

Data Analysis of Racial/Ethnic Disproportionality in Special Education

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Objectives

- Develop a workable understanding of special education disproportionality
- Look at disproportionality through in-depth data analysis
 - Methods of data analysis
 - Levels of data analysis

Disproportionality Is:

The over-representation of specific groups in special education programs in relation to their representation in the overall enrollment, and/or the under-representation of specific groups in accessing intervention services, resources, programs, rigorous curriculum and instruction.

Disproportionality Looks Different in Different Districts

- The over-identification of culturally and linguistically diverse (CLD) students as disabled or under-identification as gifted and/or talented
- The over-identification of certain CLD populations in specific special education categories, such as ED, LD, SLI, or OHI

Disproportionality Looks Different in Different Districts

- The overrepresentation of CLD students receiving special education services in more restrictive classroom environments or segregated programs
- Significant discrepancies in the number of incidences, duration, and types of disciplinary actions, including suspensions and expulsions, experienced by CLD students compare to other students

Conducting an initial analysis of the special education data

SPECIAL EDUCATION DATA

Methods of Data Analysis

- Three main data tools (calculations) are used to explore special education data:
 - Risk Index
 - Composition Index
 - Relative Risk Ratio

Risk Index

The risk index identifies at what rate, or amount of risk students of a particular racial/ethnic group have of falling into a particular category

- What is the rate in which Black students are classified disabled, or how likely is it that a Black student will be classified as having a disability?
- What is the rate in which Black students with disabilities are suspended for more than 10 days, or how likely is it that a Black student with a disability will be suspended for more than 10 days?

Composition Index

The composition index gives the proportion of students by race/ethnicity in a particular category

Of the total district population, what percentage are Black students?

Of the total SWD population, what percentage are Black students?

Of the total suspended SWD population, what percentage are Black students?

Composition Index (cont.)

- Composition indexes are used to determine if a particular group is over or under represented in special education, in a particular disability, in a particular classroom setting, or in particular discipline practice

Relative Risk Ratio

Relative risk ratios give a comparison of risk for one group in relation to the risk for all other groups

- How much more likely is it for Black students to be classified disabled compared to all other students?
- How much more likely is it for Black students with disabilities to be suspended for more than 10 days compared to all other students with disabilities?

Relative Risk Ratio

- We utilize measures of risk (risk index) to answer questions about the likelihood of students in a given racial/ethnic group receiving a particular treatment or experiencing a particular outcome
- A relative risk ratio (risk ratio) is a *comparison of the risks* of a particular racial/ethnic group receiving a particular treatment or experiencing a particular outcome to the risk of the remaining racial/ethnic group receiving the same treatment or experiencing the same outcome

Relative Risk Ratio

- Using Relative Risk Ratios we are able to answer questions such as:
 - How much more likely is it that a student from a particular racial or ethnic group will be classified as disabled relative to students in other racial or ethnic groups?
 - How much more likely is it that a student from a particular racial or ethnic group will be classified with a specific disability relative to students in other racial or ethnic groups?
 - How much more likely is it that a SWD from a particular racial or ethnic group will be placed in a most restrictive environment relative to SWDs in other racial or ethnic groups?
 - How much more likely is it that a SWD from a particular racial or ethnic group will be suspended for more than 10 days relative to SWDs in other racial or ethnic groups?

Calculating Relative Risk

The Idea

The Risk of Black Students
Being Classified SWD
Compared to
The Risk of All Other
Students Being Classified SWD

