Using the Supports Intensity Scale – Children's Version with Children with Autism and Intellectual Disability

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Support Needs Assessment

- As in the intellectual disability field, the autism spectrum disorder field has begun to focus on the role of individualized supports in classification and enhancing outcomes
- The Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013) shifted classification of ASD from an array of five distinct developmental disorders to a three-level system based on the amount of support required in social communication and restricted, repetitive behavior
  - Level 3 designates the need for very substantial support
  - Level 2 the need for substantial support
  - Level 1 the need for some support

Demographic Characteristics	Autism & Intellectual Disability (N = 2,124)		Intellectual Disability Only (N = 1,861)	
Variable	n	%	n	%
Gender				
Male	1,614	76.0	1,094	58.8
Female	474	22.3	725	39.0
Missing	36	1.7	42	2.3
Data Source				
State ID/DD System	1,459	68.7	1,422	76.4
School District	665	31.3	439	23.6
Age cohort				
5-6	317	14.9	194	10.4
7-8	335	15.8	226	12.1
9-10	462	21.8	300	16.1
11-12	409	19.3	393	21.1
13-14	379	17.8	439	23.6
15-16	199	9.4	285	15.3
Missing	23	1.1	24	1.3
Student's intelligence level				
< 25 or profound	124	5.8	335	18.0
25-39 or severe	482	22.7	379	20.4
40-55 or moderate	776	36.5	544	29.2
55-70 or mild	632	29.8	523	28.1
Missing	110	5.2	80	4.3

Findings

- Children with ID-ASD tended to have:
  - Lower exceptional medical support need scores
  - Higher exceptional behavioral scores

- Similarly, the proportion of children with ID-ASD that had a rating of 2 or higher (the maximum score) on at least one item tended to be lower for medical but higher for behavior

Respiratory care			
Inhalation or oxygen therapy	0	1	2
Postural drainage	0	1	2
Chest physical therapy	0	1	2
Suctioning	0	1	2
Feeding assistance			
Oral stimulation or jaw positioning	0	1	2
Tube feeding (e.g., nasogastric)	0	1	2
Parenteral feeding (e.g., IV)	0	1	2
Skin care			
Turning or positioning	0	1	2
Dressing of open wound(s)	0	1	2
Other exceptional medical care			
Protection from infectious diseases due to immune system impairment	0	1	2
Seizure management	0	1	2
Dialysis	0	1	2
Ostomy care	0	1	2
Lifting and/or transferring	0	1	2
Eating disorders	0	1	2
Therapy services	0	1	2
Allergies	0	1	2
Diabetes management	0	1	2
Other(s) – List all that apply			

Externally directed behavior			
Prevention of tantrums or emotional outbursts	0	1	2
Prevention of assaults or injuries to others	0	1	2
Prevention of property destruction (e.g., fire setting, breaking furniture)	0	1	2
Prevention of stealing	0	1	2
Self-directed behavior			
Prevention of self-injury	0	1	2
Prevention of pica (ingestion of inedible substances)	0	1	2
Prevention of suicide attempts	0	1	2
Sexual behavior			
Prevention of sexual aggression	0	1	2
Prevention of non-aggressive but inappropriate sexual behavior	0	1	2
Other exceptional behavioral concerns			
Prevention of wandering	0	1	2
Prevention of substance abuse	0	1	2
Maintaining mental health treatments	0	1	2
Prevention of truancy	0	1	2
Other(s) – List all that apply _____	0	1	2

Reliability Indices

Age Cohort	Autism & Intellectual Disability			Age Cohort	Intellectual Disability Only		
	Construct	Alpha	Omega		Construct	Alpha	Omega
Total (Item)	HLA	.910	.909	Total (Item)	HLA	.943	.944
	CNA	.934	.936		CNA	.940	.941
	SPA	.924	.929		SPA	.934	.941
	SLA	.946	.947		SLA	.952	.953
	HSA	.922	.923		HSA	.937	.939
	SA	.942	.942		SA	.953	.953
	AA	.914	.916		AA	.941	.943
Total (Parcel)	HLA	.905	.905	Total (Parcel)	HLA	.945	.947
	CNA	.936	.937		CNA	.945	.946
	SPA	.920	.923		SPA	.928	.932
	SLA	.935	.936		SLA	.947	.947
	HSA	.935	.935		HSA	.952	.952
	SA	.952	.953		SA	.960	.961
	AA	.937	.941		AA	.952	.956

