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Jordanian Speech Pathology Students' Beliefs and Attitudes Toward People Who Stutter (PWS)

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Abstract

This research aims to better understand how speech pathology students in Jordan perceive and interact with individuals who stutter (PWS). During their time as undergraduate clinical trainees, it seeks to shed light on how these aspiring professionals view stuttering and associated speech disorders. Also, in order to determine how much of an effect experience has on students' viewpoints, the study plans to compare those of juniors and seniors. It measured these sentiments using a modified version of the CATS and the POSHA-S scales, which stand for the Public Opinion Survey of Human Attributes-Stuttering. The online poll was filled out by 110 students from Al-Ahliyya Amman University, split evenly between first- and second-year students as well as third- and fourth-years. Experts verified the Arabic version of the 30-question survey, which inquired about demographics, stuttering knowledge, stuttering impact perceptions, PWS competence, and general opinions. There was no statistically significant difference in the beliefs on the causes of stuttering between the two groups, but the results showed that senior students had substantially more knowledge about stuttering than juniors. From an attitude perspective, both groups showed neutral to positive feelings towards PWS, with the seniors showing a little more positivity. The disparity between the sexes in terms of optimistic outlooks was also not statistically significant, but female students did exhibit a general trend toward more optimistic views and attitudes. The survey found that students, particularly seniors, have a typically positive attitude and are becoming more confident when it comes to coping with PWS.The research shows that higher levels of education are associated with more positive attitudes and understanding of stuttering. As compared to juniors, seniors had somewhat more positive attitudes and greater knowledge, indicating that higher education enhances professional efficacy and empathy. Students' opinions ranged from neutral to positive on the whole, with girls showing more optimism than boys. The results highlight the need of teaching students about communication impairments in a positive light while also providing them with the technical skills necessary for the field of speech pathology.

Keywords: *Speech Pathology Students, Beliefs, Attitudes, People Who Stutter (PWS), Jordan.*

Introduction

Professional practice within the field of Speech pathology has initiated to receive attention in the past. Evidence-based practice is an essential aspect of all sorts of clinical procedures and therapies, and all professionals must carry out the evidence-based practice. For the field of speech pathology, very few practice guidelines have been published presented. Although specific guidelines and books are devoted to providing proper guidelines for evidence-based practices in speech pathology. Stuttering is termed as a neurological speech disorder that impacts the smooth delivery of speech. It occurs when the mechanism monitoring the operations of speech are impaired or weak. The frequent stuttering is attributed to the failure of the nervous system in the path of producing speech (Smith et al., 2010). It is further associated with the inability to express one's thoughts using appropriate words (Van Borsel & Taillieu, 2001).

Detailed studies performed on stuttering put forward that the highest rate of stuttering is observed in the initial sound when the individual attempts to formulate speech. It is also a common observation related to stuttering that longer sentences increase the potential of stutter in the speech (Taylor, 1966; Weisberg et al., 1989). Longer sentences require increased speech mechanism capabilities to verbalize complicated thought processes (Bloodstein & Grossman, 1981). Another possibility is that the potential of producing a stutter in the prolonged utterance is more significant than on a shorter one

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The study's objective is to explore the Jordanian Speech Pathology Students' Beliefs and Attitudes Toward People Who Stutter (PWS). This helps provide professional insight into what the professionals in speech pathology perceive the phenomenon of stuttering and disturbances in smooth speech. For this purpose, surveys were designed with structured questionaries about students' different beliefs from the field.

Literature Review

Theoretical Framework

Stuttering is defined by Guitar (2006) as 'abnormally high frequency and duration of stoppages in the forward flow of speech. These stoppages usually take the form of (1) repetitions of sounds, syllables, or one-syllable words, (2) prolongations of sounds, or (3) "blocks" of airflow or voicing in speech' (p. 13). The disorder impacts the social, emotional, and vocational aspects of a person's life (Hartford & Leahy, 2007; Klompass & Ross, 2004; Koutsodimitropoulosa, Buultjensa, St. Louis, & Monfries, 2016; Przepiorka, Blachnio, St. Louis, & Wozniak, 2013). It affects about 1% of the population (Mavis, St. Louis, Özdemir, & Toğram, 2013).

Research suggests that people who stutter (PWS) are perceived negatively, for example, as shy, anxious, introverted, passive, withdrawn, and distrustful (Hartford & Leahy, 2007; Hughes, Gabel, Irani, & Schlagheck, 2010; McKinnon, McLeod, & Reilly, 2007; Przepiorka et al., 2013; Williams, 2006).

Such negative perceptions have also been found among speech-language pathologists (SLPs; henceforth SLPs or speech pathologists) who work with PWS (Hughes et al., 2010). This stereotyping and stigma have been suggested to affect PWS' treatment progress and how they view their speech (Betz, Blood, & Blood, 2008; Craig, Tran, & Craig, 2003; Snyder, 2001).

Previous Studies

Several studies have been conducted to assess attitudes and stereotypes toward PWS among speech pathologists and speech pathology students—those who work with PWS. Results show that clinicians with more practical experience dealing with PWS are more likely to exhibit negative attitudes toward PWS than those with less experience dealing with PWS (Brisk, Healey, & Hux, 1997; Burley & Rinaldi, 1986; Cooper, 1975; Cooper & Cooper, 1985; Cooper & Cooper, 1996; Cooper & Rustin, 1986; Horsley & Fitzgibbon, 1987; Hughes, 2008; Kenneth, 1972; Koutsodimitropoulosa et al., 2016; Lass, Ruscello, Pannbacker, Schmitt, & Everly-Myers, 1989; Lee, 2014; Mavis et al., 2013; Ruscello, Lass, French, & Channel, 1990; St. Louis & Lass, 1981; St. Louis et al., 2014; Yairi & Williams, 1970). On the other hand, one Australian study found that speech pathology students were positive toward dealing with PWS (Koutsodimitropoulosa et al., 2016).

Chen & Miyamoto (2024) study aimed to look at how potential speech-language pathology (SLP) professionals and students feel about stuttering. In addition, we determined what variables impact shifts in perspective among SPs and SLP students across nations. For both primary and secondary screening, a search formula was utilized to scour the PubMed and ScienceDirect databases. The systematic review only included English-language research that had previously focused on SPs or SLP pupils. The first and second writers worked separately to find and evaluate studies, and then they shared their findings. The systematic review includes 22 articles with different research approaches and sample sizes. Analysis was completed by extracting and organizing information on authors, publishing year, participants, country or region, assessment materials, and outcomes. Twenty-two articles were retrieved from a total of eight nations and one geographic area (the Middle East). Various factors such as education, experience, location, culture, and social development influence the attitudes of SLP students and SPs from different countries toward stuttering. However, stereotypes about people who stutter (PWS) remain (e.g., nervous), and attitudes toward clinics seem to be more negative in Western countries.

