

Introduction to the Theory and Measurement of Self-Determination

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Acknowledgment and Citation

- This presentation is based on a 2008 article by Karrie A. Shogren and six co-authors
- “Understanding the Construct of Self-Determination,” *Assessment for Effective Intervention*, vol 33, no 2, March 2008, 94-107
- Dr. Shogren is an associate professor of special education at the University of Kansas
- I have taken the text for some of these slides directly from the article

What is Self-Determination?

- **The National Gateway to Self-Determination (ngsd.org) defines self-determination as:**
“...a characteristic of a person that leads them to make choices and decisions based on their own preferences and interests, to monitor and regulate their own actions, and to be goal oriented and self-directing.”

Objectives of the Shogren et al. Article

- Review the theoretical basis for self-determination scales developed by:
 - The Arc of the United States (the Arc)
 - The American Institutes for Research (AIR)
- Use data on a sample of special education students to investigate the empirical relationship between the two scales
- In addition to discussing the above, I will describe the data inputs for the scales

Two Theories of Self-Determination



The Arc's Concept of Self-Determination (Wehmeyer 1996, etc.)

- Concept is based on a *functional theory of self-determination*, under which self-determined behavior is defined as:

“...volitional actions that enable one to act as the primary causal agent in one's life and to maintain or improve one's quality of life.” (Wehmeyer 2006)
- Four essential characteristics that lead to such actions:
 - Autonomy
 - Psychological empowerment
 - Self-regulation
 - Self-realization

The Functional Theory of Self-Determination

- . . . posits that self-determination emerges as students learn skills (e.g., problem-solving skills) and develop attitudes (e.g., self knowledge) that enable them to be causal agents in their own lives.

The AIR Concept of Self-Determination (Mithaug 1996, etc.)

- Concept is based on *self-determined learning theory*, which focuses on the process through which students become self-determined
- This theory posits that the development of self-determination depends on students' capacity and opportunity to interact with their environments

Capacity and Opportunity

- **Capacity** refers to the knowledge and abilities that enable students to become self-determined
- **Opportunity** refers to the chances that students have at home and at school to apply their knowledge and abilities related to self-determination

Contrasting the Two Theories

- The functional theory of SD focuses on the characteristics that lead people to act in a self-determined manner
 - This is the theoretical basis for the *Arc's Self-Determination Scale*
- SD learning theory focuses on the process through which people become self-determined
 - This is the theoretical basis for the *AIR Self-Determination Scale*

Measuring Self-Determination



The Arc's Self-Determination Assessment

- **A 72-item assessment**
 - **Autonomy: 32 items**
 - **Self-regulation: 9 items**
 - **Psychological empowerment: 16 items**
 - **Self-realization: 15 items**
- **The assessment may be self-administered by a student or administered orally by a teacher**
- **The self-realization section of the assessment is shown on the next slide**

Section Four

Self-Realization

Directions:

Tell whether you think each of these statements describes how you feel about yourself or not. There are no right or wrong answers. Choose only the answer that BEST fits you.

58. I do not feel ashamed of any of my emotions.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree	66. I don't accept my own limitations.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree
59. I feel free to be angry at people I care for.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree	67. I feel I cannot do many things.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree
60. I can show my feelings even when people might see me.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree	68. I like myself.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree
61. I can like people even if I don't agree with them.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree	69. I am not an important person.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree
62. I am afraid of doing things wrong.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree	70. I know how to make up for my limitations.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree
63. It is better to be yourself than to be popular.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree	71. Other people like me.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree
64. I am loved because I give love.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree	72. I am confident in my abilities.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree
65. I know what I do best.	<input type="checkbox"/> Agree	<input type="checkbox"/> Don't agree	Section 4 Subtotal _____		

Arc Total and Component Self-Determination Scales

- A total self-determination scale can be calculated
 - SDS
- Subscales corresponding to the four essential characteristics in the functional theory can also be calculated
 - AUT
 - SREG
 - PSYE
 - SREA