Excellent Internal Consistency

Use of SIS-C in Children with Autism

Relationship of the SIS to Intelligence and Adaptive Behavior for Participants with Autism and Intellectual Disability and (Intellectual Disability Only)

INTELLIGENCE

Group	HLA	CNA	SPA	SLA	HSA	AA
Total Sample	.45 (.65)	.37 (.58)	.35 (.56)	.31(.46)	.35 (	6 (.54)
5-6	.47 (.58)	.44 (.56)	.45 (.47)	.44 (.38)	.4	(.40)
7-8	.46 (.61)	.37 (.48)	.36 (.50)	.32 (.39)	.34	.50)
9-10	.42 (.70)	.34 (.58)	.32 (.58)	.32 (.42)	.32	54)
11-12	.42 (.68)	.29 (.59)	.34 (.55)	.28 (.48)	.32 (	55)
13-14	.50 (.66)	.38 (.60)	.29 (.59)	.24 (.50)	.34 (.	1)
15-16	.57 (.65)	.50 (.60)	.35 (.58)	.26 (.48)	.47 (.5	)

ADAPTIVE BEHAVIOR

Group	HLA	CNA	SPA	SLA	HSA		
Total Sample	.47 (.67)	.39 (.59)	.37 (.57)	.32 (.47)	.37 (.57)		
5-6	.47 (.61)	.40 (.61)	.42 (.51)	.41 (.41)	.40 (.51)		
7-8	.40 (.66)	.33 (.51)	.32 (.50)	.29 (.37)	.28 (.51)		
9-10	.41 (.71)	.36 (.60)	.34 (.60)	.35 (.42)	.35 (.57)		
11-12	.50 (.73)	.38 (.62)	.41 (.60)	.33 (.51)	.40 (.60)		.39 (.58)
13-14	.50 (.69)	.40 (.62)	.35 (.61)	.29 (.54)	.38 (.62)	.59)	.37 (.63)
15-16	.59 (.64)	.53 (.56)	.38 (.54)	.26 (.50)	.47 (.57)	.45 (.51)	.42 (.52)

Across the board, those with Autism and Intellectual Disability had lower correlations with intelligence and adaptive behavior

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Use of SIS-C in Children with Autism

Age Band		Autism & Intellectual Disability		Intellectual Disability Only		Effect Size
	Construct	*M*	*SE*	*M*	*SE*	
5-6	Health and Safety	3.19	.04	2.96	.07	.28
	Social	3.22	.04	2.84	.07	.45
	Advocacy	3.11	.04	2.90	.07	.26
7-8	Home Living	2.38	.04	2.62	.06	.30
	Social	3.16	.04	2.87	.07	.36
9-10	Home Living	2.33	.04	2.60	.05	.34
	Social	3.08	.04	2.87	.05	.25
11-12	Home Living	2.19	.04	2.45	.05	.31
	Social	3.02	.04	2.72	.05	.34
13-14	Health and Safety	2.98	.04	2.82	.04	.19
	Social	3.01	.04	2.60	.05	.46
	Advocacy	2.99	.04	2.84	.04	.20
15-16	Community & Neighborhood	2.72	.05	2.50	.05	.27
	School Participation	2.87	.06	2.63	.06	.27
	Health and Safety	2.87	.06	2.57	.06	.33
	Social	2.91	.06	2.37	.07	.56
	Advocacy	2.98	.05	2.60	.06	.44

Consistently higher Social support need scores

Section 2F: Social Activities	Type					Frequency					Daily Support Time					Item Raw Score Sum
1. Maintaining positive relationships with others	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
2. Respecting the rights of others	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
3. Maintaining conversation	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
4. Responding to and providing constructive criticism	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
5. Coping with changes in routines and/or transitions across social situations	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
6. Making and keeping friends	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
7. Communicating with others in social situations	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
8. Respecting others personal space/property	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
9. Protecting self from exploitation and bullying	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
															SUM OF ITEM RAW SCORES	
															MEAN RATING FOR SOCIAL ACTIVITIES = (SUM OF ITEM RAW SCORES) ÷ 27	

