The Cognitive Factors Underlying Readiness to Manage Stuttering: Evidence from Adolescents

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European Symposium on Fluency Disorders 2018

What Needs to be Changed and Who Decides?

• Teenagers may come to therapy with partially formed notions of why they are there, and what they want. They may have vague feelings and ideas about stuttering that have led them to decide that they want to make some kind of change...OR

• They may be contemplating some kind of change to which they are not yet ready to commit (Proschaska, DiClemente, & Norcross, 1992).

What Do We Mean by “Motivation?”

• Stuttering therapy (and all therapies for that matter) is action-oriented.

• We assume that for the most part, teens and adults who receive our services are prepared to actively engage in taking effective steps to change their behavior.

• Those who aren’t are considered to be “unmotivated” to do so, and frequently our relationship with them is put on hold “until they are ready”.

Reframing “Motivation” as “Readiness to Change”

• Motivation reflects readiness for change, a dynamic psychological state.

• Readiness to change emerges when ambivalence toward change is resolved. It is NOT the clinician’s job to resolve ambivalence – rather it is the client’s. The clinician’s role is to facilitate the client’s expression of the pros and cons of making a change, and to gently guide him or her to an acceptable resolution (Rollnick & Miller, 1995).

• EVERYONE has the potential to change AND we are all experts about ourselves

Stages of Change

• Staging algorithms for multiple clinical populations (e.g. weight loss, smoking cessation, stress management, gambling) have been developed following extensive interviews and focus groups.

• These algorithms have consistently shown that a stage-based framework is a good fit for how people change, regardless of the behavior to be changed.

• The best predictors of movement between stages are decisional balance and perceptions of self-efficacy.
• Decisional Balance: A dynamic process of conflict resolution that occurs when a person simultaneously considers the pros and cons of making a change and its consequences.

• Self-Efficacy: The confidence one has in using a new behavior, and the extent to which he or she will be actively engaged in behavior change after failure.

• Both can be measured and together predict movement across stages.

Stages of Change Model: Behavior change is viewed as a temporal progression through a series of stages:

- Pre-contemplation
- Contemplation
- Preparation
- Action
- Maintenance

Stage placement and movement is predicted by:

- the importance that one assigns to the pros + cons of changing a behavior (decisional balance)
- confidence in one's ability to sustain a behavior in difficult situations (situational self-efficacy)

Hall & Rossi (2008); Mauriello et al. (2007)

Applying the Stages of Change Model Among Adolescents Who Stutter

This project is a collaboration between:

- University of Iowa
  Stuttering Research Lab (Zebrowski, Herrberg Rodgers)
- University of Rhode Island
  Cancer Prevention Research Center (Floyd, Robbins)

This project was funded by a clinical research grant from the American Speech-Language Hearing Foundation

• Adolescents who stutter (aWS) pose a unique clinical challenge
  - Noncompliance (“unmotivated”)
  - Disproportionately high rate of relapse (32-70%) (Craig, 1998)

• We propose that a key factor in increasing motivation, compliance, and preventing relapse is the goodness-of-fit between therapy tools and aWS’ readiness to use them (Floyd, Zebrowski, & Flamme, 2007; Manning, 2006)

• Primary aim: Develop and test the validity of new measures to assess the core constructs of aWS’ readiness to manage stuttering (stage, decisional balance, self-efficacy)

PURPOSE

1. Focus groups and individual interviews with aWS and stuttering specialists to:
   a. Define “stuttering management”
   b. Determine pros and cons of managing stuttering (decisional balance)
   c. Identify speaking situations in which aWS find stuttering management difficult (self-efficacy)
   d. Qualitatively analyze transcripts from step 1 to develop survey items for:
      e. Stage of Change scale
      f. Decisional Balance scale
      g. Self-Efficacy scale

2. Administer this survey package online to an intended n=300 aWS (13-21)

3. Assess dimensional and psychometric properties of each measure using confirmatory and exploratory factor analyses

4. Generate new scales with overlapping items and items with low factor loadings eliminated
It's important to pay attention to all three of you talk. For any of these things to become automatic, you will need help and regular practice for up to one year or more.

