

# Gender Differences in Respect to Self-Esteem and Body Image as Well as Response to Adolescents' School-Based Prevention Programs

## Abstract

This review explores the impact of gender roles on adolescents' self-esteem and body image and the influence of prevention programs on these two factors when delivered in mixed gender vs. uni-gender groups. Self-esteem is a large part of adolescents' self-understanding and it is dynamic and susceptible to internal and external influences during adolescence. Gender roles influence adolescents' self-esteem. While, self-confidence is a stereotypical male feature, presentation of self-confidence for girls is considered a breach of traditional gender roles. Therefore, it is not surprising that boys report higher self-esteem than girls. It is more likely to see boys in situations that encourage competition, conflict, power, and excitement while girls in situations of intimacy, self-disclosure, support, and co-rumination. While girls tend to develop emotions related to internalizing problems, boys tend to develop emotions related to externalizing problems.

Considering the body ideal for males (muscular and lean) vs. females (thin body), it can explain why adolescent girls reported more body dissatisfaction compared to boys. Body dissatisfaction can cause harmful emotional, psychological and physiological effects.

During adolescents, girls appear to be more vulnerable to the negative psychological health effects of stress, they present significant higher levels of adaptation, depressive symptomatology and eating disorder. Boys tend to display higher prevalence of externalizing behavior problems, aggression, antisocial and delinquency.

Gender differences were reported in messages/concepts internalization among adolescents. Moreover, conflicting results were reported in respect to the impact of prevention programs on adolescents' body image and self-esteem when delivered in mixed gender groups vs. single-gender groups. Further research is needed to explore what is the best practice in respect to self-esteem and body image school-based prevention programs, and its preferred setting.

**Keywords:** Adolescents; Self-esteem; Body-image; Prevention-Programs; School-based

## Review Article

Volume 2 Issue 5 - 2015

**Reut Agam<sup>1</sup>, Snait Tamir<sup>1,2</sup> and Moria Golan<sup>1,3\*</sup>**

<sup>1</sup>Department of Nutritional Sciences, Tel Hai Academic College, Israel

<sup>2</sup>Laboratory of Human Health and Nutrition Sciences, MIGAL - Galilee Research Institute, Israel

<sup>3</sup>School of Nutritional Sciences, The Hebrew University of Jerusalem, Israel

\*Corresponding author: Moria Golan, Tel Hai Academic College, Upper Galilee, Israel, Tel: 972547240330; Fax: 97289348798; Email: Moria.golan@mail.huji.ac.il

Received: March 19, 2015 | Published: April 30, 2015

## Introduction

This review focuses on gender differences among adolescents in self-esteem, body image, and their responses to the school-based prevention programs that challenge these subjects. Since youngsters spend most of their time in school, school-based programs may be the most effective way to reach them [1]. Several well-designed studies have shown that school-based prevention programs have the potential to reduce risky behaviors in adolescents, and to increase healthy ones [2,3].

Gender differences have been reported from a very early age in children's and adolescents' perceptions, expression of emotions, and behavior [4]. Adolescents face a number of unique developmental challenges, including coping with sudden changes in their bodies, managing their sexual interests, forming new kinds of relationships, and planning their academic and occupational futures. Gender affects how youths manage all of these challenges [5]. These differences may to some extent be attributed to the different roles and expectations that adolescents have learned; for example, parents may perceive the use of aggressive and

confrontational coping strategies as acceptable for males but not for females [6].

Cross-cultural differences have been found in Western countries among boys' and girls' cognitive-behavioral roles in life. Girls and female adolescents more frequently develop cognitions and emotions related to internalizing problems (e.g., sadness, anxiety, anger inhibition, eating disorders), while boys and male adolescents develop cognitions and emotions related to externalizing problems (e.g., aggressiveness, dominance) [7].

Coping research suggests that compared to boys, girls accept greater responsibility for academic failure, use social support more often, and have fewer inadequate reactions [8]. However, gender differences in coping with interpersonal and emotional problems are inconsistent. In some studies, gender differences were found only in seeking support, with females using this coping strategy to a greater extent than males [9,10]. Other studies found that females report a higher amount of perceived impersonal stress and use more social support than boys [8]. Under peer stress, females chose disengagement strategies more often than

other strategies [11]. Females have a higher use of isolation, self-blame, wishful thinking, rumination and crying, while males rely on physical activity and higher use of aggression [8]. In addition, perceived interpersonal stress has been shown to have a negative impact on emotional and behavioral problems in girls, but only on emotional problems in boys [12].

