# Title: Recovery and Relapse: Perspectives from Adults who Stutter

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# Abstract

Purpose: Recovery and relapse relating to stuttering are often defined in terms of the presence or absence of certain types of speech disfluencies as observed by clinicians and researchers. However, it is well-documented that the experience of the overall stuttering condition involves more than just the production of stuttered speech disfluencies. This study sought to identify what recovery and relapse mean to people who stutter based on their own unique experiences to account for both the stuttering behavior and the broader adverse impact of the condition.

Method: In this study, 228 adults who stutter participated in a mixed-methods exploration of the terms recovery and relapse. Participants categorized themselves on whether they considered themselves to have recovered or experienced relapse. Data were analyzed thematically through the lens of the speaker self-categorizations to determine how adults who stutter define recovery and relapse regarding stuttering.

Results: Results indicate that, to adults who stutter, recovery from stuttering is associated with increases in positive affective/emotional, behavioral, and cognitive reactions to the condition and simultaneous decreases in associated negative constructs. These group-level definitions did not change as a function of whether respondents reported that they had experienced recovery or relapse themselves.

Discussion: Recovery or relapse from the stuttering behavior can occur independently from recovery or relapse from the broader adverse impact related to the condition, suggesting that researchers and clinicians should consider recovery and relapse as involving more than just a reduction or increase in observable behaviors. These findings support recent research evidence further specifying the many individual phenotypes of stuttering (Tichenor & Yaruss, 2019c) in that pathways to recovery and relapse can be experienced in different ways for people with different stuttering phenotype profiles.

# LITERATURE REVIEW

## 1.0 Recovery and Relapse from Stuttering Behaviors

Researchers have long sought to quantify rates of recovery and relapse from stuttering (Andrews & Harris, 1964b; Shames & Beams, 1956; Sheehan & Martyn, 1966, 1970). Many endeavors have paralleled investigations of the incidence, prevalence, and persistence of stuttering behaviors in children and, to a lesser degree, adults. Research evidence over several decades among various cohorts has revealed wide ranges for both the prevalence of stuttering (0.07% to 15.4%) and for the natural recovery that occurs independent of treatment (9.5% to 79.1%) (see Andrews & Harris, 1964a; Cooper, 1972; Culton, 1986; Dickson, 1971; Glasner & Rosenthal, 1957; Hertzman, 1948; Howell et al., 2008; Howell & Davis, 2011; Janssen et al., 1996; Johnson & Millsapps, 1937; Kloth et al., 1999; Månsson, 2000; Porfert & Rosenfleld, 1978; Quinan, 1921; Ramig, 1993; Riley & Riley, 1981; Ryan, 2001; Seider et al., 1983; Sheehan & Martyn, 1970; Voelker, 1942; Watkins & Yairi, 1997; Yairi & Ambrose, 1999). Interpreting many of these early findings is difficult due to differences in the definitions of terms such as *stuttering*, *relapse*, and *recovery*; uncertainty about various environmental influences that might have affected stuttering and recovery; and a lack of clarity about the effects of treatment versus natural recovery (Ingham, 1983). More recent research endeavors have focused specifically on recovery in children, with converging evidence showing that approximately 75% to 80% of young children who stutter naturally recover without intervention (Yairi & Ambrose, 2005), that young girls naturally recover at higher rates than boys (Yairi & Ambrose, 1999), and that most children who naturally recover do so in the first few years following onset, typically by about age 7 (Månsson, 2000; Yairi & Ambrose, 1999), though recovery from stuttering can occur later in life (see discussion in Neumann et al., 2019).

Rates of recovery are often determined by behavioral measures, such as how often and to what degree stuttering behaviors are observed or experienced. Such judgments are most typically based on listener perceptions. For example Yairi and Ambrose (1999, 2005) used a listener-based perspective of recovery and suggested that a child who has at one point demonstrated observable stuttering behaviors should be considered to have recovered when (1) the severity of observable stuttering behavior is considered to be low (e.g., 1 out of 7 point scale) over multiple observations by parents and/or clinicians, (2) so-called stutter-like disfluencies occur in less than 3% of syllables in two spontaneous speech samples, and (3) a clinician or parent considers the child to have recovered. In contrast, Craig and Calver (1991) used a speaker-centered definition of relapse, though they still focused on behavior, by stating that relapse involved “stuttering to a degree which was not acceptable to yourself for at least a period of one week” (p. 50). Thus, recovery has been defined based on the presence or absence of certain behaviors associated with stuttering.

In a similar way, relapse has commonly been defined in terms of observable stuttering behavior (see, Craig, 1998; Craig & Andrews, 1985; Craig & Hancock, 1998; Hancock & Craig, 1998). For example, if therapy gains are primarily measured in terms of observable fluency or stuttering behavior, research evidence has shown that approximately 22% of people who stutter (14/62) who had successfully reduced their stuttering behavior frequency to under 2% experienced relapse (e.g., decreased fluency) following treatment (Craig & Andrews, 1985). Hancock and Craig (1998) also reported that pre-treatment stuttering frequency and posttreatment anxiety significantly predicted relapse of observable stuttering behaviors one year following treatment in school-age children. Similarly, Craig and Hancock (1998) reported that a majority of 152 adults who had received fluency-focused treatment had experienced cycles of relapse and subsequent periods of decreased speech fluency. Respondents who indicated that they had experienced relapse described that specific speech situations (e.g., at work, when under pressure) were more likely to elicit relapse and increased amounts of stuttering behavior. Thus, relapse, typically viewed as a return of stuttering behaviors or a reduction in speech fluency, is a common experience for people who achieve increased fluency as a result of therapy (see , Cream et al., 2009; Evesham & Fransella, 1985; Silverman, 1981). While research continues to reveal important differences between people who have apparently recovered or relapsed from stuttering behaviors and people who continue to exhibit overt stuttering behaviors, much less is known about the recovery and relapse from the adverse impact of the condition (Tichenor & Yaruss, 2019c; Yaruss & Quesal, 2004).

