

**Investing in Girls**  
**Literature Review on Middle-School Girls—The National and Local Scene**  
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*Note: This literature review was developed in late 2006/early 2007 as a working document to help shape the work of the Investing in Girls (IIG) group and as a source of data from which to draw in writing the needs assessment report From Gaps to Opportunities: Meeting the Needs of Girls in the Worcester Area. This literature review was not intended, and would not be appropriate for use as a published, public, stand-alone document. Some of these data were used in the final IIG report, but this literature review does not represent the full range of sources used in writing the needs assessment report. In addition, some of the data in this review--especially local data drawn from ever-changing websites--may be obsolete already.*

Over the past twenty-five years, researchers have begun to document the particular issues and concerns facing adolescent girls. The world of girls has changed. The revolution in online communication, changes in social networks, and the changing social and political positioning of the United States makes it hard to imagine how girls negotiate their social worlds. Adults need to know more about girls' real experiences. This literature review aims to bring us closer to those experiences. By reviewing the current research on girls across the nation and what is known about girls in Worcester, we can begin to build a foundation for understanding the current needs of middle-school girls in Worcester. This review of current research focuses on two questions:

- (1) What does the research tell us about the issues facing girls across Worcester and across the nation?
- (2) What does the research suggest about how the Worcester community can best support local girls?

To begin to answer these questions we have reviewed the recent research on middle-school girls' issues and experiences. Seven areas were identified as key to understanding girls' experiences today. This literature review focuses on each of these areas and their relevance to the lives of middle-school girls in the Worcester area: (1) Schools and Schooling; (2) Relationships; (3) Sexuality; (4) Health; (5) Violence and Safety; (6) Economic Realities; and (7) Culture and Communities. By understanding the issues facing girls, more effective ways of supporting them as a community can be developed.

**NOTE ABOUT LOCAL DATA**

Some data were not available disaggregated by gender, and some data were not attainable at all. This finding has implications for the IIG needs assessment and future work of the IIG group. In many cases, we can assume that one-half of the population is girls – e.g., census data, school enrollment data. This **lack of data**, and the difficulty or inability to attain data, is an important issue for the IIG group and people involved with young people and youth development in Worcester.

## Section 1: Who are the girls in Worcester, Massachusetts?

With a population currently estimated to be 176,000, Worcester is the third-largest city in New England. The girls of Worcester are diverse and face diverse challenges. As of the year 2000, the city had 19,829 girls under age 18 and 5,582 girls between 10 and 14 years of age (U.S. Census Bureau, 2000a). The County of Worcester had 27,010 girls between ages 10 and 14 (U.S. Census Bureau, 2000c).

There are 5,582 girls aged 10-14 in the city of Worcester and 27,010 girls aged 10-14 in Worcester County.

Worcester has a rich history of immigration, and currently its **population is becoming more racially and ethnically diverse**. This diversity brings a rich character to the city, yet poses some complex issues for public education and youth development. As of 2000, almost 15% of Worcester's residents were foreign born (U.S. Census Bureau, 2000d); 77% of the population was White, 15% Latino/Hispanic, 7% African American, and 5% Asian (U.S. Census Bureau, 2000b). A high percentage of young people constitute Worcester's population of color. For example, in 2000, 15% of the city's overall population was Latino or Hispanic, but 24% of girls aged 10-14 were Latina or Hispanic (U.S. Census Bureau, 2000e). Among Worcester Public School (WPS) students in 2005-2006, 33% were Latino (Massachusetts Department of Education (DOE) District Profiles, 2006). Likewise, as of 1999, the Asian population was almost 5% of Worcester residents (2000 Census), but in 2005-2006 8% of WPS students were Asian (Massachusetts DOE District Profiles 2005-2006). African-Americans comprise 7% of Worcester residents (U.S. Census, 2000) but 12% of students in the school district in 2003-2004, and 13% of the WPS students in 2005-2006 (DOE Worcester District Profile 2003-2004 and 2005-2006).

The following chart, reproduced from E. R. Ellison's Master's thesis, illustrates the racial and ethnic makeup of the city of Worcester, based on the 2000 Census and the racial and ethnic makeup of the district, based on the Massachusetts Department of Education district profile (see Figure 1).

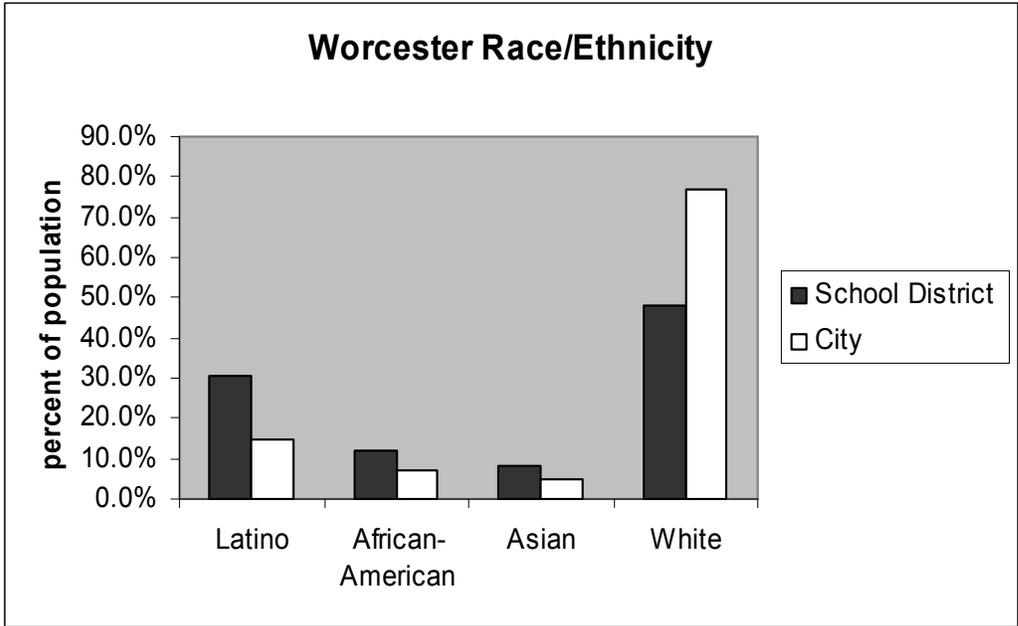


Figure 1: Worcester Race/Ethnicity

Not surprisingly, many residents use a language other than English at home. In Worcester’s public middle schools, 30-59% of the students speak a first language other than English; at the state level, the proportion is 15% of the population. (See Table 1.)

**Table 1: Average Student Profile: First Language Not English**

	State of Mass.	Worcester Middle Schools				
		University Park	Sullivan	Worcester East	Burncoat	Forest Grove
Students whose first language is not English	15%	59%	46%	42%	38%	30%

Source: Massachusetts Department of Education District Profiles (2006)

Many girls in the Worcester area are poor. The median income for families with children in Worcester is well below the state and national averages.

- Worcester \$38,622
- Massachusetts \$61,530
- National \$48,196 (U.S. Census Bureau, 2000 f)

**Table 2: Average Student Profile: Low-Income Students**

	State of Mass.	Worcester Middle Schools				
		University Park	Sullivan	Worcester East	Burncoat	Forest Grove
Low-income students	29%	72%	75%	80%	65%	53%

Source: Massachusetts Department of Education District Profiles (2006)

As seen in Table 2, the percentage of low-income students in the five main public middle schools in Worcester ranges from 53% to 80%, whereas in the state of Massachusetts overall, it is only 29%. In Worcester, as in other communities, **poverty disproportionately affects people of color** (See Table 3).

According to Worcester Public Schools data, more than half of 7<sup>th</sup> and 8<sup>th</sup> graders are on free or reduced lunch, a commonly accepted indicator of poverty. The fact that so many girls live in poverty and that the schools in Worcester are more racially diverse than the city as a whole are important trends to be considered by educators and providers serving girls. Directly and indirectly, poverty affects many aspects of girls' lives, and cultural awareness is critical for effective education, services, and programming. Gender issues are not monolithic; gender expectations, roles, and relationships often differ by culture and social circumstances, so schools and youth-serving organizations need to take these factors into consideration when striving to meet the needs of girls.

Minority youth who live in poor urban communities and youth who live in poor, single-parent families are particularly at risk of academic failure, as well as risk of self-injurious behavior such as alcohol and/or drug abuse, and/or unsafe sex, leading to the potential

**Table 3: Percentage of Worcester Families with Children Under 18 Living Below the National Poverty Threshold, By Ethnicity**

15% of White families with children under 18  
 25% of Black or African American  
 49% of American Indian or Alaskan Native  
 32% of Asian  
 41% of Hispanic or Latino

Source: U.S. Census, 2000g.

for sexually transmitted diseases and unplanned pregnancies (Eccles and Gootman, 2002, p. 299). Youth from poor areas, especially minority youth, score substantially lower on national achievement tests than those from more affluent districts (Eccles and Gootman, 2002; Shannon and Bylsma, 2002). This difference is often called the 'achievement gap'--"the difference in academic performance on tests among identified groups" (Shannon and Bylsma, 2002, p. 5).

Almost 18% of Worcester's 172,648 residents live below the national poverty threshold (2000 Census), and more than 60% of district students are considered low-income (DOE Worcester District Profile 2003-2004 and 2005-2006). According to the Urban Institute of Washington, DC, the relationship between poverty and a low graduation rate is stronger than all other likely factors (Losen, 2004, p. 18). The number of Worcester Public School students living in poverty is striking, and alone is cause for concern. The connection between poverty and school achievement is a situation that calls for education reform, and is especially crucial in secondary education, as a global and competitive economy requires at least a high school diploma, if not a college degree.