Gender roles are embedded in the cultural context. Thus, intercultural differences also influence gender differences; for example, Turkish male adolescent's showed significantly higher levels of assertiveness than females, but no gender differences in assertiveness were reported among Swedes [13]. It has also been noted that Black girls have higher academic outcomes (e.g., better grades) than Black boys, a result that may be linked to greater racial discrimination toward the latter and how they cope with it [14]. Moreover, unlike the case of White youths, Black girls do not tend to have lower self-esteem than Black boys [15]. Having said this, further exploration of the masking effects of culture on gender differences is beyond the scope of this review.

The objectives of this review are to explore the gender differences among youth in self-esteem and body image, review the results of programs that target mixed-gender vs. uni-gender groups, and discuss recommendations for future programs.

### **Gender differences in youths' dangerous behavior**

Adolescence is universally viewed as a challenging period during which youth have to deal with a range of different concerns related to the demands of the transition from childhood to young adulthood. A host of problems become evident within different cultural contexts. For example, adolescents report conflicts with parents, mood disruption, issues with academics, family, financial hardship, self-image, puberty and peer and romantic relationships, as well as risky health behaviors [8].

Several specific gender-typed pathologies have been reported to increase in adolescents. In a longitudinal study among 315 adolescents performed by Charbonneau et al. [16], girls appeared to be more vulnerable to the negative psychological health effects of stress than boys. In a cross-sectional study, Aunola et al. [17] examined 1185 adolescents' at 14 years of age and found that girls present significantly higher levels of adaptation and have fewer behavioral problems than boys, but also a lower level of self-esteem, and a higher level of depressive symptomatology than boys. In another study, gender differences were also found: boys tended to display a higher prevalence of externalized behavioral problems, such as aggression, antisocial behavior and delinquency, than girls [18].

In a cross-sectional study examining 81,247 adolescents in 9<sup>th</sup> and 12<sup>th</sup> grades et al. [19] found that abnormal eating habits in both genders are highly connected with concerns about appearance. For females reporting disordered eating, 73% reported having strong concerns regarding their looks, compared to only 39% of females not reporting disordered eating. For males, 41% of those reporting disordered eating reported having strong look-related concerns, versus only 25% of those not reporting disordered eating. Cultural differences were also observed in the frequency of disordered eating. For both genders, overall disordered eating was more prevalent among Hispanic and American Indian youth. Among females, Whites reported the third highest prevalence and Blacks the lowest, while among males, Blacks and Whites

reported the lowest prevalence [19].

Risky behavior among youth is a serious public problem. Adolescents, who suffer from one problematic behavior, for example, drug/alcohol abuse, are likely to engage in others as well, such as early sexual intercourse and aggressive behaviors, because problematic behaviors tend to have the same individual and environmental predictors [20]. The differences between the genders can be attributed to a variety of factors, including girls' and women's dependence on relationships or affiliated needs [21], ovarian and adrenal hormonal changes at puberty [22], genetic factors [23], body dissatisfaction [24], greater cognitive vulnerability [25], exposure to negative life events [26], gender intensification and adherence to traditional gender roles [27], and interactions among these factors [25,28].

### **Gender roles and self-esteem**

Self-esteem is a large part of adolescents' self-understanding and is likely to be a fluctuating and dynamic construct, susceptible to internal and external influences during adolescence [29]. Self-esteem is widely recognized as a central aspect of psychological functioning during adolescence. Boys seem to score higher than girls on self-esteem during adolescence [30]. One possible explanation for this difference is gender roles. Many qualities associated with the male role are consistent with high self-esteem. In addition, self-confidence is a stereo typically masculine trait. Boys are expected to develop self-confidence, whereas the presentation of self-confidence in girls is considered a breach of traditional gender roles [31]. Thus, it is not surprising that in a meta-analysis performed by Costa et al. [32] that examined NEO (Neuroticism Extraversion Openness) Personality Inventory data from 26 cultures, including females and males of college age (18-21 years) and adults (age 22 or over), females ranked themselves as higher for neuroticism, agreeableness, warmth, and openness to feelings, whereas males saw themselves as more assertive and open to ideas. With respect to abilities, girls did better on verbal tasks, and boys were better at spatial tasks and mathematical word problems. In achievement contexts, girls chose easier tasks, avoided competition, and had lower expectations than boys. Adolescent girls scored significantly higher than boys in social competence, and lower for aggressive behavior and body image [33].

In a descriptive study with 360 children aged 11 years, Zakriski et al. [34] found that gender differences may reflect the sexes differential tendencies to place themselves in situations conducive to particular behaviors. For example, boys may choose situations that encourage competition, whereas girls may seek opportunities for self-disclosure. In boys-only uni-gender groups, there was more competition and conflict than in girls-only groups or mixed-gender groups. Girls-only groups displayed more nurturance and empathy than boys-only groups or mixed-gender groups [35]. In a cross-sectional study with 284 children (mean age 9.9 years) and 324 adolescents (mean age 13.8), Rose [36] found that girls engage in co-rumination-extensively discussing problems and focusing on negative feelings. In early and middle adolescence, girl's friendships focused on issues of intimacy, love, and communion, whereas boys' friendships tended to focus on power, and excitement.