### 1.2 Differentiating Recovery and Relapse from both Adverse Impact and Stuttering Behaviors

The *adverse impact* of stuttering refers to the environmental, personal, and physiological factors that can negatively affect and limit the life of a person who stutters (Tichenor & Yaruss, 2019c; Yaruss, 1998; Yaruss & Quesal, 2004). Research evidence has shown that measurements of adverse impact from the broader stuttering condition do not correlate strongly with measures of the stuttering behavior, such as percent stuttered syllables (Blumgart et al., 2012). In other words, just because a person might exhibit a reduction in observable stuttering behavior does not necessarily mean that the person will necessarily experience a reduction in adverse impact. This is relevant to the discussion of recovery and relapse, because some individuals who might be considered to have recovered using behavioral definitions (e.g., Yairi et al. 2005) may still experience stuttering-related adverse impact in their lives (Anderson & Felsenfeld, 2003; Finn, 1997; Franken et al., 2018). For example, Franken et al. (2018) found that 13% of a sample of preschoolers who were judged to have recovered self-reported that they continued to live with stuttering, even though observations of their speech using standard listener-based methods did not reveal stuttering behavior. These children may have exhibited recovery from the stuttering behavior, but they had not experienced recovery from the broader adverse impact of the condition (for discussion of adverse impact, see Tichenor & Yaruss, 2019c; Yaruss & Quesal, 2004). Just as recovery from adverse impact may occur independently from the stuttering behavior, so too may relapse of the stuttering behavior occur independently from adverse impact. For example, it is not presently clear whether speakers may experience a return of negative emotional responses to stuttering or increased avoidance and difficulty with communication, even if the overt stuttering behaviors do not increase. More information is needed about recovery and relapse from the adverse impact of stuttering to better understand and differentiate both processes.

Glimpses of how people who stutter view recovery from the impact related to stuttering can be found in past research. For example, Wingate (1964) conducted a survey of 50 people who reported that they had “recovered in respect to their former speech difficulty” (p. 313). The people who reported to have recovered indicated that they still sometimes stuttered, but conversation partners were not aware of stuttering and they were not considered by others to be people who stutter. Wingate found that a common theme among those who reported recovery was a change in attitude concerning stuttering. Attitudinal change was indicated by acceptance, desensitization, or “increasing awareness of…capabilities” (p. 316). Likewise, Quarrington (1977) analyzed the reports of 20 people who considered themselves to have recovered from stuttering. The author found that recovery came about due to “increased feelings of self-worth or capability, reduced feelings of helplessness…[and] increased awareness of the circumstances and personal behaviors involved with stuttering” (p. 80). Finn (1996) reported similar findings: increased motivation, self-confidence, and self-awareness, as well as speech management strategies, were common factors that contributed to people considering themselves to have recovered. These insights suggest that recovery from the adverse impact of stuttering may include increased participation in life activities, as well as improvements in personal factors such as acceptance, self-confidence, and motivation to communicate.

Other research evidence exists suggesting that recovery and relapse can be conceptualized and experienced differently by different individuals. Anderson and Felsenfeld (2003) employed qualitative methods with 6 adults who considered themselves to have recovered from stuttering. No participant in the study was judged to demonstrate an average percentage of observable stuttered syllables higher than 2% during the five speech samples taken during the qualitative interview. Respondents indicated that they “stuttered in the past but no longer experienced problems with stuttering” and that this recovery occurred after age 10 (p. 245). Themes were categorized as: 1) recollection of past stuttering and its impact, 2) representations of recovery, 3) perceptions of the recovery process, and 4) perceptions of current speaking performance and experiences. The term recovery came to be used in two ways: (a) a change in their speech or impact that required constant attention or vigilance, lest the person fall back off “the fluency wagon” (p. 252), and (b) the notion that recovery did not require absolute fluency but rather involved learning to live with the disorder in order to experience reduced impact. For example, although all participants in the study self-reported to have recovered, subject K.P. stated, “I don’t think that you ever completely recover; it’s always there” (p. 249) and subject R.T. stated, “It’s in remission…I still have episodes where I am fighting to get the word out” (p. 249). The authors further found that a few participants reported that they used strategies such as avoiding words or situations from time-to-time due to a of fear of stuttering. Other respondents also reported the need to pay increased attention to their speech strategies to maintain fluency. The authors interpreted these results to mean that there are different pathways to recovery and that recovery can be experienced in different ways by different people, though forms of “vigilance” such as avoiding or increased attention are sometimes needed to guard against showing stuttering (Anderson & Felsenfeld, 2003, p. 252). The fact that participants in the study were still reporting episodes of struggle, avoidance, and negative impact highlights the need to study in more detail how recovery and relapse from the stuttering behavior and the broader condition differ.

The notion that recovery can be experienced in different ways is supported by recent research that highlights the importance of considering the individual perspectives of people who stutter when answering questions about the stuttering condition (Tichenor & Yaruss, 2018, 2019c). For example, recent evidence shows that a person who stutters who is focused on fluency is significantly more likely to demonstrate more covert stuttering behaviors and negative thoughts/feelings than a person who is more open about stuttering (Tichenor & Yaruss, 2019a). As such, a person who seeks to mask, hide, or prevent overt stuttering behaviors by using covert behaviors or fluency-enhancing strategies might appear to a listener to have recovered from the stuttering behavior, even though the speaker might still experience the associated adverse impact of stuttering (and would therefore not be judged to have recovered from the stuttering condition). In contrast, people may demonstrate many overt stuttering behaviors yet experience few negative thoughts or feelings related to stuttering. Such speakers may consider themselves to have recovered from the adverse impact of the condition even though they have not recovered from the behavior (Tichenor & Yaruss, 2019a).

Investigations into recovery from the adverse impact related to stuttering may be limited by attempts to equate recovery from stuttering behaviors to recovery from adverse impact. Finn (1997) compared the speech of 15 adults who claimed to have stuttered previously and recovered without formal treatment to the speech of age and sex-matched people who reported that they had never stuttered. Raters were asked to listen to speech samples and judge whether the speaker in the sample stuttered. Raters were also asked to rate how certain they were in making this determination. Results indicated that the speech of those who had reportedly recovered was perceptually different from the speech of people who had never stuttered. The author attributed the origin of these differences to residual moments of stuttering and presumed that self-imposed modifications, such as slowing down or prolonging speech, may have decreased the naturalness of their speech even though overt stuttering behaviors were not always apparent (Finn, 1997). In particular, the speech of those who considered themselves to have recovered demonstrated a “high frequency of part-word repetitions” (p. 828). Finn (1997) highlighted this apparent disparity by writing,

> Findings from this study also reveal a quandary concerning the apparent disparity between speaker self-judged recovery and listener-judged non-normal sounding speech. Conventional wisdom would suggest that recovery means there is some semblance of

> normalcy attained by the speaker. Listener judgments, however, indicate that many of these speakers did not exhibit normal speech (p. 828).

The quandary described by Finn highlights a disparity between the fluency that listeners observe and often judge to be indicative of recovery (see Yairi & Ambrose, 1999, 2005) and the experiences of speakers who may not demonstrate fluent speech yet still consider themselves to have recovered (see for discussion, Anderson & Felsenfeld, 2003; Franken et al., 2018).