Sibanda & Mothapo (2024) study aimed to investigate how people in South Africa perceive stuttering and the experiences of those who stutter. This study included four stuttering individuals who identified as South

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Africans. All of the subjects were interviewed using a semi-structured interview format by the principal investigator. Twenty friends and acquaintances of each participant were also given a questionnaire. We looked for overarching themes in the interview transcripts and survey responses. This study's findings imply that stutterers and people familiar with them have different perspectives. The study's results demonstrate that stutterers face difficulties in communicating and that they develop coping mechanisms to deal with their speech impairment. Taking into account unfavorable social perspectives, the results demonstrated that stuttering has a ubiquitous effect on the lives and self-perceptions of stutterers.

Croft & Byrd (2023) This pilot study set out to answer the question, "How effective is an online self-compassion intervention for improving self-compassion and quality of life in adults who stutter?" by looking at participants' responses to the intervention. Finding out how well the intervention was received and how satisfied the participants were was a secondary objective. Adult stutterers who committed to completing a six-week online self-compassion training were considered for participation. The Self-Compassion Scale-Trait and the Overall Assessment of the Speaker's Experience of Stuttering were administered before and after the intervention. Weekly and after the intervention, participants filled out acceptability surveys that included both quantitative and qualitative data. Ten people took the pre- and post-intervention surveys and finished all six intervention courses. The intervention was well-received by participants in terms of its format, content, length, and relevance to stuttering and everyday life; participants also reported higher levels of self-compassion and quality of life after the intervention. There was significant individual diversity across the categories of acceptability.

Koutsodimitropoulos et al. (2016) Finding out how fourth-year speech pathology students in Australia feel about stuttering was the driving force for this research. The data for this mixed-method study came from a combination of a large Australian university's speech pathology final year students and the Public Opinion Survey of Human Attributes - Stuttering (POSHA-S). In general, the qualitative results showed that Australian speech pathology students in their final year have a good attitude towards stutterers. The findings also demonstrated how education may shape students' perspectives and provide them the self-assurance they need to assist those who stammer. Positive views towards people who stammer are displayed by final year speech pathology students in Australia, according to this research. They showed an awareness that stutterers might not be born with innate shyness or other characteristics, but rather that these behaviors might be learned responses to one's unique circumstances. Additionally, the results indicated that education can help shape the attitudes and beliefs of student clinicians, which in turn can help them transition to practice with confidence.

Abdalla, Irani, and Hughes (2014) used a modified version of Bebout and Arthurs' (1992) questionnaire asking university students and the general public their opinions regarding stuttering. Although the study revealed that generally, the public showed positive attitudes toward stuttering, opposing trends were found (vocational and societal inclusion of PWS, for example).

Al-Khaledi et al. (2014) is the only study so far in the Arab world to focus on the attitudes of SLPs or SLP students toward PWS. Therefore, the current research aims to shed more light on this issue by exploring Arabic speech pathology students' attitudes and beliefs toward PWS in a private university in Jordan. At the same time, despite sharing similar language and culture, countries in the Arab world also vary in these areas and educational systems and socioeconomic status, all of which may lead to different views toward stuttering that might need investigation.

St. Louis and Rogers (2011) reported an urgent need for more mixed-methods studies exploring speech pathologists' and speech pathology students' attitudes towards PWS to find solutions to reduce stigma and improve these professionals' attitudes towards PWS.

In the literature, there is only one instrument developed to assess speech pathologists' attitudes and beliefs toward PWS (Clinician Attitudes Toward Stuttering, CATS) and another instrument designed to assess public attitudes towards people who stutter (Public Opinion Survey of Human Attributes-Stuttering, POSHA-S).

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Cooper developed CATS in (1975) to study speech pathologists' attitudes and beliefs toward PWS. It consisted of fifty statements grouped under themes such as aetiology, parental factors, stuttering symptoms, PWS, therapy procedures, therapy effectiveness, and professional competence. Cooper's study revealed that most participants believed that stuttering is a fluency problem caused by psychological disturbance and that counselling for parents and clients was seen as an essential component of stuttering treatment. Despite differences in participants' exposure to stuttering treatment, most participants reported low belief in stuttering treatment, emphasizing the lack of speech pathologists' ability to adapt to and accept dealings with PWS. However, participants with more training working with stuttering reported a better view of their competence than participants with less training.

St. Louis and Lass (1981) used CATS with 2000 speech pathology and audiology students in the United States and found similar results to other studies (Cooper, 1975; Cooper & Cooper, 1996; Cooper & Rustin, 1986). According to St. Louis and Lass (1981), speech pathology and audiology student participants were found to believe that people with stuttering had psychosocial problems. Besides, beginner undergraduate students were more optimistic about the effectiveness of treatment provided for PWS than advanced graduate students.

CATS was also used to compare SLPs' attitudes toward stuttering in the USA and Great Britain and found that American and British SLPs shared the same negative attitudes toward PWS (Cooper & Rustin, 1986). Seventeen years later, the same investigation was repeated by Crichton-Smith, Wright, and Stackhouse (2003), and showed an increase in British SLPs' positive attitudes compared to American SLPs. The study emphasized that the speech pathologists in both countries needed more professional development to improve their attitude toward working with PWS.

Ruscello et al. (1990) compared attitudes toward PWS among undergraduate and graduate speech pathology students at a US university and found that graduate participants' perceptions and attitudes toward PWS were also negative in nature.

In (1996), Cooper and Cooper replicated the study using CATS. The report noted that most SLPs believed strongly that most of their stuttering patients have psychological problems and feelings of inferiority. Also, SLPs still held negative attitudes toward parents of children who stutter due to the parents' lack of belief and loss of hope in the therapeutic process.

