CHAPTER FOUR
DISPROPORTIONALITY IN SPECIAL EDUCATION

Disproportionality, or disproportionate representation, is generally defined as ‘the representation of a particular group of students at a rate different than that found in the general population’ (Gravois & Rosenfield, 2006, p.42). In many countries, the apparent over-representation in special education of two groups of students – those from ethnic minorities and males – has caused concern to policy makers who worry about the probability of such students being misidentified, misclassified, and inappropriately placed in special education programmes. This chapter will review the literature on both of these groups.

Before reviewing the literature on disproportionality, it is interesting to observe that placement in special education is seen as a negative outcome by many of those who express concern about the over-representation of boys and of ethnic minorities. For example, in the US, the Elementary and Middle Schools Technical Assistance Center (2010) stated that

For ethnic minority students, misclassification or inappropriate placement in special education programs can have devastating consequences. The problem is exacerbated when it results in a child's removal from the regular education setting, the core curriculum, or both. Students faced with such exclusionary practices are more likely to encounter a limited curriculum and lower teacher expectations. As a result, these students often have more negative post-school outcomes as evidenced by their lack of participation in post-secondary education and limited employment opportunities. In some districts, the disproportionate representation of ethnic minority students in special education classes also results in significant racial separation.

Macmillan & Rechsley (1998) pointed to the irony of considering over-representation to be a problem if students are purportedly gaining the advantage of special education.

4.1 Over-representation of Ethnic Minorities
Disproportionate representation of students from ethnic minority backgrounds in special education has been a persistent concern in the field for more than 30 years, particularly in the US (Fiedler et al., 2008; Garcia & Ortiz, 2006; Skiba et al., 2005) and the UK (Dyson & Gallannaugh, 2008; Strand & Lindsay, 2009). (In passing it is worth noting that an opposite situation pertained in South Africa where, under apartheid, whites were
over-represented in special education (Department of Education, 2001).

In considering the over-representation of ethnic minorities in special education, attention must also be paid to a relevant, and possibly causative factor: the continuing gulf between schools and those families whose cultures differ from their children’s school. In their recent review of IEPs, the writer and his colleagues referred to the work of the following writers who have analysed this situation: Calicott, 2003; Hanson et al., 1990; Harry et al., 1995; Kalyanpur & Harry, 1997; Robinson & Rathbone, 1999; Thorp, 1997; Trainor, 2010; Valenzuela & Martin, 2005; and Zhang & Bennett, 2003).

4.1.1 Evidence of ethnic disproportionality
Two countries have detailed statistics on the ethnicities of students classified as having special educational needs – the US and England.

US. In the US, the issue of ethnic minority over-representation was explored in some detail by Artiles (2003). He noted that in that country, African Americans and Native Americans were disproportionately represented in special education, especially in the high incidence categories of learning disabilities, mental retardation and emotionally disturbed.

The re-authorisation of IDEA in 1997 required states to collect and analyse data to ‘determine if significant disproportionality based on race is occurring in the state or schools’. Five race/ethnicity categories are used in the collection of these data: American Indian, Asian/Pacific Islander, black (non-Hispanic), Hispanic, and white (non-Hispanic). The Office of Special Education Programs (OSEP) in its Annual Report to Congress then collates this information. For example, the 22nd Annual Report to Congress included the information outlined in Table 4.1 about the race and ethnicity of students with disabilities (U.S. Department of Education, 2000):
Table 4.1. Percentage of students by ethnicity in the population and in special education in the United States in the 1998-99 school year

<table>
<thead>
<tr>
<th>Percentage of Students by Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of students in general population</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
</tr>
<tr>
<td>Black (non-Hispanic)</td>
</tr>
<tr>
<td>Hispanic</td>
</tr>
<tr>
<td>American Indian</td>
</tr>
<tr>
<td>Caucasian (non-Hispanic)</td>
</tr>
</tbody>
</table>

OSEP presented a second, more detailed, set of statistics in Table 4.2, which shows the percentages of students, by ethnicity making up the various disability categories.

Table 4.2. Percentage of students aged 6 to 21 by race/ethnicity served by disability services in the 1998-99 school year in the United States