Research also shows that dropout rates are higher among Hispanic youth and youth living in poor communities than other groups (Eccles & Gootman, 2002, p. 299). In Worcester, in the 2002-2003 school year, the overall dropout rate was just over 5% (DOE Worcester District Profile 2002-03). During this time, according to the Latino Education Institute at Worcester State College (Hernandez, 2005), the dropout rate for Hispanic students in Worcester was 7% and the dropout rate for White students was 4%. At the state level, only 36% of Hispanic students in Massachusetts graduate; nationally, only 53% of Hispanic students graduate (Orfield, Losen, Wald, & Swanson, 2004, p. 5).<sup>1</sup> The calculations differ, but any way you count it, the dropout rate or the graduation rate for Hispanic students is bleak.

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<sup>1</sup> It should be noted that the calculations for the dropout rate used by the Massachusetts D.O.E. and the Latino Education Institute are different from the graduation rate that Orfield and his colleagues (Orfield et al., 2004) use. See Orfield et. al (2004) for an in-depth discussion of the problems with reporting the dropout or graduation rate. Briefly summarized, the reporting of graduation and dropout data is a controversial and political issue.

According to Orfield, et al. (2004), official dropout rates do not accurately count or report the large numbers of students who do not graduate from high school. The authors contend that there is little oversight of such reporting and that the methods used vary from state to state. Some rates are limited to the percent of enrolled 12<sup>th</sup> graders who do not graduate, thus leaving out large numbers of students who leave before reaching the 12<sup>th</sup> grade. The calculation of students over four years then represents the number of students who began in the 9<sup>th</sup> grade but did not obtain a diploma. This method can be problematic because it is difficult to account for students who move or enroll in a GED program, for example.

In Massachusetts, according to the D.O.E., dropout rates are calculated from information provided by school districts on students who drop out during a particular reporting year; the reported data is not audited. According to Orfield et al. (2004), the Massachusetts D.O.E. does not publish "on-time" graduation rates based on enrollment, does not report longitudinal rates based on tracking individual students, and excludes all students who transfer in or out of school districts beyond 10<sup>th</sup> grade. Regardless of how rates are calculated, however, in Worcester, the dropout rate for Hispanic students is higher than for other racial/ethnic groups.

## **Section 2: Schools and Schooling**

### **Achievement**

How are girls doing in school? Girls show increasing achievement rates across the disciplines and girls are more likely to have higher educational aspirations than boys (Slashinski, 2004A). Girls out perform boys in reading and sometimes math. The greatest disparities in achievement exist across race and class. Unfortunately, data are not available to examine the combined effects of race and sex on NAEP test scores; but it is reasonable to believe that the challenges and successes faced by all girls influence girls across sub-populations.

In Massachusetts, girls are doing better in reading proficiency than boys. For example, 87% of 8<sup>th</sup> grade girls have basic proficiency in reading while 79% of 8<sup>th</sup> grade boys have basic proficiency (National Center for Education Statistics (NCES), 2006a). Severe disparities exist between race and ethnicities: 88% of White 8<sup>th</sup> graders and 86% of Asian/Pacific Islander 8<sup>th</sup> graders meet basic proficiency standards, compared to 65% of Black 8<sup>th</sup> graders and 56% of Hispanic 8<sup>th</sup> graders. Class also shows a divide, with 67% of 8<sup>th</sup> graders on free and reduced lunch reaching basic reading proficiency, compared to 89% of those not eligible for free or reduced lunch (NCES, 2006a).

Eighth grade girls in Massachusetts are also doing slightly better than boys in math proficiency. Eighty-one percent of 8<sup>th</sup> grade girls have basic proficiency in math versus 79% of 8<sup>th</sup> grade boys. Again, disparities exist between races and ethnicities: 86% of White 8<sup>th</sup> graders and 91% of Asian/Pacific Islander 8<sup>th</sup> graders meet basic proficiency standards, compared to 50% of Black 8<sup>th</sup> graders and 55% of Hispanic 8<sup>th</sup> graders. Class also shows a divide, with 64% of 8<sup>th</sup> graders on free and reduced lunch reading basic reading proficiency, compared to 87% of those not eligible for free or reduced lunch (NCES, 2006b).

Despite these encouraging statistics, girls still face challenges in school. Nationally, 45% of 13- to 17-year-old girls felt their emotional safety was compromised by participating in class (Schoenberg et al., 2003). Girls' anxiety around being active participants in their learning is particularly concerning. So while girls' academic achievement is admirable, work remains to create classrooms that are comfortable and rewarding spaces for girls.

### **Special education in Worcester**

According to current WPS data, approximately 37% of special education students in Worcester are females; 63% are males (WPS data, 2006). This proportion holds across grades 4-12 and has been consistent over the past several years. It is not possible to determine from these statistics whether or not the needs of girls with "special needs" are being met or not.

### **Progress in Science**

Across the nation, girls and boys have similar math and science achievement (Slashinski, 2004a). In Massachusetts, boys are performing slightly better in science proficiency than girls: 73% of 8<sup>th</sup> grade boys have basic proficiency in science and 72% of 8<sup>th</sup> grade girls have basic proficiency. There is a large proficiency gap between races and ethnicities: 81% of white 8<sup>th</sup> graders and 75% of Asian/Pacific Islander 8<sup>th</sup> graders meet basic proficiency standards, compared to 37% of Black 8<sup>th</sup> graders and 37% of Hispanic 8<sup>th</sup> graders. Class also shows a gap, with 50% of 8<sup>th</sup> graders on free and

reduced lunch achieving basic science proficiency, compared to 81% of those not eligible for free or reduced lunch (NCES, 2006C).

Despite girls' gains in science achievement, girls are still less likely to be interested in pursuing an engineering or science degree and women hold only 12% of science and engineering jobs (Slashinski, 2004a). In middle and high school, girls still tend to have passive roles in science classrooms and teachers often hold different expectations for boys and girls (Tindall & Hamil, 2004). Recent research shows that having a same-gender teacher in science and mathematics significantly improves the achievement of girls--and boys--in middle school (Dee, 2005).

The gender gap in the sciences is closing somewhat, with the gap closing at a faster rate in the life sciences than in chemistry, physics, or engineering (AAUW, 2004b). Research shows that girls still hold different beliefs about their math and science abilities compared to boys and research shows that a student's math-related beliefs have an important influence on their learning and mathematical achievement (De Corte & Op't Eynde, 2003). These beliefs are often influenced by the socio-historical context in which they live (De Corte & Op't Eynde, 2003). Boys tend to believe that they are stronger in mathematics than girls and girls tend to value humanities tracks more than math and science (De Corte & Op't Eynde, 2003).

Interventions for girls, especially in middle school when girls make key decisions about their math and science curriculum, are critical in promoting girls success in science, math, and engineering (AAUW, 2004b). Effective interventions incorporate a focus on gender equity in the science and math curriculum in schools, focus on students' content knowledge and skill development, support teachers' professional development on these issues, connect people across ages and disciplines (in mentoring relationships, etc), use online resources, and collect programming data to be used for evaluation (AAUW, 2004B). Teachers can improve girls' participation and attitudes towards science by creating accessible and gender-sensitive curriculum and ensuring that girls are given access to positive female role models in science (Tindall & Hamil, 2004). Informal learning opportunities that expose girls to science, math and engineering concepts is effective at fostering girls interests in these fields (AAUW, 2004B). Involving supportive adults is key to promoting girls interests in science and math. Mentoring models, including cascading mentoring (in which a professor might mentor an undergrad who would mentor a high school student), are an important intervention to promoting girls interest and skills in science, math, and engineering (AAUW, 2004B).

In Worcester, a slightly smaller percentage of girls than boys are failing MCAS in science and math (WPS data, 2006). And **in the city there is significant interest in connecting girls** (and other young people who otherwise wouldn't be connected) **with math and science**. Funders such as the Fred Harris Daniels Foundation and the Women's Initiative of United Way of Central Massachusetts and program practitioners such as Pipeline programs and the Worcester EcoTarium, among others, are working to address the gender gap in science and technology. Additionally and more broadly, WPS and many local partners work to connect education with SMET (science, math, engineering, and technology) careers.

Worcester Pipeline Collaborative (WPC) is a partnership involving Worcester Public Schools, Quinsigamond Community College (QCC), and UMass Medical School. It focuses on preparing students for careers in the biotech and health industry. The Health

Science Academy at North High, and the Health Assistant Program at Voke High School are small schools dedicated to this goal. WPC aims to increase the number of minority and other disadvantaged students entering careers in health sciences, and includes activities such as mentoring, job shadowing, internships, tours, laboratory opportunities, after-school science programs, visiting-scientists programs, academic support, and fostering parental involvement to enhance mathematics and science skills ([http://www.wrrb.org/institutue\\_high\\_learn\\_1.php](http://www.wrrb.org/institutue_high_learn_1.php)).

There is also a Pipeline in another science-related field here in Worcester. Worcester Public Schools has also partnered with many community partners (e.g., Worcester Polytechnic Institute, QCC, Intel) to create a pipeline – a pathway of experience from grades K -12 to prepare students for careers in engineering-related fields (<http://www.mos.org/doc/1961>). Dougherty High's Engineering Technology Academy is one of the products of this initiative.

It is clear that there is a push for education to connect with career opportunities in the sciences in Worcester. The important questions here are: whether or not girls are getting access; whether or not girls are interested and involved in these programs and opportunities; if there are efforts specifically aimed to prepare girls for opportunities in the sciences; and if these efforts address the issues that lead to sex-segregation or sex-typing in careers.