The possibility that perceptions concerning recovery might differ between individuals who stutter and researchers is not commonly accounted for in stuttering research. For example, Finn, Howard, and Kubala (2005) explored the differences in self-perception, attitudes, and feelings between groups of people who considered themselves to have recovered but still exhibited observable stuttering behaviors on occasion and people who considered themselves to have recovered and did not exhibit observable stuttering behavior. A total of 15 people were interviewed using pre-defined questions, and responses were analyzed thematically. The group of people with no tendency to stutter overtly described a perception of normalcy, such as a person who does not stutter might experience. The participants explained that their speech did not limit them in daily situations, that they experienced spontaneity in their speech, that they did not have to pay attention to how they spoke, and that they felt positively about their ability to communicate. Importantly, the group of people who still exhibited observable stuttering behaviors yet felt as if they had recovered reported similar experiences. These participants—whose speech still contained observable disruptions—considered their speech to be “normal,” just like the group who reported recovery and did not exhibit observable stuttering behavior (p. 295). When they described their “residual stuttering,” they did so in a way that demonstrated acceptance, a lack of struggle, and minimal negative impact on themselves (p. 296). At the same time, participants who considered themselves to have recovered also discussed feelings of apprehension that some situations might make stuttering manifest itself again. The authors interpreted these findings to mean that,

> …*complete* recovery was possible for speakers who reported that they no longer stuttered; whereas, those who still stuttered occasionally appeared to no longer be handicapped by stuttering, but required some vigilance to maintain their relatively fluent speech. (Finn et al., 2005, p. 281, emphasis added)

Most recently, Neuman et al. (2019) conducted an international internet and paper-based survey of 110 adults who self-reported to have spontaneously recovered from stuttering after age 11. The researchers asked participants to respond to a list of techniques that helped them recover and to provide possible explanations for why they recovered. Results included a wide range of responses that the authors ultimately grouped in terms of 6 broad themes: speech restructuring techniques, relaxed or monitored speech, elocution training, stage performance experiences, seeking out speech demands to challenge oneself, and reassurance (e.g., establishing and maintaining eye contact during moments of stuttering). The causal attribution or reason for recovery was described as occurring within three categories: life change, attitude change, and social support. Rather than interpreting these results in terms of what individuals who stutter experience, Neuman and colleagues focused on a desire to corroborate their participants' recovery status through clinician observation.

> "The current findings are thus limited in that the influence of previous treatments cannot be generally excluded, because the recovery [reported by respondents] was mostly a *partial* one…" (emphasis added, Neumann et al., 2019, p. 10).

These findings highlight the distinction between recovery from the observable behavior and recovery from the associated adverse impact of the condition. Specifically, in some studies, it appears that the perceptions of listeners are presumed to take precedence over a speaker's own knowledge and experience regarding stuttering in the determination of whether an individual has recovered. This can be seen in attempts to classify recovery via listener-based perspectives such as *partial* recovery (Neumann et al., 2019) or *complete* recovery (Finn et al., 2005) based on the presence of observable stuttering behaviors. The research reviewed above shows that people's individual experiences of recovery may involve changes to both surface behavior and life experiences – and that different people's experiences of recovery may depend upon how they define and experience both stuttering and recovery (Anderson & Felsenfeld, 2003; Tichenor & Yaruss, 2019c). In other words, because people who stutter experience stuttering in a myriad of phenotypes that vary greatly in terms of overt features and adverse impact (Tichenor & Yaruss, 2019c), pathways to and definitions of recovery and relapse may be highly individualized.

In order to investigate this possibility that people who stutter can and do experience recovery and relapse as a function of their individual phenotypes of the stuttering experience, it is first necessary to explore what recovery and relapse actually *mean* to people who stutter who consider themselves to have recovered or relapsed. Moreover, past research on what recovery means to people who stutter has involved relatively small, homogenous groups of participants (n = 6 for Anderson & Felsenfeld, 2003); (n = 15 for Finn et al., 2005). Therefore, it is necessary to explore recovery and relapse via large and heterogeneous samples of participants to capture the broadest range of different phenotypes in the population of those who stutter. Thus, the purpose of this study was to explore what the terms recovery and relapse mean to a large and heterogeneous sample of people who stutter, so that a deeper and more thorough understanding of these aspects of the broader experience of stuttering can be understood. This purpose aligns with patient-centered care perspectives (Barry & Edgman-Levitan, 2012; Epstein & Street, 2011; Frank et al., 2014; Schork, 2015), where patients or clients “are known as persons in context of their own social worlds, listened to, informed, respected, and involved in their care—and their wishes are honored (but not mindlessly enacted) during their health care journey” (Epstein & Street, 2011, p. 100). The knowledge from this study will serve as a vehicle for informing the profession about how to conceptualize therapeutic choices for adults who stutter, wherein each individual speaker’s definitions of recovery and can motivate the therapeutic approaches that are offered.

## 2.0 METHOD

### 2.1 Participants and Procedures

This study involved a mixed-method analysis of results from a survey asking adults who stutter about their experience of recovery relating to stuttering, their perceptions of whether they currently or have ever considered themselves to have recovered from stuttering, and their experience and perceptions of relapse. The survey consisted of both open-ended and Likert-based items. A total of 246 people opened the link for the survey. Incomplete responses from 11 participants were excluded because the respondents provided no meaningful data other than the consent form. Of those 235 people providing meaningful data, 232 people indicated that they considered themselves to be people who stutter at the time that they completed the survey, while 3 indicated that they considered themselves to be people who formerly stuttered. A total of 7 people who completed the survey were excluded from the analyses: 4 due to any lack of self-reported history of stuttering (former or current), and 3 for being under the age of

18. Thus, the total number of participants included in the study was 228 adults who currently or formerly considered themselves to be people who stutter.

Recruitment procedures were similar to those found in recent surveys from the Michigan State University Spartan Stuttering Laboratory (Tichenor & Yaruss, 2019c, 2019a, 2019b). Participants were recruited via convenience and snowball sampling, using research registries from previous studies, social media outlets, personal contacts of the authors, word-of-mouth, and national and international stuttering associations in an attempt to capture the experiences of the broadest sample of participants possible. The survey was conducted online using Qualtrics (Qualtrics, 2019). All participants were adults, age 18 or older (*Mean age* = 42.82, *SD* = 17.22), who self-reported that they were or had previously considered themselves to be people who stutter. All participants provided informed consent prior to completing the survey. The study was judged to be exempt from institutional review by the Michigan State University Human Subjects Research Protection Office of Regulatory Affairs under statute 45 CFR 46.101(b) 2 of the Federal Policy for the Protection of Human Subjects.