<table>
<thead>
<tr>
<th>Disability</th>
<th>American Indian</th>
<th>Asian/Pacific Islander</th>
<th>Black (non-Hispanic)</th>
<th>Hispanic</th>
<th>White (non-Hispanic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Learning Disabilities</td>
<td>1.4</td>
<td>1.4</td>
<td>18.3</td>
<td>15.8</td>
<td>63.0</td>
</tr>
<tr>
<td>Speech and Language Impairments</td>
<td>1.2</td>
<td>2.4</td>
<td>16.5</td>
<td>11.6</td>
<td>68.3</td>
</tr>
<tr>
<td>Mental Retardation</td>
<td>1.1</td>
<td>1.7</td>
<td>34.3</td>
<td>8.9</td>
<td>54.1</td>
</tr>
<tr>
<td>Emotional Disturbance</td>
<td>1.1</td>
<td>1.0</td>
<td>26.4</td>
<td>9.8</td>
<td>61.6</td>
</tr>
<tr>
<td>Multiple Disabilities</td>
<td>1.4</td>
<td>2.3</td>
<td>19.3</td>
<td>10.9</td>
<td>66.1</td>
</tr>
<tr>
<td>Hearing Impairments</td>
<td>1.4</td>
<td>4.6</td>
<td>16.8</td>
<td>16.3</td>
<td>66.0</td>
</tr>
<tr>
<td>Orthopedic Impairments</td>
<td>.8</td>
<td>3.0</td>
<td>14.6</td>
<td>14.4</td>
<td>67.2</td>
</tr>
<tr>
<td>Other Health Impairments</td>
<td>1.0</td>
<td>1.3</td>
<td>14.1</td>
<td>7.8</td>
<td>75.8</td>
</tr>
<tr>
<td>Visual Impairments</td>
<td>1.3</td>
<td>3.0</td>
<td>14.8</td>
<td>11.4</td>
<td>69.5</td>
</tr>
<tr>
<td>Autism</td>
<td>.7</td>
<td>4.7</td>
<td>20.9</td>
<td>9.4</td>
<td>64.4</td>
</tr>
<tr>
<td>Deaf-Blindness</td>
<td>1.8</td>
<td>11.3</td>
<td>11.5</td>
<td>12.1</td>
<td>63.3</td>
</tr>
<tr>
<td>Traumatic Brain Injury</td>
<td>1.6</td>
<td>2.3</td>
<td>15.9</td>
<td>10.0</td>
<td>70.2</td>
</tr>
<tr>
<td>Developmental Delay</td>
<td>.5</td>
<td>1.1</td>
<td>33.7</td>
<td>4.0</td>
<td>60.8</td>
</tr>
<tr>
<td>All Disabilities</td>
<td><strong>1.3</strong></td>
<td><strong>1.7</strong></td>
<td><strong>20.2</strong></td>
<td><strong>13.2</strong></td>
<td><strong>63.6</strong></td>
</tr>
</tbody>
</table>

In commenting on the above statistics, OSEP made the following points regarding what it described as ‘disparities’ between the race/ethnicity distribution of the
students served under IDEA and the general population of students. These included the following:

- **Asian/Pacific Islander** students represented 3.8% of the general population, but they comprised only 1.7% of those receiving special education services in all disability categories. This percentages varied by disability category: in the areas of hearing impairments (4.6%), autism (4.7%), and deaf-blindness (11.3%), the representation of Asian/Pacific Islander students was greater than their representation in the resident population.

- **Black (non-Hispanic)** students accounted for 14.8% of the general population, compared with 20.2% of the special education population in all disabilities. In 10 of the 13 disability categories, the percentage of the special education population composed of black students equaled or exceeded the resident population percentage. At the most extreme, black students’ representation in the mental retardation and developmental delay categories was more than twice their national population estimates.

- Representation of **Hispanic** students in special education (13.2%) was generally similar to the percentages in the general population (14.2%). However, Hispanic students exceeded the resident population percentages in three categories: specific learning disabilities (15.8%), hearing impairments (16.3%), and orthopedic impairments (14.4%).

- **American Indian** students represented 1.0% of the general population and 1.3% of special education students. They slightly exceeded the national average in nine disability categories, reaching the largest percentages in the categories of deaf-blindness (1.8%) and traumatic brain injury (1.6%).

- Overall, **white (non-Hispanic)** students made up a slightly smaller percentage (63.6%) of the special education students than the general population (66.2%). However, their representation was higher than the national population estimates in five disability categories: speech and language impairments (68.3%), orthopedic impairments (67.2%), other health impairments (75.8%), visual impairments (69.5%), and traumatic brain injury (70.2%).

**United Kingdom (England).** Table 4.3 outlines the primary school statistics for 2007 in England on the number of pupils with special educational needs by ethnicity. (It will be noted that England does not keep statistics comparable to those kept in the US).
From this table it can be seen that the ethnic groups with the highest percentages of students classified as having special educational needs were Travellers of Irish heritage (2.6% with statements and an incredible 55.5% without statements), closely followed by Gypsy/Roma students (2.5% and 49.2%, respectively). At the other end of the continuum were Chinese students (1.2% and 11.1%, respectively) and Indian students (1.2% and 14.2%). By comparison, the figures for the majority group, White British, were 1.8% and 20.0%, respectively.

In a recent UK study, Strand & Lindsay (2009) analysed the 2005 Pupil Level Annual School Census for 6.5 million students aged 5 to 16 years in England. They found that poverty and gender had stronger associations than ethnicity with the overall prevalence of SWSEN. However, after controlling for these effects, significant over- and under-representation of some minority ethnic groups relative to White British students remained. The nature and degree of these disproportionalities varied across categories of special educational needs and minority ethnic groups and were not restricted to judgmental categories of special educational needs.

