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EDUCATIONAL PSYCHOLOGY & COUNSELLING | RESEARCH ARTICLE

Mental motivation, intrinsic motivation and their relationship with emotional support sources among gifted and non-gifted Jordanian adolescents

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Abstract: Emotional support has emerged in contemporary research as a significant component to establishing and maintaining close relationships, and is thought to play a critical role in children's development. Emotional support has been defined in a number of ways, but the various definitions contain some commonalities. Emotional support refers to expressions of concern and care for another person, especially in times of distress and difficulty. In doing so, someone providing emotional support will offer sympathy, express concern, and display compassion and love for another. As such, emotional support: addresses matters residing at the core of our being; our sense of self, the things we aspire to, our hopes, our fears, and our deepest feelings. Being emotionally supportive may involve helping someone who is distressed by "listening to, empathizing with, legitimizing, and actively exploring their feelings". Expressions of emotional support aim to relieve a person's distress, and offer sympathy and nurturance. In particular, because stress and emotional hurt often stem from the invalidation of self, either directly (e.g., rejection by a valued other) or indirectly (e.g., failing at something connected to one's self-

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PUBLIC INTEREST STATEMENT

Gifted and non-gifted tenth grade students in Jordan were asked to complete measures of emotional support, intrinsic motivation, and mental motivation. Each of these concepts have been shown to be important for development and learning, but little is known about them with regard to gifted Jordanian students. Results from our study show that emotional support is related to intrinsic motivation and mental motivation. The highest levels of emotional support, intrinsic motivation and mental motivation are found in gifted females.

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concept), expressions of encouragement, compassion, compliment, appreciation, reassurance, and respect—often regarded as appraisal, ego, or esteem support—can be conceptualized as forms of emotional support.

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Emotional support has emerged in contemporary research as a significant component to establishing and maintaining close relationships (Burleson, 2003a), and is thought to play a critical role in children's development (Brock & Curby, 2014). Emotional support has been defined in a number of ways, but the various definitions contain some commonalities. Emotional support refers to expressions of concern and care for another person, especially in times of distress and difficulty. In doing so, someone providing emotional support will offer sympathy, express concern, and display compassion and love for another (Buhrmester, Furman, Wittenberg, & Reiss, 1988; Cohen & Willis, 1985; Cutrona & Russell, 1990). As such, emotional support: addresses matters residing at the core of our being; our sense of self, the things we aspire to, our hopes, our fears, and our deepest feelings (Burleson, 2003a, p. 2).

Being emotionally supportive may involve helping someone who is distressed by "listening to, empathizing with, legitimizing, and actively exploring their feelings" (Burleson, 2003b). Expressions of emotional support aim to relieve a person's distress, and offer sympathy and nurturance (Hill, 1987). In particular, because stress and emotional hurt often stem from the invalidation of self, either directly (e.g., rejection by a valued other) or indirectly (e.g., failing at something connected to one's self-concept), expressions of encouragement, compassion, compliment, appreciation, reassurance, and respect—often regarded as appraisal, ego, or esteem support—can be conceptualized as forms of emotional support (Burleson, 2003b, p. 552).

For this reason, emotional support is critical to the establishment of close personal relationships (Brant, 2003; Cunningham & Barabee, 2000). As children develop, they engage in reciprocal interactions with significant others, and they begin to predict the behaviours of those others. They then may modify their emotions in anticipation of the predicted behaviours. Consequently, the quality of the relationship that is established in this mechanism can enhance or hinder a child's development (Brock & Curby, 2014). For example, children who are close to their parents and teachers are more academically and socially competent, display fewer behaviour problems, and show better engagement and adjustment in school (Birch & Ladd, 1997; Ladd, Birch, & Buhs, 1999). When classrooms are emotionally supportive children display fewer behaviour problems (McCormick, Cappella, O'Connor, & McClowry, 2013; Merritt, Wanless, Rimm-Kaufam, & Cameron, 2012). These results are accentuated if the emotional support is consistent. Children of teachers who are consistently emotionally supportive display higher social competence and exhibit fewer behaviour problems (Brock & Curby, 2014, 2016).

Some studies have suggested emotional support is associated with subjective well-being (Almquist, Östberg, Rostila, Edling, & Rydgren, 2014; Shakespeare-Finch & Obst, 2011; Siedlecki, Salthouse, Oishi, & Jeswani, 2014) and better quality of health (Reblin & Uchino, 2008) while low emotional support is associated with poor health outcomes (Strine, Chapman, Balluz, & Mokdad, 2008). Family emotional support has been found to be associated with a greater likelihood of engaging in health-promoting behaviours (Maldonado & Vaughn, 2013).

More importantly, emotional support from parents during early phases of development is important, and a positive, warm and supportive relationship with parents predicts social-emotional adjustment during childhood and early adolescence (Laursen & Collins, 2009).

Children and adolescents who report their parents as being sensitive and supportive tend to feel better about themselves and have positive friendships (Booth-Laforce et al., 2006; Laible, Carlo, & Raffaelli, 2000). As such, emotional support may provide the foundation for developing resilience. The support provided through the establishment of close relationships may help individuals cope more effectively with difficulties, face problems and maintain a positive outlook (Burleson, 1994; Stroebe & Stroebe, 1996).