Worcester Polytechnic Institute (WPI) specifically addresses girls and other young people who might get 'lost along the way' in the Pipeline (<http://www.wpi.edu/News/Transformations/2002Fall/pipeline.html>) WPI has more than 40 programs to target critical points along what they refer to as "the Pipeline"(for more information, see: <http://www.wpi.edu/News/Transformations/2002Fall/pipeline.html>). One of the initiatives at WPI includes the 4 Schools for WIE.

Funded by the National Science Foundation, the 4 Schools for Women in Engineering (4 Schools for WIE) initiative is a consortium of four engineering colleges in Massachusetts. The schools are committed to gender equity in STEM and include three schools in the Boston area (Northeastern, Tufts, and Boston University) and one in Worcester (WPI). The partners engage in outreach and programming, as well as teacher training, aimed at girls ages K-12. Each engineering school forms a STEM team, which includes two middle schools and an industry partner, and involves female engineers at different points in their careers. The teams focus on role modeling and positive engineering-related classroom experience, as well as understanding current research on gender-related issues in educational settings (Knight, Browning, Wong, & Ingraham, 2004).

The Women's Initiative of United Way of Central Massachusetts also funds the Women in Science Conference through the EcoTarium and UMASS Medical School. Thus, it is clear that in Worcester, there is some interest, effort, and funding directed at addressing the issue of science education and preparation of girls for STEM careers.

### **Computers and Technology**

The expansion of the Internet and communication technology in recent years has touched the lives of adolescent girls. Girls are avid users of the internet and technology. Of girls 13-17, 65% lived a household with a computer (Slashinski, 2004b). Girls and boys use technology in similar ways: both use the Internet as a social space, to communicate with friends, and to discuss ordinary and sometimes intimate topics

(Gross, 2004). Girls are as likely to use the internet as boys, but not as interested in computer and video games; on average, girls spend 10 minutes less per day on the computer than boys (Slashinski, 2004b). Girls are less likely than boys to take advanced computer classes in high school or college (Slashinski, 2004b). Girls report that Internet communication can help to them to strengthen their relationships, especially with boys, and that Internet communication allows them to express their emotions more freely and helps them to feel more comfortable communicating (Girl Scouts, 2002).

### **After-School/Out-of-School Time**

Girls learn both in school and out of school. Of children in grades K-12, 11% (6.5 million) currently participate in after-school programming, while an additional 15.3 million students indicate that they would participate if *quality* programming were available in their community (Westmoreland & Little, 2006). Girls are less likely than boys to have access to quality after-school programming. In Boston, for example, the majority of after-school attendees are male; only 39% of after-school programming participants are female (Boston After School for All Partnership, 2004). Much can be done to expand out-of-school opportunities for girls. Effective youth programming is developed within the social and cultural context of the community and empowers youth to be active leaders in program development (Ms. Foundation, 2006). Research indicates that programs where adults share power with youth in developing programs and trying to identify and focus on youth-identified needs are more likely to be effective (Ms. Foundation, 2006).

Best practices include recognizing participants' cultural, racial, socioeconomic, immigration status, sexual orientation, and community identities, as well as being particularly sensitive to the needs of girls (Wheeler, Oliveri, Deshmukh Towery, & Mead, 2005). Girls have particular emotional and psychological needs and need special skills and supports to cope with the pressures of their community and culture. Research suggests that programming should be directed towards supporting girls' strengths and developing their sense of self. Whether single sex or co-ed, out-of-school programming needs to be gender sensitive (Wheeler, Oliveri, Deshmukh Towery, & Mead, 2005). Effective programming also collects data and engages in self-evaluation and reflection as it grows (Ms. Foundation, 2006).

In the spring of 2004, a group of graduate and undergraduate students at Clark University created and piloted an out-of-school time survey for the Boys and Girls Club of Worcester in anticipation of their new development (Ellison, Newman, Kidrin, Farina, & Saloman, 2004). The study was aimed at understanding what youth would look for in a program, and what the obstacles to participation in youth programs might be. The sample included 180 youth in grades 7 – 12, with more young people in the lower grades. Reflecting the population at the particular school where the survey was conducted, minority students comprised a significant percent of those surveyed; at 30% Latino/Hispanic students comprised the largest ethnic group in the sample. Fifty-five percent of the sample was female.

The findings revealed that overall, students want a balance of academic assistance and fun activities (both structured and non-structured) and many options of activities from which to choose. There were few differences in responses when disaggregated by gender, but the findings which included divergence between girls and boys include:

- 80% of girls surveyed (versus 62% of boys) rated programming that 'has activities that my friends and I want to do' as 'very important'

indicating the importance of friendship relationships for girls at youth programs;

- Almost 60% of girls (versus 44% of boys surveyed) reported that they felt it was 'very important' that after-school programming 'doesn't feel like school';
- 62% of girls (versus 50% of boys) wanted youth programming that helps them make money, rating this a 'very important' quality;
- 80% of girls (versus 65% of boys) reported that computers are the activity that they look for in an after-school program over any other activity (Ellison et al., 2004).

In sum, girls want time to focus on friendship relationships, opportunities to make money, and access to computers. And although girls want academic support, they also want time that doesn't feel like school (Ellison et al, 2004).

In Worcester, the list of girl-specific after-school programs includes programs offered at the Young Women's Christian Association (YWCA) of Central Massachusetts, Girls Incorporated of Worcester, the Tools for Teens program at the Worcester Center for Crafts, LASOS (Latina Achievers in Search of Success) at the Latino Education Institute, and Girl Scouts of Montachusett Council. This list is not exhaustive.

### **Sports and Physical Activity**

Sports play an important role in many girls' lives. Fifty seven percent of girls in grades 9-12 participate in sports (Collins, 2002c). Sports participation varies across race and ethnicities. Sixty percent of White girls, 52% of Hispanic girls, and 48% of Black girls participate in sports (Collins, 2002c). Sports participation has positive benefits for girls, including: increased self-esteem, confidence, and sense of empowerment, which promotes leadership skills (Hart, Gary, Duhamel, & Homefield, 2003). Girls who are more physically active are more satisfied with their weight and report greater self-esteem, regardless of their actual body shape (Schoenberg, Salmond, & Fleshman, 2006). In addition, fewer female athletes smoke cigarettes, consume alcohol, and have sex at a young age (Collins, 2002c). Incorporating athletics into adolescent girls' daily lives can lead to positive and empowering outcomes.

According to the Worcester Regional Research Bureau (2004), approximately 41% of WPS high-school students participate in sports, which is significantly lower than the national and state averages of 55% and 66%, respectively. The pilot study for the Boys and Girls Club (Ellison et al., 2004) found that 63% of respondents played an organized sport and that more than half of those students report playing a sport at school. However, these data are not disaggregated by gender and apply only to one particular school.

Access to play was a neighborhood concern and a gendered experience identified by a Clark undergraduate student, Sara Levenson (2004). Levenson found that in Worcester, poorer young people have less access to adequate playgrounds than wealthier youth, and girls have less freedom to go to the park on their own than boys.

Levenson (2004) studied the use of playgrounds in two very different neighborhoods in Worcester. She surveyed youth ages 8 –12 from the Goddard School (in the main south neighborhood), and from Flagg Saint School (in the more affluent west wide of the city).

Approximately half of her 200 student sample was girls. (Crystal Park and Duffy Field were the respective neighborhood parks.) Levenson found that **children who lived in the poorer neighborhood** of the study experienced **less access to playgrounds in general**, and less access to high-quality playgrounds, as compared to their more affluent counterparts. This study also found that boys **have more freedom to go to the park**, as opposed to girls who are more restricted (Levenson, 2004). She found that more girls than boys go to parks – 42% of girls surveyed versus 29% of boys, yet more boys go to the park alone or with friends than girls (Levenson, 2004). 74% of the girls in the study report that they are accompanied by a family member, while only 51% of boys report the same (Levenson, 2004).

Levenson also found a **difference in play preferences between boys and girls** – when asked what they would change in the playground, girls expressed a desire for more advanced equipment, while boys wanted more athletic equipment (Levenson, 2004).

Interestingly, Levenson (2004) reports that use of park space in Worcester is equitable—a finding that differs from national studies (e.g., Karsten, 1998) which have shown that boys use more space than girls. **The actual play space is used by girls and boys almost equally.** Girls also spend approximately the same amount of time at the park as do boys (Levenson, 2004).

Thus, in Worcester there appear to be differences between girls and boys in their preferences for physical activities. Data on opportunities, needs, and preferences for sports, play, dancing, and other activities is not, to our knowledge, available in the aggregate for the city of Worcester. An investigation exploring what activities girls want and which activities are currently available to them would be an interesting topic to explore.

### **Section 3: Relationships**

#### **Friends**

An important part of adolescence is developing friendships and social understanding. Girls especially tend to place a lot of emphasis on social groups in middle and high school. Finding good friends can be complicated for girls. A recent study revealed that 34% of teenage girls worry about finding friends that they can trust (Schoenberg et al., Riggins, & Salmond, 2003). Girls who feel more safe and supported in their daily lives are more likely to reach out to family and friends to get support, while girls who feel unsafe are more likely to cope by withdrawing and isolating themselves (Schoenberg et al., 2003).