The Formula

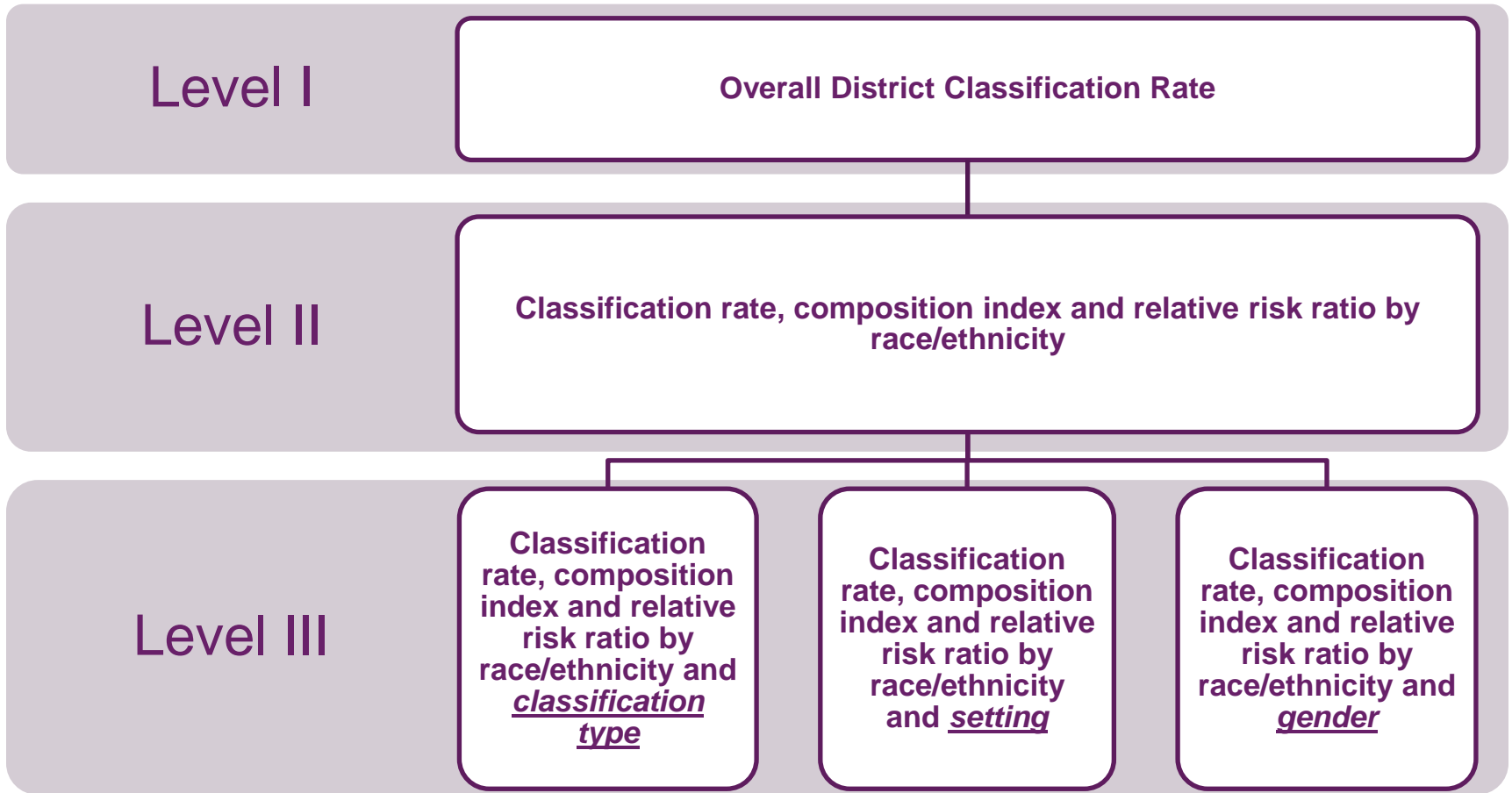
(Black SWD
Black enrollment)

→ [(Total SWD – Black SWD)
(Total enrollment – Black
enrollment)]

Interpreting Relative Risk Ratios

- If a particular racial or ethnic group's Relative Risk Ratio is 2.0, it means that students from that racial or ethnic group are twice as likely to receive a certain treatment relative to other students
- If a particular racial or ethnic group's Relative Risk Ratio is 1.0, it means that students from that racial or ethnic group are equally likely to receive a certain treatment as other students
- If a particular racial or ethnic group's Relative Risk Ratio is 0.50, it means that students from that racial or ethnic group are less than half as likely to receive a certain treatment as other students

Levels of Special Education Data Analysis



Analyzing Special Education Data: Data Requirements

- In order to analyze special education you need to have the following data
 - District enrollment by race and gender
 - Special education enrollment by race and gender, classification, and placement
- The general and special education enrollment data should reflect the same school years; a lack in consistency prevents appropriate analysis

Examining the Results

- After inputting and running the formulas in each section, it is important to examine the results critically
- Attempt to explain your findings (what you have noticed) in the context of the data and current research
- Use the research to help guide your explanations
- What did you notice?
 - Write down what you noticed.
 - What patterns are emerging and what possible problems are becoming apparent?
- Critical Analysis:
 - What are the possible explanations for your findings?

Computing measures of disproportionality

**ANALYZING DISTRICT LEVEL
SPECIAL EDUCATION DATA**

Level 1: Overall Risk

Question 1: What is the overall risk of student being classified with a disability in the school district – i.e., the district classification rate?

Risk Index (Classification Rate) =

Total Number of Students with Disabilities

divided by the

Total Number of Students in the District

Examining your results

- What did you notice?
 - What patterns are emerging and what possible problems are becoming apparent?
- Critical Analysis
 - What are the possible explanations for your findings?

Level 2: Risk Indexes, Compositions Indexes, and Risk Ratios by Race/Ethnicity

Question 2: What is the overall risk of student of a given racial/ethnic group being classified with a disability in the school district – i.e., the district classification rate by race/ethnicity?

Risk Indexes by Race/Ethnicity

Risk Index (Classification Rate) =

Number of Students with Disabilities
of a Given Racial/Ethnic Group

divided by the

Total Number of Students in the District
of the Same Racial/Ethnic Group

Risk Indexes by Race/Ethnicity

	Black	Hispanic	White	Asian	Total*
A. Observed SWD	# classified	# classified	# classified	# classified	Total # classified
B. Total Enrolled	# enrolled	# enrolled	# enrolled	# enrolled	Total # enrolled
Risk Index	$A/B \times 100$	$A/B \times 100$	$A/B \times 100$	$A/B \times 100$	$A/B \times 100$

* Multiracial/Multiethnic and Native American Students are represented in the Totals

Examining your results

- What did you notice?
 - What patterns are emerging and what possible problems are becoming apparent?
- Critical Analysis
 - What are the possible explanations for your findings?