In another study, Read et al. (2007) also focused on disabilities, reporting the following, *inter alia*:

a. *Black Caribbean* and *Mixed White and Black Caribbean* pupils were around 1.5 times more likely to be identified as having Behavioural, Emotional and Social Difficulties (BESD) than White British pupils;

b. *Bangladeshi* pupils were nearly twice as likely to be identified as having Hearing Impairments than White British pupils,

c. *Pakistani* pupils were between 2 and 2.5 times more likely to be identified as having Profound and Multiple Learning Difficulties, Visual Impairments, Hearing Impairments or Multi-sensory Impairments than White British pupils;

d. *Asian* and *Chinese* pupils were less likely than *White British* pupils to be identified as having Moderate Learning Difficulties, Specific Learning Difficulties and Autistic Spectrum Disorders; and

e. *Travellers of Irish Heritage* and *Gypsy/Roma* pupils were overrepresented among many categories of special educational needs, including Moderate, and Severe Learning Difficulties and BESD.
### Table 4.3. Maintained primary schools’ number of pupils with special educational needs by ethnic group in England (January 2007)

<table>
<thead>
<tr>
<th>Ethnic group</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>2,666,330</td>
<td>46,530</td>
<td>1.7</td>
<td>357,110</td>
<td>178,070</td>
<td>6.7</td>
<td>535,180</td>
<td>20.1</td>
<td></td>
</tr>
<tr>
<td>White British</td>
<td>2,545,340</td>
<td>44,770</td>
<td>1.8</td>
<td>338,810</td>
<td>169,910</td>
<td>6.7</td>
<td>508,720</td>
<td>20.0</td>
<td></td>
</tr>
<tr>
<td>Irish</td>
<td>11,760</td>
<td>230</td>
<td>1.9</td>
<td>1,570</td>
<td>870</td>
<td>7.4</td>
<td>2,440</td>
<td>20.7</td>
<td></td>
</tr>
<tr>
<td>Traveller (Irish)</td>
<td>2,840</td>
<td>70</td>
<td>2.6</td>
<td>940</td>
<td>640</td>
<td>22.5</td>
<td>1,580</td>
<td>55.5</td>
<td></td>
</tr>
<tr>
<td>Gypsy / Roma</td>
<td>5,370</td>
<td>140</td>
<td>2.5</td>
<td>1,630</td>
<td>1,010</td>
<td>18.8</td>
<td>2,640</td>
<td>49.2</td>
<td></td>
</tr>
<tr>
<td>Other White</td>
<td>101,000</td>
<td>1,320</td>
<td>1.3</td>
<td>14,160</td>
<td>5,650</td>
<td>5.6</td>
<td>19,800</td>
<td>19.6</td>
<td></td>
</tr>
<tr>
<td>Mixed</td>
<td>122,450</td>
<td>2,090</td>
<td>1.7</td>
<td>16,780</td>
<td>8,240</td>
<td>6.7</td>
<td>25,030</td>
<td>20.4</td>
<td></td>
</tr>
<tr>
<td>W &amp; B Caribbean</td>
<td>40,770</td>
<td>740</td>
<td>1.8</td>
<td>6,470</td>
<td>3,280</td>
<td>13.3</td>
<td>508,720</td>
<td>20.0</td>
<td></td>
</tr>
<tr>
<td>W &amp; B African</td>
<td>13,330</td>
<td>190</td>
<td>1.4</td>
<td>1,920</td>
<td>960</td>
<td>7.2</td>
<td>2,880</td>
<td>21.6</td>
<td></td>
</tr>
<tr>
<td>W &amp; Asian</td>
<td>25,500</td>
<td>370</td>
<td>1.4</td>
<td>2,730</td>
<td>1,230</td>
<td>4.8</td>
<td>3,960</td>
<td>15.5</td>
<td></td>
</tr>
<tr>
<td>Other mixed</td>
<td>42,860</td>
<td>790</td>
<td>1.8</td>
<td>5,670</td>
<td>2,780</td>
<td>6.5</td>
<td>8,450</td>
<td>19.7</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>276,540</td>
<td>4,030</td>
<td>1.5</td>
<td>39,770</td>
<td>14,400</td>
<td>5.2</td>
<td>54,170</td>
<td>19.6</td>
<td></td>
</tr>
<tr>
<td>Indian</td>
<td>78,720</td>
<td>910</td>
<td>1.2</td>
<td>8,480</td>
<td>2,720</td>
<td>3.5</td>
<td>11,200</td>
<td>14.2</td>
<td></td>
</tr>
<tr>
<td>Pakistani</td>
<td>114,780</td>
<td>2,070</td>
<td>1.8</td>
<td>20,060</td>
<td>7,620</td>
<td>6.6</td>
<td>27,670</td>
<td>24.1</td>
<td></td>
</tr>
<tr>
<td>Bangladeshi</td>
<td>48,170</td>
<td>670</td>
<td>1.4</td>
<td>7,460</td>
<td>2,730</td>
<td>5.7</td>
<td>10,190</td>
<td>21.2</td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>11,040</td>
<td>140</td>
<td>1.2</td>
<td>880</td>
<td>350</td>
<td>3.2</td>
<td>1,230</td>
<td>11.1</td>
<td></td>
</tr>
<tr>
<td>Other Asian</td>
<td>34,870</td>
<td>390</td>
<td>1.1</td>
<td>3,770</td>
<td>1,330</td>
<td>3.8</td>
<td>5,100</td>
<td>14.6</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>151,990</td>
<td>2,870</td>
<td>1.9</td>
<td>26,450</td>
<td>12,730</td>
<td>8.4</td>
<td>39,180</td>
<td>25.8</td>
<td></td>
</tr>
<tr>
<td>Black Caribbean</td>
<td>47,230</td>
<td>1,020</td>
<td>2.1</td>
<td>8,900</td>
<td>4,830</td>
<td>10.2</td>
<td>13,730</td>
<td>29.1</td>
<td></td>
</tr>
<tr>
<td>Black African</td>
<td>88,210</td>
<td>1,510</td>
<td>1.7</td>
<td>14,690</td>
<td>6,460</td>
<td>7.3</td>
<td>21,150</td>
<td>24.0</td>
<td></td>
</tr>
<tr>
<td>Other Black</td>
<td>16,550</td>
<td>350</td>
<td>2.1</td>
<td>2,860</td>
<td>1,440</td>
<td>8.7</td>
<td>4,300</td>
<td>26.0</td>
<td></td>
</tr>
<tr>
<td>Other ethnic grp</td>
<td>40,110</td>
<td>560</td>
<td>1.4</td>
<td>5,960</td>
<td>2,320</td>
<td>5.8</td>
<td>8,270</td>
<td>20.6</td>
<td></td>
</tr>
<tr>
<td>Classified</td>
<td>3,268,470</td>
<td>56,200</td>
<td>1.7</td>
<td>446,940</td>
<td>216,120</td>
<td>6.6</td>
<td>663,060</td>
<td>20.3</td>
<td></td>
</tr>
<tr>
<td>Unclassified</td>
<td>35,910</td>
<td>680</td>
<td>1.9</td>
<td>5,460</td>
<td>2,720</td>
<td>7.6</td>
<td>8,180</td>
<td>22.8</td>
<td></td>
</tr>
</tbody>
</table>

