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The Association Between Perceived Care From Family, School Staff, and Other Social Agents and an Adolescent's Presentation of Empathy, Trait Resilience, and Psychological Strengths

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The abilities to experience and understand another person's feelings (empathy), to successfully cope with stress (resilience), and to harness personal skills (psychological strengths) are dynamic qualities that may be associated to an adolescent's perception of care from others (i.e., family, friends, school staff, and significant others). Although the association of these different social sources have been studied independently, it has yet to be elucidated which of these sources is most highly associated to the presentation of these three qualities. For this study, high school students from a northern community completed a series of online questionnaires. A series of hierarchical regressions showed each source of care accounted for unique variance in the presentation of resilience and strengths, with perceived care from school staff and family accounting for the greatest variance, emphasizing the equal importance of examining the school and home environment. Further research is needed to understand how teachers and the school culture are associated with personal growth.

Les capacités de ressentir et de comprendre les sentiments d'autrui (l'empathie), de bien gérer le stress (la résilience) et d'exploiter ses compétences personnelles (forces psychologiques) sont des qualités dynamiques qui peuvent être associées à la perception qu'ont les adolescents des soins dispensés par les autres (c.-à-d., la famille, les amis, le personnel de l'école et l'être cher). Si l'association de ces différentes sources sociales a été étudiée indépendamment pour chacune d'elles, il reste à comprendre laquelle est la plus fortement liée aux trois qualités décrites ci-haut. Dans le cadre de cette étude, des élèves du secondaire provenant d'une communauté du nord ont complété une série de questionnaires en ligne. Une série de régressions hiérarchiques a démontré que chaque source de soins expliquait une variance unique dans la présentation de la résilience et des forces. Les soins perçus de la part du personnel de l'école et de la famille représentent la plus grande variance, ce qui souligne l'importance de se pencher tant sur le milieu scolaire que le milieu familial. Il faudrait mener des recherches plus poussées pour comprendre dans quelle mesure les enseignants et la culture scolaire sont associés à l'épanouissement personnel.

Empathy, resilience, and psychological strengths are dynamic qualities that afford a student and their school community many benefits. Although empathy, resilience, and psychological strengths

are commonly thought of as traits belonging to an individual, their presentation is associated with care from others, most notably from family, peers, school staff, and other important figures. Although these different social sources have been studied independently, it has yet to be elucidated which of these sources is most central. A concurrent examination of multiple sources of care within the same student sample is rare within the literature. However, such an examination would help clarify whether certain relationships are more important for certain outcomes, as well as whether certain relationships are more important to certain students (Rueger, Malecki, & Demaray, 2010).

Empathy

Empathy is a multi-dimensional construct that encompasses both cognitive and affective components. Cognitive theories have emphasized the importance of role-taking, social learning, and imitation for empathic acquisition (Borke, 1971; Mead, 1934), whereas affective theories have emphasized the experiential component of empathy, in that empathy entails the ability to vicariously experience the affective response of another (i.e., to feel the same emotion as another; Feshbach & Roe, 1968). With these conceptualizations, both awareness and experience are integral to empathic responding, with integrative views of empathy conceptualizing both processes as interdependent (Feshbach, 1976; Hoffman, 1977). Empathy is positively correlated with prosocial behaviour, cooperative/socially competent behaviour, better moral reasoning, and defending peers during incidents of bullying (Eisenberg & Miller, 1987; Eisenberg-Berg & Mussen, 1978; Lambe, Della Cioppa, Hong, & Craig, 2019), and is negatively correlated with aggressive and externalizing/antisocial behaviour, as the vicarious experience of negative reactions of others is thought to inhibit negative social behaviours that may cause such experiences (Miller & Eisenberg, 1988).

The Influence of Social Figures for the Development of Empathy

With adolescents, stark contrasts have been found between parents of empathic and unempathic children. Not surprisingly, enactment and receipt of physical abuse, as well as greater psychological control, have been found to be negatively associated with empathy (Miklikowska, Duriez, & Soenens, 2011; Miller & Eisenberg, 1988). Abusive parents were found to interact less with their children; to be unresponsive to the needs of their children; and to tend to be less prosocial to their children and spouse (Bousha & Twentyman, 1984; Wolfe, 1985). Families with low-incomes may find it particularly difficult to attend to their child with warmth given their financial strain, but such warmth, as exemplified by the mother, may be important for indoctrinating empathic concern and moral conviction within the child (Davis & Carlo, 2019). Many additional aspects of the parent-child relationship and parenting behaviour may help foster a child's empathy. Empathic children tend to have a secure attachment to their parents and peers, to experience support during times of distress, and to perceive a balanced connectedness (i.e., balanced closeness and autonomy) with their parents (Laible, 2007; Yoo, Feng, & Day, 2013). Parental disciplinary practices may be especially important, as parents who express disappointed expectations and who orient attention to the plights of others during altercations, tend to have children higher in empathy, and who are more willing to defend others during instances of bullying (Valdés-Cuervo, Alcántar-Nieblas, Martínez-Ferrer, & Parra-Pérez, 2018). Even when examining early development in toddlers, it was found that the degree to which parents

encouraged the child to take the perspective of others, maternal mental health, and the degree of parent-child interaction predicted empathic levels (Farrant, Devine, Maybery, & Fletcher, 2012; Tong et al., 2012).