Although expressions of concern, compassion and empathy are important forms of emotional support that support healthy development, equally significant is the fulfillment of the basic needs of autonomy, competence and belonging, as outlined in self-determination theory (Ryan & Deci, 2000). According to self-determination theory, individuals have an innate tendency for growth if the basic needs of autonomy, competence and belonging are fulfilled. If these needs are thwarted, individuals are at risk of developing defensive mechanisms (Ryan, Deci, & Vansteenkiste, 2016; Vansteenkiste & Ryan, 2013). For example, thwarting the development of these psychological needs has been linked to suicide ideation (Britton, Van Orden, Hirsch, & Williams, 2014; Bureau, Mageau, Vallerand, Rousseau, & Otis, 2012), bulimic tendencies (Pelletier & Dion, 2007; Verstuyf, Vansteenkiste, & Soenens, 2012) and borderline personality disorders (Ryan, 2005).

More importantly, the fulfillment of these basic needs is the cornerstone of intrinsic motivation (Deci & Ryan, 2000). Intrinsic motivation refers to the innate and inherent tendencies for people to seek challenges, to explore and play by participating in activities that are engaging (Ryan & Deci, 2000). That is, to be intrinsicaly motivated is to do something for the enjoyment and satisfaction of doing it (Seifert & Hedderson, 2010), and being intrinsically motivated plays a critical role in development, learning, and well-being (Deci & Ryan, 1985, 1995; Deci, Vallerand, Pelletier, & Ryan, 1991; Grolnick, Deci, & Ryan, 1997). Intrinsic motivation ensues from contexts that nurture curiosity, exploration, challenge, mastery, and interest, and it is in this context that development occurs (Csikszentmihalyi & Nakamura, 1989, 1999; Deci & Ryan, 1985, 1995; Grolnick et al., 1997; Ryan & Deci, 2000).

Yet it is also the case that curiosity, exploration and mastery, that is learning for its own sake, is a characteristic of critical thinking. Although critical thinking is valued as an important goal of education, possessing the necessary skills to think critically is considered insufficient to be a good critical thinker (Facione, Giancarlo, Facione, & Gainen, 1995). In addition to the requisite cognitive skills, it is recognized that students must also possess the disposition to utilize those skills. Possessing a critical disposition refers to having the appropriate attitudes, values and inclinations towards critical thinking (Facione et al., 1995; Giancarlo, Blohm, & Urdan, 2004), and is considered an essential component of critical thinking. Giancarlo et al. (2004) have termed this disposition as mental motivation, and have characterized it as being comprised of four elements: learning orientation, creative problem-solving, mental focus, and cognitive integrity. Learning orientation refers to possessing a mastery or learning goal orientation which is defined as a desire to acquire new skills and knowledge. The creative problem-solving component describes the tendencies to be innovative, imaginative, and novel in thinking about problems. Mental focus characterizes one's ability to be task-focussed, organized, systematic and clear-headed when solving problems. Cognitive integrity refers to the degree to which one considers different points of view for the sake of pursuing truth, and being fair-minded by valuing alternative viewpoints. In a series of studies with secondary school students, Giancarlo et al. (2004) found these four components of mental motivation to be correlated with SAT and PSAT scores, grade point average, self-efficacy, self-regulation and mastery goal orientation.

Emotional support, intrinsic motivation and mental motivation may be particularly important for gifted students and their development. Gifted children often have difficulty relating to others, especially if they are highly gifted (Blackett & Webb, 2011). They may be perceived as impatient with others, ask embarassing questions, critical or intolerant towards others, and sensitive to the criticism by others (Blackett & Webb, 2011). Often, such children see themselves as different from

their peers, and being labeled as gifted results in "limited social benefits," often having to choose between academic excellence or social acceptance. Consequently, they may strive to hide their abilities, to the point of dropping out of school. Experiences of social isolation coupled with sensitivity and perfectionistic tendecies may lead gifted students to be at risk of problem behaviours (Blaas, 2014). Consequently, emotional support is important for gifted children and research suggests that gifted children will be better adjusted when placed in environments which provide acceptance and support (Eddles-Hirst, Vialle, McCormick, & Rogers, 2012).

Although gifted children may display behaviours which create tendencies for social isolation, they also display behaviours which are intellectually driven. Gifted children have been described as being creative and innovative, capable of intense concentration, love of truth, able to solve problems, inquisitive and curious (e.g., Blackett & Webb, 2011). For example, Henderson, Gold, and McCord (1982) found that gifted children reported higher levels of curiosity than non-gifted children, and the differences increased as grade-level increased. Curiosity is an important characteristic of intellectual giftedness, and the superior intellectual skills possessed by gifted children allows them to explore and create (Perleth & Wilde, 2009).

Creative individuals are both energized by and strive for greater self-determination (Sheldon, 1995). Gifted students tend to have higher levels of intrinsic motivation than their non-gifted counterparts (Vallerand, Gagne, Senecal, & Pelletier, 1994) and tend to be more learning goal oriented than their non-gifted peers (Kahyaoglu, 2013). Results of a meta-analysis indicated that gifted students had much higher perceived academic competence than their non-gifted peers (Lister & Roberts, 2011). Chessor (2013), however, found that gifted students in a homogeneous setting had lower learning goal orientations than non-gifted students.

Few studies have examined emotional support, intrinsic motivation and mental motivation in Arabic cultures. One notable exception is a study of intrinsic motivation in gifted Jordanian students by Al-Dhaimit and Kreishan (2016). Further, although a number of studies have explored gender differences in emotional support, with mixed findings (Bokhorst, Sumter, & Westenberg, 2010; Côté, Bouffard, & Vezeau, 2014; Helsen, Vollebergh, & Meeus, 2000; Inguglia, Ingolgia, & Lo Coco, 2013; Malecki & Demaray, 2002), none have done so with Arabic populations. As a consequence, the present study aims to further our understanding of emotional support, intrinsic motivation and mental motivation in Arabic countries by addressing three research questions:

(1) Are there a significant correlations between emotional support, mental motivation, and intrinsic motivation among gifted and non-gifted Jordanian students?

