support in adolescence. Replication of the study in an area more affluent than Atlantic Canada may be useful in assessing the generalizability of our findings. Nonetheless, the technological and economic changes of the past decade, across the country, have made post secondary education increasingly necessary, and have made career choice more complex. Perception of opportunity, afforded by social support, clearly is important to the future planning of our youth. The implementation of more Full Service Schools (Dryfoos, 1995), in which there is considerable attention paid to the social support needs of both male and female students, may be helpful, particularly in areas of high unemployment.

This study was conducted as part of the first author's undergraduate honours thesis. Please address correspondence to the second author at Psychology Department, University College of Cape Breton, Sydney, Nova Scotia B1P 6L2.

## References

- Allaire L., & Campbell, J.A. (1994). Flash! The girls are way ahead of the boys in Quebec schools. *Inroads*, 3, 108-115.
- Arbuckle, J.L. (1995). *AMOS 3.5 Users' Guide*. Chicago, IL: Smallwaters Corporation.
- Baker, M. (1985). *What will tomorrow bring...? A study of the aspirations of adolescent women*. Ottawa, ON: The Advisory Council on the Status of Women.
- Bo, I. (1994). The sociocultural environment as a source of support. In F. Nestemann & K. Hurrelmann (Eds.),

- Social networks and social support in childhood and adolescence.* Berlin: de Gruyter Press.
- Cauce, A.M., Hannan, K., Sargeant, M. (1992). Life stress, social support, and locus of control during early adolescence: Interactive Effects. *American Journal of Community Psychology, 20*(6), 787-798.
- Cheung, S. (1995). Life events, classroom environment, achievement expectation and depression among early adolescents. *Social Behavior and Personality, 23*, 83-91.
- Clifford, W.E. (1990). *Students at Risk*. Sydney, NS: Northside Victoria School Board.
- Cobb, S. (1976). Social Support as a moderator of life stress. *Psychosomatic Medicine, 38*, 300-314.
- Coleman, J.S. (1987). Families and schools. *Educational Researcher, 16*, 2-38.
- Connell, J.P., Spencer, M.B., & Aber, J.L. (1994). Educational risk and resilience in African-American youth: Context, self, action, and outcomes in school. *Child Development, 65*, 493-506.
- Covell, K., & Howe, R.B. (1995). Variations in support for children's rights among Canadian youth. *International Journal of Children's Rights, 3*, 1-9.
- Crandall, V.C. (1969). Sex differences in expectancy of intellectual and academic reinforcement. In C.P. Smith (Ed.), *Achievement-related motives in children* (pp. 11-45). New York: Russell Sage.
- Davey, H. (1993). The occupational aspirations and expectations of senior high school students. *Guidance and Counseling, 8*, 16-28.
- Davey, F.H., & Stoppard, J.M. (1993). Some factors affecting the occupational expectations of female adolescents. *Journal of Vocational Behavior, 43*, 235-250.
- Day, D. (1990). *Young women in Nova Scotia: A study of attitudes, behavior and aspirations*. Nova Scotia Council on the Status of Women.
- Dryfoos, J.G. (1995). Full service schools: Revolution or fad? *Journal of Research on Adolescence, 5*, 147-172.
- DuBois, D.L., Felner, R.D., Meares, H., & Krier, M. (1994). Prospective investigation of the effects of socioeconomic disadvantage, life stress and social support on early adolescent adjustment. *Journal of Abnormal Psychology, 103*, 511-522.
- Dubow, E.F., Tisak J., Causey D., Hryshko A., & Reid G. (1991). A two year longitudinal study of stressful life events, social support, and social problem-solving skills: Contributions to children's behavioral and academic adjustment. *Child Development, 62*, 583-599.
- Dubow E.F., & Ullman D.G. (1989). Assessing social support in elementary school children: The survey of children's social support. *Journal of Child Clinical Psychology, 18*, 52-64.
- Dunn, S., Putallaz, M., Sheppard, B., & Lindstrom, R. (1987). Social support and adjustment in gifted adolescents. *Journal of Educational Psychology, 79*, 467-473.
- East, P., & Rook, K. (1992). Compensatory patterns of support among children's peer relationships: A test using school friends, nonschool friends, and siblings. *Developmental Psychology, 28*, 163-172.
- Fortune J.C., Bruce A., Williams J., & Jones M. (1991). What does the evaluation of your dropout program show about its success... Maybe not enough. *The High School Journal, 74*, 225-231.
- Furman, W., & Buhrmeister, D. (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development, 63*, 103-115.
- Gilbert, S., Barr L., Clark W., Blue M., & Sunter, D. (1993). *Leaving school: Results of a national survey comparing school leavers with high school graduates 18-20 years of age*. Ottawa, ON: Human Resource Development Canada.
- Hirsch, B.J., & DuBois, D.L. (1992). The relation of peer social support and psychological symptomatology during the transition to junior high school: A two year longitudinal analysis. *American Journal of Community Psychology, 20*, 333-347.
- Jurkovic, G.J., & Ulrici, D. (1985). Empirical perspectives on adolescents and their families. In L. L'Abate (Ed.), *The handbook of family psychology and therapy* (pp. 217-257). Chicago, IL: The Dorsey Press.
- Kimball, M.M. (1989). A new perspective on women's math achievement. *Psychological Bulletin, 105*, 198-214.
- Landis, J.R., Dinitz, S, & Reckless, W.C. (1963). Implementing two theories of delinquency: Value orientation and awareness of limited opportunity. *Sociology and Social Research, 47*, 408-416.
- Levitt, M.J., Guacci-Franco, N., & Levitt, J.L. (1994). Social support and achievement in childhood and early adolescence: A multicultural study. *Journal of Applied Developmental Psychology, 15*(2), 207-222.
- Marascuilo, L.A., & Levin, J.R. (1983). *Multivariate statistics in the social sciences: A researcher's guide*. Monterey, CA: Brooks Cole.
- Marsh, H.W. (1989). Sex differences in the development of verbal and mathematics constructs: The high school and beyond study. *American Educational Research Journal, 26*, 191-225.
- McFarlane, A.H., Bellissimo, A., & Norman, G.R. (1995). The role of family and peers in social self-efficacy: Links to depression in adolescence. *American Journal of Orthopsychiatry, 65*(3), 402-410.
- Moran, P.B., & Ekenrode, J. (1991). Gender differences in the costs and benefits or peer relationships during adolescence. *Journal of Adolescent Research, 6*, 396-409.
- Nurmi, J.E. (1991). How do adolescents see their future? A review of the development of future orientation and planning. *Developmental Review, 11*, 1-59.
- Nurmi, J.E. (1987). Age, sex, social class, and quality of family interaction as determinants of adolescents' future orientation: A developmental task interpreta-



