

Research Article

Self-Compassion and Quality of Life in Adults Who Stutter

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Purpose: The purpose of this study was to identify levels of self-compassion in adults who do and do not stutter and to determine whether self-compassion predicts the impact of stuttering on quality of life in adults who stutter.

Method: Participants included 140 adults who do and do not stutter matched for age and gender. All participants completed the Self-Compassion Scale. Adults who stutter also completed the Overall Assessment of the Speaker's Experience of Stuttering. Data were analyzed for self-compassion differences between and within adults who do and do not stutter and to predict self-compassion on quality of life in adults who stutter.

Results: Adults who do and do not stutter exhibited no significant differences in total self-compassion, regardless

of participant gender. A simple linear regression of the total self-compassion score and total Overall Assessment of the Speaker's Experience of Stuttering score showed a significant, negative linear relationship of self-compassion predicting the impact of stuttering on quality of life.

Conclusions: Data suggest that higher levels of self-kindness, mindfulness, and social connectedness (i.e., self-compassion) are related to reduced negative reactions to stuttering, an increased participation in daily communication situations, and an improved overall quality of life. Future research should replicate current findings and identify moderators of the self-compassion–quality of life relationship.

Despite similar overt behaviors, including sound or syllable repetitions, prolongations, or inaudible blocks, people who stutter (PWS) vary widely both in stuttering frequency and internal reactions to their stuttering moments. Thus, stuttering and the relative impact cannot be measured by the frequency or severity of the overt behavior. Rather, stuttering is a multifaceted experience that often results in feelings of shame, isolation, lost control, and avoidance. For many, these negative feelings can interfere with vocational, academic, social, and personal achievement and have a profound impact on overall quality of life (Boyle, 2013; Bricker-Katz et al., 2009; Craig et al., 2009; Daniels et al., 2012).

The Impact of Stuttering on Quality of Life

Quality of life is broadly conceptualized as an individual's well-being across multidimensional contexts, including physical, psychological, social, and vocational domains

(Craig et al., 2009). Quantitative and qualitative studies indicate that PWS experience increased emotional distress (Craig et al., 2011; Tichenor & Yaruss, 2018), negative affect (Iverach et al., 2010), self-deprecation (Corcoran & Stewart, 1998), and anxiety (Boyle, 2015). Research also demonstrates a strong relationship between these factors and quality of life. For example, Craig et al. (2009) measured the impact of stuttering on quality of life indicators, such as mental health (i.e., feelings of anxiety and depression), vitality (i.e., energy levels), and social functioning. Results from 200 adults who stutter and 200 adults who do not stutter indicated that PWS scored significantly lower in vitality, social and emotional function, and mental health compared to their fluent peers, revealing the unique social and psychological ramifications of stuttering. Similarly, Boyle and Fearon (2018) found that adults who stutter ($n = 397$) with higher levels of stigma awareness and application (i.e., awareness of and internalization of the public's negative beliefs about stuttering) experienced increased stress and decreased physical health, both strong predictors of life quality.

Historically and recently, qualitative studies suggest that PWS may experience adverse listener reactions to stuttering that can result in quality of life consequences. In 1998, a qualitative analysis of interview narratives of eight adults who stutter revealed a core theme of “suffering,”

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including feelings of helplessness, fear, and shame before, during, and after stuttering moments (Corcoran & Stewart, 1998). Much of this suffering stemmed from negative internal reactions to listener insensitivity, such as listeners who laughed, avoided eye contact, or mocked them. More recently, a phenomenological analysis demonstrated that PWS experience the negative influence of listener reactions on moments of stuttering (Tichenor & Yaruss, 2018). One participant shared:

“And then that’s usually when the listener starts giving me the look, why is this person not saying anything? And I know that I’m doing something. I’m trying to get my speech moving again but the listener is kind of sitting there looking at you and thinking “what’s this guy’s problem?” (p. 1118)

Given that PWS are frequently subjected to these types of exchanges, they may benefit from a practice that helps to mitigate adverse reactions. One such practice is self-compassion.

Self-Compassion Overview

Self-compassion is characterized by an open, caring, and nonjudgmental response to one’s own thoughts and feelings, especially in the face of negative experiences or emotions. Three primary components define self-compassion: mindfulness, self-kindness, and common humanity (Neff, 2003). Contrary to overidentifying with or ruminating on negative emotions, mindfulness is a nonjudgmental awareness in which each thought and feeling is observed and accepted, rather than judged as “good” or “bad” (Segal et al., 2002; Shapiro & Schwartz, 2000). Mindfulness is characterized by an open, curious, and accepting attitude toward one’s living experience (Kabat-Zinn, 1994; Neff & Germer, 2017). Self-kindness refers to the extension of warmth, care and concern rather than criticism (Neff, 2009). In practice, self-kindness might mean using a gentle tone when talking to one’s self and using affirming language. Doing so can result in “holding” suffering with care and concern, rather than self-criticizing. Finally, common humanity recognizes that suffering is a part of the human experience and that no one is alone in experiencing feelings of pain or inadequacy. In practice, common humanity means remembering that others have been through something similar or forming a supportive social network. Taken together, self-compassion can be considered as an unconditional support for self, resulting in a sense of psychological safety even after a negative experience.