The association between parental care and adolescent empathy has been theoretically explained through the social learning theory, which posits that caring parents act as role models for their children, leading the child to be motivated and engaged in thinking of others (Barnett, 1987; Eisenberg, Spinrad, & Sadovsky, 2006). The association has also been explained through attachment theories, which posit that supportive caregivers allow children the freedom and security to be truly empathic, as the child will not be preoccupied with their own needs and therefore be able to focus on others (Bowlby, 1980; Sroufe, 2005).

In addition to the family and home environment, the school setting may also be pertinent to the presentation of empathy in adolescents. Positive perception of school culture was found to predict higher levels of empathy in secondary school children, with school culture encompassing the perception of relationship quality with peers and teachers (Barr & Higgins-D'Alessandro, 2007). Connection to school and positive student-teacher relationships were found to predict increased prosocial behaviour and reduced bullying behaviour, and children with higher empathy tended to report being part of a class atmosphere characterized by acceptance among peers and by rational discourse as a means of conflict resolution (Raskauskas, Gregory, Harvey, Rifshana, & Evans, 2010; Wölfer, Cortina, & Baumert, 2012). The school environment is rarely examined in relation to empathy, but the reviewed research suggests that the perception of care and connectedness among peer groups and teacher-student relationships may be associated with increased empathy. In line with the social learning theory, it is conceivable that peers and teachers may serve as role models for the student as they learn how to relate to others.

The current study aimed to further examine whether perceived care from the home and school environment would be associated with the presentation of empathic ability in a student sample. As it stands, the literature points to the importance of relationship qualities (e.g., attachment, connectedness, degree of interaction) for empathy, but it has yet to be established whether something as basic as perceived care may also associated with empathy.

Psychological Strengths and Resilience

Perceived care from others may also be associated with the presentation of strengths and resilience, which has implications for the student during times of stress and happiness. Much like empathy, strength and resilience are not stable traits, but rather processes and perspectives that can change with experience (Masten, 2001). Due to the complexity and changing nature of both constructs, no single conceptualization of either construct exists among scholars. We reviewed the conceptualizations and developmental process of both constructs in turn.

Resilience

Defined as the process, capacity for, or outcome of successful adaptation amidst experience or circumstances of adversity (Masten, Best, & Garmezy, 1990), resilience can encompass the mechanisms by which individuals successfully adapt in the face of adversity (i.e., process of resilience; Luthar, Cicchetti, & Becker, 2000); as the personality traits or resources within the individual that confer greater stress-coping ability for that individual (i.e., capacity for resilience or trait resilience; Connor & Davidson, 2003; Wagnild & Young, 1990); and as successes within

specified domains, with the definition of successes determined statistically based on an understanding of the association between certain adverse events to certain functional outcomes (i.e., resilient outcome; Luthar & Cicchetti, 2000).

The three different aspects of resilience provide theoretical boundaries to researchers and help guide the nature of inquiry (Fletcher & Sarkar, 2013). The present paper focuses on the capacity for resilience. Although the presence of adversity is defined as a component of resilience, and participants are often purposely selected due to a history of trauma or sustained stress, the presence of adversity need not be present when examining resilience as a trait, as resilience is seen as the potential for adaptive functioning should adversity occur. The capacity for resilience has been examined in healthy community samples (e.g., Gucciardi, Jackson, Coulter, & Mallett, 2011; Liu, Fairweather-Schmidt, Burns, & Roberts, 2015), with a meta-analysis (Hu, Zhang, & Wang, 2015) demonstrating a negative association between trait resilience and negative indicators of mental health (i.e., depression, anxiety, negative affect) and positive association between trait resilience and positive indicators of mental health (i.e., life satisfaction).

While reviewing the resilience literature, Luthar and colleagues (2000) identified three prominent models of resilience that helped guide current research. Each model emphasizes personal developmental and the dynamic process of resilience throughout the lifespan. The first model interprets resilience not as a trait exclusively within the individual, but as an interaction of protective and vulnerability processes across contexts of the individual, the family, and the wider social environment (Garmezy, 1985). The second model focuses on the multiple levels of a child's ecology (culture, community, and previous development) and how they influence each other, as well as the development of the child (Cicchetti & Lynch, 1993). The final model posits that active individual choice and self-organization are the major determinants of resilience (Sroufe, 1979). Each framework emphasizes the dynamic nature of resilience and the fact that it is ever-changing based on experiences and relationships with others. The capacity for resilience is also dynamic, with the present paper examining whether perceived care within important relationships is associated with varied levels of resilience within adolescents.

The Influence of Social Figures for the Development of Resilience

In adolescents, the perception of care from important adults has been identified as a critical promotive resource in regards to the capacity for resilience (Zimmerman et al., 2013). The importance of family has been highlighted, as familial support has been found to be a robust protective factor against stressors and psychopathology in a wide range of adolescent samples (Collishaw et al., 2007; Resnick, Harris, & Blum, 1993). Familial support is conceptualized to have a main and buffering effect, in that it facilitates social integration among its members, and buffers against stressors, by providing emotional and esteem support, concrete aid, and help with problem solving, respectively (Armstrong, Birnie-Lefcovitch, & Ungar, 2005). The importance of the school environment has also been stressed, as connection to adults at school has been found to act as a protective factor against suicidality in bullied sexual minority youth (Duong & Bradshaw, 2014), and classmate and teacher support was associated with self-esteem and depression (Wit, Karioja, Rye, & Shain, 2011). In summation, family-level resources (e.g., parental warmth, cohesion within the family, family involvement), supportive peers, stable romantic partners, school experiences (e.g., positive teacher influences, sense of connection to school), and supportive relationships with notable adults (e.g., coaches) have each been found to be positively associated with adolescent resilience in the midst of adversity and discrimination (Collishaw et

al., 2007; Elkington, Bauermeister, & Zimmerman, 2011; Olsson, Bond, Burns, Vella-Brodrick, & Sawyer, 2003). Such findings emphasize the importance of social support and social connectedness, which is the youth's perception of belonging where they are cared for (DiFulvio, 2011). Such social connections may affirm one's identity, and better prepare an individual for turning personal struggle into opportunities of challenge and growth.

