

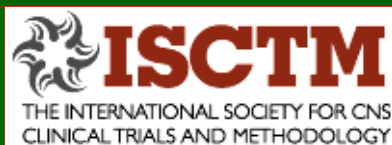
# Subdomains of Negative Symptoms

Symptoms Separable and Inseparable

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# Subdomains In Negative Symptom Measures

<u>SANS</u>	<u>NSA</u>	<u>PANSS</u>	<u>SDS</u>
<b>Affective Flattening or Blunting</b>	<b>Emotion/Affect</b>  <b>Retardation</b>	<b>Blunted Affect</b>  <b>Poor Rapport</b>	<b>Restricted Affect</b>
<b>Alogia</b>	<b>Communication</b>	<b>Lack of Spontaneity &amp; Flow of Conversation</b>	<b>Poverty of Speech</b>
<b>Anhedonia-Asociality</b>	<b>Social Involvement</b>	<b>Passive-Apathetic Social Withdrawal</b>	<b>Diminished Social Drive</b>
<b>Avolition-Apathy</b>	<b>Motivation</b>	<b>Emotional Withdrawal</b>	<b>Curbing of Interests</b>  <b>Diminished Sense of Purpose</b>
<b>Attention</b>	<b>Gross Cognition</b>	<b>Stereotyped Thinking</b>  <b>Difficulty in Abstract Thinking</b>	<b>Diminished Emotional Range</b>



# Convergence Across Negative Symptom Measures?

**Global dimensional ratings across instruments are generally highly correlated.**

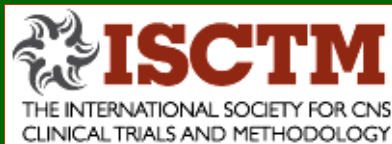
**Zero-Order Correlations of approximately .77 - .82 (e.g., Kay et al. 1998; Fenton & McGlashan, 1992)**

**However, few studies have examined comparability of instruments, especially at item- or subscale level.**

# Similar Yet Different

**Differences emerge both across instruments  
and across studies using the same instrument.**

- » **Conceptualization**
  - Dimension versus category**
  - Primary versus secondary**
  
- » **Content**
  
- » **Time frame**
  
- » **Sources of Information**



# Structure of Schizophrenia Symptoms: Examining Broad Range of Psychopathology

## Identified Dimensions

One: Consistently poor fit of single (bipolar or unipolar) dimension.

Two: Negative, Positive

Three: Negative, Positive, Disorganized (most replicated)

With broader symptom rating scales (PANSS):

Five: Negative, Positive, Disorganized (Cognitive), Excited, Depression/Anxiety (inconsistent with different or more factors suggested)

Eleven: Poverty of Affect/Speech, Social Dysfunction, Thought Disorder/Inappropriate Affect, Bizarre Delusions, Paranoid Delusions, Other Delusions, Bizarre Behavior, Non-Auditory Hallucinations, Auditory Hallucinations, Manic Thought Disorder, Attention



# Structure of Negative Symptoms: Focusing on SANS

## Identified Dimensions using the SANS

**One: Poor Fit. Inconsistent with unidimensionality.**

**Two: Diminished Expression (Blunted Affect, Alogia)  
Social Dysfunction (Anhedonia, Avolition/Apathy)**

<b>Three: Diminished Expression</b>	<b>Diminished Expression</b>
<b>Social Dysfunction</b>	<b>Social Amotivation</b>
<b>Disorganization</b>	<b>Inattention-Alogia</b>

**more: (problematic)**

For example: Kelley et al. (1999); Sayers et al. (1996); Keefe et al. (1992) Mueser et al. (1994)

# Cross-Cultural Replication from the WHO Ten-Country Study ( $N=933$ )

<b>Diminished Expression</b>	<b>Social Amotivation</b>
<b>Blunted Affect</b>	<b>Social Withdrawal</b>
<b>Slowness &amp; underactivity</b>	<b>Loss of Interest</b>
<b>Slow Speech</b>	<b>Subjective Anergia</b>
<b>Restricted Quantity of Speech</b>	
<b>Self-Neglect</b>	

# Intercorrelations of Negative Symptom Factors

## Sayers et al. (1996)

	<u>1</u>	<u>2</u>	<u>3</u>
1. Diminished Expression	--		
2. Social Amotivation	<b>.56</b>	--	
3. Inattention Alogia	<b>.82</b>	<b>.56</b>	--