The therapeutic property of self-compassion stems from the social mentality theory, which draws upon the evolutionary biology, neurobiology, and attachment theory to describe humans’ tendency to seek support and resources during times of need (Gilbert, 2000; Hermanto & Zuroff, 2016). When people seek support from others or, in the case of self-compassion, give support to themselves, they deactivate the threat system (i.e., the sympathetic nervous system) and activate the self-soothing system (i.e., the

parasympathetic nervous system) by reducing cortisol and heart rate (Arch et al., 2016; Gilbert, 2000; Luo et al., 2018). Thus, when distressed individuals observe their thoughts, treat themselves kindly, and relate their experience to others, they experience physiological and psychological decreases in stress. The benefit of self-compassion for increasing psychological flexibility, positive affect, and self-efficacy and decreasing rumination, negative affect, and state anxiety has been demonstrated widely both in nonclinical (Arch et al., 2018; Babenko & Oswald, 2019) and clinical (Bakker et al., 2019; Ford et al., 2016) populations.

Self-Compassion and Quality of Life Outcomes

In studies conducted with individuals without a specified clinical diagnosis, research suggests that self-compassion serves as a protective factor against the development of psychopathology (Trompetter et al., 2016) while promoting creativity, resilience, and self-exploration (Sharma & Davidson, 2015). Research conducted across various clinical settings also suggests a significant impact of self-compassion on overall quality of life. For example, in a study examining the influence of self-compassion on health-related quality of life in individuals with multiple sclerosis, researchers found that engaging in self-compassion significantly predicted participants’ physical, social, and mental health, as well as overall life satisfaction (Nery-Hurwit et al., 2017). Self-compassion has also been shown to be significantly and negatively related to psychological distress in individuals with chronic pain (Costa & Pinto-Gouveia, 2013; Sirois et al., 2015; Wren et al., 2012), social anxiety (Blackie & Kocovski, 2018), major depressive disorder (Diedrich et al., 2016), and diabetes (Friis et al. 2016).

Self-Compassion Across Gender

Gender, which may or may not correspond to biological sex, refers to an individual’s “psychological identification with typical societal gender roles” (Yarnell et al., 2018). In the general population, previous research implicates a potential effect of gender on self-compassion level, though these findings are mixed. While some research suggests that females tend to seek and sustain more social relationships (Baker & McNulty, 2011; Hill & Lynch, 1983) and would thus be more self-compassionate compared to males, other research suggests that females exhibit greater rumination and self-criticism compared to males (DeVore, 2013). Recent research, including a meta-analysis (Yarnell et al., 2015) and replication (Yarnell et al., 2018), indicates that men tend to have slightly higher self-compassion levels than women, though the effect size is small.

With regard to stuttering, studies indicate that gender plays a role in males’ and females’ experiences of stuttering. Specifically, empirical research supports the idea that females who stutter are at unique risk for dual discrimination as it relates to negative perception of females compared to males who stutter (Byrd et al., 2017). The dual minority status that females who stutter hold, along with

the increased discrimination and stigma that comes along with these identities, could put females who stutter at increased risk for lower self-compassion compared to males.

Qualitative studies support the idea that gender can influence the experience of stuttering. In a qualitative study examining the stuttering experiences of women who stutter, female participants reported a close, “fused” relationship between their identities as women and as PWS, as well as pressures to communicate in a certain way depending on the context (Nang et al., 2018). These women who stutter reported that stuttering significantly interfered with their self-esteem, their confidence, and their ability to form social relationships with others (Nang et al., 2018). However, studies in the stuttering literature have not yet explored potential self-compassion differences.

The Relevance of Self-Compassion to the Impact of Stuttering

Previous research highlights the intersections between each tenet of self-compassion—mindfulness, self-kindness, and common humanity—and the stuttering experience. Qualitative and quantitative studies support the use of mindfulness for “observing” moments of stuttering, rather than judging or overidentifying with them. Doing so can differentiate a negative stuttering experience from a neutral one (Beilby et al., 2012; Constantino, 2016; Tichenor & Yaruss, 2018). Empirical evidence also suggests that mindfulness is positively related to quality of life in PWS. Emge and Pellowski (2019) examined the influence of mindfulness meditation on decreasing disfluencies and improving communication attitude and psychosocial well-being. As mindfulness increased, the negative impact of stuttering on quality of life, as indicated by the Overall Assessment of the Speaker's Experience of Stuttering (OASES; Yaruss & Quesal, 2006), decreased. Rather than significant differences in the stuttering moments themselves, one's “response” to such moments matter most for decreasing the negative impact of stuttering.