In all the prominent areas of adolescent resilience research discussed, social support and connectedness with other figures were protective factors associated with positive outcomes. However, most of the adolescent samples examined include traumatized individuals, despite the fact that the capacity for resilience is a quality that can be examined in healthy adolescents. Within a large grade school and high school student sample, Resnick and colleagues (1993) found that caring and connectedness within families and schools surpassed demographic variables (e.g., two-parent versus single-parent) as protective factors against high-risk behaviours. Perceived care may be one important area for understanding the progression from at-risk status to manifestation of problem behaviour amidst adverse environments within adolescents. We examined perceived care within different relationships, as discrepancies likely exist across relationships, with certain relationships potentially being more relevant for the capacity of resilience than others.

Psychological Strengths

Similar to resilience, psychological strengths may also be looked at in regards to multiple contexts, and as a function of relationship quality. Psychological strengths are the characteristics of an individual, which may be gained from both experiences of adversity and normal everyday experiences, that allow the individual to perform well or at their personal best (Wood, Linley, Maltby, Kashdan, & Hurling, 2011). Strengths are commonly thought of as character strengths inherent within an individual (e.g., gratitude, hope, spirituality; Park, Peterson, & Seligman, 2004). The possession and utilization of strengths have been found to predict different measures of well-being. For example, it was found that those who utilized their strengths tended to have higher self-esteem, experienced less stress, had greater vitality, and had generally positive affect across a six-month follow-up period (Wood et al., 2011). Such individuals tended to have a greater orientation to pleasure, to engagement, and to meaning, leading to a more fulfilling life and having greater appreciation of the world as a whole (Huta & Hawley, 2010; Peterson, Ruch, Beermann, Park, & Seligman, 2007).

When psychological strengths are examined specifically in adolescent populations, it tends to be done on at-risk populations, which undermines the fact that strengths are relevant for daily life and need not be related to major stressors. Researchers have examined those in or entering residential treatment and found that level of strengths were associated with psychopathology symptoms, risk behaviour, functional level, and dispositional outcomes (Lyons, Uziel-Miller, Reyes, & Sokol, 2000). In addition, strengths from school and community were found to be protective factors against substance use (Harris, Brazeau, Rawana, Brownlee, & Klein, 2017).

When strengths have been assessed in healthy community adolescent samples, the literature points to the importance of looking at different domains of strength (i.e., within the self and within relationships/different environments). In respect to strengths within the self, it was found that hope, self-efficacy, and optimism (qualities related to goal-directed thinking) were related to more effective student leadership (Wisner, 2011), whereas the strengths of building connection to people and having a greater purpose in life were most important for predicting well-being (Gillham et al., 2011).

The Influence of Social Figures for the Development of Psychological Strengths

Although the focus of strength research tends to be on the individual and their well-being, strengths may also be relevant for groups of individuals and their collective well-being. It has been found that family functioning is largely dependent on the strengths and appraisals of its members (Lustig & Akey, 1999). The strengths within the family will in turn be relevant for the child's well-being (e.g., life satisfaction, self-esteem, sense of mastery; Moore, Chalk, Scarpa, & Vandivere, 2002; Shek, 2002), their school adjustment (Shek, 2002), whether problem behaviour occurs (Shek, 2002), as well as the strengths the child possesses (Togari et al., 2012). It was found that the mother's sense of coherence (extent to which one views the world as comprehensible, manageable, and meaningful) was directly related to the children's sense of coherence, regardless of their sex, as well as greater participation in decision-making at home for daughters. In this way, understanding the strengths of the individuals, requires an understanding of the family. Literature regarding the social influence of other figures has been sparse, however, both autonomy-supportive parenting and teaching have been found to be related to an adolescent's sense of competence (mastery) and self-determination (personal control) in themselves and in different domains (school, friendships, and work), which was consequently related to better adjustment in those domains (Grolnick, Ryan, & Deci, 1991; Soenens & Vansteenkiste, 2005). Such findings point to the importance of examining strengths within relationships (e.g., whether care is present) as a means of gaining understanding of strengths within an individual.

Strengths can and are developed through everyday experiences and need not be exclusively examined within vulnerable groups. Strengths evolve with time, are highly contextual, and are dynamic (Biswas-Diener, Kashdan, & Minhas, 2011). Although the aforementioned literature suggests that family strengths and relationship quality are associated to the presentation of strengths in children, it is less clear if other social figures (friends, teachers, and other significant adults) may also be associated to strength presentation. Thus, we undertook the current study to explore the relative variance accounted by perceived care from different social figures on the presentation of strengths in a healthy community adolescent sample.