All pupils | 3,304,370 | 56,880 | 1.7 | 452,400 | 218,830 | 6.6 | 671,230 | 20.3 |

*Source: School Census*

**Key**

1. Total pupils
2. Pupils with statements of special educational needs
3. % of pupils by SEN provision expressed as a percentage of total pupils according to ethnic group
4. Pupils with SEN at School Action
5. % of pupils by SEN provision expressed as a percentage of total pupils according to ethnic group
6. Pupils with SEN at School Action Plus
7. % of pupils by SEN provision expressed as a percentage of total pupils according to ethnic group
8. Total pupils with SEN without statements
9. % of pupils by SEN provision expressed as a percentage of total pupils according to ethnic group

### 4.1.2 Explanations for ethnic disproportionality

Despite consistent documentation of the existence of disproportionality across many countries, there has been relatively little exploration of the possible causes and factors contributing to racial disparities in special education (Skiba et al., 2005).

Before exploring possible explanations for ethnic disproportionality, it is necessary to consider quite a serious caveat regarding its evidential basis – at least that coming out of the US. Thus, MacMillan & Rechsl (1998) have argued that the over-
representation of ethnic minorities in special education issue is not a straightforward matter. In their critique of the US literature, they argued that data suffer from four major problems. Firstly, quite different results are obtained when percentages of groups in categories or programmes are used, compared with the more commonly cited data on percentage of categories or programmes by groups. Secondly, they urge caution in relying on aggregated data on race/ethnicity from sources that use different approaches to recording these features (in a related point, they note that most data collection fails to account for biracial students). Thirdly, in noting the considerable variability in rates of disability across states, particularly in categories requiring subjective judgements, they question the validity of these designations. Fourthly, they note the failure to consider that social class, rather than race/ethnicity, may be the more significant variable to focus on when considering over-representation.

However, if we accept that since ethnic disproportionality seems to be a universal phenomenon, it is highly likely to be a valid construct and it is therefore appropriate to turn our attention to possible explanations for it. These are many and varied and include such factors as poverty, socioeconomic disadvantage, the lack of congruence between minority cultures and the school culture, the legacy of deficit thinking about racial minorities, bias towards racial minorities, the history of school segregation (at least in the US), resource inequalities, asynchronous power relationships between school authorities and minority parents, culturally inappropriate or insensitive assessment practices, and inadequate professional development opportunities for teachers (Elementary and Middle Schools Technical Assistance Center, 2010; Fiedler et al., 2008; Gabel et al., 2009; Losen & Orfield, 2002; Skiba et al., 2005).

It is to the first of these explanations – poverty – that we shall now turn our attention. The consistent overlap of race and poverty in the US has led some to suggest that race is simply a ‘proxy’ for poverty and that ‘ethnic disproportionality in special education is in large measure an artefact of the effects of poverty’ (Skiba et al., 2005, p.130). Indeed, some writers think that the link between poverty and race is so strong that the former could be used as a substitute for the latter in collecting demographic data for the purposes of predicting educational outcomes (Hodgkinson, 1995).