CATS has been used to assess attitudes towards PWS across nations. Mavis et al. (2013) investigated Turkish SLPs toward PWS and gained similar results to Cooper and Cooper (1986; 1996). However, Turkish SLPs showed less optimism about stuttering treatment's effectiveness, especially for children who stutter. Lee (2014) used a modified version of CATS to assess Korean SLPs' attitudes toward PWS. The study found that speech pathologists with more experience were more negative toward PWS than speech pathology students and seemed to face more difficulties when dealing with PWS. Al-Khaledi, Lincoln, McCabe, and Alshatti (2014) used the UK English version of CATS (Cooper & Rustin, 1986) to measure the knowledge and attitudes of Arab SLPs towards stuttering. Although showing some confidence in treating stuttering, Arab SLPs focused on their need for more guidance from stuttering specialists and thought that the treatment process for stuttering was complex. The authors concluded that there was a need for training programs in stuttering targeting Arab SLPs.

POSHA was designed to measure public attitudes toward stuttering and other attributes (e.g., mental illness, obesity, left-handedness, intelligence). The questionnaire has a section that asks respondents how they know people with these attributes (St. Louis & Rogers, 2011). POSHA-S has undergone extensive validation (Flynn, Kenneth, & St. Louis, 2009; St. Louis & George, 2008; St. Louis, Lubker, Yaruss, & Aliveto, 2009; St. Louis, Reichel, Yaruss, & Lubker, 2009) and testing for reliability (St. Louis, Lubker, et al., 2009) and internal consistency (Al-Khaledi, Lincoln, McCabe, Packman, & Alshatti, 2009).

Revealing public attitudes toward PWS has been the primary purpose of many studies. Hughes (2008) explored non-stuttering public university students' attitudes, emotions, thoughts, and behaviours toward PWS and concluded that non-stuttering participants had good intentions when interacting with people who

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stutter, but reported that they might behave inappropriately when dealing with PWS. Participants also emphasized the importance of educating non-PWS in appropriate strategies when dealing with people who stutter. They suggested that this should be done by the people who stutter themselves as well as speech pathologists.

St. Louis (2014) used POSHA-S to compare attitudes toward PWS between SLP and non-SLP students in the United States and Poland. The study found that SLP students from both countries had more positive attitudes toward PWS than non-SLP students. American participants from fields other than speech pathology were more favorable toward PWS than Polish students. In addition, graduate students from both countries reported more positive attitudes toward PWS than undergraduate students.

Hughes (2008) conducted a comprehensive review of studies and found no effect of participants' gender on their attitude toward PWS, using POSHA. However, Burley and Rinaldi (1986) found that male participants rated PWS lower than female participants—specifically, men seemed to react less favourably to the PWS' voices.

In the Arab world, Al-Khaledi et al.(2009) used an Arabic version of the POSHA-S to assess parents' knowledge and beliefs in Kuwait toward stuttering. They found that their level of knowledge about stuttering was limited.

The current study aimed to use a modified version of CATS and POSHA-S to assess SLP students' attitudes in Jordan towards PWS and to obtain a comparison between junior and senior students (reflecting their experience, education, training, beliefs, and attitudes) and a comparison by gender.

The specific study questions were:

What is the level of knowledge of the causes of stuttering among Jordanian SLP students?

Were these students' beliefs and attitudes positive or negative?

Was there a difference in beliefs and attitudes based on gender and training, and educational level?

How confident were students toward dealing with people who stutter, and are there any differences between juniors and seniors' students?

Methodology

This study aimed to gather current beliefs and attitudes of speech pathology students in a private university in Jordan toward PWS. Students' beliefs and attitudes were measured using a modified version of CATS and POSHA-S.

As participants could be considered both professionals (senior students) and non-professionals (junior students), we chose items from both surveys, CATS, and POSHA-S, to establish a combined new study. This survey was translated into Arabic by a professional English–Arabic translator; experts validated a translated document by another translator. Parts of POSHA-S were used to ask respondents about their beliefs and attitudes toward PWS, self-reaction to PWS, and the aetiology or what they believe would cause stuttering in PWS. In addition, participants' perspective about PWS intelligence was also borrowed from POSHA-S. Parts of CATS were used to detect demographic information, beliefs and attitudes about the effectiveness of early intervention for PWS, the efficacy of treatment, attitudes toward different therapy procedures, knowledge of stuttering, and self-perceived competency dealing with PWS. Other parts were used to ask about PWS's personality, whether participants prefer to work with children or adults who stutter, and whether treatment is more effective with children than adults. Also, participants were asked if they preferred to collect either assessment or treatment for PWS as in CATS.

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The resulting questionnaire consisted of 30 questions in four main parts: demographic information (gender, academic level); participants' level of knowledge about stuttering, sources of such information, and participants' perception of the cause of stuttering and how it affects PWS in different life aspects, such as academic, work, and social life; participants' sense of their competence dealing with PWS; and participants' attitudes toward dealing with PWS, such as how they act when talking to a PWS.

The survey was distributed online for all audiology and speech pathology students in Aahliyyah Amman university through the Microsoft team software. The questionnaire was designed to be answered within two to three minutes. It was piloted by asking colleagues to answer the questions and give feedback to the researcher.

Participants were recruited based on their enrolment in classes in speech and language pathology and audiology during the first semester of the academic year 2020-2021. ?????of 110 total students enrolled in the program at Amman Al-Ahliyya University have answered the questionnaire. Students were divided into two groups; juniors (first- and second-year students) and seniors (third- and fourth-year students).

Knowledge, beliefs, and attitudes and confidence were the main three items studied throughout the survey. For each item, several questions were provided, each answered by giving a number between 1 and 5, where 1 means 'strongly agree,' and 5 'strongly disagree' (that is, a 5-point Likert scale).

Chi-squared was used to investigate patterns between statements. A paired t-test was conducted to examine the significance of responses on the composite questions representing the three parts, by gender and seniority. SPSS Version 22 was used for data analysis.

Results

The questionnaire assessed three separate parts; 1. students' knowledge about stuttering, 2. Students' beliefs and attitudes about stuttering and 3. Students' confidence in dealing with PWS.

Knowledge

Senior students reported statistically higher knowledge about stuttering than junior students (p=0.015).

Both seniors and juniors believe that all factors covered—genetic factors, neurogenic factors, psychological factors, and environmental factors—are possible causes of stuttering. The two groups were similar regarding their beliefs about the aetiology of stuttering. Figure 1 shows the percentages of students who mentioned each type of stuttering cause.

Beliefs and Attitudes

The second part of the questionnaire targeted students' beliefs towards people who stutter. Both groups showed neutral beliefs towards people who stutter; juniors' mean was 2.18, while seniors' mean was 2.15. There was no significant difference between the two groups (p=0.764).

Although female students showed more positive beliefs towards PWS, with mean=2.24 than male students, with mean=2.05, the differences were not statistically significant (p=0.116).