The Relationship Between Empathy, Strength, and Trait Resilience

The review presented clearly shows that the qualities of empathy, strength, and trait resilience each have demonstrable effects on mental well-being and social functioning. More so, these qualities tend to correlate in an individual, and its co-occurrence has most commonly been found while studying stress and the effect of hardship (Kinsella, Anderson, & Anderson, 1996; Parker, Cowen, Work, & Wyman, 1990). In a retrospective study design, adult offspring of individuals with mental illness, reported having a stronger sense of self-reliance, resilience, and empathy from the experience (Kinsella et al., 1996). Empathy was the most commonly identified outcome of the participants in this particular study, with individuals expressing that their hardship promoted a non-judgemental attitude and the value of putting oneself in another's shoes. Many also expressed the fact that surviving their traumatic childhood history promoted a sense of confidence in being able to handle future life difficulties, demonstrating the construct of resilience Similarly, in 4^{th}–6^{th} grade urban children, those who managed stress in a resilient manner also proved to be more empathic, and unsurprisingly, demonstrate better problem solving and coping strategies (Parker et al., 1990).

In this paper, we posit that a commonality among empathy, strength and trait resilience is that each is affected by the perception of care from others, in line with the relational-cultural theory (RCT; Jordan, 2000; Miller, 1976). The RCT is a comprehensive theory concerning human development that emphasizes the importance of mutually-empathic growth-fostering relationships for personal development and well-being. Relationships are the means and goal of personal development. Resilience is relational, with connection amongst others seen as crucial building blocks (Jordan, 2013). The RCT emphasizes a mutual interaction, in that individuals both contribute and grow as a function of relationships, with relationship networks being increasingly complex and diversified with growth.

Adolescence is a period of time in which individuals form increasingly diversified social networks. Although relationships with the family may be prioritized during childhood and serve as a basis for future relationships (Howes, Hamilton, & Philipsen, 1998), support amongst peers and the formation of significant bonds with notable non-familial adults may take precedence during adolescence (Levitt, Guacci-Franco, & Levitt., 1993; Schwartz, Lansford, Dodge, Pettit, & Bates, 2013).). What appears most functional is for an adolescent to perceive multiple sources of care, as such adolescents tend to be better adjusted, more competent, and better at problem-solving than those who must rely on support from only one source (Levitt et al., 2005; Sarason, Sarason, Potter, & Antoni, 1985). Perceiving care amongst multiple sources may be an indication of greater social integration, highlighting the importance of establishing and maintaining supportive relationships with children, as well as the importance of examining different prominent sources of care as a means of understanding child functioning (e.g., how a child empathizes with other people, the capacity of children to remain resilient amidst stress, and how a child successfully utilizes their strengths).

The Current Study

In the current study, we assessed the relation between adolescents' perception of care from different important figures (family, school staff, friends, and a significant other) with their ability to be empathic, their capacity to cope amidst stress, and their profile of psychological strengths. We utilized a community adolescent sample, as resilience and strengths have historically been studied in samples characterized by extreme adversity (e.g., poverty, abuse), rather than by daily stresses (e.g., studying for exams, having a fight with a friend). We hypothesized that:

1. Perceived care from each notable source would significantly account for a unique portion of variance in empathic ability, resilience, and strength, and
2. Familial care would account for the greatest amount of variance, as it has been the most consistently demonstrated social factor to be related to the three constructs.

Method

Participants

Two hundred and thirty-six high-school students (51% female), between the ages of 13 to 19 (M = 15.56, SD = 1.26) participated in the study. The participants were recruited from four public schools within an urban northern Ontario community. Roughly equal numbers of participants were recruited from each grade (Grade 9 = 29%, Grade 10 = 20%, Grade 11 = 23%, Grade 12 =

28%). Seventeen students were eliminated from the dataset due to the following reasons: three students had not answered a single question, three students answered only demographic questions, and 11 students had not completed at least one scale. The remaining dataset was fairly complete, with only 2% of values missing. To analyze the pattern of missing data, a Little's chi-square was done. With this test, the null hypothesis is that the missing data is missing completely at random (MCAR; Little & Rubin, 2002). The analysis showed that the null hypothesis should not be rejected (p = .80). Listwise deletion was used to handle the remaining missing data (n = 14), as tests indicated missing data was MCAR and adequate power existed despite the deletion. A priori analysis conducted suggested that 128 participants were required ($1 - \beta$ = .95, α = .05, d = .19, predictors = 8; G* Power 3.1.9.2).

Instruments

Support measures. *The Multidimensional Scale of Perceived Social Support* (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988) assesses the current perception of social support adequacy in a specific individual. The scale consists of 12 items, which are equally divided into three subscales, assessing perceived care from the family, friends, and a significant other. The inclusion of a significant other as a source of support may be particularly relevant for adolescents as romantic relationships and relationships with adults outside the family are emerging (Canty-Mitchell & Zimet, 2000). An instruction was given to participants to indicate the relation of the significant other. However, the specific figures listed were not further divided and analyzed, due to the many responses given, as well as presence of missing responses. The measure has been shown to have sound psychometric properties with adolescent samples (Canty-Mitchell & Zimet, 2000). The MSPSS demonstrated high internal consistency within the present sample when assessed in its entirety (Cronbach's alpha = .92) or as subscales: Family (Cronbach's alpha = .92), Friends (Cronbach's alpha = .90), Significant Other (Cronbach's alpha = .92).