Support for a race--poverty connection in explaining disproportionality in special education can be found in a range of sources. Firstly, the U.S. Bureau of the Census 2001 data showed that whereas 14.4% of White children lived in homes at or below the
poverty line in 2000, 30.4% of African American children and 29.2% of Latino children lived in families below the poverty level (Skiba et al., 2005). As mentioned above, MacMillan & Reschly (1998) argued that insufficient attention has been paid to variations in special education disproportionality by social class and that ‘social class, and not ethnicity, would explain more variance in the rates of detection for these high-incidence disabilities, particularly MMR [mild mental retardation]’ (p. 20).

Skiba et al., 2005) have presented a detailed analysis of the reasoning behind claims that disadvantages associated with poverty constitute a primary contribution to minority over-representation in special education. They argued that there are at least four assumptions implicit in a logical sequence linking poverty and disproportionality:

1. Minority students are disproportionately poor and hence are more likely to be exposed to a variety of sociodemographic stressors associated with poverty.
2. Factors associated with living in poverty leave children less developmentally ready for schooling and ultimately yield negative academic and behavioral outcomes.
3. Students who are low achieving or at risk for negative behavioral outcomes are more likely to be referred to, and ultimately found eligible for, special education service.
4. Therefore, poverty is an important contributing factor that increases the risk, presumably in a linear fashion, of special education placement for minority students (p.131).

Skiba et al. went on to argue that, given such a logical sequence, it might be assumed that if the first three propositions are proven, the fourth can be inferred. In a closely reasoned argument, they concluded that even a relatively substantial overlap between poverty, race, and achievement does not guarantee a strong association between poverty and minority placement in special education. They concluded that poverty makes only a weak and inconsistent contribution to the prediction of disproportionality across a number of disability categories, and that ‘where poverty makes any contribution to explaining disproportionality, its effect is primarily to magnify already existing racial disparities’ (p.141).

4.1.3 Addressing the problem of disproportionality
There are two main ways of addressing disproportionality –through legislation and regulation and through actions at the school level.
Legislation and regulation. In the US, the most recent reauthorisation of IDEA 2004 made several statutory provisions to address the problem of disproportionality. Firstly, it required states and local education agencies to develop policies and procedures to prevent the over-identification of students with racial, cultural, ethnic, and linguistic diversity (RCELD). Secondly, it required school districts to gather and analyse data and identify disproportionality across disability categories, in special education placements, and in disciplinary actions. Thirdly, local education agencies with high rates of students with RCELD in special education are required to implement early identification services and to reserve a maximum amount of federal funds (15%) for early intervention services. Finally, the Office of Special Education Programs in the Department of Education was required to monitor state compliance with the IDEA regulations by reviewing state data on performance indicators, including two directly related to disproportionality (Fiedler et al., 2008). As well, The Department of Education's Office of Civil Rights (OCR) undertakes pro-active compliance reviews of disproportionate representation. This office gathers information on the racial breakdown of general and special education enrolments in districts and states. If disparities occur in these data, it works with the relevant districts to create an action plan to rectify the situation and a time schedule to report back to OCR (Elementary and Middle Schools Technical Assistance Center, 2010).

Actions at the school level. There is an extensive literature on how schools can prevent underachievement and failure at the school level among ethnic minorities, thus obviating the need for special education placement. Research has shown that reducing disproportionality requires a comprehensive approach that encompasses teacher education, culturally appropriate assessment and instruction, cultural sensitivity, home and school collaboration, and an effective pre-referral process. It is beyond the scope of the present review to undertake a thorough review of this literature; however, a brief reference to some representative studies is included to give something of the tone of work in this area.

Before presenting these, the writer would like to observe that, for the most part, the principles described are relevant to all students, not just those from ethnic minorities. The truism that ‘good teaching is good teaching’ surely applies: the principles of learning and pedagogy apply similarly to all students. Just as the question of whether SWSEN require distinctive teaching strategies was answered both in the
affirmative and the negative in Chapter Ten, the same surely applies with respect to students from ethnic minorities: ‘Yes’ they need culturally appropriate teaching, but ‘No’ they share the same needs with other students for sound, evidence-based teaching; the goals - a marked and measurable change in educational outcomes - surely remain the same.

Writing on behalf of the National Center for Culturally Responsive Educational Systems (http://nccrest.org), Garcia & Ortiz (2006) have presented a comprehensive overview of how disproportionate representation can be prevented ‘through culturally and linguistically responsive pre-referral interventions’ (p.1). By ‘pre-referral’, they mean taking steps to avoid referring students for special education by ‘differentiating students with disabilities from those whose academic or behavioral difficulties reflect other factors, including inappropriate or inadequate instruction’ (p.4). Others to have identified pre-referral intervention as a successful way to decrease the number of inappropriate referrals for minority students include Schrag & Henderson (1996).

Garcia & Ortiz noted that the concept of pre-referral intervention is similar to the ‘response to intervention’ model (to be outlined in the next chapter of the present review). In making their case, they argued that it is critical that the pre-referral intervention process is culturally and linguistically responsive; that is, educators must ensure that students’ socio-cultural, linguistic, racial/ethnic, and other relevant background characteristics are addressed at all stages, including reviewing student performance, considering reasons for student difficulty or failure, designing alternative interventions, and interpreting assessment results (p.4).