The AIR

Self-Determination Assessments

- Assessments for students, educators, and parents
- 30-item educator assessment
 - 18 items on student's capacities
 - 12 items on student's opportunities at home/school
- 24-item student assessment
 - 12 items on own capacities
 - 12 items on own opportunities at home/school
 - The section of the student assessment on opportunities at home is shown on the next slide

WHAT HAPPENS AT HOME

1. People at home listen to me when I talk about what I want, what I need, or what I'm good at.	Never <input type="checkbox"/> 1	Almost Never <input type="checkbox"/> 2	Sometimes <input type="checkbox"/> 3	Almost Always <input type="checkbox"/> 4	Always <input type="checkbox"/> 5
2. People at home let me know that I can set my own goals to get what I want or need.	Never <input type="checkbox"/> 1	Almost Never <input type="checkbox"/> 2	Sometimes <input type="checkbox"/> 3	Almost Always <input type="checkbox"/> 4	Always <input type="checkbox"/> 5
What Happens at Home – Total Items 1 + 2					
3. At home, I have learned how to make plans to meet my goals and to feel good about them.	Never <input type="checkbox"/> 1	Almost Never <input type="checkbox"/> 2	Sometimes <input type="checkbox"/> 3	Almost Always <input type="checkbox"/> 4	Always <input type="checkbox"/> 5
4. People at home encourage me to start working on my plans right away.	Never <input type="checkbox"/> 1	Almost Never <input type="checkbox"/> 2	Sometimes <input type="checkbox"/> 3	Almost Always <input type="checkbox"/> 4	Always <input type="checkbox"/> 5
What Happens at Home – Total Items 3 + 4					
5. I have someone at home who can tell me if I am meeting my goals.	Never <input type="checkbox"/> 1	Almost Never <input type="checkbox"/> 2	Sometimes <input type="checkbox"/> 3	Almost Always <input type="checkbox"/> 4	Always <input type="checkbox"/> 5
6. People at home understand when I have to change my plan to meet my goals. They offer advice and encourage me when I'm doing this.	Never <input type="checkbox"/> 1	Almost Never <input type="checkbox"/> 2	Sometimes <input type="checkbox"/> 3	Almost Always <input type="checkbox"/> 4	Always <input type="checkbox"/> 5
What Happens at Home – Total Items 5 + 6					

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AIR Total and Component Self-Determination Scales

- **Total scale and subscales for students from the educator assessments**
 - Total: AIR-E
 - Capacity subscale: AIR-EC
 - Opportunity subscale: AIR-EO
- **Total scale and subscales for students from the student assessments**
 - Total: AIR-S
 - Capacity subscale: AIR-SC
 - Opportunity subscale: AIR-SO

Data and Methods for the Empirical Analysis



Purpose of the Empirical Analysis

- **Empirically examine the relationship between the Arc and AIR self-determination scales in order to:**
 - **Better understand the relationship between the two underlying theoretical perspectives**
 - **Provide guidance on the use of the two scales in research and practice**

Data for the Empirical Analysis

- **Subjects: 407 high school students in 6 plains states who were receiving special education services**
 - 42% had developmental disabilities
 - 29% had learning disabilities
- **Students completed the Arc and AIR-S assessments**
- **Their special education teachers completed the AIR-E assessment**

Analytic Methods

- **Correlation analysis of the four Arc subscales and the four AIR subscales**
- **Structural equation modeling of the relationships among the three total scales and the eight subscales**

Reminder of the Scales and Subscales

- **Arc**
 - Total: SDS
 - Subscales: AUT, SREG, PSYE, SREA
- **AIR educator**
 - Total: AIR-E
 - Subscales: AIR-EC, AIR-EO
- **AIR student**
 - Total: AIR-S
 - Subscales: AIR-SC, AIR-SO

Note: We will also refer to the total scales as “higher-order” scales.