The Psychological Sense of School Membership Scale (PSSM; Goodenow, 1993) is an 18-item, 5-point Likert scale designed to assess an adolescent student's current perception of belonging or membership in the school environment. The PSSM measures "the extent to which the student feels personally accepted, respected, included, and supported by others in the school environment" (p. 80), with rating reflecting the sufficiency of care individuals feel from the adult staff members within the school community. The PSSM was administered in its entirety with total scale scores used for analyses ("perceived school staff care"). The PSSM has been found to have good test-retest reliability (r = .78) and internal consistency (Cronbach's alphas range from .71 to .88) for both middle and high school students (Goodenow, 1993; Hagborg, 1994). The PSSM demonstrated high internal consistency with the present sample (Cronbach's alpha = .91)

Empathy measure. *The Basic Empathy Scale* (BES; Jolliffe & Farrington, 2006) is a 20-item self-report measure that assesses an individual's current level of cognitive and affective empathy. The test developers conceptualized empathy as an understanding and sharing in another's emotional state or context and sought to create a measure that assessed both affect congruence and the understanding of another's emotions (affective and cognitive empathy, respectively). Care was taken to develop items and an organization to the scale that would minimize the effect of social desirability and acquiescence response bias. The BES was originally validated using an adolescent sample. A general empathy score, as well as an affective and cognitive empathy score was garnered from this measure. However, only general empathy scores were used for the primary analyses, as both cognitive and affective components are typically

viewed as essential elements of empathy. The BES demonstrated high internal consistency when measured in the present sample (Cronbach's alpha = .85).

Trait resilience measure. *The Connor-Davidson Resilience Scale* (CD-RISC; Connor & Davidson, 2003) is one of the most widely used measures of trait resilience due to its strong psychometric properties and its wide applicability to diverse samples and conditions (Windle, Bennett, & Noyes, 2011). It has been utilized in both clinical and community adolescent samples. The CD-RISC consists of 25 5-point scale items, which are designed to measure the ability to cope with traumatic stress as perceived by the participant for the past month. The items are designed to assess personal resources or qualities empirically found to be associated with positive adaptation to adversity and include hardiness, self-efficacy, and humour. The CD-RISC demonstrated high internal consistency in the present sample (Cronbach's alpha = .93).

Strength measure. *The Strength Assessment Inventory-Youth Version* (SAI-Y; Rawana & Brownlee, 2010) is a self-report 105-item measure designed to provide a context-driven assessment of strengths in children and adolescents. The SAI examines strengths in different environments, in relation to different figures, and due to personal commitments. In this way, the SAI-Y assesses strengths that are both intrinsic to the individual and those due to interactions with others and the environment. For example, the SAI-Y examines strengths at home ("I take responsibility for my behaviour at home", "I take care of my pet") as well as strengths from knowing oneself ("I can listen and accept feedback, whether it is good or bad", "If there is something I am not good at, I try to get better or find something else I can do better"). A total strength score was obtained by summing the responses on all items and served as the primary strength outcome measure. It was decided to use the total strength score as opposed to total subscale scores for analysis, as the total score was found to have stronger psychometrics in the initial validation study (i.e., higher values of internal consistency and test-retest reliability) and would have greater utility when making comparisons between individuals due to the greater range of values. The SAI-Y demonstrated high internal consistency when measured in the present sample (Cronbach's alpha = .94).

Procedure

The current study was approved by the Research Ethics Board at the university, by the local district's school board, and by each participating school prior to any study activity. Recruitment and data collection were completed with the assistance of the principals and teachers at each school. Each school educator involved was informed as to the details of the study (by meeting and/or email) and given a script of main points to mention to students. An equal number of randomly-selected classes from each grade, at each school, was invited to participate in the study. Students of the selected classes were informed by the respective teachers as to the study's purpose and voluntariness of involvement. Each student was given a parental consent form and asked to return it signed if they were interested in participating. Once consented, participants completed the series of self-report questionnaires by means of online administration, during class time, with the permission of school staff. On average, students required 23 minutes to complete all questionnaires.

Analysis

All analyses were conducted using SPSS for Windows, Version 22. Descriptive statistics was used

to examine the demographic characteristics of the adolescent sample (i.e., age, grade, and gender) and the characteristics of each measure. Alpha coefficients were calculated first to ensure the reliability of the instruments included (Clark & Watson, 1995). Three separate five-step hierarchical regression analyses were employed, which allowed us to both examine whether an association between perceived care, empathy, trait resilience, and psychological strengths existed and to understand the nature of this association. Specifically, whether perceived care from certain social sources was explaining the association (if found). All demographic information was added on the first step, familial care was added as the second step, care from friends was added as the third step, care from school staff was added as the fourth step, and care from a significant other was added as the fifth step. As each source of care was added individually in steps, we were able to assess and compare the amount of variance in empathy, resilience, and psychological strengths explained by each source. The order in which the different sources of care were added into the hierarchical regression model was based on the ecological systems theory of human development (Bronfenbrenner, 1979), and proximal influences on development (i.e., familial care) were entered before distal influences (i.e., peer and teacher care). In addition, although no study existed examining the effect size of the different sources of perceived care in relation to empathy, resilience, and strengths within the same study, such a study has been conducted in relation to other psychological outcomes (i.e., depression and self-esteem; Way & Robinson, 2003). It was found that perceived care from the family exerted the greatest effect, which was followed by perceived care from peers, and perceived care from teachers exerted the smallest effect. Given that a significant other is a descriptor that can be used for many different individuals and has been less-studied, it was added last for each model.