Garcia & Ortiz went on to specify key elements of culturally- and linguistically-responsive pre-referral intervention for culturally and linguistically diverse students. These included the following:

- schools should recognise the fact that all students have cultures composed of social, familial, linguistic, and ethnically-related practices that shape the ways in which they see the world and interact with it;
- all educators should share responsibility for educating all students, through culturally responsive curricula and instruction and by creating learning environments in which their culturally and linguistically diverse students can be successful;
- educators should recognise that culturally and linguistically diverse learners are best served by curricula and instruction that build on their prior socio-cultural
and linguistic knowledge and experiences;

- schools should offer an array of programmes and services that accommodate the unique learning characteristics of specific groups of students, including community-based programmes and support services;
- educators should create collaborative relationships with students and their families, by recognising parents/family members as valuable partners in promoting academic progress and by working with them from a posture of cultural reciprocity;
- school authorities should develop effective professional development programmes for educators, which gives attention to participants’ cultural self-awareness, attitudes/expectations, beliefs, knowledge, and skills, as well as the socio-political contexts of education in culturally and linguistically diverse communities;
- schools should implement early intervention strategies as soon as learning problems are noted.

To this list many others could be added. One that is particularly worthy of attention is contained in a recent publication by Fiedler et al. (2008), who referred to Wisconsin’s Checklist to Address Disproportionality in Special Education (CADSE). This checklist has three broad sections:

1. Culturally responsive beliefs and practices of schools and general education classrooms.
2. Culturally appropriate coordinated early intervening services and referral to special education.
3. Culturally responsive IEP team decision-making evaluation and determination of eligibility.

4.2 Over-representation of Males in Special Education

While there is clear international evidence of a gender imbalance in the incidence of disabilities and in special education enrolments, its causes are not so clear. In this section, the research findings showing gender differences, possible causes and educational implications will be outlined.
The principal sources of information for this section are a paper by Oswald et al. (2003), with its focus on special education, and an extensive report on boys’ underachievement by Younger et al. (2005); others will be cited where relevant.

It should be noted from the outset that in the field of special education, some writers portray the gender imbalance as reflecting either or both an over-identification of males and an under-identification of girls (Wehmeyer & Schwartz, 2001). Also, at least one writer (Evans, 2000) has interpreted the gender imbalance to mean that boys receive more resources than girls to help them gain more access to the curriculum.

4.2.1 Research findings on gender imbalance in special education

There is abundant evidence from many countries to show that there are significant gender differences in achievement levels and access to special education.

*United States.* In their reviews of predominantly US literature, Oswald et al. (2003), Frombone (2005) and Yeargin-Allsopp et al. (2007) reported the following:

- Since the 1960s, the overall male to female ratio in special education has been between 2:1 and 3:1.
- For only a few childhood disorders are prevalence rates higher for girls than boys (e.g., separation anxiety, selective mutism, neural tube defects (NTD), and translocation Down syndrome). With respect to NTD, females are affected 3-7 times as frequently as males, except for sacral-level NTDs, which are about equal (Liptak, 2007). Translocation Down syndrome was represented by females at 74% compared with males at 26% (Roizen, 2007).
- Only for deaf/blindness are boys identified at about the same rate as girls (49.5%);
- For other impairments or disabilities, males predominate: (a) hearing impairments (52%), (b) orthopedic impairments (54%), (c) deafness (54%), (d) other health impairments (56%), (e) visual impairments (56%), (f) mental retardation (secondary school) (58%), (g) speech impairments (60%), (g) multiple disabilities (65%), (h) learning disabilities (73%), and (i) emotional disorders (76%). Also, as reported by Yeargin-Allsopp (2007), ADHD has a 4:1 ratio of males to females and cerebral palsy a ratio between 1.1:1 and 1.5:1. Roizen (2007) reported that trisomic Down syndrome was represented by males at 59% and females at 41%.
In several studies of gender ratios in autism, the male/female ratio varied from 1.33:1 to 16:1, with a mean ratio of 4.3:1. Gender differences were more pronounced when not associated with mental retardation. In 13 studies where the sex ratio was available within the normal band of intellectual functioning, the median sex ratio was 5.5:1. Conversely, in 12 studies, the sex ratio was 1.95:1 in the group with autism and moderate to severe mental retardation.

Also drawing upon US research, the American Psychiatric Association (2000) has reported a predominance of males with mental retardation (the male/female ratio was about 1.5:1) and ADHD (estimates ranged from 4:1 to 9:1).

**United Kingdom.** In England, too, there is clear evidence of a gender imbalance in special education statistics, according to the National Pupil Database Version 2.2 (combining 2003 PLASC data and final 2002 attainment data), the Department for Children, Schools and Families (2007) and articles by Daniels et al. (1999), and Eason (2002):

- 68% of the 88,000 students in special schools were boys;
- of those with formal statements, 72% were boys and 28% girls; expressed another way, 21.4% of boys had special educational needs without a statement, compared with 12.6% of girls, while 2.5% of boys had a statement of special educational needs, compared with 1.0% of girls;
- almost five times as many boys as girls were expelled from school;
- of the more than 1.5 million students who were defined as having special educational needs, 64% were boys and 36% were girls;
- girls and boys were more or less equally likely to have physical disabilities, but boys were far more likely than girls to have specific learning difficulties, autistic disorders or emotional or behavioural problems.