Demographic data, including age at the time of the survey, age of stuttering onset, history of participation in self-help/support and speech therapy, country of origin, and ethnicity are shown in Table 1. Some demographic data were missing for questions at the end of the survey due to respondents not completing the entire survey. Although attempts were made to recruit a broad range of participants from different backgrounds, most of the participants in this study were Caucasian, resided in the United States of America, and had participated in therapy as well as self-help/support.

## 2.2 The Survey

Respondents were first asked to define and describe what the terms recovery and relapse from stuttering meant to them. Once they completed these open-ended questions, they were then asked to use their own definitions of recovery and relapse to answer yes/no questions about whether they considered themselves to have recovered at any time in the past, whether they currently considered themselves to have recovered, or whether they have experienced relapse. Because prior pilot data revealed that it was possible for participants to consider themselves to have recovered, to have recovered but relapsed, or to have never recovered, these questions were asked to understand how the participants conceptualize themselves in relation to those constructs . Importantly, these distinctions were based on each respondent's own personal definitions of recovery and relapse that they had described first. Respondents were then asked why they considered themselves to have recovered (or not). Respondents were also asked if other people had ever considered them to have recovered via a 4-point Likert scale (Yes, Maybe, Not Sure, No). Individuals who answered yes or maybe were then asked who thought that they had recovered and why they believed that to be the case.

### 2.3 Data Analysis

Data recorded in Qualtrics were exported to and analyzed in R-studio (Rstudio Team, 2018), a companion program to R (R Core Team, 2019). Various R packages were used for qualitative (Huang, 2016), quantitative analysis (Revelle, 2019), and data manipulation (Wickham, 2016, 2019). All data were manually checked for data entry and coding errors. Quantitative data were analyzed descriptively and are presented in raw numbers and/or percentages. Qualitative data were edited slightly as needed for misspellings and punctuation to improve readability.

Principles of thematic analysis were used to analyze qualitative data. The process of analyzing thematic data was iterative. It began with the first author separating out the data files for respondents who considered themselves to have recovered at the time that they completed the survey from those who considered themselves to have recovered at some point in the past and those who considered themselves never to have recovered. This allowed the themes to be analyzed separately to address the possibility that the conceptualizations of recovery might differ among the groups due to varying experiences with stuttering. Phrases or sentences that highlighted the participants' definitions and experiences were collected and coded in broad terms to categorize meaning. This culminated in a list of initial significant statements comprising a rough set of themes. These were then collected, grouped, renamed, clustered, and re-clustered into meaning-units and emerging themes (Braun & Clarke, 2006). Emerging themes were then re-named as needed to facilitate interpretation of the findings, and again clustered into themes and sub-themes as meanings were more clearly seen (Creswell, 2013). Quotes are presented below to support the themes. The themes were not quantified (i.e., the number of times a theme occurred in the sample was not tallied) to limit mis-representing the data. In most qualitative research, representational counting of how often a theme or sub-theme occurs is avoided because the frequency of a theme does not directly relate to the importance of the theme (for discussion, see Sandelowski, 2001). This approach to qualitative research follows similar and recent qualitative work exploring various aspects of stuttering (see, Jackson et al., 2015; Plexico et al., 2010; Tichenor et al., 2017; Tichenor & Yaruss, 2018, 2019c).

## 2.4 Credibility

The themes reported below come from all data collected. Consistent with past qualitative stuttering research using large samples of data (Tichenor & Yaruss, 2019c) and qualitative standard practice (Fusch & Ness, 2015), no saturation analysis was conducted. The large sample size, consistency of themes, and varied backgrounds of participants support the credibility of the results. The second author completed a reliability analysis on the themes by coding 20% of the data independent of the first author. The content and names of the themes coded by the second author matched those identified by the first author, thereby supporting the credibility and reliability of the findings.

## 3.0 RESULTS

Because this survey contained both Likert items and open-ended free response items, a mixture of both quantitative and qualitative data were analyzed. Data concerning participant self-judgments and thematic analyses (e.g., Recovery, Relapse, Recovery as Judged by Others) are presented below.

### 3.1 Participant Self-Ratings of Experiences Relating to Recovery and Relapse

Table 2 contains the raw frequencies and percentages of Likert-based responses across the samples of adults who formerly or currently considered themselves to have recovered from stuttering. The table indicates results for whether another person considered respondents to have recovered and if the respondents reported having experienced relapse. Results indicate that the majority of respondents (a) had never experienced recovery, (b) had never been considered to have recovered by another person, and (c) had experienced relapse. A number of respondents reported that they either currently (n = 38, 17.3%) or formerly (n = 59, 26.8%) considered themselves to have recovered, while less than 2% of respondents (n=3) indicated that they formerly—but not currently—considered themselves to be people who stutter. This indicates that the concepts of experiencing recovery and identifying as a person who no longer stutters were not defined synonymously by respondents.

### 3.2 Recovery and Relapse Defined: Initial Group Analyses

Participants were grouped into three categories based on their responses to the yes/no questions described above: Never Recovered, Formerly Recovered, and Currently Recovered. Respondents' definitions of recovery were initially analyzed within each of these groups separately to determine if participants within each group defined the terms differently from the way participants in other groups defined the term. Results indicated that the groups did not define the terms relapse and recovery differently. Moreover, all themes were present for all groups, though participants reported experiencing certain aspects of the themes differently, based on whether they considered themselves to have ever recovered or relapsed. That is, adults who considered themselves not to have recovered discussed not experiencing relapse, even though they defined relapse the same way as adults who did consider themselves to have recovered at some point in their lives. For this reason, the data defining recovery and relapse for each of the groups are presented together. Individual examples in support of the themes are presented, with participant numbers and codes representing the group the person belonged to (e.g., "CR" for currently recovered, "OR" for once recovered, and "NR" for never recovered). Themes and sub-themes for both recovery and relapse can be found in Table 3.

Responses relating to why someone currently, formerly, or never considered themselves to have recovered were analyzed after the definitions of recovery and relapse presented below. Results indicated that respondents did not provide novel or added information in response to these questions. Instead, respondents simply rephrased their definitions of recovery, indicating that they had or had not experienced their definition of recovery in their own lives. As such, those data were not further analyzed.