- tion. *Adolescence*, 22, 977-991.
- Nurmi, J.E., Poole, M.E., & Lalakoskis, V. (1994). Age differences in adolescent future-oriented goals, concerns, and related temporal extension in different sociocultural contexts. *Journal of Youth and Adolescence*, 23(4), 471-478.
- O'Brien, R.W. (1990, March). The use of family members and peers as resources during adolescence. Paper presented at the meeting of the Society for Research in Adolescence, Atlanta.
- Pedhazur, E.J. (1997). *Multiple regression in behavioral research*. New York: Harcourt Brace.
- Poole, M.E., & Cooney, G.H. (1987). Orientations to the future: A comparison of adolescents in Australia and Singapore. *Journal of Youth and Adolescence*, 16, 129-151.
- Price, R.H., Cioci, M., Penner, W., & Trautlein B. (1993). Webs of influence: School and community programs that enhance adolescent health and education. *Teachers College Record*, 94, 487-520.
- Robinson, N.S. (1995). Evaluating the nature of perceived support and its relation to perceived self-worth in adolescents. *Journal of Research in Adolescence*, 5(2), 253-280.
- Ryan, R.M., Stiller, J.D., & Lynch, J.H. (1994). Representations of relationships to teachers, parents, and friends as predictors of academic motivation and self-esteem. *Journal of Early Adolescence*, 14, 226-249.
- Sarason I.G., Levine H.M., Basham R.B., & Sarason B. (1983). Assessing social support: The social support questionnaire. *Journal of Personality and Social Psychology*, 44, 127-139.
- Shavit, Y., & Williams, R.A. (1985). Ability grouping and contextual determinants of educational expectations in Israel. *American Sociological Review*, 50, 62-73.
- Streeter, C.L., & Franklin C. (1991). Psychological and family differences between middle class and low income dropouts: A discriminate analysis. *High School Journal*, 74, 211-219.
- Tabachnick, B.G., & Fidell, L.S. (1996). *Using Multivariate Statistics (3rd ed.)*. New York: Harper Collins.
- Windle, M., Miller-Ttuzauer, C., & Barnes, G. (1991). Adolescent perceptions of help seeking resources for substance abuse. *Child Development*, 62, 179-189.
- Zimiles, H., & Lee, V. (1991). Adolescent family structure and educational progress. *Developmental Psychology*, 27, 314-320.

Received May 12, 1997

Revised October 15, 1997

Accepted February 20, 1998