**OECD.** The OECD (2005), too, has reported gender imbalances across a range of countries. Using its three-way categorisation, described in Chapter Three, it found that the median percentages for boys were: 61.3% in category A (disabilities), 66.78% in category B (difficulties), and with a typical range for category C (disadvantages) of between 50 and 60%. It also noted that the gender imbalance for Category A was most marked for autistic spectrum disorders, emotional and behavioural difficulties, and learning difficulties, and was the least marked for hearing impairments.
4.2.2 Boys’ underachievement

As well as the above findings from special education, there is an extensive literature on boys’ underachievement at school. While it is not within the scope of the present review to deal with this literature in depth, it does serve to contextualise the special education findings by showing that gender imbalances are pervasive and are of widespread concern. An excellent review of this literature can be found in a Cambridge University report authored by Younger et al. (2005). In their survey of the international literature on boys’ academic underachievement, they included the following points:

- In the United Kingdom, national performance data have shown a ‘gender gap’ between the levels of boys’ and girls’ performance, whether at the age of 7 in reading and writing or at the age of 16, in virtually all GCSE subjects. As well, there is evidence that more boys than girls are disengaged, that more discipline problems are perceived to be caused by boys, and that more boys are excluded from secondary schooling.
- In Australia, there are references to ‘underachieving and under privileged’ boys and of boys as the ‘new disadvantaged’.
- In the United States, there are concern around the theme of how to ‘protect’ boys, and on how teachers, counsellors and therapists might identify and respond to boys’ hidden despondency and depression.
- In mainland Europe, there are similar concerns. For example, in Belgium, research suggests that boys’ culture is less study oriented than girls’ and that this impacted upon achievement levels in secondary schooling; in Sweden, there has been a concern with the need to develop boys’ social competence and democratic understanding; while in Germany girls have been obtaining better school marks than boys, repeating classes less often and gaining school certificates more successfully.

4.2.3 Possible causes of gender imbalance

In addressing the question of the over-representation of males in special education and the corollary phenomenon of more underachievement among boys, a range of reasons have been advanced (Wehmeyer & Schwartz, 2001; Oswald et al., 2003; OECD, 2005; Younger et al., 2005):
a **Biological factors.** According to Oswald et al. (2003), early explanations emphasised physiology and sex-linked genetic characteristics. The case for a biological basis appeals to gender differences in such factors as genetics, hormones, brain function, and maturation and development. In support of this explanation, Oswald et al. cited reports which document higher rates among boys for foetal mortality, postnatal mortality, complications during pregnancy and childbirth, and congenital malformations. They noted that males are at increased risk for X-linked disorders because they receive only one copy of the X chromosome from their parents, whereas females receive two; thus having a better chance of receiving at least one unaffected copy of the X chromosome. On balance, they claimed that the biological hypothesis for gender disproportionality had the strongest support in the case of mental retardation. They also pointed out that many studies have suggested that overrepresentation of males in special education, and male predominance in childhood psychiatric disorders and learning disabilities, occur because boys mature more slowly than girls. As well, they cited writers who hypothesise pervasive hormone effects on behaviour that extend well beyond sexual and reproductive behaviours.

This latter point was taken up by Younger et al. (2005) when they noted the existence of brain differences between girls and boys with links to boys’ testosterone and the ‘natural’ development of boys. Similarly, they cited researchers who have argued for a biological construction of masculinity, with studies showing behavioural sex differences at a very early age, before children are able to form any notions of socially constructed gender.

b **Unacceptable behaviour patterns.** Several writers have referred to the tendency for more boys than girls to exhibit behaviour patterns (such as externalising their feelings) that are considered by teachers and other professionals to be socially unacceptable and thus are more likely to lead to special education referrals (OECD 2005, Oswald et al., 2003). Thus, there may be a gender bias in referrals and admissions. A related point, advanced by some writers, is that schooling is becoming feminised (OECD 2005 p. 140), and, possibly a corollary, that masculine behaviours exhibited by boys are less acceptable (OECD, 2005).
Related points were made by Younger et al. (2005) when they cited studies indicating boys’ disregard for authority, academic work and formal achievement and the formation of concepts of masculinity which are in direct conflict with the ethos of the school.

c Peer influences. One of the crucial factors leading to boys’ underachievement, according to Younger et al. (2005), is the importance for many boys to be accepted by other boys, to enable them to identify with and act in line with peer group norms, so that they are seen as belonging, rather than as different. Such acceptance is often dependent on showing behaviours, speech, dress and body language that incorporate aspects of ‘laddishness’ and risk-taking to gain and protect a macho image. Such laddishness often runs counter to the expectations of the school.