Results

The basic descriptive statistics for the sample and responses for each measure can be found on Table 1. The correlation among measures can be found on Table 2. In regards to significant others, best friends (37.25% of responses), family members (30.72%), romantic partners (18.95%), a combination of individuals within the three previously listed domains (12.42%), and social worker were identified (.65%) among the valid responses. Three separate hierarchical linear regressions were conducted with empathy scores, resilience scores, and strength scores as the dependent variable. Assumptions of a linear relationship, multivariate normality, multicollinearity, autocorrelation, and homoscedasticity were examined and satisfied for each regression. The exceptions being three participants whom were identified as outliers and removed from analyses (i.e., their standardized residual was greater than 3 for a particular outcome variable and histograms showed the participant deviated markedly from that of the rest of the sample).

With respect to empathy, demographic variables were added at step one and produced significant results, $F(3, 198) = 12.09$, $p < .001$. Perceived care from friends, added at step three, similarly produced significant results, $\Delta F(1, 196) = 10.94$, $p < .01$. These predictors accounted for 16% and 4% of the variance in scores, respectively. No other predictor proved significant within this model. For results of the hierarchical regression, please refer to Table 3. Given the significance of gender in the model, an analysis was run on males ($N = 99$) and females separately ($N = 103$) to examine gender differences. In males, only care from friends proved to be a significant predictor, $\Delta F(1, 94) = 8.56$, $p < .01$, with 8% variance accounted. No predictor proved significant when testing on the female sample.

Table 1

Descriptive Statistics

	M (SD)	Range	Scale Range
Age	15.55 (1.26)	13–19	
BES: Total	71.16 (10.29)	46–95	20–100
BES: Cognitive Subscale	34.69 (4.77)	22–45	9–45
BES: Affective Subscale	36.47 (7.77)	11–53	11–55
CD–RISC	61.47 (16.72)	8–99	0–100
SAI:Y	142.50 (22.91)	65–203	0–210
MSPSS: Total	5.08 (1.22)	1–7	1–7
MSPSS: Family Subscale	4.86 (1.55)	1–7	1–7
MSPSS: Friend Subscale	5.13 (1.37)	1–7	1–7
MSPSS: Significant Other Subscale	5.25 (1.54)	1–7	1–7
PSSM	60.49 (14.23)	19–87	18–90

Note. N = 202 for all measures; BES = Basic Empathy Scale, CD-RISC = Connor Davidson Resilience Scale, SAI:Y = Strength Assessment Inventory: Youth Version, MSPSS = Multidimensional Scale of Perceived Social Support, PSSM = Psychological Sense of School Membership Scale.

Table 2

Correlation Table

	BES: Total	BES: Cognitive Subscale	BES: Affective Subscale	CD-RISC	SAI:Y	MSPSS: Total	MSPSS: Family Subscale	MSPSS: Friend Subscale	MSPSS: Significant Other Subscale	PSSM
BES: Total	1									
BES: Cognitive Subscale	.70***	1								
BES: Affective Subscale	.90***	.31***	1							
CD-RISC	.03	.30***	-.15*	1						
SAI:Y	.14*	.32***	-.01	.66***	1					
MSPSS: Total	.11	.21**	.01	.61***	.57***	1				
MSPSS: Family Subscale	-.00	.07	-.05	.43***	.38***	.77***	1			
MSPSS: Friend Subscale	.23**	.31***	.12	.34***	.30***	.84***	.43***	1		
MSPSS: Significant Other Subscale	.23**	.30***	.12	.35***	.35***	.85***	.43***	.66***	1	
PSSM	.08	.17*	-.01	.57***	.53***	.43***	.46***	.35***	.24***	1

Note. N = 202. BES = Basic Empathy Scale, CD-RISC = Connor Davidson Resilience Scale, PSS = Perceived Stress Scale, SAI:Y = Strength Assessment Inventory: Youth Version, MSPSS = Multidimensional Scale of Perceived Social Support, PSSM = Psychological Sense of School Membership Scale. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3

Summary of Hierarchical Regression Analysis for Variables Predicting Empathy

	B	*SE B*	*β*
Step 1: R^2 = .16, $F(3, 198) = 12.09$***			
Age	1.64	1.88	.20
Grade	-.87	2.03	-.10
Gender	7.53	1.38	.37***
Step 2: R^2 = .17, $\Delta F(1, 197) = 2.60$			
Perceived Familial Care	-.40	.53	-.06
Step 3: R^2 = .21, $\Delta F(1, 196) = 10.94$**			
Perceived Friend Care	1.10	.66	.15
Step 4: R^2 = .22, $\Delta F(1, 195) = 1.67$			
Perceived School Staff Care	.07	.05	.10
Step 5: R^2 = .23, $\Delta F(1, 194) = 2.05$			
Perceived Significant Other Care	.83	.58	.12

Note. N = 202. R^2 = .16 for Step 1; ΔR^2 = .01 for Step 2; ΔR^2 = .04 for Step 3; ΔR^2 = .01 for Step 4; ΔR^2 = .01 for Step 5. All standardized and unstandardized regression coefficients are from the final step in the analyses. * $p < .05$, ** $p < .01$, *** $p < .001$.