(2) Are there any significant differences in students' emotional support, intrinsic motivation, and mental motivation, respectively in relation to students' gender and giftedness?

(3) Are there any significant mean differences in the intrinsic motivation and mental motivation, respectively in relation to the source of emotional support?

1. Method

1.1. Participants
The participants in this study were recruited from two schools in Amman, Jordan. Ninety-one (42 male and 49 female) tenth grade students were selected from a secondary school for gifted children; this represents 94% of the total population of the school. The sample of non-gifted children consisted of students enrolled in the regular program of government schools in Amman. Eight school districts containing 37 schools for boys and 40 schools for girls are found in Amman. From these, two boys' schools and two girls' schools were selected to participate. This resulted in a sample size of 140 students of which 68 were male and 72 were female. Prior to conducting the study, 20 gifted and 20 non-gifted students were selected to participate in a pilot study to check the validity and reliability of the instruments used.

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1.2. Measures

1.2.1. Mental motivation

To measure disposition for critical thinking, participants completed the California Measure of Mental Motivation—CM3 (Giancarlo & Facione, 2000). This version of the CM3 consisted of 72 items in Likert format with four responses for each item (strongly disagree to strongly agree). The inventory consisted of four scales: Learning Orientation, Creative Problem Solving, Mental Focus, and Cognitive Integrity. Scale scores were computed by summing the individual item scores (ranging from 1 to 4); the total score of the CM3 was calculated by adding the item scores across all the items. In a series of three studies, Giancarlo et al. (2004) showed the CM3 to have acceptable psychometric characteristics (Giancarlo et al., 2004). Cronbach's alpha for the total scale in the three studies ranged between (0.89–0.91), and between (0.73–0.87) for the various sub-scales.

For this study, we used an Arabic version of the CM3 (Maree' & Nofel, 2008) which has demonstrated acceptable psychometric characteristics. The internal consistency coefficient for total scale was 0.88, and ranged between 0.76–0.91 for each of the subscales. A factor analysis yielded four factors similar to the English version of the CM3: Learning Orientation, Creative Problem Solving, Mental Focus, and Cognitive Integrity (Maree' & Nofel, 2008).

1.2.2. Emotional support

In the present study, sources of emotional support was assessed using a 16 item, five point Likert scale (Hisada, Senda, & Minoguchi, 1989). This scale assesses an individual's perception of receiving emotional support (e.g., compassion or encouragement) from those to whom they feel close. Uchida, Kitayama, Mesquita, Reyes, and Morling (2008) reported internal consistency coeffecients of 0.91, .92 and .91 for samples of American, Filipino and Japanese participants respectively. For this study, the scale was translated into Arabic and then translated back into English to verify the translation for suitable wording.

Within the current study, the scale showed good internal consistency. The Cronbach's alpha for the total scale was found to be .90. Each of the subscales assessing specific sources of emotional support demonstrated good internal consistency: Parents (.93), Teachers (.91), Peers (.89) and Social Media Communications (.93).

1.2.2.1. Intrinsic motivation. The Intrinsic Motivation Inventory (IMI; Ryan, 1982) was used to assess participants' intrinsic motivation. The task version of the IMI is a 22 item, seven point Likert format instrument which measures interest (seven items), perceived competence (five items), perceived choice (five items) and pressure or tension (four items). Responses were provided on a seven point Likert-type scale ranging from strongly disagree to strongly agree. Prior studies have demonstrated acceptable psychometric characteristics for the instrument (McCauley, Duncan, & Tammen, 1989; McCauley, Wraith, & Duncan, 1991; Tsigilis & Theodosiou, 2003). For this study, the scales were translated into Arabic Language and translated back into English to ensure the translation contained suitable wording. The internal consistency coefficient for the total scale was found to be .92. For the subscales of Interest/Enjoyment, Perceived Competence, Perceived Choice, and Pressure/Tension the Cronbach alphas were found to be .91, .85, .80 and .62 respectively.

2. Results

Descriptive statistics for emotional support, intrinsic motivation and mental motivation scores are presented in Table 1. Statistically detectable non-zero correlations were found between emotional support, intrinsic motivation and mental motivation. In the sample of gifted students, emotional support was correlated with intrinsic motivation (r = .24, p < .05) and mental motivation (r = .30, p < .05), suggesting that emotional support has a moderately strong influence on intrinsic motivation and disposition for critical thinking. Likewise, for non-gifted students emotional support

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Table 1. Descriptive statistics for emotional support, intrinsic motivation and mental motivation by giftedness and gender						
	Gifted			**Non-gifted**		
Variable	**Mean**	**SD**	**n**	**Mean**	**SD**	**n**
Emotional support						
Female (n = 49)	212.93	34.10	49	195.59	29.58	72
Male (n = 42)	203.68	32.77	42	211.14	34.14	68
Total (n = 91)	292.77	32.54	91	202.77	32.64	140
Intrinsic motivation						
Female (n = 49)	110.88	19.57	49	87.55	19.65	72
Male (n = 42)	93.82	22.32	42	91.81	23.60	68
Total (n = 91)	102.59	22.56	91	89.52	21.54	140
Mental motivation						
Female (n = 49)	188.22	21.40	49	177.45	17.72	72
Male (n = 42)	171.28	19.27	42	176.36	13.74	68
Total (n = 91)	179.45	22.20	91	176.95	1.93	140

was also correlated with intrinsic motivation ($r = .37$, $p < .05$) and mental motivation ($r = .40$, $p < .05$). The tests of the difference yielded no statistic differences between gifted and non-gifted students for either pairs of correlations.