The second part of the beliefs section assessed students' views on the main barriers that affect the treatment process for PWS. The variables evaluated were patient personality, patient age, parents, teachers, and the surrounding environment.

Figure 2 shows the percentage of students who think these variables represent barriers to treatment.

Generally, both groups showed positive attitudes towards PWS. Senior students showed more positive attitudes (mean=4.19) in comparison to junior students (mean= 3.90), with statistical significance (p=.061).

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Female students showed more positive attitudes (mean=4.11) than male students (mean=3.87), though this result did not show statistical significance (p=.144).

Demographics of the Participants

The demographics of the individuals selected for the study have been represented in pie charts in Figures 3 and 4.

Self-Efficacy Towards the Treatment of Stuttering

The questionnaire also asked the participants about their self-efficacy beliefs towards treating and dealing with individuals that suffer from stuttering and speech impairment. We included questions that inquired about their past experiences with the treatment of children and their preference towards the different treatment options for stuttering individuals. It was reported that most of the students had more significant experience working with stuttering children relative to teenagers and adults.

It is evident in figure 5 that the bar for children is higher in comparison to teenagers and adults when asked about past experiences with stuttering individuals.

When asked about the preferred approach for treating stuttering individuals, either through direct treatment or evaluation, most of the subjects suggested that treatment is a better option for stuttering patients. This also indicates that the subjects had a better experience with individuals' treatment rather than the evaluation. Stuttering treatment involves several aspects, such as cognitive behavioral therapy, speech therapy, or even electronic devices. Moreover, it can be elucidated from the data that the students belonging to the field of speech pathology believe strongly in treating speech impairments such as stuttering and disturbed formulation of words and sentences.

The study participants were asked about their prior experience in dealing with stuttering patients. The question aimed to get insight into the different treatment options and the most preferred one (Figure 6).

The participants were further inquired about their previous experience dealing with stuttering patients. The first question asked whether they received proper training for the treatment of individuals with speech impairment. For this question, they answered mostly with "agreed" in the questionnaire. The participants were further inquired about their current information about stuttering individuals and how confident they are with their training and knowledge about the subject (Figure 7).

The subjects were asked whether they believed in the success of the treatment of stuttering and were asked to answer with either a "Yes" or "No." The results showed that most students answered by saying "yes," which shows that the students had strong and positive beliefs towards the treatment of stuttering observed in individuals—further questions regarding their preference for the treatment of speech impairments and other language disorders. The majority of the participants were skeptical about their ability to treat individuals that needed speech therapy as the bar for "No' is higher for this question in figure 8.

Treatment of Stuttering

The participants were asked how they get information about stuttering and what guidelines they use to treat stuttering individuals and speech impairment. The majority of the answers inclined towards scientific lectures, constituting 72.27% of the participants. Whereas, 68.91% of the subjects revealed that they used the internet to learn about the treatment techniques of stuttering in individuals (Figure 9).

The participants were asked what they thought to be the most frustrating approach towards stuttering patients. The participants were asked whether they believed it was related to their personality or their parents, age, or school. The majority of the participants answered by saying that the community mattered greatly when it comes to frustrating aspects of such individuals' treatment (Figure 10).

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This part of the survey inquired about the individuals' physical health and fitness when dealing with stuttering patients. The majority of the patients answered by saying that they deal with patience and tolerance when dealing with difficult patients and wait for them to answer until they are ready (Figure 11).

Perception of Stuttering Individuals

This section of the survey inquired about what perception; the participants held by the subjects in terms of treating individuals with a stutter in their speech. The majority of the subjects answered with "very high" when asked about the effectiveness of stuttering treatment. This elucidates that the participants believed that speech impairment is treatable by approaches such as professional therapy (Figure 12).

Confidence

Senior students showed more confidence in dealing with a person who stutters than confidence in juniors (p=.023). However, there was no significant difference at the practice level between groups (p=.292).

Discussion of the Results

Knowledge

Senior students reported statistically higher knowledge level about stuttering than junior students (p=0.015). Dealing with PWS in the department's clinic may contribute to this advanced knowledge in seniors.

Both seniors and juniors believed that all assessed factors—genetic, neurogenic, psychological, and environmental—cause stuttering. The two groups did not differ in their beliefs on stuttering's aetiology: psychological factors were the highest factor believed to be causing stuttering, followed by environmental factors, then neurogenic factors, and last, genetic factors. This agrees with recent work revealing more awareness of multiple coexisting factors behind stuttering (Cooper & Cooper, 1996; Cooper & Rustin, 1986; Mavis et al., 2013).

Figure 1 shows the percentages of students who thought each variable might cause stuttering. Almost all previous studies advocate increasing knowledge level and training for both students and SLPs (Hughes, 2008). Knowledge level for our students was acceptable; however, further education about recent findings regarding causes of stuttering and more training in stuttering treatment might help students gain better knowledge and be more informative when dealing with parents and teachers.

Beliefs and Attitudes

Both groups showed positive attitudes and beliefs towards PWS, which agrees with previous findings (Al-Khaledi et al., 2014; Brisk et al., 1997; Koutsodimitropoulosa et al., 2016). However, senior students showed more positive attitudes towards PWS than junior students. This result contradicts previous results (Brisk et al., 1997; Kenneth, 1972; Lee, 2014; Ruscello et al., 1990), which indicated that more negative attitudes towards PWS in senior students and more experienced SLPs than in junior students and less experienced SLPs. It appears that the current program in our facility provides proper education in stutter in addition to clinical training, which helped our students become more positive when dealing with PWS.

Female students showed more positive beliefs and attitudes toward PWS than male students; however, the differences were insignificant. These results agree with Hughes (2008). Usually, male students are more instrumentally orientated than female students, who are more human-oriented. That may explain female students' tendency to be warmer and more positive when dealing with PWS than male students. This is in agreement with Burley and Rinaldi (1986) results, which indicated that male participants tended to show more aggressiveness and react less favourably toward PWS voices than female participants.

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Confidence

There was no statistically significant difference in the confidence levels of senior and junior speech pathology students when it came to dealing with persons who stutter (PWS), although the study did find that senior students tended to be slightly more confident. Student speech-language pathologists (SLPs) report higher levels of confidence after gaining more experience and exposure to clinical settings, which is consistent with this pattern and other important studies. One study that supports the idea that practical experience is key to developing therapeutic self-assurance was conducted by Al-Khaledi et al. (2014). They discovered that both students and SLPs showed more confidence when it came to managing PWS after having more clinical exposure.