Gender differences in adolescents' relationships with their peers have been noted. In a longitudinal study by De Goede et

al. [37] with 930 adolescents-593 in early adolescence (mean age 12.4 years) and 337 in middle adolescence (mean age 16.7 years), girls reported a significantly higher level of support from their best friends compared to boys, and this level increased from early to late adolescence. Higher initial levels of support were related to lower initial levels of negative interaction. Boys, on the other hand, initially perceived more negative interactions with friends than girls. A cross-sectional study by Parker et al. [38] that included 399 young adolescents in 5<sup>th</sup> to 9<sup>th</sup> grade found that girls are more jealous than boys, and have a reputation for greater passive and social aggression.

Gender differences in same-sex friendships have also been noted in other studies [39-41]. Friendships among girls are characterized by greater intimacy, self-disclosure, empathy, interdependence, caring and co-rumination of woes and fears. Boys generally interact in larger friendship groups with a focus on companionship, competition, risky activities, excitement, efforts at direct control, and inhibition of feelings and intimacy. These different styles of emotional response may render girls more vulnerable to depression (especially following negative relationship events), but protect them from externalizing behavior (e.g., aggression, recklessness); the opposite holds true for boys [42]. To summarize, gender roles have a significant impact on adolescents' self-esteem and thus an influence on how adolescents place themselves in different social situations. It may also affect adolescents' body image.

### **Gender differences in body image**

Body image is the dynamic perception of one's body-how it looks, feels, and moves. It can change with mood, physical experience, and environment [43]. There are many different factors affecting body image, including gender, media, parental relationships and puberty, as well as weight and popularity [44].

Body image is closely linked to psychological well-being during adolescence and can have harmful effects when a child is dissatisfied with his/her body. Furthermore, the importance of body-image dissatisfaction is growing due to its implication as a risk factor for the development of eating disorders, depression, emotional distress, self-mutilation, low self-esteem, appearance rumination and unnecessary cosmetic surgery [35,45].

Rosenblum & Lewis [46] analyzed 115 teenagers (55 boys and 60 girls) in a longitudinal study. Data were collected when the children were 13, 15, and 18 years of age. They found that ratings of physical attractiveness and body image remain relatively stable across the early teenage years, but become increasingly negative around age 15-18 years because of pubertal changes.

Adolescents experience significant physical changes in their bodies during puberty and are likely to experience highly dynamic perceptions of their body image. Puberty for boys brings characteristics that are typically admired by society-height, speed, breadth and strength. Puberty for girls brings with it characteristics that are often perceived as less laudable, as girls generally get rounder and gain body fat. These changes can serve to increase girls' body dissatisfaction [43,47]. In a cross-sectional study, Lawler & Nixon [45] examined 239 adolescents (54% female), with a mean age of 16 years. They found that girls scored significantly higher than males on body dissatisfaction, with 80.8% of the girls reporting a desire to alter their body size

as compared to 54.8% of the boys.

Body image issues are especially prevalent in girls, but as boys enter puberty their expectations of height and muscle mass change as well. Girls typically want to be thinner, whereas boys frequently want to be bigger [48]. In Western society, the ideal body for males is muscular and lean, whereas for females, a thin body is viewed as more desirable. Tatangelo & Ricciardelli [49] examined 68 pre-adolescents in a qualitative study. They demonstrated that fitness is an important element of boys' and girls' body ideals. For boys the emphasis was on sport, and this was promoted by their peer interactions and the sportsmen they admired. For girls the focus was on looking good, and this was reinforced by their peer conversations, and the actresses and singers they admired. The impact of media exposure is affected by gender. Repeated exposure, for girls, to media images of unrealistic beauty idols significantly impacts the development and maintenance of body image through internalization of cultural ideals, but the influence on boys is controversial [45,50-52].

Girls usually want to be thinner than they are. They invest in a thin ideal, overestimate males' preference for slender female bodies, view themselves as fatter than other girls, compare themselves negatively to female media models, and consequently become dissatisfied with their bodies [5]. The preference toward thinness appears to increase as girls develop from childhood to adolescence [53]. Wertheim, Paxton & Blaney [54] concluded from cross-sectional studies that about 40-50% of pre-adolescent girls report a preference for being thinner, whereas during adolescence, this number increases to over 70%. Adolescent girls often think that being thinner will make them happier, healthier, attractive and better looking. Furthermore, many studies find that "larger" girls are more likely to be dissatisfied with their body and to feel less good about themselves in general [53].