Niobe Way (1996) suggests that close, authentic friendships have a variety of benefits for adolescents, including interpersonal skill development, and an understanding of intimacy, sensitivity, and empathy for others. Friendship quality may be deeply impacted by social and cultural context, in addition to gender (Way, 1996). Urban adolescents often hold a high level of distrust for their peers (Way, 1996). Gilligan (1996) suggests that women have a responsibility to help girls stay in touch with their authentic experiences and relationships. Gilligan argues that finding ways to “speak in relationship, to keep the inner world in the outer world, and to create and maintain

resonant and responsive relationships are the grounds of girls psychological strength and resilience” (Gilligan, 1996, p. 257).

### **Relational Aggression and Bullying**

Recent research has highlighted not only the strengths of female friendships in adolescence, but also the prevalence of “relational aggression” among girls in social groups in middle school and high school. Relational and overt victimization is common among middle school girls (Casey-Cannon, Hayward, & Gowen, 2001). Verbal and relational aggression can be socially isolating for girls and can lead to a devaluation of girls’ self-appraisals (Casey-Cannon et al., 2001). Seventeen percent of junior high students report having rumors or lies spread about them in school (Harris Interactive and GLSEN, 2005). Further, 48% of junior high students report being harassed in school because of physical appearance and body size (Harris Interactive and GLSEN, 2005). One-third of girls fear being teased in school and 38% of girls worry about their emotional safety when spending time with peers (Schoenberg et al., 2003).

Acute stressors and social conflict were found to be associated with psychological symptoms and lower school competencies in a study of Latino 6<sup>th</sup> and 7<sup>th</sup> grade adolescents. This study suggests that early adolescence is a key time for coping and adaptive strategies to be learned and integrated and to increase social supports for youth (Cream, 2004). After relational aggression, strong social support is key to helping girls maintain their friendships and cope with betrayal. Girls who have been hurt most by friends are more likely to use wishful thinking and self-blame to cope, however the use of social support can actually help girls gain insight and understanding about what happened in their friendship (Remillard & Lamb, 2005). Peer victimization and peer rejection each contribute to problems in emotional, behavioral, and academic adjustment (Lopez & DuBois, 2005). Interventions are against both peer victimization and peer rejections are needed to protect victims against negative behavioral outcomes and to increase self-esteem (Lopez & DuBois, 2005). Lyn Mikel Brown (2001) suggests that girls’ relational aggression is fostered by social expectations for women that limit conflict and value social connection. Adults need to teach girls more coping skills to deal with their anger to prevent relational aggression (Kluger, 2006).

Locally, Pollastri and Cardemil (2006) conducted a study on aggression among urban middle-school students at Sullivan Middle School in Worcester. Their findings pertain to relational aggression as well as physical aggression. One of the surveys given to the 8<sup>th</sup> graders measured “Negative Life Events,” the number of bad things that a student has witnessed or experienced in his or her environment in the past three months. Examples include a divorce in the home, a family member going to jail, and a friend with a serious mental health issue. In past research, the number of negative life events a child reports has been related to higher rates of depression and anxiety, lower grades in school, and higher rates of “acting out” including disruptive and aggressive behavior (Pollastri & Cardemil, 2006). In Pollastri and Cardemil’s (2006) study, there were no gender differences among the occurrence of negative events but there were differences in the way girls and boys responded to such stress. **Negative life events appear to affect girls more directly than boys.** Girls who experienced more negative life events were rated by peers as more physically and relationally aggressive; girls who experienced or witnessed violence were rated by peers as more physically aggressive; and boys who experienced or witnessed violence, and who also rated being dominant in a peer group as important, were rated by peers as more physically aggressive and relationally aggressive (Pollastri and Cardemil, 2006).

A Worcester Public Schools paper entitled *Worcester Public Schools Efforts to Address Increased Violence Among Female Students*<sup>2</sup> (Worcester Public Schools, 2005) also highlights this connection between victimization and violence, particularly for girls. The paper notes that *gender-differentiated ‘pathway’ research suggests that many girls who act out violently have had a distinct developmental path toward that behavior, most typically associated with a prolonged history of physical and/or sexual abuse* (WPS 2005).” This paper draws attention to the need for mental health services (and the lack of resources in the juvenile justice system to address those needs), and highlights the many programs and efforts provided by the school district to meet the needs of troubled youth (WPS 2005).

Clearly, girls face negative life events and stress—some even have to grapple with abuse—and these stressors impact them in terms of aggression and violence. This insight is an important contribution to our understanding of the mental health and violence prevention needs of middle-school girls in Worcester.

### **Family Involvement**

While adolescence can often be a time of conflict between teens and their parents, active family involvement and consistent support is important for adolescents’ healthy development. Adolescents often shift their attention from their family to their peers, yet families still play an extremely important role in development. Quality family relationships are particularly important to support adolescent girls’ self-esteem. Positive support from family and friends leads to more positive self-evaluations in adolescent girls of color (Greene & Way, 2005). Good relationships with parents and older siblings can promote resiliency for adolescent girls (Moore & Zaff, 2002). However, family relationships can also put adolescents at risk. Violent, abusive, or neglectful childhood relationships with parents lead to negative outcomes for teens without adequate support and protective factors (Buka, Stichick, Birdthistle, & Felton, 2001).

And unfortunately, some girls do not have adequate support: 23% of teenage girls say that have fewer than three adults they could go to if they were in trouble or needed help (Schoenberg et al., 2003). Mothers model what it means to be a woman for their daughters, often in unspoken ways. Mothers have a large influence on girls’ sense of satisfaction with their bodies. Mother’s weight, body image, attitudes, and health habits are strong predictors of their daughter’s weight and attitudes towards her body (Schoenberg et al., 2006). Daughters tend to be more dissatisfied with their weight if their mother is dissatisfied with her weight, regardless of the daughter’s actual weight, so educating mothers about body image issues may have a strong impact on their daughters (Schoenberg et al., 2006).

### **Mentoring**

From an ecological perspective on youth development, a negative or non-existent relationship with a parent is not insurmountable. Bronfenbrenner’s ecological approach to human development posits that families, peers, school and work settings, and communities are the multiple settings or the environment that surrounds and influences adolescents (Bronfenbrenner, 1979, 1986). When a specific risk factor, such as a poor relationship with a family member occurs in one setting, a relationship with an adult in

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<sup>2</sup> The WPS white paper also highlights the attribution of local and national increases in violence among girls to a ‘re-labeling’ of family conflicts as violent offenses. The paper cites the work of Simkins and Katz (2002) Criminalizing abused girls. *Violence Against Women*, Vol. 8, No. 12, December 2002 pp. 1474-1499.

another setting, such as a mentor or teacher, can serve as a protective factor with the potential to mitigate risk (Benard, 1991).

Relationships with adults have been found to have a number of benefits for adolescents, including higher self-esteem, greater engagement and performance in school, reduced delinquency, less substance abuse, and better mental health (Rhodes, Grossman, & Roffman, 2002). Relationships with adult mentors and role models improve children's resiliency and provide a secure base for children to develop their sense of self (Noam & Fiore, 2004). There is evidence that long-term mentoring leads to decreases in the use of drugs and alcohol by adolescents and that the quality of their relationships with their parents can improve (Rhodes, Reddy, & Grossman, 2005).

Research on adolescent girls has found that they are more likely to respond to mentoring relationships that involve a mutual exchange and feeling of connection (Liang, Tracey, Taylor, & Williams, 2002). Anecdotally, adolescent girls seem to prefer younger women mentors, perhaps because younger women are more connected to the lives and issues of youth today. Effective mentoring relationships depend on mutual commitment and emotional engagement between the mentor and mentee (Spencer, 2006). Jean Rhodes (2002) found connection to be an important condition for effective relationships with all students. Adolescents begin to understand the world through the perspectives of others, and connection to peers and adults becomes even more important to their sense of self. Jean Rhodes (2002, p. 35) explains, "For all adolescents, the inevitable crises of identity that occur during these years create unique openings for non-parent adults, who can have positive influences on teens as they try to understand the many relationships in their lives and explore their own sense of self." Quality mentoring offers many opportunities to promote children's positive growth and development.

Many Worcester organizations and programs intentionally foster mentoring relationships, including Big Brother/Big Sister, AKOG, and smaller programs like the REC's YouthGrow, among many others. AKOG (All Kinds of Girls) is a program that focuses specifically on mentoring for girls. Clark University undergraduate women serve as mentors to more than 100 girls ages 9 – 12. AKOG girls generally come from the Main South neighborhood.

Since the number of single-parent households and low-income families (both risk factors) for the city of Worcester is cause for concern, opportunities for mentoring play an important part in youth development generally, and in youth risk prevention more specifically.

#### **Section 4: Sex and Sexuality**

##### **Sexual Activity**

Many adolescent girls are sexually active and they often lack the information and support they need to make positive and affirming choices about their sexual behavior. Almost 20% of adolescents have had sex before their 15<sup>th</sup> birthday (Albert, Brown, & Flanigan, 2003). In 2005, the Center for Disease Control (CDC) found that 45% of high school students in Massachusetts reported having had sexual intercourse, 13% reported having sex with four or more people in their lifetime, and 5% reported having sexual intercourse before age 13 (Center for Disease Control, 2006). More teens are also engaging in oral sex, often with casual partners (Eagan, 2005). Unfortunately, parents

are often misinformed about the challenges facing their children. Only about one-third of parents with sexually-active children aged fourteen or younger know that their child has had sex (Albert, Brown, & Flanigan, 2003). Parents tend to believe that teens feel more comfortable talking about sex with parents than teens themselves report (Albert, Brown, & Flanigan, 2003).