Supporting the idea that familiarity and repetitive engagement with PWS during professional training and practice improve practitioner self-efficacy, Brisk et al. (1997) and Cooper (1975) observed an increase in confidence with accumulated expertise among SLPs. Findings from the present study showing senior students show more confidence are consistent with Lee (2014), who emphasized that SLPs' confidence rises as they obtain broader and more intensive expertise in addressing various cases of stuttering.

Additionally, Koutsodimitropoulos et al. (2016) found that students' competence and confidence in treating PWS are enhanced by advanced training and education in stuttering, which highlights the significance of comprehensive educational curricula. The results of this study corroborate this correlation, indicating that the Jordanian university's course of study most likely incorporates useful theoretical and practical elements that progressively boost students' self-assurance as they go through their degrees.

Despite the lack of statistical significance, the tendency seen in this study is in line with a general trend in speech pathology education: students who are more actively involved in their coursework and who have progressed through the program tend to have more faith in their own clinical abilities. In light of this tendency, it is clear that training programs for speech pathologists need to be more organized and innovative if they are to produce graduates who are competent and self-assured in their profession.

Conclusion

The purpose of the study "Jordanian Speech Pathology Students' Beliefs and Attitudes Towards People Who Stutter (PWS)" was to evaluate the level of understanding, perspective, and familiarity with stuttering among Jordanian speech pathology students. Results showed that students in both the junior and senior years had a generally good attitude towards those who stutter. However, students in the senior year showed somewhat better understanding and a little more positive attitude, which is probably attributable to their higher status and more exposure to clinical settings. This provides more evidence that the sensitivity and comprehension towards stuttering grows in tandem with one's educational background and work experience in speech pathology. Positive attitudes were more prevalent among female students compared to male students; however, the difference was not statistically significant. The results highlight the need for speech pathology programs to focus on teaching students' specific skills and knowledge that will help them better assist people who stutter in the clinical setting. The study stresses the importance of a compassionate approach to managing stuttering and the continuous necessity for extensive speech pathology training and instruction.

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Figures

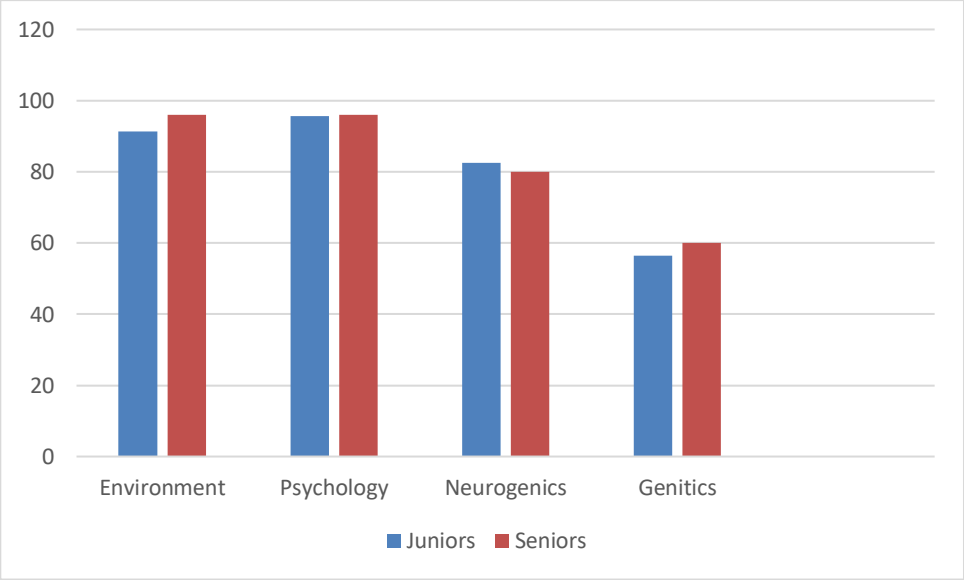

Figure 1. Percentage Of Students Who Mentioned Each Type of Stuttering Cause

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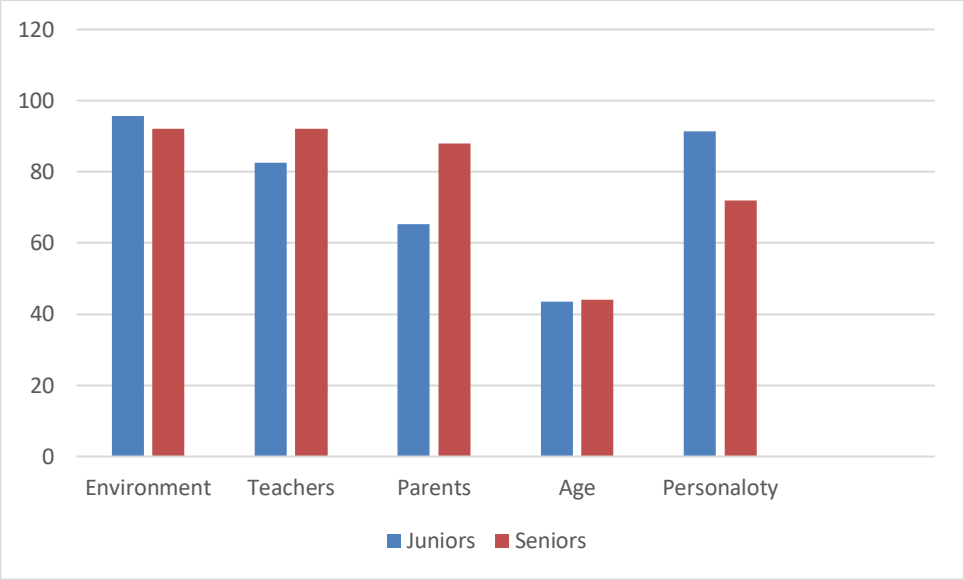

Figure 2. Percentage of Students Who Mentioned Factors Seem as Barriers Against the Treatment