Level 2: Risk Indexes, Compositions Indexes, and Risk Ratios by Race/Ethnicity

Question 3: What is the racial/ethnic composition of SWD compared to the racial/ethnic composition of the entire district?

Composition Indexes by Race/Ethnicity

Number of SWD in a racial group *divided by the*
Total number of SWD
multiplied by 100

Compared to

Number of students in a racial group
divided by the Total number of students
multiplied by 100

Composition of SWD by Race/Ethnicity

Observed Composition Index of District

	Black	Hispanic	White	Asian	Total*
Total Enrollment	A # enrolled	B # enrolled	C # enrolled	D # enrolled	E Total # enrolled
District Composition	$A/E \times 100$	$B/E \times 100$	$C/E \times 100$	$D/E \times 100$	

Observed Composition Index of SWD in District

	Black	Hispanic	White	Asian	Total*
SWD Enrollment	A # classified	B # classified	C # classified	D # classified	E Total # classified
SWD Composition	$A/E \times 100$	$B/E \times 100$	$C/E \times 100$	$D/E \times 100$	

* Multiracial/Multiethnic and Native American Students are represented in the Totals

Examining your results

- What did you notice?
 - What patterns are emerging and what possible problems are becoming apparent?
- Critical Analysis
 - What are the possible explanations for your findings?

Level 2: Risk Indexes, Compositions Indexes, and Risk Ratios by Race/Ethnicity

Question 4: How much more likely is it that a student from a given ethnic/racial group will be identified with a disability?

Relative Risk Ratio: Classification

Write the Formula:

(Black SWD / Black enrollment)

[(Total SWD – Black SWD)

(Total enrollment – Black enrollment)]

Insert the numbers in the appropriate places in the formula:

(___ / ___)

[(___ – ___)

(___ – ___)]

Complete all of the operations inside the parentheses:

(_____)

[(_____)

(_____)]

Divide inside the brackets:

You Can't Fix the Numbers by Fixing the Numbers

- Disproportionality is a condition in districts or schools with deep seeded root causes.
- In order to help districts and schools address disproportionality, additional data should also be collected.

**Looking at Data Is Just the
Beginning...**

Addressing Disproportionality

Initial Data Analysis: Creating a Data Book

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graph TD; A[Initial Data Analysis: Creating a Data Book] --> B[In-depth Exploration: Deeper Inquiry Beyond the Initial Data]; B --> C[Action Research Supported Root Cause Analysis]; C --> D[Action Research Based and Data Informed Solutions];
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In-depth Exploration: Deeper Inquiry Beyond the Initial Data

Action Research Supported Root Cause Analysis

Action Research Based and Data Informed Solutions

Creating a Data Book for Your District or School

- Data books are compilations of all of the relevant district or school data related to disproportionality including:
 - Demographic data
 - Achievement data
 - Special education data
- Each of these sets of data are compiled as a prelude to deeper inquiry

Demographic Data

- What is the current student demographics?

Deeper inquiry:

- What did the student demographics look like 5 years ago?
- Have there been any significant changes to the student demographics?

Achievement Data

- What percentage of each racial/ethnic group reach proficiency in Math and ELA in the district or school?

Deeper inquiry

- What early interventions programs are in place, and how do students get those services?
- To what extent are these interventions implemented with fidelity and consistency?

Special Education Data

- What is the likelihood that a student from a particular racial or ethnic group will be classified as disabled, be given a specific disability classification, or placed in a most restrictive environment?
- What is the likelihood that a student with a disability from a particular racial or ethnic group will be suspended for more than 10 days?

Deeper inquiry

- What is the district referral to classification process?
- What is the district discipline process?
- Are the processes applied to students in the same way?

How do we know if districts are improving?

**LOOKING AT CHANGING
DATA**

Looking at Changing Data

- In looking at changing special education data, the risk ratio and the classification rates have to be analyzed respective of each other
- This is a helpful method to judge whether or district interventions are working to reduce disproportionality

Looking at Changing Data

Risk Index	Relative Risk Ratio	Interpretation	Explanation
Increase	Increase	Disproportionality has increased	The rise in the risk index indicates that the group's risk has increased overall. Furthermore, the increase in the relative risk ratio indicates that the group's risk has increased relative to all other students.
Increase	Decrease	Disproportionality has increased	The rise in the risk index indicates that the group's risk has increased overall. Thus, the decrease in the relative risk is most likely due to the increased risk of another group.

Looking at Changing Data

Risk Index	Relative Risk Ratio	Interpretation	Explanation
Decrease	Increase	Disproportionality has decreased	The reduction in the risk index indicates that the group's risk has decreased overall. The increase in the relative risk indicates that the risk of all other students has decreased to a greater extent.
Decrease	Decrease	Disproportionality had decreased	The reduction in the risk index indicates that the group's risk has decreased overall, which is further evidenced by the decrease in the relative risk.

Where do we go from here?

NEXT STEPS

Questions and Comments

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