Girls report feeling confused and trapped by the sexual attitudes they must negotiate in American culture (Tolman, 2002). Healthy development includes the development of sexual feelings and attractions, yet there is little safe space available for girls to discuss and make sense of their sexual feelings (Tolman, 2002). Deborah Tolman (2002) reports in her research that some girls ignore or shut off connection with their bodies to avoid their sexual feelings, others frame sexuality only in terms of danger, and only a few felt empowered to explore their sexual feelings. When adults focus the discourse on sexual development on sexual intercourse, rather than on healthy sexual desire, girls are cut off from opportunities to explore their developing sexuality (Tolman, 2002).

Sexually active girls are sometimes victims of sexual violence or coercion. Knowledge on this subject is limited because adolescent sexuality and sexual violence is often hidden in our culture. Thirteen percent of girls who have had sex at least once before age fifteen describe it as “non-voluntary” or “relatively unwanted” (Albert, Brown, & Flanigan, 2003). Relationships between young teens and a substantially older partner are more likely to be sexual than relationships with same-age peers —47% of relationships with a partner four years older or more include sexual intercourse (Albert, Brown, & Flanigan, 2003) and 45% of sexually active adolescents report drinking alcohol the most recent time they had had sex (Albert, Brown, & Flanigan, 2003). Similarly, 23% of sexually active high school students in Massachusetts report drinking alcohol or using drugs before having sexual intercourse in the past three months (CDC, 2006). Alcohol and drugs complicate sexual communication and compromise an adolescent’s ability to “consent”<sup>3</sup> to sexual activity. Further, perpetrators of sexual violence sometimes use “date rape drugs” like rohypnol, GHB, ketamine, and ecstasy, to render the victim unable to defend herself against sexual attack (DEA, 2006). And from a legal standpoint, even if a youth willingly participates in sexual activities, if she/he is below a particular age, she/he cannot legally give consent anyway, and the act may be considered statutory rape. The bottom line is that across the nation, young teens are often misinformed or simply uninformed about sexual issues (Albert, Brown, & Flanigan, 2003) and th, and of course, age and other factors affect an adolescent’s legal ability to give consent. This misinformation and lack of support may put them at risk.

At the Worcester city level, data about youth sexual activity is unavailable. The city does not, for example, administer the portion of the Youth Risk Behavior Surveillance that asks questions about sexuality.

### **Sexually Transmitted Diseases**

Sexually transmitted diseases (STDs) are common among sexually active adolescents and young adults in the United States. Yet, the incidence and prevalence of sexually transmitted diseases is often silenced in American public discourse. The American Medical Association (2004) reports that more than 65 million people in the U.S. are currently living with an incurable STD and an additional 15 million people become

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<sup>3</sup> Legally, youth must reach a particular age, which varies by state, to consent to sexual intercourse (e.g., age 16). Sexual contact at younger ages, even between peers, may be considered statutory rape.

infected with one or more STDs each year, with approximately half of this group contracting lifelong infections. Marginalized groups, including women, minorities, people living in poverty, and youth, are all disproportionately affected by STDs (Lewis, Melton, Succop, & Rosenthal, 2000; Rosenthal, Biro, Succop, Bernstein, & Stanberry, 1997; Santelli, Lowry, Brener, & Robin, 2000). In these groups, STD incidence is higher and often causes more significant health implications (Santelli et al., 2000).

Adolescents are at particular risk for contracting STDs. Sexually active teenagers have the highest STD rates of any age group in the country (Cates, Herndon, Schulz, & Darroch, 2004). During puberty, girls are more vulnerable to STDs than boys (Collins, 2003). By age 25, half of all sexually active youth have had an STD (Cates et al., 2004). Girls aged 15-19 represent 19% of reported cases of gonorrhea and 32% of chlamydia (Collins, 2003). Further, about half of HIV infections occur before age 25 (Bleakley & Ellis, 2003). Among girls aged 13-19 diagnosed with AIDS, 51% report exposure through sexual contact; African American women aged 13-19 make up 72% of reported HIV cases. Medical treatment for STDs for youth costs more than six billion dollars in direct medical costs per year (Cates et al., 2004). In addition, an STD diagnosis can contribute to social and psychological risks including depression, low self-worth, and social stigma (Nack, 2002). On a positive note, 93% of Massachusetts high school students report learning in school about HIV and AIDS and 65% of sexually active high school students in Massachusetts report using a condom during last sexual intercourse, compared to 63% nationwide (Center for Disease Control, 2006).

Blake, Kearney, Oakes, Druker, & Bibace (2003) conducted research with young people 15–24 years old to describe their beliefs and opinions about what motivates them or the obstacles testing for chlamydia, and to make recommendations for services based on their findings. Blake et al concluded that to increase youth participation in screening services, it is necessary to address the concerns of youth, and to educate them in order to change misconceptions. The young people in this study overwhelmingly expressed interest in a home test for chlamydia (Blake, et al, 2003).

### **Pregnancy**

On a national level, teen pregnancy rates continue to decline. Overall, girls of color are more likely to give birth. In 2004, the teen birth rate for teenagers 15–19 years declined somewhat: 4.12 % of females aged 15–19 years gave birth in 2004, a one percent decrease from 2003 (Hamilton, Martin, Ventura, Sutton, & Menacker, 2005)<sup>4</sup>. Pregnancy rates vary among ethnic and racial groups due to a range of cultural factors, health care access, and education. In 2004, 6.27% of African American girls, 8.26% of Hispanic girls, and 2.68% of white girls aged 15-19 gave birth (Hamilton, et al., 2005). The birth rate (.07%) for 10–14 year-olds increased slightly in 2004, with African American and Hispanic girls giving birth at higher rates than white girls (.16%, .13%, .02%, respectively) (Hamilton, et al., 2005). Almost 15% of sexually active 14-year-old girls report having been pregnant. (Albert, Brown, & Flanigan, 2003). More than one-third of teen pregnancies end in abortion in the U.S. (Child Trends, 2006). Teen abortions rates have also been in decline since the 1980's (Child Trends, 2006). From 1990 to 2000, abortion rates for 15-17 year olds in the U.S. has declined 45% to 1.45 abortions per 100 female teens (Child Trends, 2006). Younger teens (under 15) have a lower abortion rate at 0.09% (Child Trends, 2006). African American and Latina girls have higher abortion

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<sup>4</sup> It is important to remember in review these statistics that some teens become pregnant due to coerced or forced sexual contact.

rates than white teens (Child Trends, 2006). Teens could benefit from increased comprehensive sex education and access to contraception to reduce unintended pregnancy.

According to the Massachusetts Alliance for Teen Pregnancy, the Massachusetts teen birth rate dropped between 2003 and 2004, yet many communities still face challenges ([www.massteenpregnancy.org/data/index.html](http://www.massteenpregnancy.org/data/index.html)). In Worcester, the teen birth rate (per 100 women ages 15-19) continues to decline as well. It was 5.62% in 1994, 3.8% in 2003 and in 2004, the teen birth rate was 3.61% ([www.massteenpregnancy.org/index.html](http://www.massteenpregnancy.org/index.html)). According to MassCHIP, in 2004 there were 30 births to white teenage mothers (age 10 -17), 5 births to Black teenage mothers, and 47 births to Hispanic teenage mothers ([www.masschip.state.ma.us](http://www.masschip.state.ma.us)). Among the teenage mothers in Worcester (ages 10-17), 96.5% were first time mothers ([www.masschip.state.ma.us](http://www.masschip.state.ma.us)).

Although Massachusetts rates below the national averages for teen pregnancy, abortion rates are higher in Massachusetts than they are on the national level ([www.massteenpregnancy.org/index.html](http://www.massteenpregnancy.org/index.html)).

### **A call for sexuality education?**

There is a noticeable interest in—and a call for—movement around the topic of youth sexuality and sex education in Worcester. As mentioned previously, in general, obtaining local Worcester-specific and girl-specific data for this literature review was a hefty challenge. “Hard” data on sexuality issues was particularly hard to find, but anecdotally, in conversation, practitioners expressed a strong need for youth sex education and other related programming. Contacts often stated that they had no hard data but they could share some of their experiences.

One example of interest includes an email exchange with Dr. Lucy M. Candib, MD, in which she outlined some of the needs, based on her experience with young people. She included the need for sex education, the need for knowledge about and use of multiple forms of contraception, and other related needs such as violence prevention, making education more relevant to girls, the need for boys to reflect on gender issues and relationships, and the overall need to address gender issues in a more profound way (Candib, 2006).

Seasoned youth worker Phyllis Shea also elaborated on the state of sexuality education in public schools in Central Massachusetts. Phyllis indicated that in many cases sex education—and health education in general—have been dropped in many schools. Sex education is not a substantial part of curricula during the school day in WPS or in many of the schools in surrounding towns and cities. And even when sex education is present, Ms. Shea believes that “the dosage isn’t present.” The students are not getting enough information, nor are they getting it over an extended period of time. Phyllis co-facilitates an in-school program for middle-school girls called Girls Promoting Safety (GPS). The GPS curriculum does not specifically deal with sex education, but in discussions on interrelated topics such as healthy relationships and dating violence, students raise the topic. For example, the girls from the one of the academies at a middle school in Worcester specifically requested information about sexuality.

Similarly, the Healthy Options for Prevention and Education (HOPE) Coalition peer leaders found sexuality education an important need for youth when they conducted a survey of youth issues in Worcester in 2001 (HOPE Information Packet 2002). The HOPE Coalition found that sexuality was important, and in response to this concern, they created a video.