A between-groups multivariate analysis of variance was used to test for gender and giftedness effects: emotional support, intrinsic motivation and mental motivation were the dependent variables in the analysis while giftedness and gender were between-groups variables. The results yielded a statistically detectable interaction effect ($F_{(3, 225)} = 6.028$, $p < .001$; Wilk's $\Lambda = 0.926$.) as well as main effects for gender ($F_{(3, 225)} = 5.822$, $p < .001$; Wilk's $\Lambda = 0.928$.) and giftedness ($F_{(3, 225)} = 6.868$, $p < .000$; Wilk's $\Lambda = 0.916$.). The interaction between giftedness and gender is readily apparent in Figures 1–3. Follow-up univariate analysis of variance tests yielded statistically detectable interaction effects for emotional
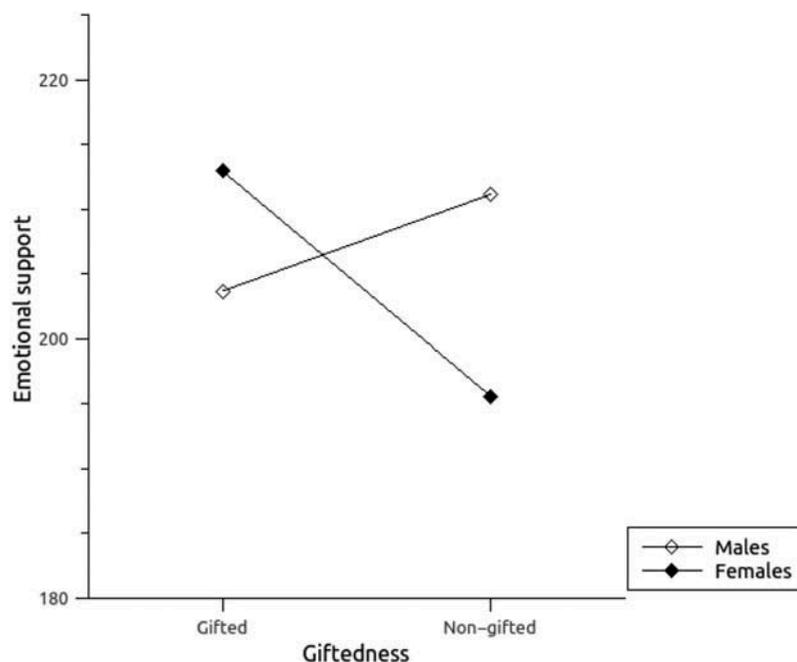
Figure 1. Emotional support by giftedness and gender.

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Figure 2. Intrinsic motivation by giftedness and gender.
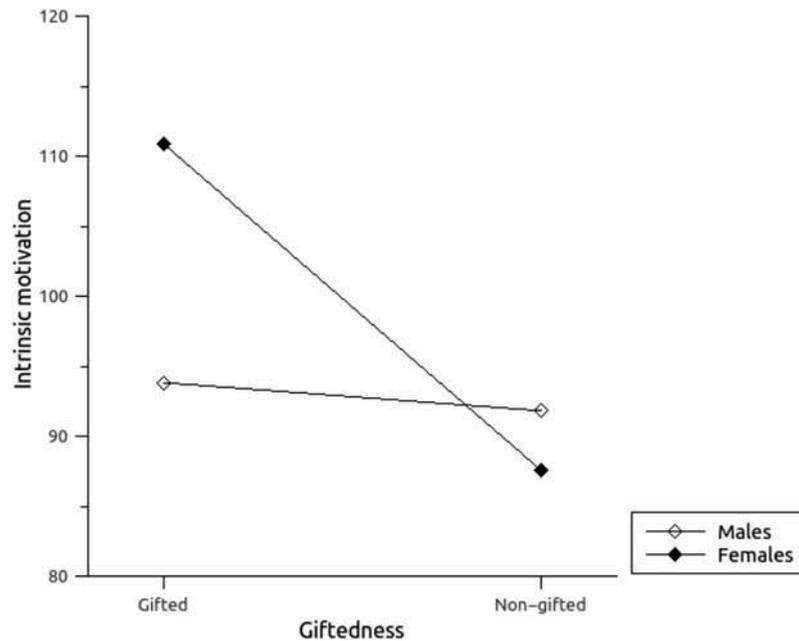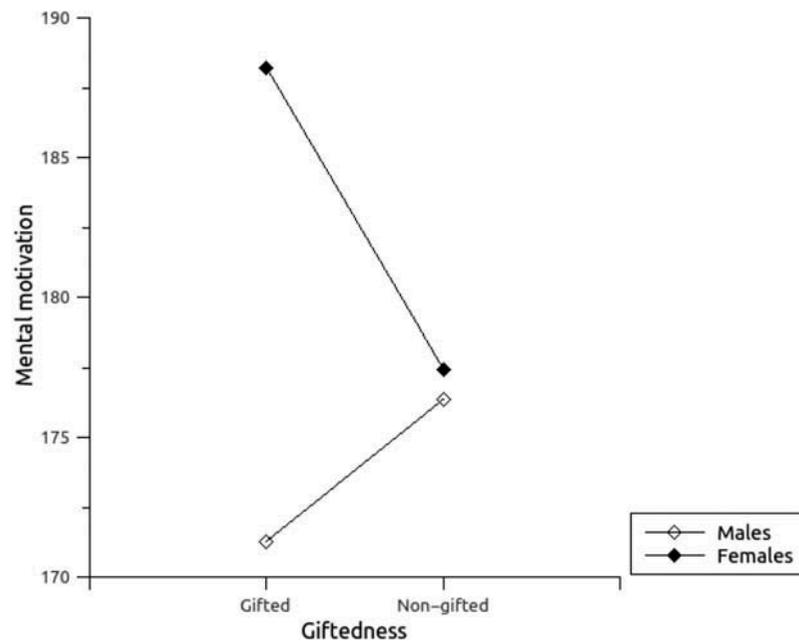

Figure 3. Mental motivation by giftedness and gender.

support, intrinsic motivation and mental motivation (see Table 2). Main effects for gender were found for intrinsic motivation and mental motivation but not for emotional support. A main effect for giftedness was found for intrinsic motivation but not for emotional support or mental motivation (Table 2).