Use of SIS-C in Children with Autism

- Also saw differences in some age groups for:
  - Advocacy Activities
    - Youth aged 13-14 and 15-16 with ID-ASD showed HIGHER support needs

Section 2G: Advocacy Activities	Type					Frequency					Daily Support Time					Item Raw Score Sum
1. Expressing preferences	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
2. Setting personal goals	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
3. Taking action and attaining goals	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
4. Making choices and decisions	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
5. Advocating for and assisting others	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
6. Learning and using self-advocacy skills	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
7. Communicating personal wants and needs	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
8. Participating in educational decision making	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
9. Learning and using problem solving and self-regulation strategies in the home and community	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
															SUM OF ITEM RAW SCORES	
															MEAN RATING FOR ADVOCACY ACTIVITIES = (SUM OF ITEM RAW SCORES) ÷ 27	

Use of SIS-C in Children with Autism

- Also saw differences in some age groups for:
  - Home Living Activities
    - Youth with ID-ASD tended to generally show LOWER support needs across ages

Section 2A: Home Life Activities	Type					Frequency					Daily Support Time					Item Raw Score Sum
1. Completing household chores	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
2. Eating	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
3. Washing and keeping self clean	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
4. Dressing	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
5. Using the toilet	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
6. Sleeping and/or napping	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
7. Keeping track of personal belongings at home	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
8. Keeping self occupied during unstructured time (free time) at home	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
9. Operating electronic devices	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
															SUM OF ITEM RAW SCORES	
															MEAN RATING FOR HOME LIFE ACTIVITIES = (SUM OF ITEM RAW SCORES) ÷ 27	

Use of SIS-C in Children with Autism

- Youth with ID-ASD aged 15-16 tended to show HIGHER support needs in multiple domains
  - Social
  - Advocacy
  - Community and Neighborhood
  - School Participation
  - Health and Safety

Section 2C: School Participation Activities	Type					Frequency					Daily Support Time					Item Raw Score Sum
1. Being included in general education classrooms	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
2. Participating in activities in common school areas (e.g., playground, hallways, cafeteria)	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
3. Participating in co-curricular activities	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
4. Getting to school (includes transportation)	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
5. Moving around within the school and transitioning between activities	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
6. Participating in large-scale test taking activities required by state education systems	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
7. Following classroom and school rules	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
8. Keeping track of personal belongings at school	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
9. Keeping track of schedule at school	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
															SUM OF ITEM RAW SCORES	
															MEAN RATING FOR SCHOOL PARTICIPATION ACTIVITIES = (SUM OF ITEM RAW SCORES) ÷ 27	

Section 2E: Health and Safety Activities	Type					Frequency					Daily Support Time					Item Raw Score Sum
1. Communicating health–related issues and medical problems, including aches and pains	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
2. Maintaining physical fitness	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
3. Maintaining emotional well-being	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
4. Maintaining health and wellness	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
5. Implementing routine first aid when experiencing minor injuries such as a bloody nose	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
6. Responding in emergency situations	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
7. Protecting self from physical, verbal, and/or sexual abuse	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
8. Avoiding health and safety hazards	0	1	2	3	4	0	1	2	3	4	0	1	2	3	4	
															SUM OF ITEM RAW SCORES	
															MEAN RATING FOR HEALTH & SAFETY ACTIVITIES = (SUM OF ITEM RAW SCORES) ÷ 24	

Implications

- SIS-C is as reliable and valid a tool for children with ID-ASD as it is for those with ID-ONLY
- The same items can be used to measure the seven support need domains across those with ID-ASD and ID-ONLY
- Implications for supports planning for youth with ASD
  - Consider additional exceptional behavioral support needs identified on the SIS-C in planning supports
  - Consider social activities items that might indicate specific support needs that should be addressed
  - May also be unique considerations for 15-16 year old age group as they had significantly higher support needs in five domains
    - Other research has also suggested this may be the case for youth with ID-ONLY

Using the SIS-C to Inform Supports Planning

- Assessment information, in and of itself, does not lead to the effective provision of supports
- Need to take assessment data and translate it into support plans that can be implemented in homes, schools, and communities