Limitations of programs like GPS and an overall abstinence-oriented culture in the U.S. pose major challenges to youth workers and teachers, especially when they work within public schools. But the cry for more local education on youth sexuality and interrelated topics such as violence prevention, gender issues, and healthy relationships is loud, clear, and consistent--an area that demands attention if Worcester girls are to thrive today, and as adults.

### **Sexual Difference and Sexuality**

Freiwirth and Wilbur (2006) recently conducted a needs assessment of the gay, lesbian, bisexual, and transgender (GLBT) community for the Greater Worcester Community Foundation. They found that segments of the GLBT community in Worcester County which experience less access to information, services, and support include people of color, immigrants, working class residents, transgender people **and youth** (Freiwirth & Wilbur 2006). They reported that youth support, safety, and parent information to support GLBT youth were high priorities (Freiwirth & Wilbur, 2006). They also found that programming for youth in the GLBT community is lacking. "The data revealed that the **current youth programs** are not fully able to address the need for GLBT youth support in Worcester County, and that expanded and new GLBT youth programs are urgently needed" (Freiwirth & Wilbur, 2006, p. 24).

## **Section 5: Health**

### **Obesity**

Rates of overweight children and adolescents have tripled in the last twenty years (Schoenberg et al., 2006). The Centers for Disease Control (2005) define overweight as falling in the 95<sup>th</sup> percentile of the Body Mass Index (BMI) based on age and sex. Overweight children face increased health risks and stigmatization in childhood and adolescence (Schoenberg et al., 2006). Being overweight in adolescence can lead to consequences, including type-2 diabetes, hypertension, poor quality of life, and increased mortality in adulthood (Meich, Kumanyika, Stettler, Link, Phelan, & Chang, 2006). Nationally, 13% of girls aged 11-17 are overweight and an additional 17% of girls in this age group are at risk for becoming overweight (Schoenberg et al, 2006). Low-income girls and girls of color are at greater risk for being overweight. 20% of Latino girls aged 11-17, 18% of African American girls, 11% of White girls, and 4% of Asian girls are currently overweight (Schoenberg et al., 2006). In Massachusetts, 16 % of high-school students are at risk for becoming overweight and 11% are overweight; 47% of high-school students report trying to lose weight (Centers for Disease Control, 2006). Nationally, adolescents 15-17 years old who live in poverty are more likely to be overweight and also more likely to eat unhealthy foods like sweetened beverages, to lack adequate physical activity, and to skip breakfast (Meich, et al., 2006). The lack of affordable, easily accessible healthy food choices for adolescents living in poverty may contribute to this effect.

Girls in Massachusetts are relatively active: 63% of high school students report having engaged in moderate exercise in the past week (Centers for Disease Control, 2006). However, girls often associate physical health more with appearance and peer acceptance than with actual exercise or diet (Schoenberg et al., 2006). As a result, girls often do not make healthy choices: 33% of Massachusetts high school students have watched more than three hours of TV per day on a school day (CDC, 2006); 18% of high-school girls report bingeing and purging (Collins, 2001); and more than 25% of 12<sup>th</sup> grade girls have tried diet pills (Collins, 2002b). Further, one-third of girls aged 8-17 have a distorted perception of their weight: 14% of normal-weight girls believe they are overweight and 45% of overweight girls believe they have normal body weight (Schoenberg et al., 2006).

### **Body Image**

Girls continue to have less satisfaction with their bodies than do boys. There is a pronounced drop in self-esteem for girls 12-17 years of age and there is a strong link between body image and self-esteem (Clay, Vignoles, & Dittmar, 2005). According to one study, 26% of girls were dissatisfied with their weight compared to 19% of boys; only 34% of girls report being very satisfied with their weight (Schoenberg et al., 2006). Fifty nine percent of high-school girls reported trying to lose weight in the past 30 days (Collins, 2001). Eating disorders are more prevalent among girls, probably due to the cultural connection between female beauty and thinness (APA, 2000). More than 90% of clinical cases of anorexia and bulimia are in girls and women and typically begin in adolescence (APA, 2000); 0.5% of females are clinically diagnosed with anorexia and 1-3% of females are diagnosed with bulimia in their lifetimes, with many more coming close to the threshold for clinical diagnosis (APA, 2000).

Interestingly, although African-American girls are more likely to be overweight, they also report being more satisfied with their bodies than girls from other ethnicities, and this satisfaction tends to stay stable over time (Greene & Way, 2005). Research suggests that more psycho-educational interventions are needed for girls that focus on promoting a critical stance towards sociocultural standards for female beauty (Clay, Vignoles, & Dittmar, 2005). Interventions like *Full of Ourselves* (Steiner-Adair & Sjostrom, 2006) equip girls with tools to resist cultural pressures to become preoccupied with their bodies and weight. In this curriculum, girls are given skills to critique media and social messages, have a healthy relationship with their body, and to become leaders in their communities (Steiner-Adair & Sjostrom, 2006).

### **Mental Health and Well-Being**

Girls face a range of mental health diagnoses, 27% of high school students in Massachusetts reported feeling sad or helpless everyday for two weeks or more in a row in the past year, a prominent symptom of depression; 13% reported seriously contemplating attempting suicide; and 6% actually attempted suicide (Centers for Disease Control, 2006). Girls who feel unsafe in their communities or homes are at higher risk for mental health problems than girls who feel safe in their home and school life (Schoenberg et al., 2003).

Self-esteem is an important part of well-being. In adolescence, girls are barraged by media images teaching them to try to meet impossible standards of female beauty and encouraging them to purchase products to achieve this perfection (Lamb & Brown, 2006a, 2006b). Changing cultural standards and the onset of puberty and increased sexualization can cause a downturn in self-esteem for adolescent girls (Martin, 1996).

Race and ethnicity also play an important role in self-esteem. In one study of adolescents of color, self-esteem trajectories differed by ethnicity but not by gender. Asian-American adolescents had significantly lower self-esteem compared to their African-American and Latino peers (Greene & Way, 2005). African-American students showed the highest self-esteem, perhaps supported by the range of social support and teaching of effective coping strategies in the African-American community (Greene & Way, 2005).

In Massachusetts, mental health services are barely scratching the surface. A recent report found that “70% of the children who need mental health services do not receive them” (Massachusetts Society of Prevention of Cruelty to Children, 2006).

In Worcester, there is special attention being paid to the issue of self-esteem for girls, especially by the Fred Harris Daniels Foundation, as well as the Women’s Initiative of the United Way of Central Massachusetts. Girls Promoting Safety, Tools for Teens, and several other programs focus on self-esteem for girls in Worcester, but the need is far greater than the number of available programs.

### **Cigarettes, Alcohol, and Drugs**

Many adolescents experiment with drugs, alcohol, and cigarettes. In Massachusetts, 51% of high-school students report trying cigarettes and 13% report trying cigarettes before age 13 (Centers for Disease Control, 2006). Twenty seven percent of girls in grades 9-12 currently smoke in Massachusetts (National Women’s Law Center & Oregon Health and Science University, 2003). Nationwide, girls aged 12-17 are more dependent on or abusing alcohol and drugs than boys: 17 % of girls aged 12-17 are current drinkers, compared to 16% of boys in the U.S. (Substance Abuse and Mental Health Services Administration, 2006) and 8.3% of girls aged in the U.S. are dependent on drugs compared to 7.8% of boys (Substance Abuse and Mental Health Services Administration, 2006). In Massachusetts, 76% of high-school students report trying alcohol, 48% report drinking in the past 30 days, 27% report drinking five or more drinks in a row in the past 30 days, and 22% report trying alcohol before the age 13 (Centers for Disease Control, 2006). A history of abuse or stressful life events is associated with increased risk for alcohol abuse (Collins, 2002b).

In Massachusetts, 45% of high-school students report trying marijuana, 26% report smoking marijuana in the past 30 days and 9% report trying marijuana before age 13 (Centers for Disease Control, 2006). Eight percent of high-school students in Massachusetts report trying cocaine or crack, 2% report trying heroin, 4% report trying methamphetamine, and 4% report using steroids (Centers for Disease Control, 2006). Nationwide, 35% percent of teenage girls spend time with peers who use drugs and alcohol at least a few times a month (Schoenberg et al., 2003). Further, adolescents are bringing drugs to school. 30% of high-school students in Massachusetts report being offered, given, or sold illegal drugs in school in the past year (Centers for Disease Control, 2006). Girls who feel unsafe in their daily lives are more likely to cope by using drugs and alcohol: 13% of girls who felt unsafe reported using these substances compared to 1% of girls who felt safe (Schoenberg et al., 2003).

In Worcester, the HOPE Coalition has identified substance abuse as an area of concern for youth (HOPE Information Packet 2002) and has launched a campaign against cigarette advertising to urban youth.

## **Section 6: Violence and Safety**

### **Violence**

Many girls experience violence as part of their daily lives, at home, in the community, or in school. Exposure to violence can contribute to mental health issues, erratic school attendance and achievement, and can negatively influence girls' development. Across the nation, suburban and urban girls are more concerned about physical safety, while rural girls are more concerned about emotional safety (Schoenberg et al., 2003). For example, 32% of urban girls, 29% of suburban girls, and 21% of rural girls worry about being attacked by a gun or a knife (Schoenberg et al., 2003) and 30% of urban girls, 23% of suburban girls, and 20% of rural girls fear sexual violence (Schoenberg et al., 2003). Only 51% of girls feel that they can keep themselves safe (Schoenberg et al., 2003).