## Keefe et al. (1992)

	<u>1</u>	<u>2</u>	<u>3</u>
1. Diminished Expression	--		
2. Social Dysfunction	<b>.53</b>	--	
3. Disorganization	<b>.32</b>	<b>.36</b>	--

# External Correlates of SANS Factors: Social Functioning

	<u>Diminished Expression</u>	<u>Social Amotivation</u>	<u>Inattent.- Alogia</u>
<b><u>Social Adjustment</u></b>			
Instrumental	.06	.32***	.05
Household Adj.	.09	.29***	.12*
Extend. Family	.07	.25***	.01
Social/Leisure	.07	.25***	.06
General Adj.	.07	.30***	.07

\* $p < .05$ . \*\*\* $p < .001$   
Sayers et al. (1996)



# External Correlates of SANS Subscales: Treatment Response

Treatment outcomes over 3 to 6 months (Mueser et al. 1994)

*Significant Improvement* =

Affective Flattening, Alogia, Avolition-Apathy

*No Change* =

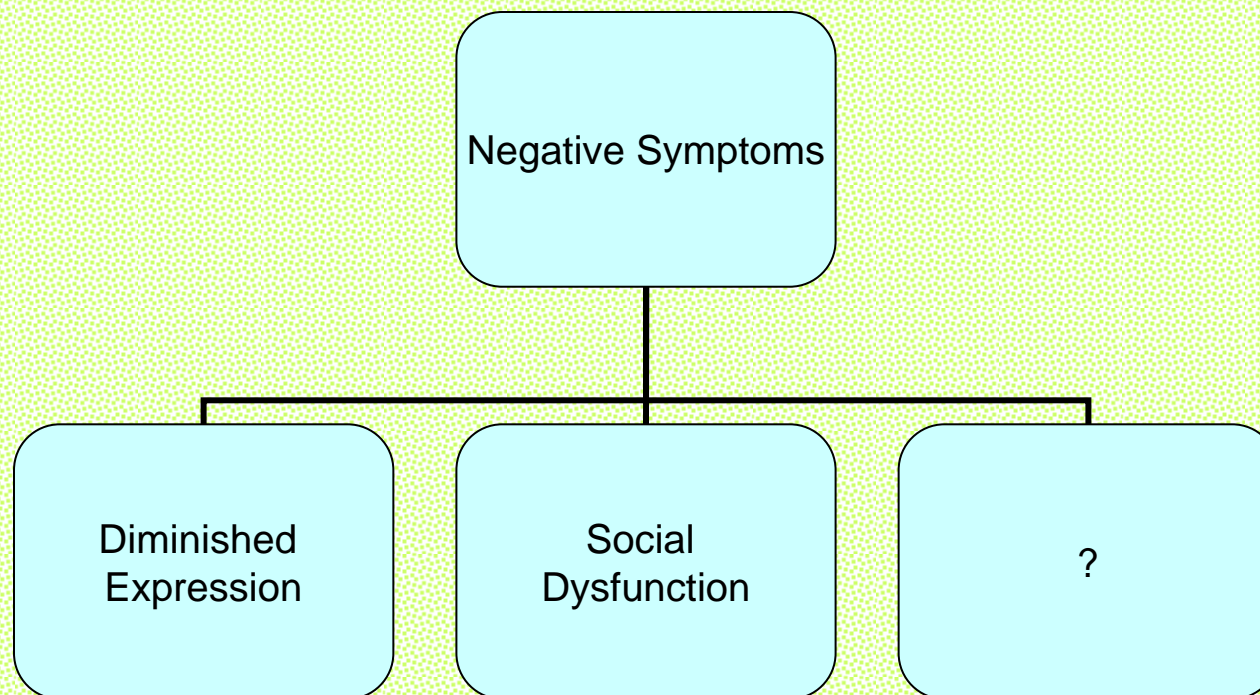
Anhedonia-Asociality, Inattention

Survival Analyses Following Stabilization (Sayers et al. 1996)