For boys, pubertal development is usually a positive experience, as most boys move closer to the common ideal masculine shape. Boys build muscle and their shoulder width increases. These physical characteristics fit the "ideal" cultural messages for men's body shape and size [55], and body dissatisfaction among boys has been reported to either decrease or remain stable as they move toward adulthood [51]. Nevertheless, body dissatisfaction is a substantial concern among adolescent boys as well. Bearman et al. [47] found, in a longitudinal study of 428 adolescent girls and boys aged 13.5 years, a rate of body dissatisfaction among adolescent boys of 23%. Today, boys are under increasing pressure to meet their unrealistic lean and muscular body ideal [48,56]. These concerns can also lead to health problems such as eating disorders and compulsive body building [57]. The drive for lean muscularity is displayed among male adolescents across cultures, and is a common source of boys' body-image concerns, with many boys wishing to be stronger and more muscular than they are. In addition, many adolescent boys want to be leaner, and this is becoming even more important with the rising prevalence rates of obesity [55].

Body mass is the most consistent biological factor correlated with body-image dissatisfaction, although the relation seems to differ between genders [58]. A cross-sectional study by Austin et al. [59] that included 4254 5<sup>th</sup>-graders (boys and girls) found that boys report dissatisfaction when they are above or below average weight and a higher satisfaction grade when they are of



average weight. In contrast, girls' body dissatisfaction increased as a function of body weight. Underweight girls reported greater satisfaction, whereas girls of average weight reported dissatisfaction, which increased further in overweight girls. These findings are consistent with other studies [60,61].

For both genders, the desire to alter shape or weight during adolescence is common, and is associated with emotional distress, dramatic measures to alter appearance such as cosmetic surgery or steroid use, and psychiatric disturbances such as depression and eating disorders [47]. Nevertheless, the gender difference in body image generates different beauty ideals and thus different age-related stresses.

### **Gender differences in prevention program outcomes (single vs. mixed groups)**

In recent years, the issue of dangerous behaviors among youth has generated an increasing demand for prevention programs. Such programs are usually delivered in groups, since social interactions with peers can lead to sharing experiences, perceptions and positions [62]. Thus the school-based setting is considered a good space for adolescent prevention programs. Nevertheless, since there are gender differences in message/concept internalization, the question of single-gender vs. mixed-gender setting needs to be investigated in the prevention field.

Stice et al. [63] reviewed, in a meta-analysis, 66 published and unpublished studies that focused solely on eating disorder-prevention programs that were evaluated in controlled trials, and delivered to girls-only vs. mixed-gender groups covering a wide range of ages (8-55 years). They found that conducting uni-gender interventions with girls and women was more effective for the prevention of eating disorders than mixed-gender settings. Some studies have found a positive effect on the measure of self-esteem and body image in boys vs. girls in a mixed-gender group [64,65], whereas others did not find any such differences [66,67].

Richardson et al. [64] examined the efficacy of a prevention program focusing on body image and self-esteem of 277 participants (150 boys and 127 girls), all 7<sup>th</sup> grade students from four secondary schools in Australia. The impact of the program on boys and girls was different. The girls in the intervention group reported higher media literacy and lower internalization of the thin ideal compared to the control group. However, boys reported higher media literacy and body satisfaction than the control group.

Similar differences were also found in Wilksch et al. [65], which examined the efficacy of a prevention program delivered to 540 adolescents with a mean age of 13.62 years that focused on reducing eating disorder risks. They found a significant improvement in self-esteem and body dissatisfaction only among boys post-test and at a 6-month follow-up. No significant differences were found among girls. Other studies reported that girls were more affected than boys by the intervention. For example, in Bird et al. [68] study, which examined the influence of school-based body-image intervention on 43 girls and boys aged 10-11 years compared to 45 children in the control group, improvement on measures of body image was found in girls, but not boys. Among the girls, there were improvements in body satisfaction, and reductions in body-satisfaction and appearance-related conversations, appearance-related and restrained eating, and emotional eating. In addition, there were improvements in

knowledge of the intervention topic. In contrast, boys reported significantly lower levels of internalization of cultural appearance ideals and appearance-related conversations. Other studies also reported that in mixed-gender groups, girls are more influenced by the intervention than boys [69,70]. Some studies found no significant effect of gender on changes in self-esteem or body image in a school-based program delivered to 5<sup>th</sup>- and 6<sup>th</sup>- graders [66,67].