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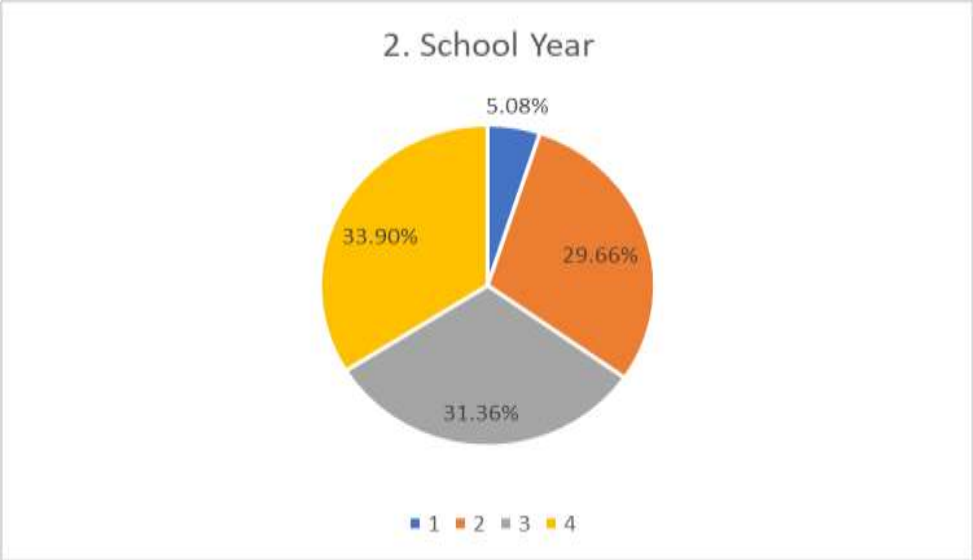

Figure 3. School Year

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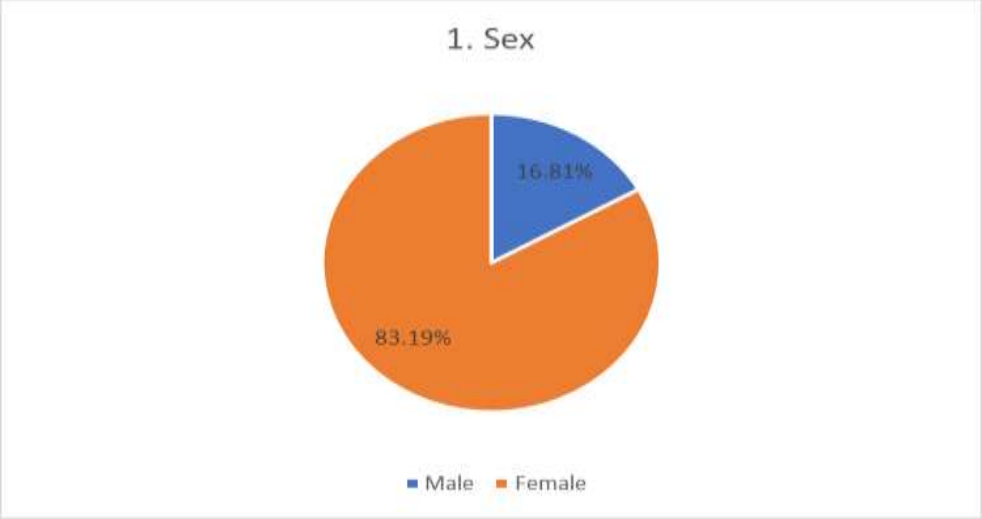

Figure 4. Sex

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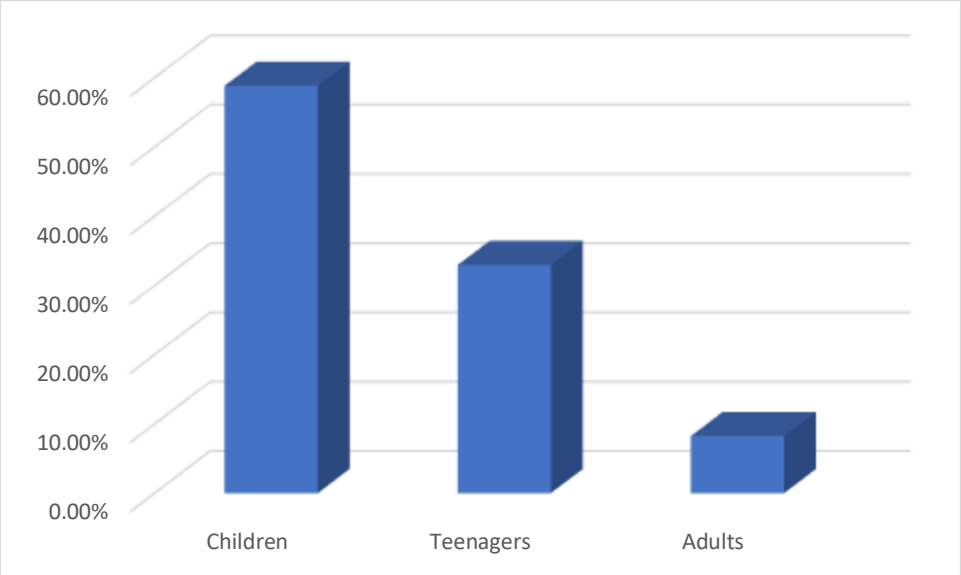

Figure 5 Age Group for Most Cases in Stuttering

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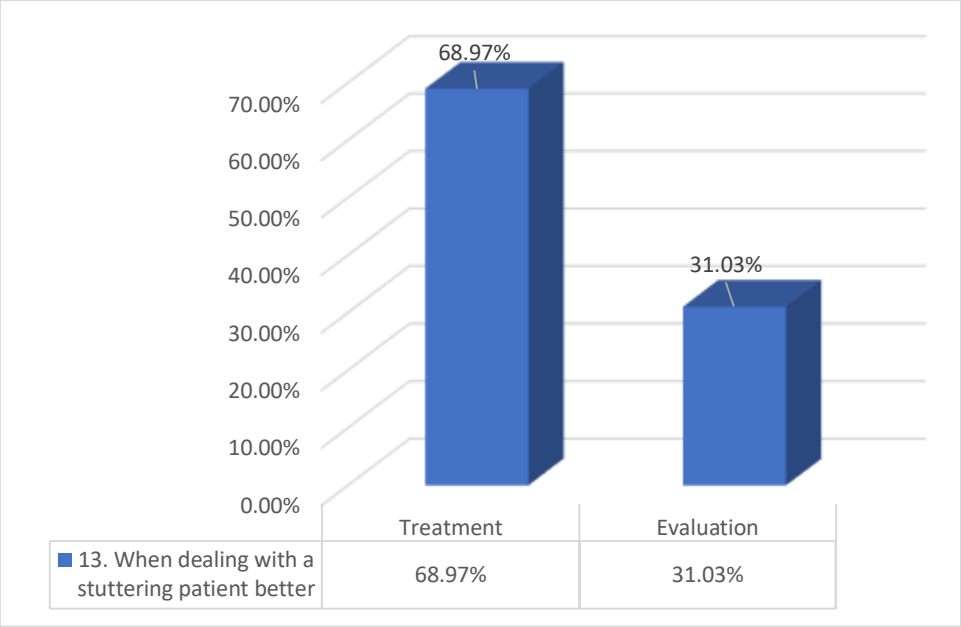