Post-hoc analyses using Fisher's least significant difference test showed that gifted females reported statistically greater emotional support than non-gifted females ($p < .01$), and the difference was large ($g = .55$). Non-gifted males experienced greater perceived emotional support than gifted males ($p < .01$), and the difference was moderately small ($g = .22$). There was a large, statistically detectable effect whereby non-gifted males reported greater emotional support than

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Table 2. Results of univariate ANOVAs for emotional support, intrinsic motivation and mental motivation by giftedness and gender				
Variable	**F**	**df**	**MSE**	**p**
Giftedness				
Emotional support	1.246	1,227	1074.26	.26
Intrinsic motivation	19.36	1,227	449.04	<.001
Mental motivation	1.261	1,227	353.29	.26
Gender				
Emotional support	.51	1,227	1074.26	.48
Intrinsic motivation	5.01	1,227	449.04	.03
Mental motivation	12.64	1,227	353.29	<.001
Interaction				
Emotional support	7.87	1,227	1074.26	.005
Intrinsic motivation	13.89	1,227	449.04	<.001
Mental motivation	9.77	1,227	353.29	.002

non-gifted females ($p < .01$, $g = .48$), while the emotional support reported by gifted females was not greater than that of gifted males ($p > .01$).

Gifted females reported higher levels of intrinsic motivation than non-gifted females ($p < .01$) and gifted males, and in both instances the differences were large ($g = 1.19$ and $g = .82$ respectively). On the other hand, there were no statistical differences between non-gifted males and non-gifted females ($p > .01$), and between non-gifted males and gifted males ($p > .01$). Likewise, gifted females had greater mental motivation than non-gifted females ($p < .01$, $g = .55$) and gifted males ($p < .01$, $g = .82$). However, there was no difference between non-gifted males and non-gifted females, or between non-gifted and gifted males.

To evaluate differences in sources of emotional support on intrinsic motivation and mental motivation, the mean of each source of emotional support (teacher, parent, peers, social media) was calculated. The highest mean for each individual was used as indicator of the primary source of emotional support for the respondent. One-way analysis of variance tests were used to determine if there were differences in the sources of emotional support on intrinsic motivation and mental motivation (Table 3).

As evident in Table 3, the greatest sources of emotional support for most gifted students are parents and peers. For non-gifted students, parents are the greatest source of emotional support, and to a lesser extent, peers. What is noteworthy, though, is that students for whom parents are their greatest source of emotional support also have high levels of intrinsic motivation and mental motivation.

3. Discussion
The results of this study lend support to the role of emotional support in the development of Jordanian adolescents, in particular those who are gifted. Emotional support was correlated with intrinsic motivation and mental motivation, for both gifted and non-gifted students. This finding suggests that the development of close relationships that are supportive, caring and affirming plays an important role in both the tendency to be curious, inquisitive and creative, and the willingness to utilize one's intellectual resources.

That gifted students tended, on average, to have higher intrinsic and mental motivation in Jordan culture is understandable. Intrinsic motivation appears to be a characteristic of giftedness, and intrinsic motivation is influence through interaction with the environment. Schools for gifted

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Table 3. Means, standard deviations, and results of one-way analysis variance tests for intrinsic motivation and mental motivation by source of emotional support and giftedness						
Variable	**Source of support**	**Mean**	**SD**	**F**	**df**	**p**
Intrinsic motivation						
Gifted students						
	Teacher (n = 9)	82.67	24.03	4.38	3,87	.006
	Parent (n = 39)	94.85	17.63			
	Peers (n = 35)	90.40	19.86			
	Social media (n = 8)	67.38	30.34			
Non-gifted students						
	Teacher (n = 12)	115.17	17.42	4.71	3,137	.004
	Parent (n = 78)	106.08	21.01			
	Peers (n = 41)	95.17	23.50			
	Social media (n = 9)	89.44	24.15			
Mental Motivation						
Gifted students						
	Teacher (n = 9)	174.22	17.44	1.47	3,87	.23
	Parent (n = 39)	180.90	16.30			
	Peers (n = 35)	173.49	15.82			
	Social media (n = 8)	175.88	10.03			
Non-gifted students						
	Teacher (n = 12)	184.42	19.56	2.90	3,137	.04
	Parent (n = 78)	183.33	21.45			
	Peers (n = 41)	175.24	23.42			
	Social media (n = 9)	165.44	14.98			

students in Jordan tend to have greater resources and provide richer experiences for their students. They also have higher expectations, enriched curricula, and adopt teaching strategies that encourage intrinsic and mental motivation.

The Jordanian culture tends to confer respect and esteem upon gifted students which, in turn, enhances the self-esteem of the students. This may be particularly salient within Jordanian families. In Jordanian families, there is a tendency to distinguish the gifted children from their non-gifted siblings, and subsequently strive to meet the academic, personal and financial demands to support the gifted child. This, in turn, helps foster the development of intrinsic and mental motivation.