### 3.3 Recovery

Analyses yielded 576 significant statements for definitions of *Recovery* and 346 significant statements for respondent definitions of *Relapse* across the 228 participants. These significant statements were combined into initial themes and broad categories, which were then further refined iteratively into final themes and sub-themes as meaning became clearer (Boyatzis, 1998; Braun & Clarke, 2006; Creswell, 2013). As with previous research (Tichenor & Yaruss, 2018, 2019c), the quotes represent illustrative examples of the themes. Because themes co-occurred with one another, a particular quote often highlights more than one theme. Portions of the quotes are italicized to highlight pertinent portions in support of a particular theme. Given the large size of the data set, not every example of every theme is presented to support a theme. Quotes were chosen to reflect the theme and "bring in the voice of the participants" (Creswell, 2013, p. 219). Note that participant numbers corresponding to the quotes below represent the entire sample of data collected before participants were excluded in the various ways described above.

#### 3.3.1 Reducing and Eliminating Reactions

*Recovery* was defined as an increase in positive affective/emotional and cognitive aspects (e.g., acceptance) and as a decrease in negative aspects of the experience of stuttering (e.g., tension, repetitive negative thinking, anxiety, fear). These definitions of the term recovery were not reliant on the presence of fluent speech or the absence of stuttering behaviors.

### 3.3.1.1 Affective and Emotional Reactions

*Recovery* was defined in terms of affective/emotional reactions, discussed as reductions in shame, embarrassment, fear, anxiety, guilt, nervousness, worry, and stress. Increases in positive affective/emotional reactions were also mentioned.

> Participant(184-CR): "Recovery" from stuttering means *relieving myself of all the negative feelings associated with stuttering*. *It means [to] start feeling good about my speech and myself*. It does not mean the complete fluency (which we may never achieve), but the ability to communicate and express my thoughts effectively *without feeling embarrassed and ashamed*.
>
> P(96-CR): Recovery could mean a variety of things. It could be one of those success stories where a previous stutterer no longer stutters. *It could also mean no longer feeling the shame of stuttering*.
>
> P(11-OR): Recovery to me means a 95 percent decrease in stuttering along with the ability to deal with all of the symptoms that occur alongside stuttering. *This includes the anxiety and micro doses of depression* that can come along with speaking in groups, introducing yourself and everyday conversations.
>
> P(33-NR): …*The term, "recovery", for me, would be to extinguish these feelings of fear*. I don't mind stuttering, and it is my goal to stutter fluently. But, *going into situations that make my heart pound and adrenaline rush is extremely uncomfortable. I wish to interact with people, in any situation, feeling calm, relaxed, and not worried about stuttering.*
>
> P(154-NR): *To me "recovery" would mean a time in my life when I would not worry about stuttering*…I am generally happy in my life but I am worried about stuttering all the time during my working day and frequently at home, *I am always worried in social situations*.
>
> P(76-NR): …There is no such thing as "recovery". *The fear and stress of potentially stuttering in a given situation (social, business, etc.) is ALWAYS there*.

### 3.3.1.2 Behavioral Reactions

Eliminating or reducing behavioral reactions (e.g., decreasing tension, decreasing struggle, increasing fluency) associated with stuttering was described as a central component to *recovery*.

> P(79-NR): *Recovery for me means that I would stop using secondary behaviors. I define secondary behaviors as the abnormal things I do (e.g., facial tension, shut eyes, jaw jerks)*…

> P(193-OR): *Recovery…would be to be reasonably fluent, and when I do have disfluencies, to have "easy" disfluencies*…Recovery would be to have a moment of disfluency and easily tap into the tools and techniques I have learned and to make that disfluency *as easy and inconsequential as possible*.

> P(15-OR): Being certain I'll be *able to speak fluently regardless of the situation*.

> P(75-CR): Recovery from stuttering means *freedom from the fear and struggle of speaking*. It has less to do with fluency (*although being able to speak with less stuttered speech is important)*…

> P(237-CR): Recovery is *reaching a level of fluency* where I can smile at myself when completing a stressful speaking event.

#### 3.3.1.3 Cognitive Reactions

Recovery was also discussed in terms of reducing unhelpful repetitive thoughts and anticipation (the thought that stuttering might soon occur), increasing acceptance/confidence, decreasing avoidance, being more spontaneous, and developing a more-positive sense of self. As with affective/emotional aspects, these cognitive reactions were discussed in terms of a constellation/phenotype of decreased negative affective, behavioral, and cognitive factors.

> P(234-CR): *I am in "recovery" because I have fully and completely accepted that I am a person who stutters, that stuttering is now, has been and always will be part of who I am and what I do...After decades of trying to hide or keep my stuttering a secret, I no longer try to hide the way I talk or avoid talking. I believe I have a right to speak and the right to say what I want. I have found that this deep level of acceptance has dramatically taken the edge off my stuttering and allows me to speak more freely.*

> P(174-NR): Recovery from stuttering to me means *that I will not allow negative thoughts and emotions dominate my life…I will still strive every day to say what I want to say and have the self-confidence that what I want to say has value. This means that I will not avoid words or situations to avoid stuttering*.

> P(135-NR): … I associate the word recovery with the healing process. My view is that there is no cure for stuttering and the ultimate goal for a stutterer is *100% acceptance*

> *of their speech. So maybe recovery occurs after speaking and not beating yourself up over your stutter. Avoid the negative feelings*.
>
> P(13-CR): Reaching a level of fluency, *confidence, and acceptance* that it no longer interferes with my life in a significant way.
>
> P(67-OR): It means being able to speak without stuttering or with almost no stuttering. It also means not being afraid of speaking anymore and *being able to talk spontaneously without thinking about it first*.

### 3.3.2 Increased Life Participation and Effective Communication

*Recovery* was also defined in terms of decreased limitations in their ability to communicate and in their ability to live their lives more fully. Discussions of increased participation was aided by increased fluency or decreased stuttering behaviors, even though increased participation could occur without changes in speech behavior.

> P(74-CR): Recovery is no longer feeling burdened on any level by my stuttering and *pursuing the life I want and participating in life and conversations that I want*…
>
> P(111-CR): To me [recovery] simply means that stuttering *does not interfere with what you want to do*. That you do not let stuttering influence your choices or your quality of life... But, for me recovery has very little to do with the amount (frequency) of stuttering. It is all about how one responds to stuttering and *how much it influences one's life*.
>
> P(241-CR): Recovery from stuttering means the feeling of *not being held back by stuttering*.
>
> P(177-NR): Recovery for me would be - that *my speech is no longer the [first and last] concern of everything that I do. That my speech would no longer be a reason to do or not do something. That my speech no longer restricts my options and opportunities in life*.