Figure 6. The Preferred Treatment For Stuttering Individuals

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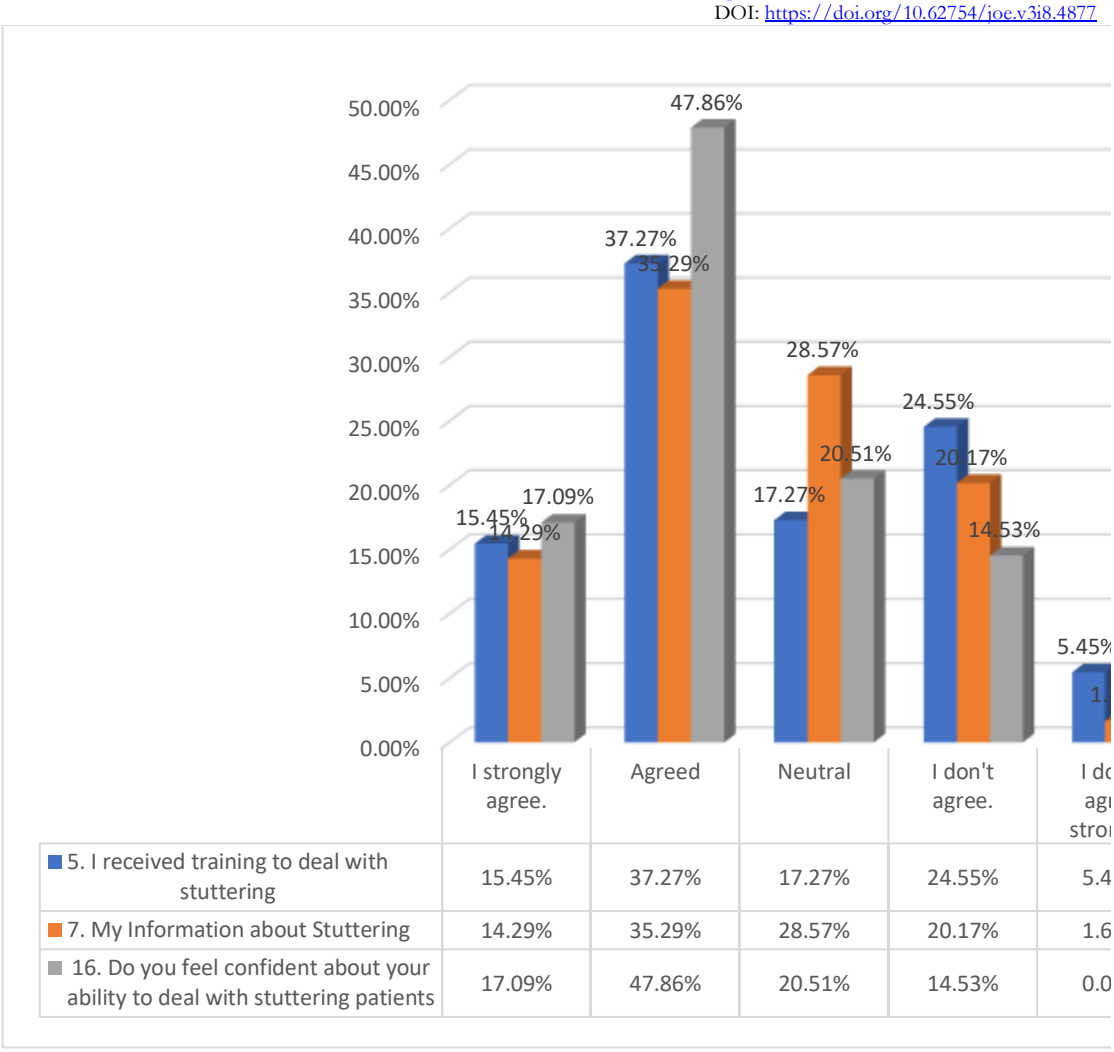

	I strongly agree.	Agreed	Neutral	I don't agree.	I do agr stro
5. I received training to deal with stuttering	15.45%	37.27%	17.27%	24.55%	5.4
7. My Information about Stuttering	14.29%	35.29%	28.57%	20.17%	1.6
16. Do you feel confident about your ability to deal with stuttering patients	17.09%	47.86%	20.51%	14.53%	0.0

Figure 7. Self-Efficacy Towards the Treatment of Stuttering

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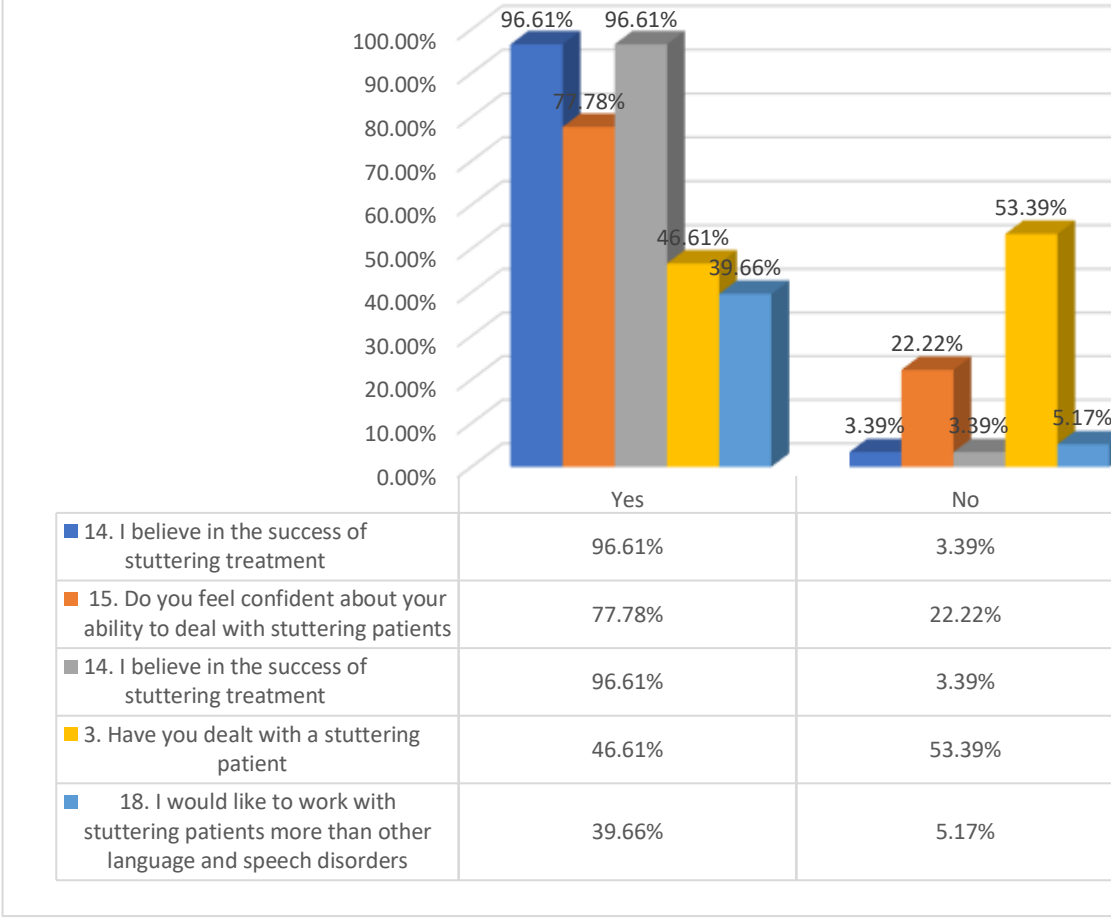