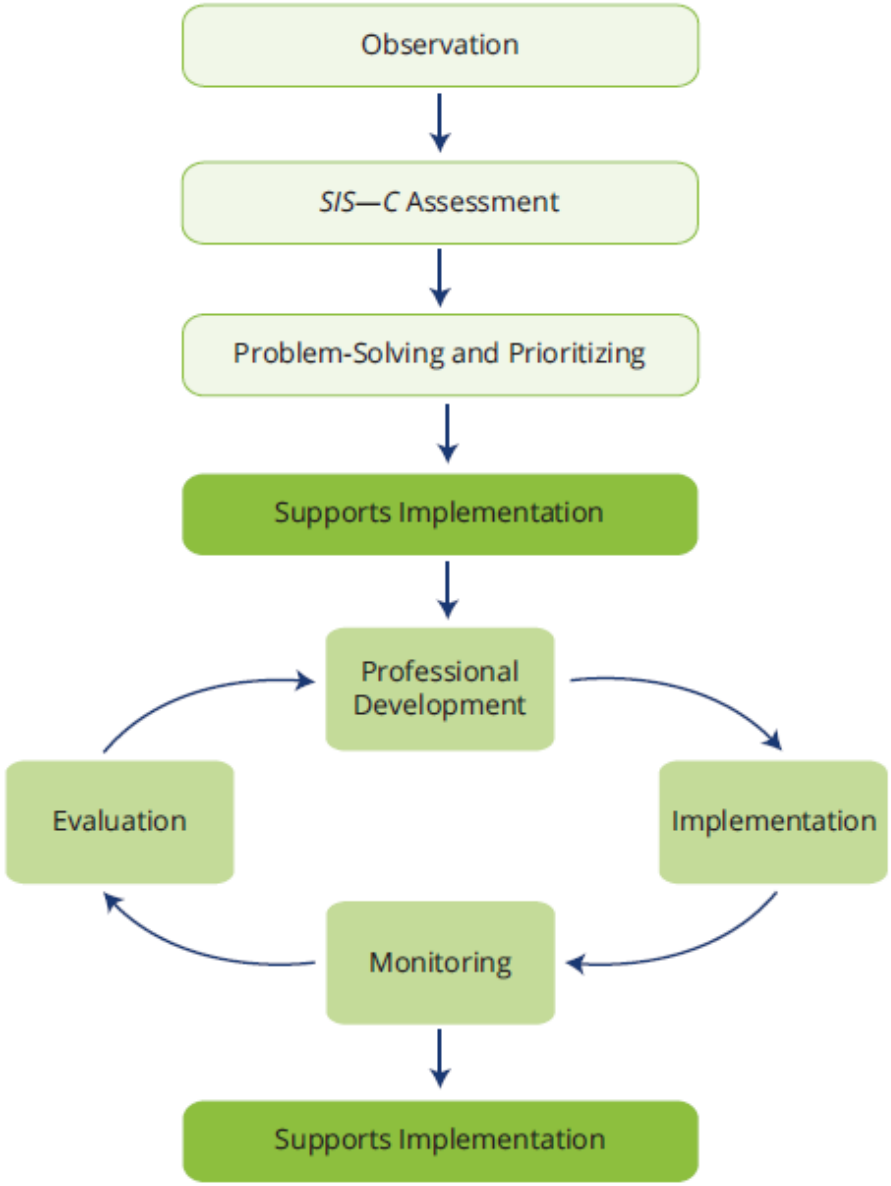

Figure 4.4. **Support Needs Assessment and Planning (SNAP) process**

Usability of SIS-C

- Teacher Feedback
  - “It’s a more authentic assessment than other assessments because it is not just looking at academic performance. It is looking at the child’s total performance.”
  - “It’s easy to say what students can’t do. The SIS-C helps you know what they can do with support.”
  - “Helps to suggest where to go next in planning activities with a student.”
  - “Good for communication with transitions to new teachers and to new schools.”

Usability of SIS-C

- Teacher Feedback
  - “Teachers focus on achievement, but teachers need to also consider supports needed for participation, and this scale is helpful in that regard.”
  - “With the SIS-C, we are not just looking at what students can’t do. Because we are looking at supports, we are not looking at what is ‘good/not good’ about what a student does. Instead, we are looking at what we can do to help support them.”
  - “Achievement scores provide a snapshot of what a child has learned, but the SIS-C provides a profile of a child in all the major areas of life.”

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Thank You!