### 3.3.3 Increased Control

An increased sense of *control w*as a central component to recovery. The ways in which participants discussed *control* (e.g., being out of control, stuck, or unable) resembles themes in past qualitative work to describe what a speaker wishes to do but is unable to do (see, Tichenor

& Yaruss, 2018, 2019c). These data support past researchers who have highlighted the importance of the internal experience of stuttering in quantifying its clinical significance (see, Perkins, 1984, 1990; Quesal, 1989).

> P(1-NR): [Recovery is] no longer experiencing moments of stuttering, stuttering-like disfluencies, and *the sensation of loss of control when speaking*.
>
> P(118-NR): Recovery for me is stuttering possibly less, *the ability to express an idea without that stop and go*, and be able to communicate socially.
>
> P(178-NR): For me recovery means speaking without fear, struggle or embarrassment. It means *saying what I want, when I want, regardless of whether I stutter or not*.
>
> P(133-NR): [Recovery] will be like getting out of the jail of my own head. Just *being able to say whatever I want, whenever I want to,* seems to me like a level of freedom different and higher from anything I can experience today.
>
> R(55-NR): Recovery means not stuttering any more no matter the circumstance. Not being anxious every few years because my stutter is coming back and there is nothing I can do about it…*Recovery means not feeling like I am losing control…when I try to say words that begin in a vowel*…[not] trying to think of how to phrase my ideas [and] *waiting for that exact moment that something in the universe changes so I'll be able to say a word and not get stuck in it*.

### 3.4 Relapse

Relapse was defined as either a return to prior behaviors or a reversal of prior improvements. This was discussed as the opposite of recovery in a unitary theme reflecting more frequent/severe stuttering behaviors, more negative cognitive and affective/emotional reactions, and increased limitations in daily life. A return of the sensation of loss of control was also discussed as a central feature of relapse. Relapse was defined in the same way, regardless of whether someone had experienced relapse or not.

> P(30-NR): *Going from a state of relative ease in speech and a relatively self-accepting state back to a state of despair*.

> P(60-NR): *I define a relapse as going back to old habits that were formed out of a fear of stuttering or an attempt to be more fluent…. After about a year in speech therapy once a week for an hour per session, I experienced a relapse with my telephone work. I stopped practicing using the pseudo-stutter technique when I had to make phone calls, and slowly I started regressing to avoidance of the telephone all together. The fear of the phone ringing crept back as strong as it had been before I even started speech therapy.*
>
> P(187-CR): *A relapse within the context of stuttering would be the loss of your positive self-image.*
>
> P(7-OR): [Relapse is] *falling back into a mindset where you ruin your self-esteem by getting frustrated and blaming yourself every time you stutter. Shutting yourself out from social events, relationships, and avoiding people so that you don't have to stutter*.
> P(78-OR): I define *"relapse" as a fall from the state of recovery* I described earlier in this survey. In other words, *I would describe a relapse as a period of time where a person who stutters experiences decreased self-perception in terms of quality of life, communicative abilities, and emotional state*.
>
> P(75-CR): *Relapse is a return to once conquered fear and struggle/tension with speaking. Whatever gains had been made in reducing the frequency and/or severity of stuttering are lost sometimes resulting in even more stuttering and fear/avoidance than was there to begin with…relapse occurs rather slowly over time.*

### 3.4.1 Relapse is Not Normal Variability

In defining relapse in relation to recovery, relapse was discussed as being different from normal variation in the frequency or severity of behaviors, thoughts, or feelings associated with stuttering.

> P(134-NR): My stuttering has fluctuated over the years. I stuttered a lot in my teens and again recently. *My stuttering is also quite variable day to day. There are weeks where I will be quite fluent, then suddenly I am stuttering a lot again. It can be somewhat annoying, but I don't think of it as a relapse*.
>
> P(230-CR): …I rarely experience "stuttering" [as] hard, prolonged blocks, eye blinking, etc. – I think because I don't try not to stutter. According to my definition of stuttering and recovery, then, *I guess a relapse would be if, for an extended period of time, I started actively trying to avoid stuttering, resulting severe stuttering. This would require a radical regression in my understanding of my speech impediment*.

### 3.5 Summary: Recovery and Relapse Defined by Adults who Stutter

The data support the interpretation that recovery from stuttering is the decrease/elimination of negative aspects of this experience and a simultaneous increase in positive aspects. Relapse is viewed as the opposite of recovery—a return of negative aspects and a decrease of positive aspects. The terms *recovery* and *relapse* from stuttering can best be understood in relation to the ways in which stuttering is uniquely experienced by each individual speaker who stutters. Past research evidence has shown that stuttering is experienced as a tightly related constellation of feeling stuck/out of control/unable to continue, reactions (e.g., affective-emotional, behavioral, and cognitive), and real-world impact/limitations (Tichenor & Yaruss, 2019c; Yaruss, 1998; Yaruss & Quesal, 2004). Thus, just as there are many phenotypes of stuttering (Tichenor & Yaruss, 2019c), so too can there be multiple pathways and facets to recovery and relapse, and these must be considered on an individual-by-individual basis.

### 3.6 Recovery as Judged by Others

This survey contained a question regarding whether others had considered the respondent to have recovered, as well as open-ended follow-up questions asking participants who had considered them to have recovered and why they thought that was so (See Section 2.2). Many respondents indicated that a range of individuals had, at one time or another, considered or maybe considered them to have recovered from stuttering (Yes: 20.3%, Maybe: 20.3%, Not Sure: 25.3%, No: 33.9%,). Respondents named a variety of individuals, including family (parents, siblings), spouses/romantic partners, speech-language pathologists, psychologists, co-workers, and other people with whom the respondents interacted on a daily basis (e.g., clients or strangers).

When asked *why* these individuals considered the participants to have recovered, they responded in ways that represented two distinct themes: *Covert Stuttering* and *Matching Perceptions*. As with the other qualitative data in this study, responses are presented based on quotes from the respondents. For reference, the respondent's answer to "Who has considered you to be recovered from stuttering?" is presented in brackets that accompany their answer to "Why do you think someone has considered you to be recovered?" The two themes below, *Covert Stuttering* and *Matching Perceptions*, were found in both the group of people who indicated *yes* and *maybe* to the question asking whether anyone considered the participant to have recovered.

### 3.6.1 Covert Stuttering

Others were discussed as people who considered a respondent to have recovered because they were successful at hiding, avoiding, or masking stuttering.