Gifted females in Jordanian culture seem to be well-supported, and that support gets translated into behaviours. That is, having been supported, gifted Jordanian girls become intrinsically and mentally motivated. Although gifted males reported statistically similar levels of emotional support as gifted females, the gifted females had greater intrinsic and mental motivation than their male counterparts. In other words, investing in emotional support for gifted Jordanian girls yields benefits that do not occur with boys. This may be due, in part, to an implicit competition that may occur between females and males. Females may be more motivated towards learning than males in order to achieve levels of excellence and advancement within a masculine society. At the same time, gifted females may be competing against each other for status within the male dominated culture. Schools and families may be more sympathetic towards gifted females, believing they are in more need of support than males, thereby providing emotional support which enhances intrinsic and mental motivation. Consequently, gifted females strive to appear to be emotionally mature in order to gain the respect of others,

including peers and teachers. The end result is that gifted females may show more interest, engage in greater study and put forth greater effort in order to prove themselves capable within a masculine society.

If being a gifted female yields benefits in Jordanian culture, being a gifted male seems to be detrimental. Gifted males do not appear to benefit as much as their non-gifted counterparts. Gifted males reported less emotional support than non-gifted males. They also reported less intrinsic and mental motivation. Gifted males are less likely to have close relationships which are caring and affirming, and are less likely to be curious, inquisitive and creative. They are less willing to utilize their intellectual resources.

Non-gifted males reported higher levels of emotional support, intrinsic motivation and mental motivation than non-gifted females. One reason for this might be the role that social media may play. Males have more freedom and leniency than females in socializing with peers, and in using social media as a means of communicating with them outside of school. Use of social media by females is often restricted by parents, and reflects the female students' belief that social media communications with peers will be met with criticism. However, Jordanian parents may be more willing to allow gifted females greater access to social media because the parents may have greater confidence in the gifted female, trusting their judgment and desire to excel academically.

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References
Al-Dhaimit, Y., & Kreishan, L. (2016). Gifted students' intrinsic and extrinsic motivation and parental influence on their motivation: From the self-determination theory perspective. *Journal of Research in Special Educational Needs, 16*, 13–23.
Almquist, Y., Östberg, V., Rostila, M., Edling, C., & Rydgren, J. (2014). Friendship network characteristics and psychological well-being in late adolescence: Exploring differences by gender and gender composition. *Scandinavian Journal of Public Health, 42*, 146–154. doi:10.1177/1403494813510793
Birch, S., & Ladd, G. (1997). The teacher-child relationship and children's early school adjustment. *Journal of School Psychology, 35*, 61–79. doi:10.1016/S0022-4405(96)00029-5
Blaas, S. (2014). The relationship between social-emotional difficulties and underachievement of gifted students. *Australian Journal of Guidance and Counselling, 24*, 243–255. doi:10.1017/jgc.2014.1
Blackett, R., & Webb, J. (2011). The social-emotional dimension of giftedness: The SENG support model. *The Australian Journal of Gifted Education, 20*, 5–13.

Bokhorst, C., Sumter, S., & Westenberg, M. (2010). Social support from parents, friends, classmates and teachers in children and adolescents age 9 to 18 years: Who is perceived as most supportive? *Social Development, 19*, 417–426. doi:10.1111/j.1467-9507.2009.00540.x
Booth-Laforce, C., Oh, W., Kim, A., Rubin, K., Rose-Krasnor, L., & Burgess, K. (2006). Attachment, self-worth, and peer-group functioning in middle childhood. *Attachment & Human Development, 8*, 309–325. doi:10.1080/14616730601048209
Brant, R. (2003). The experience and effects of emotional support: What the study of cultural and gender differences can tell us about close relationships, emotion, and interpersonal communication. *Personal Relationship, 10*, 1–23. doi:10.1111/1475-6811.00033
Britton, P., Van Orden, K., Hirsch, J., & Williams, G. (2014). Basic psychological needs, suicidal ideation and risk for suicidal behavior in young adults. *Suicide and Life-Threatening Behavior, 44*, 362–371. doi:10.1111/sltb.12074
Brock, L., & Curby, T. (2014). Emotional support consistency and teacher-child relationships forecast social competence and problem behaviors in prekindergarten and kindergarten. *Early Education and Development, 25*, 661–680. doi:10.1080/10409289.2014.866020
Brock, L., & Curby, T. (2016). The role of children's adaptability in classrooms characterized by low or high teacher emotional support consistency. *School Psychology Review, 45*, 209–225. doi:10.17105/SPR45-2.209-225
Buhrmester, D., Furman, W., Wittenberg, M., & Reiss, H. (1988). Five domains of interpersonal competence in peer relationships. *Journal of Personality and Social Psychology, 55*, 991–1008.
Bureau, J., Mageau, G., Vallerand, R., Rousseau, F., & Otis, J. (2012). Self-determination: A buffer against suicide ideation. *Suicide and Life-Threatening Behavior, 42*, 377–393. doi:10.1111/j.1943-278X.2012.00097.x
Burleson, B. (1994). Comforting messages: Features, functions, and outcomes. In J. Daly & J. Wieman

cogent ◦◦ psychology

(Eds.), *Strategic interpersonal communication* (pp. 135–161). Hillsdale: NJ: Erlbaum.

Burleson, B. (2003a). The experience and effects of emotional support: What the study of cultural and gender differences can tell us about close relationships, emotion, and interpersonal communication. *Personal Relationships*, 10, 1–23. doi:10.1111/1475-6811.00033

Burleson, B. (2003b). Emotional skill support. In J. Greene & B. Burleson (Eds.), *Handbook of communication and social interaction skills* (pp. 551–594). Mahwah, NJ: L. Erlbaum.