Mixed effects of gender on program results have also been reported in uni-gender interventions. In a school-based body-image intervention delivered in three 50-minute sessions to 104 young adolescent girls (90 girls were in the control group) in the 7<sup>th</sup> grade, a significant positive outcome was reported in the intervention group relative to the control group on the subjects of knowledge, risk factors for body dissatisfaction, body image, dietary restraint and self-esteem, post-intervention and at a 3-month follow-up [71]. In another study, performed in four weekly health class periods with 178 adolescents aged 15.2 years, significant improvements were noted in the short term, but did not last until the follow-up (3 months after program conclusion). Girls reported decreased body dissatisfaction, decreased physical appearance comparisons, and increased appearance satisfaction, relative to controls [72]. A similar impact was reported by Ross et al. [73].

Stanford & McCabe [74], who delivered two sessions of a universal prevention program for 121 young adolescent boys between the ages of 12 and 13 years focusing on body-image concerns, body-change strategies and accepting differences, found no improvement in body-image concerns or body-change strategies but a significant increase in satisfaction with muscles, increasing self-esteem and lowered level of negative effect. Nevertheless, in another study performed by the same researcher, five sessions of a prevention program for body-image concerns that focused on self-esteem and peer relationships were delivered to 421 adolescent boys between the ages of 11 and 15 years. No differences were found between the intervention and the control group post-intervention or at any of the follow-ups [75]. Intervention programs are an effective way of promoting positive body image and self-esteem in adolescents. However, there are differences between the genders in the influence of these programs. In addition, different effects are found for uni-gender vs. mixed-gender interventions.

### **Summary and Conclusion**

The present review looks at gender differences among adolescents and their impact on self-esteem and body image, as well as the influence of prevention programs on adolescents' self-esteem and body image when presented to mixed-gender vs. uni-gender groups. Overall, the findings revealed that gender differences start at a very young age, and due to differences in gender roles and physical development, impact adolescents' body image and self-esteem differently between genders [31].

Physical development for boys, contrary to girls, is usually a positive experience. Therefore, more boys are satisfied with their bodies than girls. Nonetheless, today we are seeing more boys who aspire to have a lean and muscular body and to be closer to the "athletic body ideal" [55]. Body mass emerged as a potent predictor of body dissatisfaction. It is directly impacted through

negative evaluation of one's own body, especially comparing oneself to the "body ideal". Therefore, body mass can explain the differences in body dissatisfaction between the genders. The differences in gender tendencies can be attributed to differences in the age of the examined participants, weight status and differences in socioeconomic backgrounds as well as different intensities of exposure to media messages. We assume that since boys have late physical development, internalization of the muscular-body ideal comes later in life [76].

The reviewed studies presented mixed results on gender differences with respect to the impact of intervention programs to promote self-esteem and positive body image, in both mixed-gender and uni-gender programs. The differences in intervention outcomes could be attributed to the deliverer's characteristics (gender, experience, personality, etc.), program components (content, intensity, way of delivery), and setting-girls only vs. boys only vs. mixed gender groups. Since risky behavior among youth is linked with other behaviors, further effort is warranted to develop interventions that are successful among both genders, focusing on gender differences in the context of physical development and societal influences.

To the best of our knowledge, there are no comparative reports of the same program delivered to mixed-vs. Uni-gender groups (boys only, girls only and mixed groups). It is suggested that future research focus on understanding how gender differences impact programs' outcomes and how we should challenge these differences.