Correlation Analysis of Subscales

Correlation Analysis of the Subscales within the Arc's SDS

- **SREG, PSYE, and SREA are strongly intercorrelated**
- **AUT is weakly correlated with the other subscales**
- **Conclusion: autonomy is a more distinct element of the Arc's total self-determination scale than the other three subscales**

Correlation Analysis of the Subscales within AIR-E and AIR-S (part 1)

- **AIR-SC and AIR-SO are strongly correlated**
 - **Conclusion: students who believe that they have strong capacity for self-determination also tend to believe that they have ample opportunity to exercise those capacities**
- **AIR-EC and AIR-EO are weakly correlated**
 - **Conclusion: teachers see little relationship between students' capacity and opportunity for self-determination**
- **Caveat: only opportunity at school was analyzed, not opportunity at home**

Correlation Analysis of the Subscales within AIR-E and AIR-S (part 2)

- **AIR-SC and AIR-EC are weakly correlated**
- **AIR-SO and AIR-EO are weakly correlated**
- **Conclusion: there is little agreement between students and teachers regarding students' capacity for self-determination; likewise for opportunity**

Structural Modeling of Higher-Order Scales



Structural Modeling of Higher-Order Self-Determination Scales

- The model assessed the relationships:
 - among the higher-order scales, SDS, AIR-E, and AIR-S
 - and between each higher-order scale and its respective subscales
 - SDS: AUT, SREG, PSYE, and SREA
 - AIR-E: AIR-EC and AIR-EO
 - AIR-S: AIR-SC and AIR-SO

Results for the AIR Educator Scale, AIR-E

- **AIR-EC and AIR-EO were weakly correlated with AIR-E**
 - Furthermore, the sign of the correlation between AIR-EC and AIR-E was negative
 - These findings do not support the construction of a higher-order self-determination scale based on the teacher assessments of capacity and opportunity
- **AIR-E was dropped from the structural model and replaced with AIR-EC and AIR-EO**

Results for the AIR Student Scale, AIR-S

- **AIR-SC and AIR-SO were positively, significantly, and strongly correlated with AIR-S**
 - **This supports the theory underlying the AIR higher-order self-determination scales--that capacity and opportunity contribute to self-determination**

Results for the Arc's SDS

- **All four subscales of SDS were positively, significantly, and relatively strongly correlated with the higher-order construct**
 - This supports the theory underlying the SDS--that self-determination comprises the four characteristics measured by these subscales
 - The correlation with SDS was distinctly weaker for AUT than was the case for the other subscales

The Relationship Between the Arc's SDS and AIR-S

- Findings from the structural model show that SDS and AIR-S are only moderately correlated
 - This suggests that these two constructs measure distinct aspects of self-determination
 - Those distinct aspects must be linked to differences in the underlying theories

Implications of the Empirical Findings



Implications for Research

- The theoretical underpinnings of both the SDS and the AIR-S were supported by the data
- SDS and AIR-S measure different aspects of self-determination
- Researchers must consider the goals of their research in relation to the theories underlying the SDS and AIR-S to determine which is the more appropriate theory and measure for them to use

Implications for Practice (part 1)

- **The SDS and AIR-S (but not AIR-E) are viable tools for assessing the self-determination of students with disabilities**
- **Practitioners should consider whether they are trying to learn about the autonomy, self-regulation, psychological empowerment, and self-realization of students, or about their capacity and opportunities for self-determined behavior**

Implications for Practice (part 2)

- **Weak correlation between AIR-EC and AIR-EO suggests that teachers may have difficulty creating opportunities for students to develop self-determination skills**

The Authors' Speculations and Conclusions

Speculation

- Is it possible that the AIR-S, given its focus on capacity and opportunity, is measuring the precursors to the development of the characteristics of self-determined behavior?

Conclusions

- **The Arc's SDS and the AIR-S appear to measure different aspects of self-determination**
- **Care must be taken to select the more appropriate measure of self-determination for applications in research and practice**
- **The theoretical perspective adopted will be an important consideration in the choice of measures**

Resources

- The assessments used to calculate the Arc and AIR self-determination scales, along with user guides, are available at:
<http://www.ou.edu/content/education/centers-and-partnerships/zarrow/self-determination-assessment-tools.html>
- Materials from today's discussion are available at:
<http://www.disabilitypolicyresearch.org/Forums> 2 May 15.asp

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