Self-kindness is also relevant for adults who stutter, as anecdotal and empirical evidence suggests that PWS often face high levels of self-criticism and judgment (Corcoran & Stewart, 1998; Daniels & Gabel, 2004). This self-criticism can result in significantly elevated levels of negative mood states compared to controls on dimensions such as interpersonal sensitivity, depressive mood, and hostility, regardless of stuttering severity, demonstrating the quality of life consequences of negative internal dialogue (Tran et al., 2011). Alternatively, positive self-talk (i.e., self-kindness) has been associated with improved recovery and positive treatment outcomes (Plexico et al., 2005).

Finally, previous research supports the role that “common humanity” plays a role in the experience of stuttering, as a PWS's perception of self in relation to others can either lead to feelings of disconnection and distance or healing and connection. In their examination of stuttering and identity, Plexico et al. (2009) found that participants who stutter had created a fluent speaker–nonfluent speaker

dichotomy, thus distancing self from others. Rather than focusing on commonalities, PWS identified stuttering as the key factor that distinguished them from others. Specifically, participants who stutter viewed the fluent speaker identity as more desirable than the nonfluent speaker identity, leading to feelings of low self-esteem, cognitive/affective discomfort, and reduced self-acceptance. This finding demonstrates how viewing self as separate from others can lead to feelings that negatively impact well-being. The same study, however, found that some participants navigated stuttering-related challenges by acknowledging their pain as a shared human experience. Doing so led to feelings of increased connection with others, underscoring the relevance of common humanity.

As indicated, mindfulness, self-kindness, and common humanity each plays critical roles in the quality of life of PWS. Examining these components under the broader construct of self-compassion captures what mindfulness, self-kindness, and common humanity do not capture independently: how adults who stutter respond to and treat themselves during difficult moments. The construct of mindfulness speaks to individuals' attachment to or distancing from thoughts or feelings; however, mindfulness alone does not address the delivery of positive and helpful messages toward self (i.e., self-kindness) or the ability to relate one's experiences to others (i.e., common humanity). Additionally, self-kindness has been discussed generally in the stuttering literature in the context of PWS's internal dialogue and self-talk (e.g., Gabel et al., 2002; Plexico et al., 2005; Tran et al., 2011) but has yet to be measured or explicitly defined. Exploring self-kindness as a subconstruct of self-compassion expands the literature by quantifying and defining this practice in the context of stuttering. Finally, while stuttering research has addressed and emphasized the value of common humanity, this construct as it relates to self-compassion in PWS has not been investigated. Thus, it is unknown if or how PWS use social connectedness to engage in self-compassionate practices.

Existing treatment approaches, such as acceptance and commitment therapy (ACT; Beilby et al., 2012), reveal the value of investigating multidimensional constructs in the context of stuttering. Just as ACT is composed of six core processes that contribute to psychological flexibility, self-compassion contains three components that contribute to the ability to provide relief during difficult moments. Just as the “values” and “committed action” components of ACT would not lead to psychological flexibility on their own, the mindfulness, self-kindness, and common humanity do not independently capture self-compassionate practice.

Examining self-compassion as a cohesive construct holds implications for reducing the negative impact of stuttering. Given the robust research to suggest the relationship between self-compassion and quality of life in other populations, it is worth exploring this relationship among adults who stutter. This study will be the first of its kind to take these three constructs that are composed of factors that independently do not provide the same information

when investigated collectively, in measure of the greater construct of self-compassion among adults who stutter.

Purpose of This Study

Considering PWS are at unique risk for lower quality of life compared to people who do not stutter (PWNS) and given the potential benefit of self-compassion to improving quality of life in PWS, it is worth exploring how self-compassion relates to quality of life in PWS. Together, the core principles of self-compassion appear to be impactful for PWS. The purpose of this study was to examine the relationship between self-compassion and quality of life in adults who stutter.

Research Questions

The following research questions were addressed:

1. Do self-compassion levels differ significantly across male and female adults who do and do not stutter?
2. Does self-compassion predict the impact of stuttering on quality of life among adults who stutter?

We hypothesized that both males and females who stutter would demonstrate significantly lower levels of self-compassion compared to PWNS. We also hypothesized that females who stutter would report lower self-compassion levels compared to males who stutter. Finally, we hypothesized that self-compassion would significantly predict the impact of stuttering on quality of life, such that as self-compassion increases, the negative impact of stuttering would decrease.

Method

Participants

Eligible participants included adults (≥ 18 years old) who do and do not stutter. Each participant self-identified as a person who does or does not stutter by answering the following question: "Stuttering is the repetition of sounds or words with tension, or a blockage of air and voice during speech. People who stutter know what they want to say, but have trouble getting words out during a stuttering moment. Are you a person who stutters?" (adapted from Andrews et al., 1983; Craig et al., 2009). Participants indicated "yes" or "no," which led them to the appropriate survey.

Recruitment

Prior to starting recruitment, this study was approved by the authors' university institutional review board. To recruit participants who stutter, the researchers e-mailed the clinical directors of speech-language pathology programs across the United States, who were asked to forward a Qualtrics survey link to eligible participants. Additionally, speech-language pathologists who specialize in stuttering, as indicated from the Stuttering Foundation referrals webpage (<https://www.stutteringhelp.org/therapy-referrals>),

were contacted via e-mail and asked to forward the survey to adults who stutter. Participants were also recruited through the National Stuttering Association e-mail listserv and social media platform after obtaining approval from the National Stuttering Association Institutional Review Board.