Physical safety is a particular concern for girls of color, possibly because girls of color are more likely to live in high-crime areas: 82% of Asian Pacific Islander girls, 80% of Hispanic girls, 74% of Caucasian girls, and 68% of African American girls worry about their physical safety (Schoenberg et al., 2003). Girls who are able to feel safe in their daily lives are more likely to have a lot of friends, get along well with parents, and have at least three adults they could go to if they were in trouble (Schoenberg et al., 2003).

In Massachusetts in 2005, 15% of high-school students reported carrying a weapon in the past thirty days; almost 6% carried a weapon to school (Centers for Disease Control, 2006). Four percent of high-school students in Massachusetts reported not going to school because of feeling unsafe; 5% reported being injured by a weapon on school property in the last year (Centers for Disease Control, 2006). Further, 29% of high-school students in Massachusetts were in a physical fight in school in the last year (Centers for Disease Control, 2006).

Despite the turmoil in our nation and abroad, girls reported that they are more concerned about the safety of and separation from loved ones than they are about terrorism or acts of mass destruction (Schoenberg et al., 2003). Girls feel safest when trusted loved ones are nearby: 46% feel safest with parents or family members; 87% of girls feel safe from bodily harm at home, and 83% if girls feel safe from emotional harm at home (Schoenberg et al., 2003).

In Worcester, there is special attention to issues of violence, especially girls and violence. The Mayor's At-Risk Youth Task Force spurred discussion that led to the formation of a subcommittee specifically focused on girls and violence (which ultimately evolved into the present-day Investing in Girls group), the office of the superintendent has focused on the issue of girls, violence, and education, including the production of a "white paper" on girls and violence, and the Women's Initiative of the United Way of Central Massachusetts has prioritized girls and violence as a priority area for funding.

### **Internet Safety**

As teens use the internet more and more for communication, concerns have arisen about the potential for adolescents to be exploited or placed in danger. Teenage girls are vulnerable on the internet. Recent media exposés have shown the prevalence of online sexual predators seeking sex with children and adolescents through online chat rooms. Girls report being exposed to pornography on the internet and are unsure of the severity consequences for online crime (Girl Scouts, 2002). Further, some girls present

themselves as older than they are and post provocative pictures of themselves as well as personal information on sites like MySpace.com. Parents often set prohibitive rules for teens about their internet use, but 43% of teenage girls report breaking parents' rules when they are online and girls report that parents are not computer savvy enough to understand what they do on the internet (Girl Scouts, 2002). Further, many teenage girls do not tell their parents if they are harassed online (Girl Scouts, 2002). Girls also report that online bullying is prevalent among their known peers (Kluger, 2006).

Locally in Worcester, internet safety is an emerging issue. Anecdotally, parents and providers have expressed some concerns about the issues of girls using chat rooms and websites such as MySpace.com, and the ways that girls are using and portraying themselves. A recent brownbag lunch sponsored by the Women's Initiative at United Way focused specifically on girls and Internet safety, but more work needs to be done to educate adults and girls about the dangers of Internet use.

### **Sexual Harassment**

In 1998, the Supreme Court ruled that schools can be held liable for student-to-student sexual harassment. Since that time, schools have become more active in creating policies and trainings to prevent sexual harassment in schools (Foxhall, 1999). Yet, despite the increased awareness, large proportions of students report being harassed or feeling unsafe in school. Sexual harassment is still an issue, and more education and prevention is necessary to ensure that all children can learn in a safe environment. Middle school is a critical time for sexual harassment prevention. Most students first experience sexual harassment in school between the sixth and ninth grade (AAUW, 2001). Two-thirds of teenagers report that they have been verbally or physically harassed or assaulted over the last year because of their appearance, gender, sexual orientation, gender expression, ethnicity, disability, or religion (Harris Interactive & GLSEN, 2005). Half of teenagers report they frequently hear homophobic and sexist remarks made by other students (Harris Interactive & GLSEN, 2005). Girls are more likely than boys to report feeling unsafe in school because of their personal appearance (Harris Interactive & GLSEN, 2005). Lesbian, gay, bisexual, and transgender youth are at particular risk for harassment and assault in school. One-third of teens report that students are frequently harassed for being perceived as gay, lesbian, or bisexual; 90% of LGBT students have been verbally or physically harassed during the past year (Harris Interactive & GLSEN, 2005). Sexual harassment can be a gateway to assault and dating violence, so efforts to prevent sexual harassment must start early and continue throughout the time students are in schools (AAUW, 2004a). Communication with and support from parents is key to preventing and protecting children from the negative effects of sexual harassment (AAUW 2004a).

### **Delinquency and Juvenile Justice**

Boys and girls are exhibiting aggressive behaviors in adolescence. For both girls and boys, the frequency of aggression in sixth grade predicts drug use and delinquency behavior in eighth grade. Girls tend to start with a lower rate of aggression than boys, but the growth in delinquent behaviors mirrors the growth in boys (Farrell, Sullivan, Esposito, Meyer, & Valois, 2005). Youth with anti-social behavior in middle school are most at risk for later gang involvement (Dishion, Nelson, Yasui, 2005). Middle school is often the time when deviant peer groups coalesce (Dishion et al., 2005).

More girls are part of the Juvenile Justice system than ever before. In Massachusetts, the number of girls in custody of the Department of Youth Services (juvenile corrections)

increased by 168% from 1995-2005 (Citizens for Juvenile Justice, 2005). In the past, adolescent boys were most at risk for delinquency; however, female aggression and delinquency are on the rise and the difference between girls and boys is narrowing (Nichols, Graber, Brooks-Gunn, & Botvin, 2006). Across the nation, adolescent girls account for more than 25% of arrests of young people (Collins, 2002a). Police are more likely to arrest girls than ever before. Girls of color are over-represented in the juvenile justice system, with African-American girls represented at three times the rate of their presence in the general population and Latina girls at two times the rate of their presence in the general population (Citizens for Juvenile Justice, 2005). Entry to adolescence is a particularly vulnerable time for adolescent girls. Girls report increases in anger and decreases in self-control in middle school. Girls' rate of aggression significantly increased from 6<sup>th</sup> to 7<sup>th</sup> grade compared to boys (Nichols, Graber, Brooks-Gunn, & Botvin, 2006).

A history of abuse and lack of social support puts girls at risk for juvenile delinquency and a path towards the juvenile justice system. Seventy percent of girls in the juvenile justice system in Massachusetts report histories of physical or sexual abuse (Citizens for Juvenile Justice, 2005). Girls in the juvenile justice system are much more likely to exhibit mental health issues like post-traumatic stress disorder, suicidality, borderline personality disorder, dissociation, and substance abuse (Citizens for Juvenile Justice, 2005; Veysey, 2003). Juvenile justice treatment models originally designed for boys do not meet the specific and diverse needs of girls in the system, so gender-sensitive interventions need to be implemented to improve outcomes for girl (American Bar Association & National Bar Association, 2001). Middle school is a critical point for implementing interventions for delinquency because delinquent behaviors and drug use show the greatest increase in the transition to middle school environment (Nichols et al., 2006). Middle-school girls with more positive beliefs about their reputations and a stronger bond to school are less likely to show delinquent behavior (Lee & Smith-Adcock, 2005). Among girls, strong relationships with adults can promote a feeling of a more positive reputation (or sense of self) (Lee & Smith-Adcock, 2005).

### **School Behavior**

Worcester Public Schools (WPS) records behavioral infractions and suspensions.<sup>5</sup> In 2005-2006, half of truant students in grades 7 and 8 were girls (Worcester Public Schools, 2006). Interestingly, girls are less likely than boys to be suspended for drugs/alcohol or assault (Worcester Public Schools, 2006). Infraction rates have gone down slightly for many categories from 2003 through present (Worcester Public Schools, 2006). According to WPS staff, students who misbehave in this way are elevated to the court system faster than in past years.

### **Department of Youth Services Commitments**

Comparing 2001 to 2005 Department of Youth Services (DYS) commitment data, **girls' total number of drug offenses increased** for the county and state, yet the numbers remain small (Tansi/Department of Youth Services, 2006). Table 4 presents a summary

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<sup>5</sup> The data in on school behavior (infractions, suspensions, and punishments) and on DYS commitments are based on the occurrence of being disciplined for certain behaviors, not necessarily the actual behaviors. This approach to data collection is similar to arrest reports, which don't necessarily reflect the number of specific infractions or occurrence of problem behaviors, but the number of arrests.

of the data we received from DYS. It includes Worcester County commitments by offense type, and is disaggregated by gender.

Table 4: 2005 DYS Worcester County Commitments by Offense and Gender

Offense type	Female	Male	Total	Percent Female	Compare to State Percent Female	Compare to Worcester County 2001
Person	23	57	80	29%	-	+
Property	10	55	65	15%	+	+
Drugs	3	20	23	13%	+	+
Motor Vehicle	4	17	21	19%	+	-
Weapons	1	9	10	10%	+	-
Public Order	7	26	33	21%	=	-
Total	48	184	232	21%	+	+

As Table 4 highlights, the total number of girls committed to DYS has increased over time. Table 4 also shows that the overall number of offenses has increased, although there are slight decreases for motor vehicle, weapons, and public order offenses (Tansi/Department of Youth Services, 2006).

Table 4 also compares 2005 Worcester County offenses to the Massachusetts offenses with regards to the percent of females committed. In Worcester, the percent of girls' offenses to persons and public order offenses is smaller than that of the rest of the state. Conversely, a higher percent of girls in Worcester as compared to the state are committing offenses to property, drugs, motor vehicles, and weapons. Girls make up a higher percent of the total offenses overall in Worcester as compared to the state.