## Reference

1. Miller DN, Eckert TL, Mazza JJ (2009) Suicide prevention programs in the schools: A review and public health perspective. *School Psychol Rev* 38(2): 168-188.
2. Wilson SJ, Lipsey MW (2007) School-based interventions for aggressive and disruptive behavior: Update of a meta-analysis. *Am J Prev Med* 33(2 Suppl): S130-S143.
3. Cuijpers P (2002) Effective ingredients of school-based drug prevention programs: A systematic review. *Addict Behav* 27(6): 1009-1023.
4. Seiffge-Krenke I, Aunola K, Nurmi JE (2009) Changes in stress perception and coping during adolescence: The role of situational and personal factors. *Child Dev* 80(1): 259-279.
5. Perry DG, Pauletti RE (2011) Gender and adolescent development. *J Res Adolesc* 21(1): 61-74.
6. Fournet DL, Wilson KL, Wallander JL (1998) Growing or just getting along? Technical and adaptive competence in coping among adolescents. *Child Dev* 69(4): 1129-1144.
7. Garaigordobil M, Maganto C, Pérez JI, Sansinenea E (2009) Gender differences in socio-emotional factors during adolescence and effects of a violence prevention program. *J Adolesc Health* 44(5): 468-477.
8. Al-Bahrani M, Aldhafri S, Alkharusi H, Kazem A, Alzubiadi A (2013) Age and gender differences in coping style across various problems: Omani adolescents' perspective. *J Adolesc* 36(2): 303-309.
9. Amir Khan J, Auyeung B (2007) Coping with stress across the lifespan: Absolute vs. relative changes in strategy. *J Appl Dev Psychol* 28(4): 298-317.
10. Gelhaar T, Seiffge-Krenke I, Borge A, Cicognani E, Cunha M, et al. (2007) Adolescent coping with everyday stressors: a seven-nation study of youth from central, eastern, southern, and northern Europe. *Eur J Dev Psychol* 4(2): 129-156.
11. Sontag L, Graber J, Brooks J, Warren M (2008) Coping with social stress: implications for psychopathology in young adolescent girls. *J Abnorm Child Psychol* 39(36): 1159-1174.
12. Sigfusdottir ID, Silver E (2009) Emotional reactions to stress among adolescent boys and girls: An examination of the mediating mechanisms proposed by general strain theory. *Youth Soc* 40(4): 571-590.
13. Eskin M (2003) Self-reported assertiveness in Swedish and Turkish adolescents: A cross-cultural comparison. *Scand J Psychol* 44(1): 7-12.
14. Chavous TM, Rivas-Drake D, Smalls C, Griffin T, Cogburn C (2008) Gender matters, too: the influences of school racial discrimination and racial identity on academic engagement outcomes among African American adolescents. *Dev Psychol* 44(3): 637-654.
15. Greene ML, Way N (2005) Self-Esteem Trajectories among Ethnic Minority Adolescents: A Growth Curve Analysis of the Patterns and Predictors of Change. *J Res Adolesc* 15(2): 151-178.
16. Charbonneau AM, Mezulis AH, Hyde JS (2009) Stress and emotional reactivity as explanations for gender differences in adolescents' depressive symptoms. *J Youth Adolesc* 38(8): 1050-1058.
17. Aunola K, Stattin H, Nurmi JE (2000) Adolescents' achievement strategies, school adjustment, and externalizing and internalizing problem behaviors. *J Youth Adolesc* 29(3): 289-306.
18. Lumley VA, McNeil CB, Herschell AD, Bahl AB (2002) An Examination of Gender Differences among Young Children with Disruptive Behavior Disorders. *Child Stud J* 32(2): 89-100.
19. Croll J, Neumark-Sztainer D, Story M, Ireland M (2002) Prevalence and risk and protective factors related to disordered eating behaviors among adolescents: relationship to gender and ethnicity. *J Adolesc Health* 31(2): 166-175.
20. Guilamo-Ramos V, Litardo HA, Jaccard J (2005) Prevention programs for reducing adolescent problem behaviors: Implications of the co-occurrence of problem behaviors in adolescence. *J Adolesc Health* 36(1): 82-86.
21. Cyranowski JM, Frank E, Young E, Shear MK (2000) Adolescent onset of the gender difference in lifetime rates of major depression: a theoretical model. *Arch Gen Psychiatry* 57(1): 21-27.
22. Steiner M, Dunn E, Born L (2003) Hormones and mood: from menarche to menopause and beyond. *J Affect Disord* 74(1): 67-83.
23. Zubenko GS, Hughes HB, Maher BS, Stiffler JS, Zubenko WN, et al. (2002) Genetic linkage of region containing the CREB1 gene to depressive disorders in women from families with recurrent, early-onset, major depression. *Am J Med Genet* 114(8): 980-987.
24. Hyde JS, Mezulis AH, Abramson LY (2008) The ABCs of depression: integrating affective, biological, and cognitive models to explain the emergence of the gender difference in depression. *Psychol Rev* 115(2): 291-313.
25. Hankin BL, Abramson LY (2001) Development of gender differences in depression: An elaborated cognitive vulnerability-transactional stress theory. *Psychol Bull* 127(6): 773-796.
26. Kendler KS, Gardner CO, Prescott CA (2002) Toward a comprehensive developmental model for major depression in women. *Am J Psychiatry* 159(7): 1133-1145.
27. Aubé J, Fichman L, Saltaris C, Koestner R (2000) Gender differences in adolescent depressive symptomatology: Towards an integrated social-developmental model. *J Soc Clin Psychol* 19(3): 297-313.