**Thinking about the three things above (learning and using speech strategies, changing negative thoughts, and speaking without avoiding), how ready are you to do something about your stuttering?** Place a check mark in the box next to the sentence that best describes you right now. These things because just focusing on one is not enough to make long-lasting changes in the way...

<table>
<thead>
<tr>
<th>Pre-Cont</th>
<th>Cont</th>
<th>Prep</th>
<th>Act</th>
<th>Maint</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am not thinking about any of these things in the next 6 months.</td>
<td>5.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am thinking about doing one or more of these things in the next 6 months.</td>
<td>31.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am planning to do one or more of these things in the next month.</td>
<td>11.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have been doing one or more of these things for MORE than 6 months.</td>
<td>14.3%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>I have been doing one or more of these things for LESS than 6 months.</td>
<td>57.8%</td>
<td></td>
<td></td>
<td></td>
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</table>

**STAGES OF CHANGE SCALE**

<table>
<thead>
<tr>
<th>PROS</th>
<th>CONs</th>
<th>FAMILY</th>
<th>LEADING</th>
</tr>
</thead>
<tbody>
<tr>
<td>You would feel better about yourself</td>
<td>Your speech would sound and feel better and more natural</td>
<td>81</td>
<td>76</td>
</tr>
<tr>
<td>You would talk more</td>
<td>You wouldn’t feel like you couldn’t talk or stuttered differently</td>
<td>81</td>
<td>76</td>
</tr>
<tr>
<td>You would feel calmer</td>
<td>Other people would change the way they speak to you</td>
<td>77</td>
<td>75</td>
</tr>
<tr>
<td>The way you speak</td>
<td>They wouldn’t use words and sounds that were more natural to other people</td>
<td>76</td>
<td>72</td>
</tr>
<tr>
<td>You could just be yourself</td>
<td>You wouldn’t feel like yourself if you stuttered differently</td>
<td>76</td>
<td>72</td>
</tr>
<tr>
<td>You would feel more comfortable</td>
<td>Your speech would sound more natural and related to other people</td>
<td>76</td>
<td>72</td>
</tr>
<tr>
<td>You wouldn’t worry about your speech</td>
<td>You wouldn’t feel like yourself if you stuttered differently</td>
<td>72</td>
<td>69</td>
</tr>
<tr>
<td>You wouldn’t worry about talking</td>
<td>You wouldn’t feel like yourself if you stuttered differently</td>
<td>72</td>
<td>69</td>
</tr>
<tr>
<td>You wouldn’t feel like stuttering runs your life</td>
<td>You wouldn’t feel like yourself if you stuttered differently</td>
<td>71</td>
<td>69</td>
</tr>
<tr>
<td>You wouldn’t feel like you need to change the way you speak</td>
<td>You might not be able to change the way you speak</td>
<td>69</td>
<td>65</td>
</tr>
</tbody>
</table>

"When thinking about making a change to your stuttering, how important to you is it?"
• When thinking about the overall construct of stuttering management, the weight of the pros in managing stuttering predicted stage placement, $F(4, 142) = 3.193, p < .05$

• When thinking about using speech strategies, no cognitive process in our dataset predicted stage placement

• When thinking about changing negative thoughts/feelings about stuttering, decisional balance and self-efficacy predicted stage placement:
  • Pros: $F(4, 148) = 5.60, p < .001$
  • Cons: $F(4, 145) = 2.74, p < .05$
  • Confidence: $F(4, 146) = 2.54, p < .05$

• When thinking about speaking without avoidance, the weight of the pros in managing stuttering predicted stage placement, $F(4, 149) = 3.43, p < .05$

**How? Motivational Interviewing**

(Rollnick & Miller, 1995; Behrman, 2006)

• A style of interpersonal interaction that facilitates client’s readiness to change and compliance with therapy participation.

