Measuring restrictiveness of living environments

- Environmental restrictiveness is a critical outcome in determining effectiveness of care for children/youths.
- The Restrictiveness of Living Environment Scale (ROLES) has been used since 1992 as a descriptive measure of program restrictiveness.

Conceptual Definition of the ROLES
- A living environment can be made restrictive by:
  - the physical facility, appearance and layout;
  - the rules and requirements that affect free movement, activity or choice;
  - and the voluntariness with which children and youths enter or leave the setting permanently.

Research Questions

- Is it possible to create a conceptually-based reliable and valid supplementary measure of restrictiveness that permits greater precision in measuring environmental restrictiveness?
- Can this measure empirically describe the environments and provide the basis for general types of restrictiveness that are intuitive and flexible?

New Conceptual Definition

Restrictiveness is the ways in which adults in a child’s life have anticipated that limits need to be made for the child’s safety, developmental and therapeutic needs.
Sample Description

Age

Race

- 11 & under 11% 2%
- 12 to 19 21% 72%
- 20 to 21 15% 6%
- 22 to 24 2%

72%
28%
11%
2%

Methods

- Email sent to 1000+ organizations and associations with link to the REM-Y
- Networking approach & direct appeals
- Sample of older youth from Casey Family Programs and Boy’s Town
- Sample of older youth from several colleges
- The REM-Y or REM-S was completed on 595 youth

Item Misfit Table

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<th>Score</th>
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<th>S.E.</th>
<th>MNSQ</th>
<th>ZSTD</th>
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Summary of 593 Measured (Non Extreme) Persons

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<td>Adj. SD = 1.16</td>
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<td>Person reliability = 94</td>
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Summary Statistics

(For 21 item scale)

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<th>Outfit</th>
<th>Raw Model</th>
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Count of ROLES by Cluster

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<th>Clusters</th>
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<th>Count</th>
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<th>ROLES Overall M and SD by Cluster</th>
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Cronbach Alpha (KR-20) = .91
Limitations

- Small numbers in some of the settings (state hospital, inpatient rehabilitation) and none in others (jail, medical hospital).
- Some settings not in the ROLES were not added to the REM-Y e.g. military and homelessness.
- Self-selection in respondents.
- Preliminary—need to continue to establish the validity of the REM-Y and REM-S.
- The REM-Y and REM-S was conceptualized by an adult perception of what makes an environment restrictive.
  - Culture and gender bias needs to be further investigated.

Conclusions

- ROLES needed to be revised.
  - It is confounded by related issues such as normality, social desirability, etc.
  - Settings out of order, some obsolete, new settings not included.
- The REM-Y is psychometrically sound.
  - Development and review process worked to provide a broad range of restrictiveness items.
  - IRT helped refine items and supports the soundness of measures.
- Cluster analysis supports and provides the basis for development of the General Environment Types.

How would you use the REM-Y

- REM-Y could provide empirical information about the level of restriction, helping to support the evidence basis for community-based interventions.
- REM-Y could be used to assist with prospective individualized planning for services.
- The REM-Y is free.

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Sponsors

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- Mary Beth Rautkis, Ph.D.
  - University of Pittsburgh
- Kirk O’Brien, Ph.D.
  - Casey Family Programs

Appendix
Tampa, March 2009
22nd Annual RTC Conference Presented in

Differential Item Function - Age

- Television
- Music
- Communication
- Internet
- Recreation
- Extra-curricular activity
- Leisure
- Personal entertainment devices
- Movement in community
- Interaction with friends
- Privacy
- Family interaction
- Treatment decisions
- Treatment intensity
- Physical restraint
- Choice of living setting

Differential Item Function - Race

- Television
- Music
- Communication
- Internet
- Recreation
- Extra-curricular activity
- Leisure
- Personal entertainment devices
- Movement in community
- Interaction with friends
- Privacy
- Family interaction
- Treatment decisions
- Treatment intensity
- Physical restraint
- Choice of living setting

Differential Item Function - Sex

- Television
- Music
- Communication
- Internet
- Recreation
- Extra-curricular activity
- Leisure
- Personal entertainment devices
- Movement in community
- Interaction with friends
- Privacy
- Family interaction
- Treatment decisions
- Treatment intensity
- Physical restraint
- Choice of living setting

REM-Y Means by Cluster

Cluster | Mean | SD | N
--- | --- | --- | ---
Television | 1.12 | 0.58 | 194
Music | 1.12 | 0.58 | 194
Communication | 1.23 | 0.58 | 194
Internet | 1.30 | 0.58 | 194
Recreation | 1.36 | 0.58 | 194
Extra-curricular activity | 1.39 | 0.58 | 194
Leisure | 1.43 | 0.58 | 194
Personal entertainment devices | 1.50 | 0.58 | 194
Movement in community | 1.50 | 0.58 | 194
Interaction with friends | 1.58 | 0.58 | 194
Privacy | 1.61 | 0.58 | 194
Family interaction | 1.67 | 0.58 | 194
Treatment decisions | 1.67 | 0.58 | 194
Treatment intensity | 1.73 | 0.58 | 194
Physical restraint | 1.79 | 0.58 | 194
Choice of living setting | 1.85 | 0.58 | 194

Placement Map of Items and Persons

- Item spread covers a broad range on the measured construct (restrictiveness) - range is more than 2.5 standard deviations
- Persons responses cover a very wide range of restrictiveness
- This figure reflects our oversampling of treatment settings - random sample would be heavily shared with most persons falling into the less-restrictive end of the continuum