After obtaining our participant cohort of adults who stutter, participants who do not stutter, matched for age and gender, were recruited through mass e-mail, Facebook groups unrelated to speech-language pathology, and word of mouth (i.e., asking undergraduate research assistants to forward the survey to eligible participants).

Survey

Data were collected via an electronic survey on the Qualtrics platform. The first page outlined institutional review board approval, the general purpose, known associated risks and benefits, the anonymity of responses, and the freedom to stop the survey at any time. Participants indicated their consent by clicking on the ">>" arrows at the bottom of the page, which led to the start of the survey. Participants who stutter completed demographic information, as well as measures of self-compassion and impact of stuttering on quality of life. Participants who do not stutter also completed a demographics questionnaire and a self-compassion measure. These survey sections were presented in a randomized order to each participant to prevent order effects.

Demographics

The demographic section asked all participants to report age and gender. Participants who stutter were also asked about previous and current support group and treatment experience, including number of months of current and/or previous involvement. If the participant was currently or had previously received treatment for stuttering from a certified speech-language pathologist, they were asked to indicate the number of months in treatment and the types of tasks included in therapy. Tasks were selected from the following options: techniques to speak fluently; techniques to release tension during stuttering moments; reducing avoidance; addressing thoughts, feelings and attitudes related to stuttering; or other (adapted from Yaruss et al., 2002).

The Self-Compassion Scale

Participants who do and do not stutter were required to complete the Self-Compassion Scale (SCS), a self-report measure that quantifies emotional and cognitive behaviors associated with more versus less self-compassion (Neff, 2003; Neff & Germer, 2017). This scale was selected as it has been used to examine self-compassion across a variety of clinical and nonclinical populations and exhibits strong psychometric properties. Specifically, the scale has demonstrated high internal consistency (Cronbach's $\alpha = .94$; Neff et al., 2007); good test-retest reliability ($r = .93$ for overall score, .88 for Self-Kindness, .88 for Self-Judgment, .80 for Common Humanity, .85 for Isolation, .85 for Mindfulness,

and .88 for Overidentification; Neff, 2003); convergent validity with social connectedness and resilient coping (e.g., Albertson et al., 2014; Breines et al., 2014); and divergent validity with psychopathology, depression, self-criticism, and rumination (MacBeth & Gumley, 2012; Neff, 2003, 2011, 2016). It is also the most widely cited measure of self-compassion to date.

On this 26-item instrument, participants provide responses on a 1–5 Likert scale. Anchor labels designate number 1 as *almost never* and 5 as *almost always*. Numbers 2–4 are labeled numerically without a qualitative label. The measure includes six subscales: (a) Self-Kindness (e.g., “I try to be loving toward myself when I’m feeling emotional pain”), (b) Self-Judgment (e.g., “I’m disapproving and judgmental about my own flaws and inadequacies”), (c) Common Humanity (e.g., “When things are going badly for me, I see the difficulties as part of life that everyone goes through”), (d) Isolation (e.g., “When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world”), (e) Mindfulness (e.g., “When I’m feeling down, I try to approach my feelings with curiosity and openness”), and (f) Overidentification (e.g., “When something upsets me, I get carried away with my feelings”). Each subscale mean is calculated by averaging the item responses pertaining to that subscale. Thus, higher subscale means indicate increased thoughts and behaviors associated with that construct. Before calculating an overall self-compassion mean, negatively worded items (i.e., items in the Self-Judgment, Isolation, and Overidentification subscales) are reverse-scored. Therefore, a higher total self-compassion score indicates greater self-compassion.

Impact of Stuttering

To measure the negative impact of stuttering on daily life, the survey also included the OASES (Yaruss & Quesal, 2006). This 100-item self-report instrument collects responses on a 1–5 Likert scale. Response options (e.g., agree–disagree, not at all difficult–extremely difficult) differ depending on the subsection. The higher the score between 1 and 5, the greater the negative impact of stuttering. Section I, General Information, contains 20 items that collect information regarding the participant’s knowledge about stuttering, perceived speech fluency and naturalness, and perceptions of treatment and support groups. Section II, Reactions to Stuttering, contains 30 items that examine affective, behavioral, and cognitive consequences of stuttering. Section III, Communication in Daily Situations, contains 25 items that measure the degree to which stuttering interferes with communication across diverse situations, such as with friends, at school, at work, and at home. Section IV, Quality of Life, contains 25 items that evaluate the extent to which stuttering negatively impacts the participant’s satisfaction across various domains, such as relationships, vocational opportunities, and overall outlook on life. The OASES has demonstrated high internal consistency (Cronbach’s $\alpha = .90$), test–retest reliability ($r = .90-.97$; Yaruss & Quesal, 2006), ecological validity

(Franic & Bothe, 2008), and clinical utility (Yaruss & Quesal, 2006, 2010).