28. Petersen AC, Sarigiani PA, Kennedy RE (1991) Adolescent depression: Why more girls? *J Youth Adolesc* 20(2): 247-271.
29. Moksnes UK, Espnes GA (2013) Self-esteem and life satisfaction in adolescents—gender and age as potential moderators. *Qual Life Res* 22(10): 2921-2928.
30. Frost J, McKelvie S (2004) Self-esteem and body satisfaction in male and female elementary school, high school, and university students. *Sex Roles* 51(1-2): 45-54.
31. Kling KC, Hyde JS, Showers CJ, Buswell BN (1999) Gender differences in self-esteem: a meta-analysis. *Psychol Bull* 125(4): 470-500.
32. Costa PT, Terracciano A, McCrae RR (2001) Gender differences in personality traits across cultures: robust and surprising findings. *J Pers Soc Psychol* 81(2): 322-331.
33. Vorbach AM, Foster SF (2002) The relationship between emotional competence and social competence among early adolescents. *Diss Abst Intl* 63(3-B): 1578-1591.
34. Zakriski AL, Wright JC, Underwood MK (2005) Gender similarities and differences in children's social behavior: finding personality in contextualized patterns of adaptation. *J Pers Soc Psychol* 88(5): 844-855.
35. Ruble DN, Martin CL, Berenbaum SA (2006) Gender development. In: Damon W, et al. (Eds.), *Handbook of child psychology. Social, emotional and personality development*. (6<sup>th</sup> edn), John Wiley and Sons, Hoboken, New Jersey, USA, pp. 858-932.
36. Rose AJ (2002) Co-rumination in the friendships of girls and boys. *Child Dev* 73(6): 1830-1843.
37. De Goede IH, Branje SJ, Meeus WH (2009) Developmental changes and gender differences in adolescents' perceptions of friendships. *J Adolesc* 32(5): 1105-1123.
38. Parker JG, Low CM, Walker AR, Gamm BK (2005) Friendship jealousy in young adolescents: individual differences and links to sex, self-esteem, aggression, and social adjustment. *Dev Psychol* 41(1): 235-250.
39. Benenson JF, Christakos A (2003) The Greater Fragility of Females' Versus Males' Closest Same-Sex Friendships. *Child Dev* 74(4): 1123-1129.
40. Galambos NL (2004) Gender and gender role development in adolescence. In: Lerner RM & Steinberg L (Eds.), *Handbook of adolescent psychology*. (2<sup>nd</sup> edn), John Wiley and Sons, Hoboken, NJ, USA, pp. 233-262.
41. Rose AJ, Carlson W, Waller EM (2007) Prospective associations of co-rumination with friendship and emotional adjustment: considering the socioemotional trade-offs of co-rumination. *Dev Psychol* 43(4): 1019-1031.
42. Rose AJ, Rudolph KD (2006) A review of sex differences in peer relationship processes: potential trade-offs for the emotional and behavioral development of girls and boys. *Psychol Bull* 132(1): 98-131.
43. Croll J (2005) Body image and adolescents. In: Stang J & Story M (Eds.) *Guidelines for adolescent nutrition services*. Center for Leadership, Education, and Training in Maternal and Child Nutrition. Division of Epidemiology and Community Health. School of Public Health. University of Minnesota, Minneapolis, MN, USA, pp. 155-164.
44. Graham MA, Eich C, Kephart B, Peterson D (2000) Relationship among body image, sex, and popularity of high school students. *Percept Mot Skills* 90(3 Pt 2): 1187-1193.
45. Lawler M, Nixon E (2011) Body dissatisfaction among adolescent boys and girls: the effects of body mass, peer appearance culture and internalization of appearance ideals. *J Youth Adolesc* 40(1): 59-71.
46. Rosenblum GD, Lewis M (1999) The relations among body image, physical attractiveness, and body mass in adolescence. *Child Dev* 70(1): 50-64.
47. Bearman SK, Presnell K, Martinez E, Stice E (2006) The skinny on body dissatisfaction: A longitudinal study of adolescent girls and boys. *J Youth Adolesc* 35(2): 217-229.
48. Cohane GH, Pope HG (2001) Body image in boys: A review of the literature. *Int J Eat Disord* 29(4): 373-379.
49. Tatangelo GL, Ricciardelli LA (2013) A qualitative study of preadolescent boys and girls body image: Gendered ideals and sociocultural influences. *Body Image* 10(4): 591-598.
50. Hargreaves DA, Tiggemann M (2004) Idealized media images and adolescent body image: "Comparing" boys and girls. *Body Image* 1(4): 351-361.
51. Jones DC (2004) Body image among adolescent girls and boys: A longitudinal study. *Dev Psychol* 40(5): 823-835
52. Knauss C, Paxton SJ, Alsaker FD (2007) Relationships amongst body dissatisfaction, internalisation of the media body ideal and perceived pressure from media in adolescent girls and boys. *Body Image* 4(4): 353-360.
53. Wertheim EH, Paxton SJ (2011) Body image development in adolescent girls. In: Cash T, Smolak L (Eds.), *Body image: A handbook of science, practices and prevention*. (2<sup>nd</sup> edn), The Guilford Press, New York, NY, USA, pp. 76-84.
54. Wertheim EH, Paxton SJ, Blaney S (2009) Body image in girls. In: Smolak L & Thompson JK (Eds.), *Body image, eating disorders, and obesity in youth: Assessment, prevention, and treatment*. (2<sup>nd</sup> edn), American Psychological Association, Washington DC, USA, p. 47-76.
55. Ricciardelli LA, McCabe MP (2011) Body image development in adolescent boys. In: Cash T & Smolak L (Eds.), *Body image: A handbook of science, practices and prevention*. (2<sup>nd</sup> edn), The Guilford Press, New York, USA, p. 85-92.
56. Labre MP (2002) Adolescent boys and the muscular male body ideal. *J Adolesc Health* 30(4): 233-242.
57. Ricciardelli LA, McCabe MP (2004) A biopsychosocial model of disordered eating and the pursuit of muscularity in adolescent boys. *Psychol Bull* 130(2): 179-205
58. Mäkinen M, Puukko-Viertomies LR, Lindberg N, Siimes MA, Aalberg V (2012) Body dissatisfaction and body mass in girls and boys transitioning from early to mid-adolescence: additional role of self-esteem and eating habits. *BMC psychiatry* 12(1): 35-42.
59. Austin SB, Haines J, Veugelers P (2009) Body satisfaction and body weight: gender differences and sociodemographic determinants. *BMC Public Health* 9(1): 313-319.
60. Presnell K, Bearman SK, Stice E (2004) Risk factors for body dissatisfaction in adolescent boys and girls: A prospective study. *Int J Eat Disord* 36(4): 389-401.
61. Kostanski M, Fisher A, Gullone E (2004) Current conceptualisation of body image dissatisfaction: have we got it wrong? *J Child Psychol Psychiatry* 45(7): 1317-1325.
62. Effeney G, Carroll A, Bahr N (2013) Self-Regulated Learning: Key strategies and their sources in a sample of adolescent males. *Aust J Educ Dev Psychol* 13: 58-74.
63. Stice E, Shaw H, Marti CN (2007) A meta-analytic review of eating disorder prevention programs: Encouraging findings. *Annu Rev*