For the hierarchical regression conducted for resilience, each step significantly contributed to the model. Perceived care from family and school staff accounted for the greatest variance among predictors, with 15% variance accounted by each. For results of the hierarchical, please refer to Table 4. Similar to empathy, gender proved to be a significant factor in the model, so analysis was run on males and females separately to further examine gender differences. For males, both perceived care from family and school staff proved to be significant factors, with 9% and 12% variance accounted, respectively. The complete model, with all other variables included, accounted for 28% variance. For females, perceived care from family, friends, and school staff proved to be significant factors, with 22%, 4%, and 17% variance accounted, respectively. The completed model accounted for 47% variance.

For the hierarchical regression conducted for psychological strength, perceived care from each source significantly contributed to the model. Perceived care from the family and school staff accounted for the greatest variance among predictors, with 14% and 15%, accounted variance, respectively. For results of this hierarchical regression, please refer to Table 5. Although gender did not prove to be significant within the model, an exploratory analysis was done to assess for potential gender differences missed in the regression. In males, perceived care from family and school staff proved to be significant factors, with 11% and 10% variance accounted. The complete model, with all other variables included, accounted for 26% variance. In females, perceived care from family, school staff, and significant others proved to be significant factors, with 17%, 16%, and 5% variance accounted, respectively. The completed model accounted for 42% variance.

Table 4

Summary of Hierarchical Regression Analysis for Variables Predicting Trait Resilience

	B	*SE B*	*β*
Step 1: R^2 = .07, F(3, 198) = 5.21**			
Age	-1.01	2.66	-.08
Grade	2.87	2.87	.20
Gender	-4.00	1.95	-.12*
Step 2: R^2 = .45, ΔF(1, 197) = 14.07***			
Perceived Familial Care	1.32	.75	.12
Step 3: R^2 = .48, ΔF(1, 196) = 12.94*			
Perceived Friend Care	-.12	.93	-.01
Step 4: R^2 = .53, ΔF(1, 195) = 21.21***			
Perceived School Staff Care	.53	.08	.45***
Step 5: R^2 = .55, ΔF(1, 194) = 19.48*			
Perceived Significant Other Care	1.99	.82	.18*

Note. N = 202. R^2 = .07 for Step 1; ΔR^2 = .15 for Step 2; ΔR^2 = .03 for Step 3; ΔR^2 = .15 for Step 4; and ΔR^2 = .02 for Step 5. All standardized and unstandardized regression coefficients are from the final step in the analyses. * p < .05, ** p < .01, *** p < .001.

Table 5

Summary of Hierarchical Regression Analysis for Variables Predicting Psychological Strengths

	B	*SE B*	*β*
Step 1: R^2 = .01, F(3, 198) = .63			
Age	3.18	3.84	.18
Grade	-2.80	4.14	-.14
Gender	1.79	2.82	.04
Step 2: R^2 = .15, ΔF(1, 197) = 33.28***			
Perceived Familial Care	1.67	1.08	.11
Step 3: R^2 = .17, ΔF(1, 196) = 4.47*			
Perceived Friend Care	-1.14	1.34	-.07
Step 4: R^2 = .32, ΔF(1, 195) = 42.66***			
Perceived School Staff Care	.76	.11	.46***
Step 5: R^2 = .35, ΔF(1, 194) = 9.02**			
Perceived Significant Other Care	3.56	1.19	.24**

Note. N = 202. R^2 = .01 for Step 1; ΔR^2 = .14 for Step 2; ΔR^2 = .02 for Step 3; ΔR^2 = .15 for Step 4; ΔR^2 = .03 for Step 5. All standardized and unstandardized regression coefficients are from the final step in the analyses. * p < .05, ** p < .01, *** p < .001.

Discussion

Our results partially confirmed our primary and secondary hypothesis, demonstrating that perceived care from each notable figure contributed unique variance for two of the three outcome variables examined (resilience and psychological strength), with the family contributing the largest variance among the sources for these variables. Each source of care was added as their own step within the regressions conducted, and thus, we could determine that each source of care made a significant change. The fact that perceived care from the family was not a significant predictor for empathy was quite a novel finding, given the vast research implicating the importance of family for empathic development. There has been research demonstrating that adolescents come to rely on non-family members (i.e., friends and romantic partners) as their primary source of social support and that tensions within the parent-child relationship tend to be most pronounced during early and middle adolescence (Furman & Buhrmester, 1992; Levitt et al., 1993). It could be the case that parental support plays a lessened role in the development of certain traits (e.g., empathy), while being maintained for others (e.g., resilience). In addition, in the current study, the specific family members upon which perceptions of care were based were not examined. However, support from different family members may have effects on different aspects of empathic development. For example, it was found that maternal support predicted change in the affective component of empathy among adolescents, whereas paternal support predicted changes in the cognitive component (Miklikowska et al., 2011). It could be the case that by grouping all family members as one, more subtle associations were missed. Future studies should examine the effect of social support from different members within the family network, as examinations of social support from siblings and extended families are rarely done.