Analyses

To examine the predictive and correlational relationship between self-compassion and quality of life in adults who stutter, simple linear regression and bivariate correlation analyses were used. These analyses were selected to determine the extent of the linear relationship between self-compassion and the impact of stuttering on quality of life. Results from these analyses hold implications for identifying how self-compassion relates to quality of life outcomes in PWS. The magnitude of each correlation was interpreted based on Evans’ (1996) framework, which denotes relationships less than .40 as *weak*, .40–.59 as *moderate*, and .60 and higher as *strong to very strong*. To correct for the multiple comparisons and to prevent Type I error, a Bonferroni correction was applied by dividing .05 by the number of comparisons (i.e., seven). Thus, an alpha value of .007 was used to interpret significant findings. A two-way analysis of variance (ANOVA) was also conducted to investigate main effects of gender and stuttering status (i.e., being a person who does or does not stutter) on self-compassion levels among adults who do and do not stutter. Interaction effects between gender and stuttering status were also examined. This analysis was selected to determine whether significant mean differences in self-compassion within and between these groups exist. Results from this analysis contribute to understanding regarding how males and females who do and do not stutter are similar and different.

Prior to the study, power analyses were conducted in G* Power to determine a sufficient sample size to prevent Type II error in each analysis (Faul et al., 2007). For the two-way ANOVA with four groups (i.e., males, females, PWS, and PWNS), we used an alpha level of .05, a power of .90, and a medium-to-large effect size of 0.32. This effect size was based on previous research citing significant differences between PWS and PWNS on outcomes related to social function, emotional function, and mental health, with effect sizes ranging from 0.32 to 0.59 (Craig et al., 2009). Results indicated a desired sample size of 127 total participants (i.e., at least 64 participants in each group).

For the simple linear regression with one predictor, we used an alpha level of .05, a power value of .90, and a medium-to-large effect size of 0.25. This effect size was based on a preliminary data analysis with 15 participants that yielded an effect size of 0.258. Results indicated a desired sample size of 45 participants.

Prior to conducting the analyses, the data set was examined to ensure that assumptions were met and to identify outliers. Three outliers were identified via a scatter plot and removed from the data corpus. Linearity, homoscedasticity, and normality were assessed using residual plots and the Shapiro–Wilk test. Residual plots revealed a random pattern along the horizontal axis, and the Shapiro–Wilk test indicated a nonsignificant p value of .611, thus satisfying assumptions of linearity, homoscedasticity, and

normal distribution of the data. When conducting group comparisons, Levene's test for the equality of variance was used to determine whether error variances were equal across groups. Results indicated nonsignificant p values at the .05 level for all group comparisons, supporting the assumption of homogeneity of variance. The final participant pool included 37 male and 33 female adults who stutter, ranging in age from 18 to 73 years ($n = 70$ participants who stutter). Participants also included 70 adults who do not stutter controls matched for age (within 5 years of participants who stutter) and gender (exact matches). If multiple adults who do not stutter who matched a participant who stutters for age and gender completed the survey, the first participant to complete the survey was included. Both the total sample size ($n = 140$) and the sample of adults who stutter ($n = 70$) exceeded the minimum sample size required for the analyses, as indicated by the power analysis. See Table 1 for additional participant demographics.

Results

Comparing Male and Female Adults Who Do and Do Not Stutter

A 2 (gender) $\times$ 2 (PWS or PWNS) ANOVA was performed on self-compassion. There was no significant main effect of gender on total self-compassion score, $F(1, 136) = 0.017, p > .05$. Additionally, there was no significant main effect of stuttering status (i.e., being a PWS or PWNS) on self-compassion, $F(1, 136) = 0.032, p > .05$, and no interaction effect between gender and stuttering status, $F(1, 136) = 2.049, p > .05$. See Table 2 for means and standard deviations of self-compassion total across groups and Table 3 for Self-Compassion subscale and total means and standard deviations for adults who do and do not stutter.

Self-Compassion and Overall Impact of Stuttering

The total SCS score was used to predict the overall impact of stuttering on quality of life, as indicated by the

Table 2. Total self-compassion scores for males and females who do and do not stutter.

Gender	People who stutter	People who do not stutter	Combined
Females ($n = 66$)			
<i>M</i>	2.73	2.58	2.65
<i>SD</i>	0.89	0.67	0.78
Males ($n = 74$)			
<i>M</i>	2.57	2.76	2.67
<i>SD</i>	0.62	0.64	0.63
Combined ($n = 140$)			
<i>M</i>	2.64	2.67	2.66
<i>SD</i>	0.76	0.66	0.71

Note. Significance evaluated at the .05 level.

overall OASES score. A simple linear regression of the total self-compassion score and total OASES score showed a significant, negative linear relationship of self-compassion predicting the impact of stuttering on quality of life, $F(1, 68) = 51.41, p < 0.000, R^2 = .431, \beta = -.656$. The negative impact of stuttering on quality of life decreased by .656 for each self-compassion point.