d Learning strategies. Younger et al. (2005) described studies showing gender differences in attitudes to work, goals and aspirations and learning strategies. With respect to the last point, girls placed more emphasis on collaboration, talk and sharing, whilst boys were neither competitive nor team players. They were unwilling to collaborate to learn, and were less inclined to use cooperative talk and discussion to aid and support their own learning.

e Underidentification of girls. A corollary of point b above may occur because the problems that girls present are not recognised by school personnel as the type of problem typically identified under current definitions of emotional disorders. Commonly used measures for assessing these in schools may not capture the emotional and behavioural problems that are more common in girls (e.g., adolescent depression) (Oswald et al., 2003).

f School factors. Writing from an English perspective, Daniels, et al. (1999) noted that overall patterns of gender imbalance obscured considerable inter-school variability, with ratios of girls to boys varying from 1:1 to 1:8. The authors argued that there is thus a need to investigate what aspects of schools give rise to such disparities. Perhaps they arise from factors such as those outlined in b above.

g Ethnicity. Here, two sets of findings need to be considered. Firstly, in the UK, Daniels et al. (1999) reported that gender differences were much greater among whites than among blacks, suggesting that both gender and race should be
considered simultaneously. Secondly, in the US, Oswald et al. (2003) noted a similarity of gender disproportionality across racial/ethnic groups, regardless of disability condition. This finding suggests that, whatever the forces are that influence gender disproportionality, they act on all racial/ethnic groups in a similar fashion.

Students’ age. There is some evidence that gender ratios are influenced by students’ age. Phipps (1982), for example, found that disproportionality was greatest among children aged 5–11, during which time referral rates for boys appear to surge. Before and after that, identification rates for boys and girls were much more similar.

Rather unsatisfactorily, perhaps, Oswald et al. (2003) concluded their review of the literature with the statement that

the question of whether gender disproportionality reflects actual differences between boys and girls or is the result of environment and cultural influences manifested in teacher–student interactions remains unresolved (p.226).

4.2.4 Educational implications of gender imbalances

The first point to be made here is to recognise that although there are clear gender differences in the incidence of many disabilities and that, on the whole, boys are at greater risk for underachievement and special education referral, there are considerable overlaps between the genders. By no means are all boys underachievers or identified as having special educational needs, nor are all girls outside these categories.

Educators should recognise that, in general, boys are biologically at higher risk than girls for certain disabilities. Apart from recognising the causation of such disabilities, and not searching for environmental explanations, teachers must accommodate their teaching to take any associated learning difficulties into account. This might mean, for example, allowing for the fact that boys tend to mature more slowly than girls by making appropriate adjustments to the curriculum and teaching strategies.

In the case of students whose special educational needs are more clearly associated with environmental factors, schools should carefully evaluate their policies and procedures to deal with these factors. For example, the school and classroom disciplinary procedures may be biased against boys and there may be insufficient
attempts to deal with aspects of boys’ culture that are inimical to boys acquiring more socially acceptable behaviour or more appropriate academic motivation.

Turning to the possibility of girls being unidentified as having special educational needs, schools and those responsible for assessing students’ needs for special support should re-examine their criteria to ensure that problems that girls may have are not overlooked.

For more detailed analyses and suggestion relating to addressing boys’ underachievement, the reader is referred to Younger et al. (2005).

### 4.3 Summary

1. Disproportionality, or disproportionate representation, is generally defined as the representation of a particular group of students at a rate different than that found in the general population.
2. There is an irony in considering over-representation to be a problem if students are purportedly gaining the advantage of special education.
3. There is clear international evidence of disproportionality of students from ethnic minority backgrounds in special education.
4. However, some caveats have been entered regarding the evidential basis of ethnic disproportionality— at least that coming out of the US.
5. The consistent overlap of race and poverty in the US has led some to suggest that race is simply a proxy for poverty and that ethnic disproportionality in special education is in large measure an artefact of the effects of poverty. However, the evidence suggests that where poverty makes any contribution to explaining disproportionality, its effect is primarily to magnify already existing racial disparities.
6. There is an extensive literature on how schools can prevent underachievement and failure at the school level, thus obviating the need for special education placement.
7. There is clear international evidence of a gender imbalance in the incidence of disabilities, special education enrolments and academic achievement.
8. Since the 1960s, the overall male to female ratio in special education has been between 2:1 and 3:1.
9. Some writers portray the gender imbalance as reflecting either or both an over-identification of males and an under-identification of girls.
10. In addressing the question of the over-representation of males in special education and the corollary phenomenon of more underachievement among boys, a range of reasons have been advanced. These include:
a  biological factors
b  unacceptable behaviour patterns
c  peer influences
d  learning strategies
e  under-identification of girls
f  school factors
g  ethnicity
h  students’ age

11. Educators should recognise that, in general, boys are biologically at higher risk than girls for certain disabilities and should accommodate their teaching to take any associated learning difficulties into account.

12. In the case of students whose special educational needs are more clearly associated with environmental factors, schools should carefully evaluate their policies and procedures to deal with these factors.

13. Schools and those responsible for assessing students’ needs for special support should re-examine their criteria to ensure that problems that girls may have are not overlooked.