- ClinPsychol 3: 207-231.
64. Richardson SM, Paxton SJ, Thomson JS (2009) Is Body Think an efficacious body image and self-esteem program? A controlled evaluation with adolescents. *Body Image* 6(2): 75-82.
65. Wilksch SM, Wade TD (2009) Reduction of shape and weight concern in young adolescents: A 30-month controlled evaluation of a media literacy program. *J Am Acad Child Adolesc Psychiatry* 48(6): 652-661.
66. Dowdy S, Alvarado M, Atieno O, Barker S, Barrett S, et al. (2013) Empower U: Effectiveness of an adolescent outreach and prevention program with sixth-grade boys and girls: A pilot study. *J Pediatr Nurs* 28(1): 77-84.
67. Norwood SJ, Murray M, Nolan A, Bowker A (2011) Beautiful from the inside out: A school-based programme designed to increase self-esteem and positive body image among preadolescents. *Can J Sch Psychol* 26(4): 263-282.
68. Bird EL, Halliwell E, Diedrichs PC, Harcourt D (2013) Happy Being Me in the UK: A controlled evaluation of a school-based body image intervention with pre-adolescent children. *Body Image* 10(3): 326-334.
69. Golan M, Hagay N, Tamir S (2014) Gender Related Differences in Response to "In Favor of Myself" Wellness Program to Enhance Positive Self & Body Image among Adolescents. *PLoS One* 9(3): e91778.
70. Cousineau TM, Franko DL, Trant M, Rancourt D, Ainscough J, et al. (2010) Teaching adolescents about changing bodies: Randomized controlled trial of an Internet puberty education and body dissatisfaction prevention program. *Body Image* 7(4): 296-300.
71. Richardson SM, Paxton SJ (2010) An evaluation of a body image intervention based on risk factors for body dissatisfaction: A controlled study with adolescent girls. *Int J Eat Disord* 43(2): 112-122.
72. Franko DL, Cousineau TM, Rodgers RF, Roehrig JP (2013) BodiMojo: Effective Internet-based promotion of positive body image in adolescent girls. *Body Image* 10(4): 481-488.
73. Ross A, Paxton SJ, Rodgers RF (2013) Y's Girl: Increasing body satisfaction among primary school girls. *Body Image* 10(4): 614-618.
74. Stanford JN, McCabe MP (2005) Evaluation of a body image prevention programme for adolescent boys. *Eur Eat Disord Rev* 13(5): 360-370.
75. McCabe MP, Ricciardelli LA, Karantzas G (2010) Impact of a healthy body image program among adolescent boys on body image, negative affect, and body change strategies. *Body Image* 7(2): 117-123.
76. Blond A (2008) Impacts of exposure to images of ideal bodies on male body dissatisfaction: A review. *Body Image* 5(3): 244-250.