Girls, as opposed to boys, represent a small percent within each of the offenses– the most frequent offense still represents less than one-third of all offenses to person. Thus, girls are committed less frequently than boys on the state and county level, yet when we look at the percent of commitments that are girls, Worcester County girls make up a larger percentage than girls at the state level.

### Sexual Exploitation

Child and teen prostitution is an unacknowledged problem in our culture, especially among runaways and children with a history of abuse or neglect. An estimated 244,000-325,000 children and youth each year are at risk for becoming victims of sexual exploitation, including victims of child pornography, juvenile prostitution, and trafficking for sexual purposes (Estes & Weiner, 2002). Child prostitution crosses race, class, and geographic lines and affects girls in a wide age range. A database on child exploitation

(Children's Advocacy Center of Suffolk County, 2006) reveals that from March 2005-July 2006, most referred prostitution victims in the Boston area were girls of color and 97% of the victims were female. The average age of victims was 15.9 years. 44% were African American, 25% were Caucasian, 10% were Latino, and 2% were Asian American. Of these girls, 64% were runaways and 99% were victims of some kind of abuse or neglect in the past. This research is consistent with other data indicating that abuse and maltreatment at home is a strong contributor to girls being forced into child prostitution (Estes & Weiner, 2002; Price, 2004). Although little research currently exists on the topic of sexual exploitation of children, what is clear is that raising awareness of this issue is key to both intervention and prevention efforts.

### **Dating violence**

Violence among dating partners is a serious problem for adolescent girls: 9% of high-school students across the nation report being physically hurt by their boyfriend or girlfriend in the last year (Centers for Disease Control, 2006b). According to the CDC, based on self-report data, 12% of African-American high-school girls, 9% of Hispanic high-school girls, and 9% of White high-school girls report dating violence in the past year (Centers for Disease Control, 2006b). Further, 11% of high-school girls report being forced to have sexual intercourse (Centers for Disease Control, 2006b). Adolescent girls who have been victimized in the past, especially if they have been sexually harassed or violently victimized by male peers, are at greater risk for psychological, physical, and sexual revictimization in their dating relationships (Gagne, Lavoie, & Hebert, 2004). Effective interventions start young, and focus on reducing patterns of revictimization and include materials on sexual harassment and peer victimization to reduce precursors to this violence (Gagne et al., 2004).

## **Section 7: Economic Realities**

Many girls live in families struggling financially. Family incomes in the U.S. are declining and families are struggling to meet expenses as inequality between rich and poor increases (Children's Defense Fund, 2005). In the U.S., 10.6 million children receive food stamps, a 20% increase from 2000-2004 (Children's Defense Fund, 2005). In 2004, 18% of children under 18 were poor. Poverty especially impacts children of color: On a national level, 33% of African-American children and 29% of Hispanic children lived in poverty compared to 15% of White children (Children's Defense Fund, 2005). The average income of single mothers in Massachusetts is \$20,400, leaving them, on average, in the lowest 20% income group (Center for Women in Politics and Public Policy, 2003). Further, the wages of less educated families are declining. From 1979 to 1999, the real median income among families in Massachusetts in which wage earners have received a high school diploma or less than a high school diploma has declined by 56% and 58% respectively (Fogg, Harrington, & Kochan, 2004).

In Massachusetts, as in the U.S., people of color are more likely to live in poverty than White people: 29% of Black Massachusetts residents and 34% of Hispanic residents live below the poverty line, compared to 11% of White residents (The State of Women and Girls, 2006). Massachusetts is one of the least affordable places to live (The State of Women and Girls, 2006): 10,500 families in Massachusetts are homeless (The State of Women and Girls, 2006).

Adolescents living in poverty face a range of challenges. As discussed earlier in this report, they are less likely to show high achievement in school, more likely to be obese, and more likely to face violence in their community and schools. Girls living in poverty may need special programming and supports to cope with these challenges.

## **Section 8: Culture and Community**

### **Race and Ethnicity**

Girls of color face a particular challenges growing up in a society that still struggles with racism. Making sense of racism and preventing the internalization of negative racist messages and acts can be particularly difficult for girls of color who are victims of both racism and sexism, and potentially other prejudices as well (classism, homophobia, etc.). Janie Ward (2000) suggests that parents and other community leaders need to teach children of color specific skills to cope with racism and to resist related negative messages. She suggests that youth can learn to handle and resist racism by applying four steps: (1) Read it: analyze the situation and assess evidence of racism; (2) Name it: acknowledge the presence of racism; (3) Oppose it: choose an action that constructively contests the racism; and (4) Replace it: chose an effective course of action (Ward, 2000). This strategy can promote youth's healthy and empowering resistance to racism (Ward, 2000).

The historical context for race relations within Worcester is not as evident as it has been in other cities such as Boston, which has faced serious and highly publicized racial tensions. Historically, African-Americans in the city of Worcester have been located in the neighborhood of Main South and the Belmont Street Bell Hill area (Gilbert 1998). In the 1960s the development of Interstate 290 displaced many African-Americans who were living in the Belmont Street area, and, according to Gilbert (1998) the subsequent siting of public housing projects in the 1970s caused some community leaders to see these actions as deliberate maneuvers to break up the African-American community (Gilbert 1998). In producing this literature review, we were unable to locate any recent publications about race relations in Worcester. We recognize that racism is still rampant in society at large and expect that the same is true in Worcester, and that girls in Worcester are exposed to the pressures and struggles that racism poses.

### **Faith**

Religious belief and membership in a religious community can be important assets for adolescents' health and well-being and can contribute to positive social outcomes (Scales & Leffert, 1999). Faith-based organizations can play an important role in providing mentoring, programming, and a supportive community for youth and their families (Bauldry, 2006).

Faith-based organizations are one of the many possible settings for promoting assets for youth. In Worcester, many faith-based organizations host out-of-school time programs for youth, and the Worcester Police Department collaborates with faith-based organizations in their work with youth.

### **Neighborhood Cohesion**

Neighborhood support and cohesion fosters positive outcomes for adolescents. In a study of African American girls, neighborhoods perceived by adolescents as having benefits supported the development of self-esteem and self-efficacy. Parental support

and coping skills better predicted self-efficacy in neighborhoods with high cohesion (Plybon, Edwards, Butler, Belgrave, & Allison, 2003). Pianta, Stuhlman, and Hamre (2002, p. 91) explain, "There is little doubt that relationships between children and adults (parental and non-parental) play a prominent role in the development of competencies from the elementary school through the high school years." The social and cognitive benefits of connected relationships with others are well documented. Children in communities with rich opportunities for children to connect with adults show reduced risk and evidence of higher rates of positive development (Eccles & Appleton, 2002). Quality relationships throughout childhood and adolescence support children's development.

In Worcester, neighborhood-based programs that bring together youth and adults within the sphere of the 'neighborhood' include Youth Grow, the Worcester Youth Center, and the Boys and Girls Club.

We do not know of any extensive studies on neighborhood cohesion within Worcester or the impact of neighborhood cohesion on youth in Worcester. However, the Worcester Regional Research Bureau (2005) reports that more than two thirds of respondents in their survey (68%) indicated satisfaction with Worcester as a place to raise children.

Worcester has a rich cultural and immigrant history. Many diverse groups have been settling in neighborhoods since at least the middle of the nineteenth century, when Worcester was a center of industrial diversity (Hanson & Pratt, 1995). Immigrants first came to Worcester primarily from Europe, from the Mediterranean region by the turn of the century, and more recently, from Latin America and southeast Asia (Hanson & Pratt, 1995). Recently, the city has seen an influx of immigrants from Albania and Brazil, as well as some immigrants from Africa.

Along with immigrant groups and the industrial history, distinct neighborhoods developed and continue today. There is some notable disparity among neighborhoods and larger areas within the city—for example, the west Side is categorized as wealthier than areas such as main south.

### **Media**

The media often sends girls unhealthy messages about their self-worth and beauty. Media and advertising targeted towards teens play on girls' fears and reinforce rigid standards of appearance and sexual attractiveness (Lamb & Brown, 2006a; 2006b). A recent study showed that viewing media images of ultra-thin female models leads to decreased body satisfaction and self-esteem in adolescent girls aged 11-16 (Clay, Vignoles, & Dittmar, 2005). The internalization of sociocultural beauty standards for women mediates the relationship between media exposure and body dissatisfaction (Clay, Vignoles, & Dittmar, 2005). As adolescent girls get older, they become more aware of societal expectations for female beauty. At the same time, puberty may move girls further away from these ideals, leading to an actual-ideal body discrepancy and reduction in bodily satisfaction and self-esteem (Clay, Vignoles, & Dittmar, 2005). The ability to critique unhealthy beauty standards, gendered stereotypes, and the lack of representation of women of color in the media are key skills for girls' psychological well-being (Collins, 2001). Parents and schools need to teach girls critical thinking skills and help them to think critically about media and advertising (Lamb & Brown, 2006).

## **Conclusion**

Girls today are both achieving goals never considered fifty years ago and facing a range of new and ongoing challenges, as outlined in this literature review. To promote the healthy development of girls, adults need to support girls' existing assets and promote the development of new skills. Girls need gender-sensitive programming that recognizes the realities girls face in their daily lives and empowers girls to seek support and work towards solutions. As adults work to support girls, we must promote their love of learning, positive sense of identity, and social competencies while also working towards making the world safer and more empowering for girls of all races, ethnicities, sexual orientations, immigration statuses, and religious beliefs (Scales & Leffert, 1999). Thus, to build stronger girls, we need to understand both girls' individual and collective needs, and the needs of the community as a whole, in particular, the needs of adults who want to support girls.

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