> P(14-OR): [My family members have specifically stated in the past and more recently that I have grown out of stuttering.] *They were not aware of the avoidance behaviors I used to avoid stuttering in front of them*. They are not around enough…to be exposed to my speech without those behaviors.
>
> P(18-NR): [I think some of my coworkers think I'm "better", because I have learned to hide it better.*] I've gotten better at hiding my speech in the past few years*.
>
> P(19-NR): […People I have known for a certain time might have considered me being recovered.] *My sophisticated covert techniques allowed me to hide my stuttering to an extent people could have considered me healed*.
>
> P(73-NR): [Many family members]. *I was covert with my stutter for several years growing up & family members thought since they didn't hear me stutter, I had recovered*.
>
> P(234-NR): [Speech therapists, my family.] *I could be fluent. They all liked that… As a teenager, that corresponds to when you're perfect, they like you*. What a wrong thought! I took back my life as a stutterer. I am who I am.

### 3.6.2 Matching Perceptions

The theme of *matching perceptions* describes the situation when both the speaker's internal perception and the listener or observer's judgment were aligned in terms of recovery. These matching perceptions agreed in terms of either stuttering behavior or adverse impact.

> P(22-CR): [Virtually everyone I know.] *Because my speech is not highly disfluent and because I live a pretty normal life.*
>
> P(75-CR): [Most people I speak with including many professionals (SLPs).] *Because I do not exhibit much observable stuttering*. When I do, they often do not recognize the dysfluency as stuttering. *I also do not feel, or act victimized by any stuttering that occurs*.
>
> P(171-CR): [I believe most of my family, my friends, my coworkers and even my last speech therapist.] *Because when I stutter in front of them not only do, I not panic, but they don't either. They treat it the way a cough, sneeze or hiccup can interrupt a person's speech*.

### 3.6.3 Summary: Recovery as Judged by Others

A range of individuals that have or may have considered participants to have recovered were specifically mentioned by participants. These people included spouses, friends, romantic partners, as well as professionals (e.g., speech-language pathologists). The two themes discussed above (Covert Stuttering and Matching Perceptions) describe the two sides of this experience from the perspective of individuals who stutter. Either the surface manifestation of stuttering (or lack thereof) is such that an other's view matches the speaker's internal experience (Matching Perceptions) or the person who stutters is successfully hiding stuttering in such a way that outward manifestations are avoided or masked (Covert Stuttering). These two viewpoints highlight the fact that recovery from the adverse impact relating to the condition does not equate with recovery from the overt speech behavior.

## 4.0 DISCUSSION

This study explored how adults who stutter defined the terms *recovery* and *relapse*. The data and themes suggest that recovery refers to a reduction or elimination of negative affective, behavioral, and cognitive personal factors and accompanying adverse impact from stuttering. Participants also defined recovery in terms of increases in positive experiences, such as an improved sensation of control and positive personal factors (e.g., acceptance and identity), all leading to greater effectiveness in communication and life participation. Relapse, on the other hand, is a return to or resurgence of experiencing more negative aspects. Therefore, to adults who stutter, recovery and relapse represent a duality inherent in the experience of stuttering: recovery is more than just a reduction in fluency; it also involves an increase in positive aspects of their experience. Likewise, relapse is not just a return of stuttering behaviors; it also involves increases in other personal reactions (e.g., negative affective, behavioral, and cognitive components) and real-world limitations. These data support a multi-faceted view of recovery and relapse that is dependent on how a person has experienced the stuttering condition.

Recent research has highlighted that there are many phenotypes of stuttering (Tichenor & Yaruss, 2019c) and that the term stuttering, as defined by adults who stutter, describes a constellation of behaviors, thoughts, and feelings related to their *individual experience* of the condition. Each person’s individual stuttering phenotype is the culmination of that person’s underlying impairment in body function, personal reactions, and activity limitations and participation restrictions (Tichenor & Yaruss, 2019c; WHO, 2001; Yaruss & Quesal, 2004). Data from this study show that the specific manner in which recovery and relapse are defined or conceptualized is in accordance with the individual’s personal phenotype of stuttering (e.g., how they themselves experience the stuttering condition). This can be seen in the distinct and collective definitions of recovery provided by participants. For example, some participants defined recovery in terms of increased fluency, while to others recovery meant increased acceptance and decreased struggle. Still others defined recovery as involving improvements in all three aspects of their experience of stuttering. On the other hand, some individuals defined recovery as not letting stuttering dictate how they lived their life. Though some researchers have suggested that *partial* recovery was attained in *certain* people when *some* but not *all* aspects of recovery are observed (Finn, 1997; Finn et al., 2005; Neumann et al., 2019), data from this study suggest that a person should be considered to have recovered *when they consider themselves to have recovered,* independent of observer or listener judgements.

Because individuals can experience recovery in different ways, the current data support a view of recovery in which different aspects of recovery can occur independently from other aspects (e.g., recovery from stuttering behaviors may occur even if the broader adverse impact of the condition remains). Figure 1 illustrates this independence through 4 combinations of possible outcomes. The figure also highlights the importance of taking a holistic view of stuttering, recovery, and relapse, in order to accommodate several key findings from this and other studies: (a) Finn's (1997) finding that people can still stutter observably yet experience little related adverse impact (Fig. 1, Person A), (b) data from the current study illustrating that some people consider themselves to have recovered from both the behavior and the broader impact of the condition (Fig. 1, Person C), or (c) Franken et al.'s (2018) finding that some children who no longer stutter as observed by speakers nevertheless experience adverse impact in relation to stuttering (Fig. 1, Person D). Person B would be considered not to have recovered, either in terms of stuttering behaviors or broader adverse impact.

This view of recovery and relapse also highlights the importance of considering the distinction between recovery from the underlying impairment of stuttering and recovery from the adverse impact related to the condition in relation to group identity (as reflected in answers to questions such as, “Do you consider yourself to be a person who stutters?”). Data from this study show that recovery (from behavior or condition) does not equate with no longer identifying as a person who stutters. The vast majority of participants in this study indicated that they considered themselves to be people who stutter (232 out of 235, 98.7%). Still, 38 out of 220 (17.3%) of participants indicated that they also considered themselves to have currently recovered (see Table 2). This finding indicates that if a researcher or clinician is interested in an individual’s recovery status, it is not sufficient to simply ask, “Do you consider yourself to be a person who stutters?” Because recovery and relapse are based upon each individual’s personal phenotype of stuttering, the determination of whether the person has recovered will also be defined in terms of that phenotype. An understanding of each individual’s experience of stuttering is therefore necessary before clinicians and researchers can classify people as having recovered or relapsed. Without this understanding, researchers may inaccurately consider someone to have recovered when the speaker does not actually agree.