• Rooted in the therapist’s ability to LISTEN and skill in initiating and maintaining a direct, constructive and neutral discussion about behavior change and how it can be achieved.

**....Back to Motivational Interviewing**

• **Collaborative** – not the same as ‘patient centered’ approach, but instead focusing on specific behavior change that is needed

• **Evocative** – ‘what’s right with you’ focus to activate resources for achieving personal goals

• **Honors patient autonomy** – requires detachment and recognition that people make choices about their lives.

(Rollnick et al; 2008)
Motivational Interview: DARN

- Desire – “What do you want?”
- Ability – “What is possible?”
- Reasons – “What are benefits?”
- Need – “How important is this change?” (1-10)

(Rollnick et al; 2008)

**DESIRE:**
- What would you like to see different about stuttering? What makes you think you need to change?
- Are others concerned about your stuttering?
- Why do you think others are concerned about your stuttering?

**ABILITY**
- Self-efficacy: Confidence in the ability to use a new behavior and remain engaged following failure
- EX: On a scale of 1-10, how confident are you that you will be able to manage your stuttering in the next week (or month)?
- When your schedule gets busy?
- When you don’t feel well?
- When you have worked hard for a period of time and don’t feel better about stuttering?

**ABILITY**
- What are you doing that makes you rate your confidence as (high number)?
- What would it take to move from a (number) to a (higher number)?
- How would life be different if you moved from a (number) to a (higher number)?
- What do you think you might do to increase your confidence about exercising?

**REASON**
- What would be the good things about changing something about your stuttering?
- What would be not so good about changing?
- What will happen if you don’t change?
- What will your life be like three years from now if you changed what you are doing about stuttering?

DECISIONAL BALANCE
**UISPEAKS for TEENS**

**Wendell Johnson Speech and Hearing Center**  
**University of Iowa**

- **NEED**
  - How important is making this change?  
  - How important are the pros and cons?  

1 (not at all important) – 10 (extremely important)

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**UISPEAKS**

- Week-long residential program for teens who stutter at the University of Iowa
- Focus is on
  - Shifting responsibility for managing stuttering from parents and therapist to teen  
  - Education and Exploration of Talking and Stuttering  
  - Decision making (what to change)  
  - Problem-solving (how to change it)  
  - Trying it on  
  - Building self esteem by identifying strengths  
  - Coping and resilience

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**UISPEAKS**

- Two group and two individual sessions per day
- Daily practice in a variety of outside environments and communication contexts
- Development of “Operating Instructions” for parents and speech-language pathologists.

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**DAY 1- Determining Goals through Motivational Interview**

- What would you like to share with me to help me understand what it is that you would like to learn or change as we work together this week?
- Is there anything else you think I need to know? Do you have questions, or is there anything you would like to know about me?
Tell me about the therapy you've had for your stuttering. What helped? What didn’t help?

How do you think stuttering has affected your life (1=not at all; 10=it affects me every day)

What would need to happen for you to move that number close to “1”?

If our work together is successful and you could say "Wow, I'm glad I worked on this because I'm doing much better", what would you be doing differently, or what would be changed about yourself?

How would others know that something has changed? What would they notice that was different?

Think of another time in your life when you wanted to learn something, or change something. What did you do? What happened?

Who are the people you do or could turn to for help or understanding (draw support system). How does each of these people help and support you?

What are you good at? What do friends and family say you are good at?

END of DAY 1

The changes I want to make are:

The most important reasons why I want to make these are:

The steps I plan to take in changing are:

The ways other people can help me are:

I will know that my plan is working if:

Some things that could interfere with my plan are:

What I will do if the plan isn’t working:

END of DAY 1

Therapy Map

- Long term goals
- Short term goals
- Link short to long term goals
- Steps to achieve short term goals
- How to evaluate progress
- Roles of teen and therapist