Chessor, D. (2013). The impact of grouping gifted students on motivation. *The European Journal of Social & Behavioural Sciences*, 1334–1352. doi:10.15405/ejsbs.117

Cohen, S., & Willis, T. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98, 310–357.

Côté, S., Bouffard, T., & Vezeau, C. (2014). The mediating effect of self-evaluation bias of competence on the relationship between parental emotional support and children's academic functioning. *British Journal of Educational Psychology*, 84, 415–434. doi:10.1111/bjep.12045

Csikszentmihalyi, M., & Nakamura, J. (1989). The dynamics of intrinsic motivation: A study of adolescents. In M. Csikszentmihalyi (Ed.), *Flow and the foundations of positive psychology* (pp. 175–197). New York, NY: Springer. doi:10.1007/978-94-017-9088-8

Csikszentmihalyi, M., & Nakamura, J. (1999). Emerging goals and the self-regulation of behavior. In R. Wyer (Ed.), *Perspectives on behavioral self-regulation* (Vol. 12, pp. 107–118). London: Lawrence Erlbaum.

Cunningham, M., & Barabee, A. (2000). Social support. In C. Hendrick & S. Hendrick (Eds.), *Close relationships: A sourcebook* (pp. 272–285). Thousand Oaks, CA: Sage.

Cutrona, C., & Russell, D. (1990). Types of social support and specific stress: Toward a theory of optimal matching. In B. R. Sarason, I. G. Sarason, & G. R. Pierce (Eds.), *Social support: An interactional view* (pp. 319–366). New York, NY: Wiley.

Deci, E., & Ryan, R. (1985). *Intrinsic motivation and self-determination in human behavior*. London, UK: Plenum Press.

Deci, E., & Ryan, R. (1995). Human autonomy: The basis for true self-esteem. In M. Kernis (Ed.), *Efficacy, agency, and self-esteem* (pp. 31–49). New York, NY: Plenum Press.

Deci, E., & Ryan, R. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227–268. doi:10.1207/S15327965PLI1104_01

Deci, E., Vallerand, R., Pelletier, L., & Ryan, R. (1991). Motivation and education: The self-determination perspective. *Educational Psychologist*, 26, 325–346. doi:10.1080/00461520.1991.9653137

Eddles-Hirst, K., Vialle, W., McCormick, J., & Rogers, K. (2012). Insiders or outsiders: The role of social context in the peer relations of gifted students. *Roeper review*, 34, 53–62. doi:10.1080/02783193.2012.627554

Facione, P., Giancarlo, C., Facione, N., & Gainen, J. (1995). The disposition toward critical thinking. *Journal of General Education*, 44, 1–25.

Giancarlo, C., Blohm, S., & Urdan, T. (2004). Assessing secondary students' disposition toward critical thinking: Development of the California measure of mental motivation. *Educational and Psychological Measurement*, 64, 347–364. doi:10.1177/0013164403258464

Giancarlo, C. A., & Facione, P. A. (2000). *The California measure of mental motivation*. Millbrae: California Academic Press.

Grolnick, W., Deci, E., & Ryan, R. (1997). Internalization within the family: The self-determination theory perspective. In J. Grusec & L. Kruczynski (Eds.), *Parenting and children's internalization of values* (pp. 135–161). Toronto, ON: Wiley.

Helsen, M., Vollebergh, W., & Meeus, W. (2000). Social support from parents and friends and emotional problems in adolescence. *Journal of Youth and Adolescence*, 29, 319–335. doi:10.1023/A:1005147708827

Henderson, B., Gold, S., & McCord, M. (1982). Daydreaming and curiosity in gifted and average children and adolescents. *Developmental Pyschology*, 18, 576–582. doi:10.1037/0012-1649.18.4.576

Hill, C. (1987). Affiliation motivation: People who need people... but in different ways. *Journal of Personality and Social Psychology*, 52, 1008–1018.

Hisada, M., Senda, S., & Minoguchi, M. (1989, September). *Development of social support scale (1)*. Paper presented at the annual meeting of the Japanese Psychological Association, Tokyo, Japan.

Inguglia, C., Ingolgia, S., & Lo Coco, A. (2013). The relation between emotional support, self-concept, and social functioning among school-aged children. *Bollettino Di Psicologia Applicata*, 267, 3–15.

Kahyaoglu, M. (2013). Differences between gifted students and non-gifted students' learning styles and their motivation styles towards science learning. *Educational Research and Reviews*, 8, 890–896. doi:10.5897/ERR2013.1415

Ladd, G., Birch, S., & Buhs, E. (1999). Children's social and scholastic lives in kindergarten: Related spheres of influence?. *Child Development*, 70, 1373–1400. doi:10.1111/1467-8624.00101

Laible, D., Carlo, G., & Raffaelli, M. (2000). The differential relations of parent and peer attachment to adolescent adjustment. *Journal of Youth and Adolescence*, 29, 45–59. doi:10.1023/A:1005169004882

Laursen, B., & Collins, W. (2009). Parent-child relationships during adolescence. In R. Lerner & I. Steinberg (Eds.), *Handbook of adolescent psychology, Vol. 2: Contextual influences on adolescent development* (pp. 3–42). New York: Wiley.