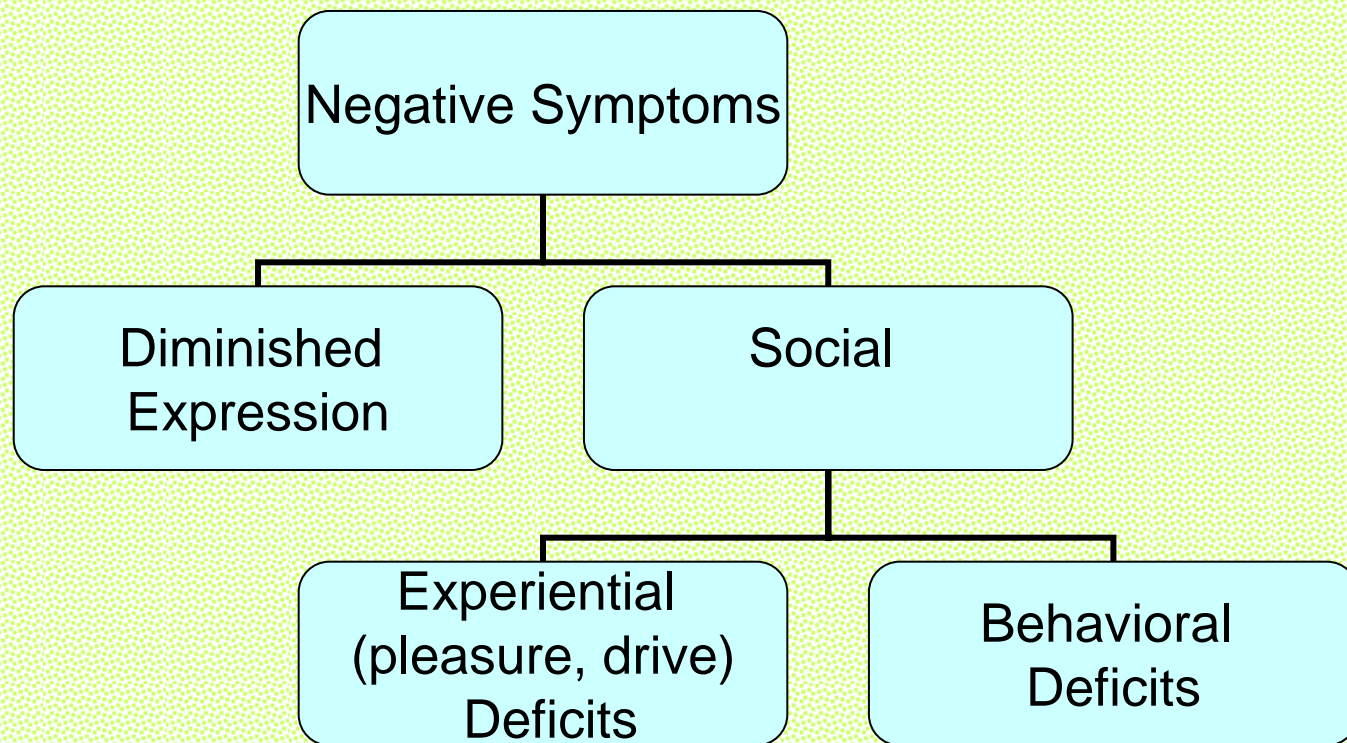
Greater Social Amotivation associated with patients' shorter survival times to open-label supplemental medications (worse outcomes).

# Hierarchical Model of Negative Symptoms

**Higher order factor of Negative Symptoms composed of correlated yet distinct symptom domains.**



# Hierarchical Model of Negative Symptoms



# Conclusions

- 1. Negative symptoms reliably emerge as a factor independent of other symptoms in schizophrenia.**
- 2. Within negative symptoms, evidence suggests that unidimensional models fit poorly.**
- 3. Negative symptoms are best characterized as multidimensional (2 or more factors).**
- 4. Validity of subscales or factors suggested by findings that these may have differential external correlates.**

# Caveats and Implications

- **Similarities: Consensus does not equal comprehensiveness.**
- **Differences: Instruments differ in item content, conceptualization of symptoms.**
- **Need to examine external validity of factors identified, including treatment response.**
- **Given concerns about instrumentation in prior studies, factor results are *not* conclusive regarding ideal number of factors.**
- **Prudent to develop *comprehensive* negative symptom instrument that taps multidimensionality and addresses prior concerns.**