Because the SCS and OASES are composed of multiple subscales, bivariate correlations were examined for each subscale of both constructs (see Table 4 for correlation coefficients, means, and standard deviations). Pearson r correlation analyses indicated a range of weak-to-strong correlations at the $p < .007$ level. Specifically, Common Humanity demonstrated significant, yet weak, negative relationships to the Reactions to Stuttering and Quality of Life subscales, as well as the OASES total. Mindfulness related significantly, weakly, and negatively to one OASES subscale and the total. Self-Kindness demonstrated weak-to-moderate negative relationships to both the OASES subscales and the total. The Overidentified subscale correlated moderately and positively to the OASES subscales and total, while Self-Judgment, Isolation, and Self-Compassion

Table 1. Participant demographics ($N = 140$ adults who do and do not stutter).

Variable	Adults who stutter	Adults who do not stutter
<i>n</i>	70	70
Age in years, <i>M</i> (<i>SD</i> ; range)	37 (14; 18–73)	37 (14; 18–72)
Gender		
Male	37 (53%)	37 (53%)
Female	33 (47%)	33 (47%)
Current support group involvement		
Yes	24 (35%)	
No	45 (65%)	
No. of months in support group, <i>M</i> (<i>SD</i> ; range)	60 (105; 1–500)	
Past support group involvement		
Yes	30 (42%)	
No	14 (20%)	
No. of months in past support group, <i>M</i> (<i>SD</i> ; range)	43 (87; 1–420)	
Current treatment involvement		
Yes	18 (26%)	
No	52 (74%)	
No. of months in treatment <i>M</i> (<i>SD</i> ; range)	28 (33; .25–108)	
Past treatment involvement		
Yes	45 (90%)	
No	5 (7%)	
No. of months in past treatment, <i>M</i> (<i>SD</i> ; range)	51 (69; 1–360)	

Table 3. Self-Compassion total and subscale means and standard deviations for adults who do and do not stutter, *M* (*SD*).

Subscale	Adults who stutter, <i>n</i> = 70	Adults who do not stutter, <i>n</i> = 70
Self-Kindness	3.13 (0.89)	3.19 (0.76)
Self-Judgment	3.14 (0.97)	3.01 (0.79)
Common Humanity	3.38 (0.90)	3.25 (0.82)
Isolation	3.02 (1.09)	2.95 (0.95)
Mindfulness	3.38 (0.74)	3.44 (0.79)
Overidentified	2.88 (1.04)	2.88 (0.95)
SC total	2.64 (0.76)	2.67 (0.67)

Note. SC = Self-Compassion (Neff, 2003).

total revealed moderate-to-strong associations. The strongest associations occurred between Isolation and Reactions to Stuttering ($r = .739, p < .007$), Isolation and Overall Impact of Stuttering ($r = .700, p < .007$), and Self-Judgment and Reactions to Stuttering ($r = .676, p < .007$).

Discussion

This study aimed to identify self-compassion levels across males and females who do and do not stutter and to determine whether self-compassion predicts the impact of stuttering on quality of life in adults who stutter. Findings expand the literature by highlighting self-compassion as a strategy that plays a role in reducing the negative impact of stuttering. Specifically, results implicate how self-compassion could help to reduce adverse reactions to stuttering, improve participation in daily communication situations, and improve quality of life.

Self-Compassion Differences Across PWS and PWNS

Total self-compassion scores did not differ significantly across adults who do and do not stutter. Thus, results suggest that adults who stutter experience a similar level of self-compassion to the general population. Given that adults who stutter historically report increased anxiety

(Craig & Tran, 2014; Gabel et al., 2002), emotional reactivity (Vanryckeghem et al., 2017), and distress (Craig et al., 2009) compared to adults who do not stutter, results are contrary to the researchers' hypothesis that adults who stutter would report significantly lower self-compassion than adults who do not stutter. However, it is possible that self-compassion is not the sole driver of these affective and cognitive differences between adults who do and do not stutter. Other factors, such as self-efficacy (Carter et al., 2019), resilience (Plexico et al., 2019), degree of self-disclosure (Boyle et al., 2018), and psychosocial well-being (Boyle, 2015) have also been found to be strongly associated with quality of life indicators in PWS. Therefore, these others factors might play a greater role in predicting differences between PWS and PWNS than self-compassion alone. No other studies compare self-compassion levels of adults who do and do not stutter; more research that explores the relationship between self-compassion, other confounding factors (e.g., self-efficacy, resilience) and quality of life in both adults who do and do not stutter would yield further insight regarding the contribution of these relative factors to disparate quality of life outcomes.

Second, it is important to note that 34% of the sample was involved in a support group at the time of the study, with an additional 42% reporting previous support group involvement. Twenty-five percent were also enrolled in treatment at the time of participation, with an additional 64% reporting previous enrollment. Previous research suggests that individuals with higher self-compassion are more likely to engage in help-seeking behaviors than individuals with low self-compassion, which ultimately reduces self-stigma and increases social support (Heath et al., 2017). Thus, it is possible that, as a whole, this cohort of adults who stutter was more self-compassionate than the broader population of adults who stutter.

Self-Compassion and Gender

Results revealed no significant differences in self-compassion between males and females who stutter, thus rejecting the authors' hypothesis that females who stutter would be significantly less self-compassionate than males.