Lister, K., & Roberts, J. (2011). The self-concepts and perceived competencies of gifted and non-gifted students: A meta-analysis. *Journal of Research in Special Needs Education*, 11, 130–140. doi:10.1111/j.1471-3802.2010.01166.x

Maldonado, A., & Vaughn, A. (2013). The influence of perceived familial emotional support in childhood on adult health-related behaviors. *Psi Chi Journal of Psychological Research*, 18, 46–60. doi:10.24839/2164-8204.JN18.2.46

Malecki, C., & Demaray, M. (2002). Measuring perceived social support: Development of the child and adolescent social support scale (CASSS). *Pyschology in the Schools*, 39, 1–18. doi:10.1002/pits.10004

Maree', T., & Nofel, M. (2008). Jordan's initial image of the California measure mental motivation. *Damascus University Journal*, 24, 257–194.

McCauley, E., Duncan, T., & Tammen, V. (1989). Psychometric properties of the Intrinsic Motivation Inventory in a competitive sport setting: A confirmatory factor analysis. *Research Quarterly for Exerceise and Sport*, 60, 49–58.

cogent ·· psychology

McCauley, E., Wraith, S., & Duncan, T. (1991). Self-efficacy, perceptions of success, and intrinsic motivation for exercise. *Journal of Applied Social Psychology, 27*, 139–155. doi:10.1111/j.1559-1816.1991.tb00493.x

McCormick, M., Cappella, E., O'Connor, E., & McClowry, S. (2013). Parent involvement, emotional support, and behavior problems: An ecological approach. *Elementary School Journal, 114*, 277–300. doi:10.1086/673200

Merritt, E., Wanless, S., Rimm-Kaufam, S., & Cameron, C. (2012). The contribution of teachers' emotional support to children's social behaviors and self-regulatory skills in first grade. *School Psychology Review, 41*, 141–159.

Pelletier, L., & Dion, S. (2007). An examination of general and specific motivational mechanisms for the relations between body dissatisfaction and eating behaviors. *Journal of Social and Clinical Psychology, 26*, 303–333. doi:10.1521/jscp.2007.26.3.303

Perleth, C., & Wilde, A. (2009). Developmental trajectories of giftedness in children. In L. V. Shavinina (Ed.), *International Handbook on Giftedness* (pp. 319–335). Amersterdam, Netherlands: Springer. doi:10.1007/978-1-4020-6162-2_14

Reblin, M., & Uchino, B. (2008). Social and emotional support and its implications for health. *Current Opinion in Psychiatry, 21*, 201–205. doi:10.1097/YCO.0b013e3282f3ad89

Ryan, R. (1982). Control and information in the intrapersonal sphere: An extension of cognitive evaluation theory. *Journal of Personality and Social Psychology, 43*, 450–461. doi:10.1037/0022-3514.43.3.450

Ryan, R. (2005). The development line of autonomy in the etiology, dynamics, and treatment of borderline personality disorders. *Development and Psychopathology, 17*, 987–1006. doi:10.1017/S0954579405050467

Ryan, R., & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68–78. doi:10.1037/0003-066X.55.1.68

Ryan, R. M., Deci, E. L., & Vansteenkiste, M. (2016). Autonomy and autonomy disturbances in self-development and psychopathology: Research on motivation, attachment, and clinical process. In D. Cicchetti (Ed.), *Developmental psychopathology, theory and method* (pp. 385–438). Hoboken, NJ: John Wiley & Sons Inc.

Seifert, T., & Hedderson, C. (2010). Intrinsic motivation and flow in skateboarding: An ethnographic study.

Journal of Happiness Studies, 11, 277–292. doi:10.1007/s10902-009-9140-y

Shakespeare-Finch, J., & Obst, P. (2011). The development of the 2-way social support scale: A measure of giving and receiving emotional and instrumental support. *Journal of Personality Assessment, 93*, 483–490. doi:10.1080/00223891.2011.594124

Sheldon, K. (1995). Creativity and self-determination in personality. *Creativity Research Journal, 8*, 25–36. doi:10.1207/s15326934crj0801_3

Siedlecki, K., Salthouse, T., Oishi, S., & Jeswani, S. (2014). The relationship between social support and subjective well-being across age. *Social Indicators Research, 117*, 561–576. doi:10.1007/s11205-013-0361-4

Strine, T., Chapman, D., Balluz, L., & Mokdad, A. (2008). Health-related quality of life and health behaviours by social and emotional support: Their relevance to psychiatry and medicine. *Social Psychiatry and Psychiatric Epidemiology, 43*, 151–159. doi:10.1007/s00127-007-0277-x

Stroebe, W., & Stroebe, M. (1996). The social psychology of social support. In E. Higgins & A. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 597–621). New York, NY: Guilford Press.

Tsigilis, N., & Theodosiou, A. (2003). Temporal stability of the intrinsic motivation inventory. *Perceptual and Motor Skills, 97*, 271–280. doi:10.2466/pms.2003.97.1.271

Uchida, Y., Kitayama, S., Mesquita, B., Reyes, J., & Morling, B. (2008). Is perceived emotional support beneficial? Well-being and health in independent and interdependent cultures. *Personality and Social Psychology Bulletin, 34*, 741–754. doi:10.1177/0146167208315157

Vallerand, R., Gagne, F., Senecal, C., & Pelletier, L. (1994). A comparison of the school intrinsic motivation and perceived competence of gifted and regular students. *Gifted Child Quarterly, 38*, 172–175. doi:10.1177/001698629403800403

Vansteenkiste, M., & Ryan, R. (2013). On psychological growth and vulnerability: Basic psychological need satisfaction and need frustration as a unifying principle. *Journal of Psychotherapy Integration, 23*, 263–280. doi:10.1037/a0032359

Verstuyf, J., Vansteenkiste, M., & Soenens, B. (2012). Eating regulation and bulimic symptoms: The differential correlates of health-focused and appearance-focused eating regulation. *Body Image, 9*, 108–117. doi:10.1016/j.bodyim.2011.09.003

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