The possibility that clinicians’ or researchers’ perception about recovery may not match an individual speaker’s identity of a speaker is further supported by the data about other people’s judgments of recovery. A large number of participants in this study (20.4%) indicated that they have been considered to have recovered by someone else even when they did not view themselves to have recovered. This is surprising because the people who should be most familiar with the individual's experience (family and speech-language pathologists, see section 3.5.1) were specifically mentioned by respondents as people who judged recovery based on surface behaviors. For example, P(85) stated that family members and friends considered them to be recovered because "they focus on what they see/hear. If I'm not blocking or stuttering anymore, then I'm cured or recovered." P(234) indicated that both their speech-language pathologists and their family members considered them to have recovered, stating, "I could be fluent. They all liked that." The majority of studies exploring childhood stuttering in recent decades have used criteria based on observable stuttering behaviors to identify differences between children who stutter and children who do not stutter (Zebrowski et al., 1985) or between children who currently stutter and children who are judged to have recovered (Yairi & Ambrose, 1999). Such studies have examined differences in neuroanatomy and neural function (Chang et al., 2008; Chow & Chang, 2017), language processing (Kreidler et al., 2017; Leech et al., 2017; Mohan & Weber, 2015; Spencer & Weber-Fox, 2014; Usler & Weber-Fox, 2015), motor skills (Usler et al., 2017), temperament (Erdemir et al., 2018), and interactions between and among these aspects between children who stutter and those who are considered to have recovered (Ambrose et al., 2015). These studies all presume that perceptibly fluent speech and a set maximum occurrence of stuttering during one or more speech samples are indicative of recovery from the stuttering condition. Data from this study highlight the importance of incorporating speaker perceptions of their own recovery status in how researchers classify subjects in terms of recovery and relapse. Such inclusion may increase the ability to detect underlying differences between people who stutter, those who do not, those who have recovered, and pathways between these categories.

These data highlight the real-world implications of focusing too much on observable speech fluency—both for the community of people who stutter and for an individual person in therapy. Prior research has shown that a clinician who uses a definition of stuttering that is based primarily on observable behaviors may unintentionally encourage their client to increase the frequency of negative thoughts and feelings associated with the condition, even if it leads to a reduction in observable behaviors such as repetitions and blocks (Tichenor & Yaruss, 2019a). In the same way, a clinician might view someone to have recovered from the behavior even though the therapy has contributed to an increase in the adverse impact of the condition. A broader understanding of relapse, recovery, and the experiences of people who stutter can help clinicians limit such negative consequences.

## 4.2 Limitations and Future Directions

This study qualitatively examined recovery and relapse in a large and relatively heterogenous sample of adults who stutter. Although the large sample size adds validity to the data, it is possible that the responses of participants in this study are not as representative of the population as they could be. In particular, despite the best efforts of the authors, most participants in this study had histories of self-help/support, therapy, were highly educated and from the United Stated of America. Future research should seek to recruit non-white American/European samples with people who stutter who do not have therapy or self-help/support histories, given that respondents in this study were skewed to those populations, ethnicities, cultures, and experiences. Furthermore, the participant pool was primarily comprised of adults who currently identify as being people who stutter. It is difficult to recruit "recovered" participants who are so far removed from stuttering that they no longer identify in any way with the condition or their past experiences. (In other words, people who simply no longer think about stuttering as being a factors in their lives are highly unlikely to respond to a survey about stuttering.) Such individuals may define recovery and relapse differently from individuals who are still dealing with stuttering in some fashion. Future research should explore the population of people who are far-removed from stuttering, if possible.

Data in this study further highlight the need to incorporate person-centered care and perspectives in the treatment of people who stutter. Clinicians have traditionally been prone to what might be called a *surface behavior bias*, in that observed stuttering behaviors or fluency dictate have dictated how they label individuals, diagnose, and treat the condition (see discussions in Jackson et al., 2012; Quesal, 1989; Tichenor & Yaruss, 2018, 2019c); see also Cooper's (1986, 1987) discussion of the *frequency fallacy*. Data from this study support the idea that individuals conceptualize recovery and relapse in accordance with how they experience the condition (and not based merely on the speech behaviors they exhibit). Moreover, as the present authors (e.g., Tichenor & Yaruss, 2019c) and many others have discussed, the various aspects of each speaker's experience of stuttering (e.g., personal reactions, reactions of those in the person's environment, difficulties in communication, and impact on quality of life) *interact* with one another to create an overall experience that is unique for each individual. Accordingly, future research should explore whether and how an individual's conceptualizations of stuttering are associated with their experience of recovery and relapse—and their responses to different approaches to treatment.

Though this study probed how adults who stutter experience and define relapse and recovery in relation to stuttering, this study did not evaluate how these experiences and definitions might have been formed by other people (e.g., family members, clinicians, etc.). Future research should address this potential relationship, because these experiences and definitions do not form in a vacuum. Understanding how these definitions and experiences form over time may improve the ability to define both relapse and recovery. Relatedly, this study explored what *recovery* and *relapse* meant to adults. Care should be taken when applying these findings to children, though some research evidence suggests that preschoolers who previously met criteria for *recovery* via behavioral definitions continued to experience adverse impact related to the condition (see, Franken et al., 2018). Future qualitative work should explore *recovery* and *relapse* in children in order to ascertain how these constructs develop over time. Lastly, this study was an initial exploration of what these terms mean to a large sample of adults who stutter. Future and follow-up qualitative work should replicate this study with other samples and triangulate responses, possibly even with interviews, so that these data can be corroborated and expanded.

### 4.3 Summary

This study provides data on how adults experience recovery and relapse in relation to the stuttering condition. Just as the term *stuttering* includes a constellation of behaviors, thoughts, feelings, and other experiences, the terms *recovery* and *relapse* are also multifaceted. As a group, adults who stutter defined recovery in terms of a reduction or elimination of negative affective, behavioral, and cognitive reactions and accompanying activity limitations and participation restrictions. This reduction in negative aspects coincided with increases in positive aspects, such as an increased sense of control and increases in positive personal reactions (e.g., acceptance and identity). Relapse reflected the opposite pattern. Viewing recovery and relapse in this way promises improvements in our understanding of the many phenotypes of stuttering and thereby supports and expands the research knowledge of the field and associated clinical work. Viewing recovery and relapse in this way also allows for the better inclusion and exclusion of research participants as well as more individualized treatment of people who stutter.

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