Table 4. Pearson *r* correlations, means, and standard deviations of SCS and OASES subscales and total (*n* = 70 adults who stutter).

Variable	Self-Kindness	Self-Judgment	Common Humanity	Isolation	Mindfulness	Overidentified	Self-Compassion total	<i>M</i> (<i>SD</i>)
General information	-.333*	.451*	-.253	.492*	-.296	.421*	-.477*	2.61 (0.49)
Reactions to stuttering	-.448*	.676*	-.327*	.739*	-.328*	.538*	-.655*	2.89 (0.73)
Communication in daily situations	-.394*	.578*	-.257	.558*	-.281	.459*	-.540*	2.67 (0.74)
Quality of life	-.460*	.636*	-.314*	.647*	-.317	.511*	-.616*	2.29 (0.79)
OASES total	-.470*	.675*	-.329*	.700*	-.346*	.551*	-.656*	2.62 (0.61)
<i>M</i> (<i>SD</i>)	3.13 (0.89)	3.14 (0.97)	3.38 (0.90)	3.02 (1.09)	3.38 (0.74)	2.87 (1.04)	2.64 (0.76)	

Note. SCS = Self-Compassion Scale (Neff, 2003); OASES = Overall Assessment of the Speaker's Experience of Stuttering (Yaruss & Quesal, 2006).

*Significance at the Bonferroni-adjusted p value $.05/7 = .007$.

Results from this study also did not find a significant interaction between gender and stuttering status (i.e., being a person who does or does not stutter). Namely, females who do and do not stutter exhibited similar levels of self-compassion, as did males who do and do not stutter. While previous research highlights the lower levels of self-esteem (Nang et al., 2018) and dual discrimination (Byrd et al., 2017) that women who stutter face, which could be associated with lower self-compassion, a study by Klein and Hood (2004) found that women were less likely to report that stuttering interfered with their employability and job performance. Thus, results from the current study suggest that, despite the increased challenges that women who stutter may endure, females and males who stutter respond to feelings of inadequacy with similar levels of mindful awareness, self-kindness, and relatedness to others. This finding also aligns with previous research citing no significant self-compassion differences between males and females (Berryhill et al., 2018; Iksender, 2009; Neff et al., 2007).

Self-Compassion and Quality of Life Implications for Adults Who Stutter

Results indicated that higher levels of self-compassion predict a lesser negative impact of stuttering on quality of life among adults who stutter, confirming the authors' hypothesis. Specifically, increasing self-kindness, mindfulness, and social connectedness and decreasing self-judgment, overidentification, and isolation are associated with reduced negative reactions to stuttering, increased participation in daily communication situations, and reduced impact of stuttering on overall quality of life. These results reinforce previous research that supports the potential benefits of mindfulness, self-kindness, and social connectedness for increasing positive outcomes, such as reducing rumination, increasing positive affect, and promoting resiliency among adults who stutter (Boyle, 2013; Plexico et al., 2009; Yaruss et al., 2002). Findings broaden the evidence base by analyzing these components as a cohesive construct (i.e., self-compassion), establishing the predictive self-compassion-quality of life relationship, and identifying the relative strength of the relationship between each Self-Compassion subscale and total as well as each OASES subscale and total.

The correlational analyses revealed particularly strong relationships between Isolation and Reactions to Stuttering, Isolation and OASES total, and Self-Judgment and OASES Total. The Isolation subscale refers to the degree to which an individual feels separate and cutoff from others when experiencing feelings of inadequacy, suggesting that when adults who stutter feel secluded and isolated during difficult times, they are also more likely to experience feelings such as anxiety, depression, and embarrassment related to stuttering. Each of these reactions to stuttering can negatively impact quality of life. The Self-Judgment subscale refers to an individual's tendency to view perceived flaws through a lens of criticism and judgment, rather than kindness and acceptance. Thus, results suggest that as adults

who stutter judge their perceived inadequacies harshly and critically; they are also more likely to report a greater interference of stuttering with their overall quality of life.

These findings must be considered in the context of other potential moderators of the self-compassion-quality of life relationship. As mentioned, previous research highlights a variety of factors that could affect quality of life in PWS, including self-efficacy (Carter et al., 2019), self-stigma (Boyle, 2018), resilience (Plexico et al., 2019), degree of self-disclosure (Boyle et al., 2018), and psychosocial well-being (Boyle, 2015). Beyond the stuttering literature, studies conducted in other populations suggest that level of education (López et al., 2018) and overall mental well-being (Durkin et al., 2016) are associated with self-compassion levels and associated quality of life outcomes. Given the potential influence of these other variables on the self-compassion and quality of life relationship, results from this study cannot assert a definite, causal relationship between self-compassion and quality of life in adults who stutter. Rather, results suggest that self-compassion may play a role in reducing the negative impact of stuttering.