Although our results did indicate the importance of the family for the presentation of resilience and psychological strengths, for both of these traits, perceived care from school staff was of equal importance to the family. There has been research examining the influence of teacher-child relationships on academic attitudes and behaviours (Baker, 1999). Less research has been done on how teachers influence students' resilience and strengths. The few studies that exist in this field have shown that relationship quality and behaviour by the teacher can contribute to students' perception of resilience (Johnson, 2008), more positive school outcomes in those with behavioural problems (Baker, Grant, & Morlock, 2008), increased personal strengths (i.e., self-efficacy, optimism, hope; Khan, 2013), and better adjustment in different life domains (i.e., school, friendship, occupation; Soenens & Vansteenkiste, 2005). Alternatively, poor connection to school and poor relationships with teachers was found in student bullies and their victims, implicating the importance of school policies that enhance children's emotional experience at school through positive teacher-student relationships (Raskauskas et al., 2010). Teachers are capable of having a profound impact on the development of students beyond the professional domain. Our results are the first to demonstrate that perceived care from school staff is of equal importance to that of the family when it comes to the presentation of resilience and psychological strengths in adolescents. Given the importance of resilience and strengths for a student's well-being and adjustment during times of hardship and happiness, our results highlight the need for educational research to examine the influence of teacher-student relationships on social development. In addition, further research is needed on understanding the direct and indirect means in which principals and administrators may alter a student's sense of school belonging (i.e., behaviours and policies enacted).

Gender differences were not of focus in the present study and thus, no gender-based hypotheses were made, however, our results found that for both resilience and psychological strengths, perceived care accounted for greater variance in women than in men, and that more sources of care reached levels of significance in women than in men. The literature on gender differences in social support generally shows that adolescent and adult women are more dependent upon social support for psychological well-being and relationship satisfaction than men (Acitelli & Antonucci, 1994; Day & Livingstone, 2003; Flaherty & Richman, 1989; Rose & Rudolph, 2006). In addition, women are more likely to confide in wider networks of people (i.e., family, friends, and partner) compared to men in coping with crisis events (Harrison, Maguire, & Pitceathly, 1995). The results of this study fit with these findings and extend it, by demonstrating that women may be more dependent on perceived care for their ability to be resilient and psychologically strong.

We found many confirmatory findings with regards to perceived care and the presentation of resilience and strengths. However, our predictors fared less well in predicting differences in empathic ability. Only perceived care from friends accounted for a significant proportion of variance (a modest 4%). When analysis was done separately for male and female participants, it was found that perceived care from friends was only significant for male participants. This suggests that for adolescent males, the process of becoming more emotionally aware of others may be associated with perceived connection among friends. Rose and Rudolph (2006) proposed a theoretical model in which peer socialization among same-sex peers influences the development of sex-linked peer relationship processes (which includes empathy, conceptualized in the model as a social-cognitive relationship style), which in turn affects emotional and behavioural adjustment. Girls and boys demonstrate differences in relational orientation styles, with girls tending to adopt connection-oriented goals amongst peer groups and feeling more empathy for others, and boys tending to adopt agentic goals and increasing dominance amongst peer groups. It could be the case that as boys perceive more care amongst peer groups, the goal of individual agency and dominance is converted into a goal for further connection through mutual development of empathy occurring between individual and peer. The nature of peer interactions amongst boys represents a necessary area of future inquiry, as although sex differences in empathic ability is often studied, the processes that are associated with differentiation is not yet understood.

There are three main limitations of the study which will be expanded on, with potential future research directions suggested in turn. The primary limitation concerns the fact that the utilized study design cannot speak to the direction of the relationship between variables. It is possible that the qualities of empathy, resilience, and strengths affected the perception of care in people, as opposed to vice versa, or that a reciprocal relationship existed between variables. A longitudinal study design would be a logical continuation of the present study, as such a design would provide information about the temporal sequence among variables and elucidate possible changes that occur with aging. In addition, caution should be exercised when interpreting results, given the exclusive utilization of self-report instruments and the possibility of unintentional impression management (Paulhus, 1986). The decision to utilize self-report instruments was based on the fact that perceived care has been found to be superior to that of objective indicators of care as predictors of psychological status (Sarason et al., 1985; Wilcox, 1981), as well as the fact that informants and objective measures may not accurately reflect the constructs of interest. Nonetheless, the utilization of informant-ratings and behavioural measures in future studies may provide information as to how perception of care is mutually shaped, as well as how social and

individual-level factors interact in predicting behaviour (e.g., it could be the case that perceived care is only associated with perceived strengths and not whether one utilizes such strengths). Our final limitation concerns the fact that we were limited in regards to the number and length of measures we were able to include. Given the young sample group and the required involvement of school personnel, brevity and simplicity were favoured in the measures chosen for the study. However, there were numerous additional variables that likely would have accounted for additional variance. For example, intelligence, personality facets, socioeconomic status, and depressed mood have each been found to affect subjective well-being and/or relationship perceptions, acting as possible variables for examination in future adolescent research (Gallagher & Vella-Brodrick, 2008; Kalmijn, 2013; Hayes & Joseph, 2003; Pinquart & Sörensen, 2000).

Shaping individuals to be more empathic in their interactions with others, be resilient amidst stress, and effectively harness their psychological strengths has implications for an adolescent's well-being, mental functioning, and social responsibility. Through the concurrent examination of multiple sources of perceived care, we were able to demonstrate that each source of care was related to the presentation of resilience and strengths, and that families and school staff each accounted for a large unique proportion of variance. A comprehensive assessment of care involving many important figures is superior to assessing any one source of care in isolation, as the influence of different figures is not uniform among psychological outcomes. The current study demonstrated that school staff members play a particularly large role in an adolescent's capacity for resilience and possession of psychological strengths, despite much of the extant research emphasizing the importance of familial influence. Care from both the home and school environment are equally important for an adolescent's healthy development. Further research is needed to examine the effect of school culture and student-teacher relationships on personal development.

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