Clinical Implications

There are existing treatment methods that address aspects of self-compassion, such as mindfulness intervention (Emge & Pellowski, 2019), ACT (Beilby et al., 2012), and cognitive-behavioral therapy (Amster & Klein, 2018). These approaches overlap with self-compassion in their mindful awareness (mindfulness intervention and cognitive-behavioral therapy) and/or acceptance of thoughts and feelings (ACT). However, self-compassion differs from these approaches in its use of mindful awareness to channel supportive messages inward, its emphasis on social connectedness, and its primary purpose to provide relief to self before, during, and after difficult moments (Germer & Neff, 2013). Aspects of mindfulness, self-kindness, and common humanity have been incorporated into previously investigated treatment approaches but have yet to be explored as the cohesive construct of self-compassion. While empirical and anecdotal evidence explicitly "describe" the value of addressing self-compassion in stuttering treatment (e.g., Harley, 2018; Hudock et al., 2017), results from this study provide empirical support to address specific components of self-compassion in a more direct, intentional manner in the clinical setting. Specifically, self-compassion is a tool that could be used in the clinical setting to help decrease the negative impact of stuttering on quality of life. Further research is needed before specific intervention methods are suggested. Still, clinicians should be aware that integrating practices of mindfulness, self-kindness, and increased social connectedness could help reduce negative feelings such as shame, embarrassment, and anxiety related to stuttering and improve overall life satisfaction. By incorporating self-compassion conceptually and functionally, adults who stutter could increase their awareness of negative reactions, gain self-soothing skills, and view their experience in a balanced perspective. Practically, adults who stutter could practice

identifying self-critical and exaggerated thoughts as they arise (e.g., “everyone at work thinks you are incompetent because you stutter”), reducing overidentification or rumination on these thoughts and using language that communicates concern and comfort to self (e.g., “you are doing the best you can, and people at work seem to really respect you”).

Self-compassion could also function as a companion to existing treatment methods, such as voluntary stuttering and self-disclosure. These evidence-based desensitization and stigma reduction techniques, both of which can lead to decreased avoidance and increased positive perceptions (Boyle et al., 2018; Byrd et al., 2017, 2016), often require adults who stutter to persist through a reportedly difficult adjustment period before the technique becomes effective. For example, in Byrd et al.’s (2016) study, 42% and 30% of participants were uncomfortable or somewhat uncomfortable using voluntary stuttering at first, and one in five participants had never voluntarily stuttered outside the room. Additionally, anecdotal evidence indicates that PWS often report “failure” to use a given technique when they “should” have, reflecting a degree of self-judgment even in the context of a strategy intended to decrease negative attitudes. Thus, the benefits of these strategies, which come with increased exposure and practice, may never be experienced by a PWS whose feelings of self-criticism dominate the experience. Given the robust research to suggest that individuals who score high in self-compassion recover more quickly following perceived failure (Neff & McGeehee, 2010), it is possible that integrating self-compassion in the clinical setting could help adults who stutter experience a treatment process characterized by reduced self-judgment, increased support, and ultimately, enhanced quality of life.

Additional Considerations

Results should be interpreted under the notion that this cohort of adults who stutter may not represent the broader population of adults who stutter. A larger sample size would allow for an increase in power, a reduced likelihood of Type II error, and more meaningful interpretation of results. Additionally, given the high rate of support group and treatment enrollment in the sample used in this study, this group of adults who stutter could be significantly more self-compassionate than the general population. Future research should engage adults who stutter who are not enrolled in a support group or treatment to gain a more representative sample of the stuttering population. More research is needed to replicate or to challenge current findings. Additionally, while there were not enough participants in the current study to compare self-compassion levels of participants with current/previous support group involvement to those with no support group involvement, the authors will examine this research question in a future study with an increased number of participants.

Importantly, interpretation of results should consider moderating factors of the self-compassion–quality of life relationship, such as self-acceptance, self-efficacy, resilience,

and locus of control. Given that previous research links these factors to quality of life, the relationship between these variables and self-compassion should be established. Moreover, while theory supports the idea that self-compassion influences variability in quality of life, the design of this study does not rule out the possibility of reverse directionality. It is possible that variations in a PWS’s reactions to stuttering, participation in communication situations, and life satisfaction could predict differences in self-compassion. The directionality of this relationship should be investigated in future research. Additionally, the role of self-compassion as a moderator between stuttering severity and quality of life should also be explored. Finally, interventions to cultivate self-compassion in and out of the clinical setting should be investigated and developed.

Conclusions

This study sought to identify self-compassion levels across people who do and do not stutter and to determine the relationship between self-compassion and quality of life in PWS. Total self-compassion scores did not differ significantly across males and females who do and do not stutter, suggesting similar levels of mindfulness, self-kindness, and social connectedness in these population samples. This study should be replicated in future research to see if similar results are obtained. While previous research indicates that PWS are at risk for self-stigma, increased distress, and reduced life satisfaction, the current study provides evidence that self-compassion is associated with a reduction of these negative, quality of life consequences. Incorporating practices of mindfulness versus overidentification, self-kindness versus self-judgment, and common humanity versus isolation could help adults who stutter decrease negative communication attitudes, increase participation in daily communication situations, and improve overall quality of life.

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