	Yes	No
14. I believe in the success of stuttering treatment	96.61%	3.39%
15. Do you feel confident about your ability to deal with stuttering patients	77.78%	22.22%
14. I believe in the success of stuttering treatment	96.61%	3.39%
3. Have you dealt with a stuttering patient	46.61%	53.39%
18. I would like to work with stuttering patients more than other language and speech disorders	39.66%	5.17%

Figure 8. Self-Efficacy Beliefs Towards Practicing the Treatment of Individuals with Stuttering

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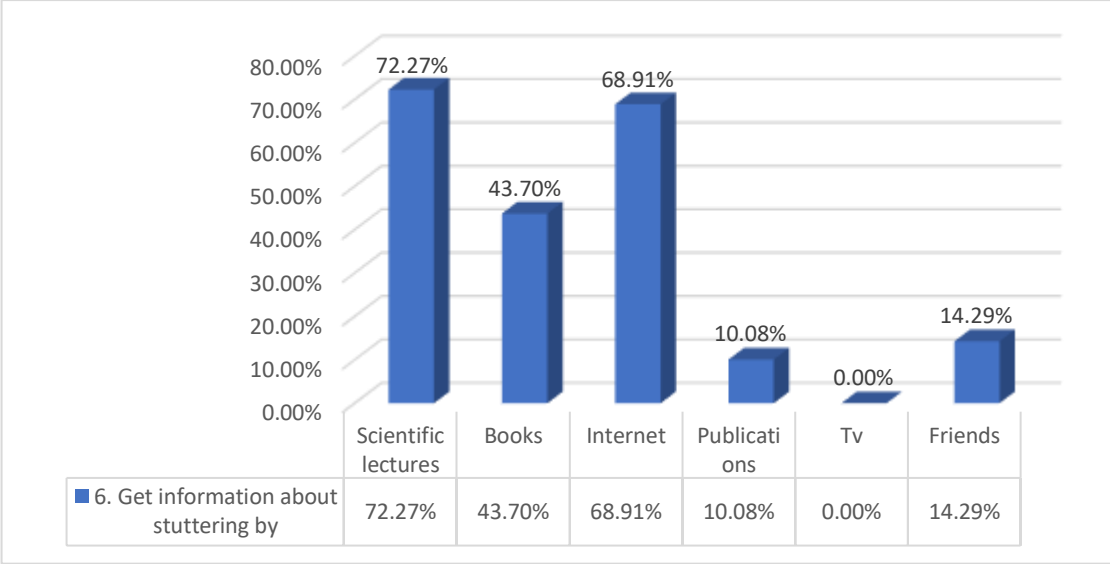

Figure 9. Resource of Information for the Participants

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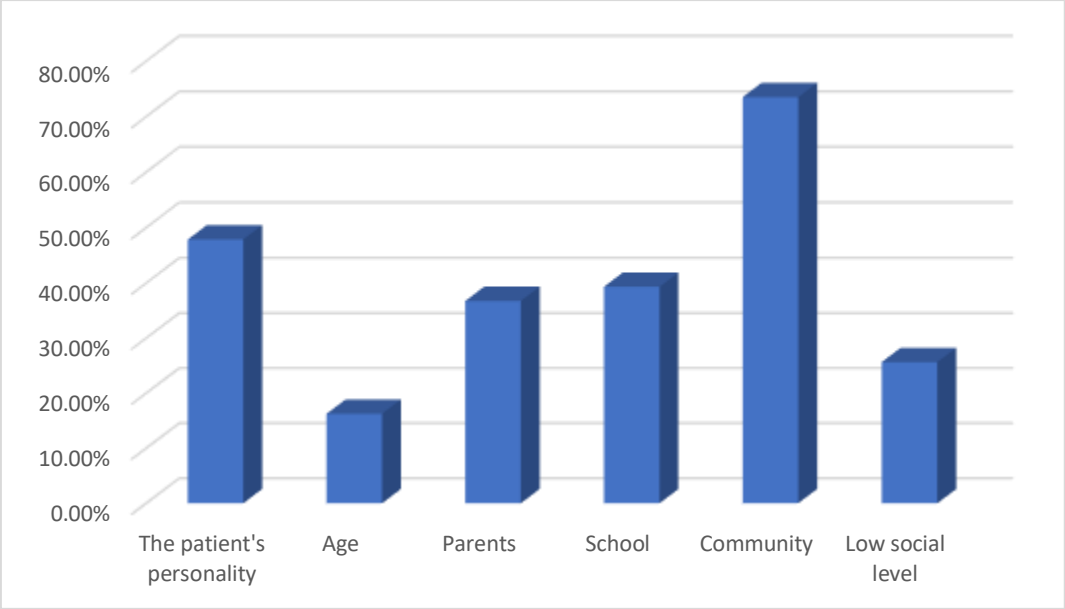

Figure 10. Frustration in the Treatment of Stuttering Individuals

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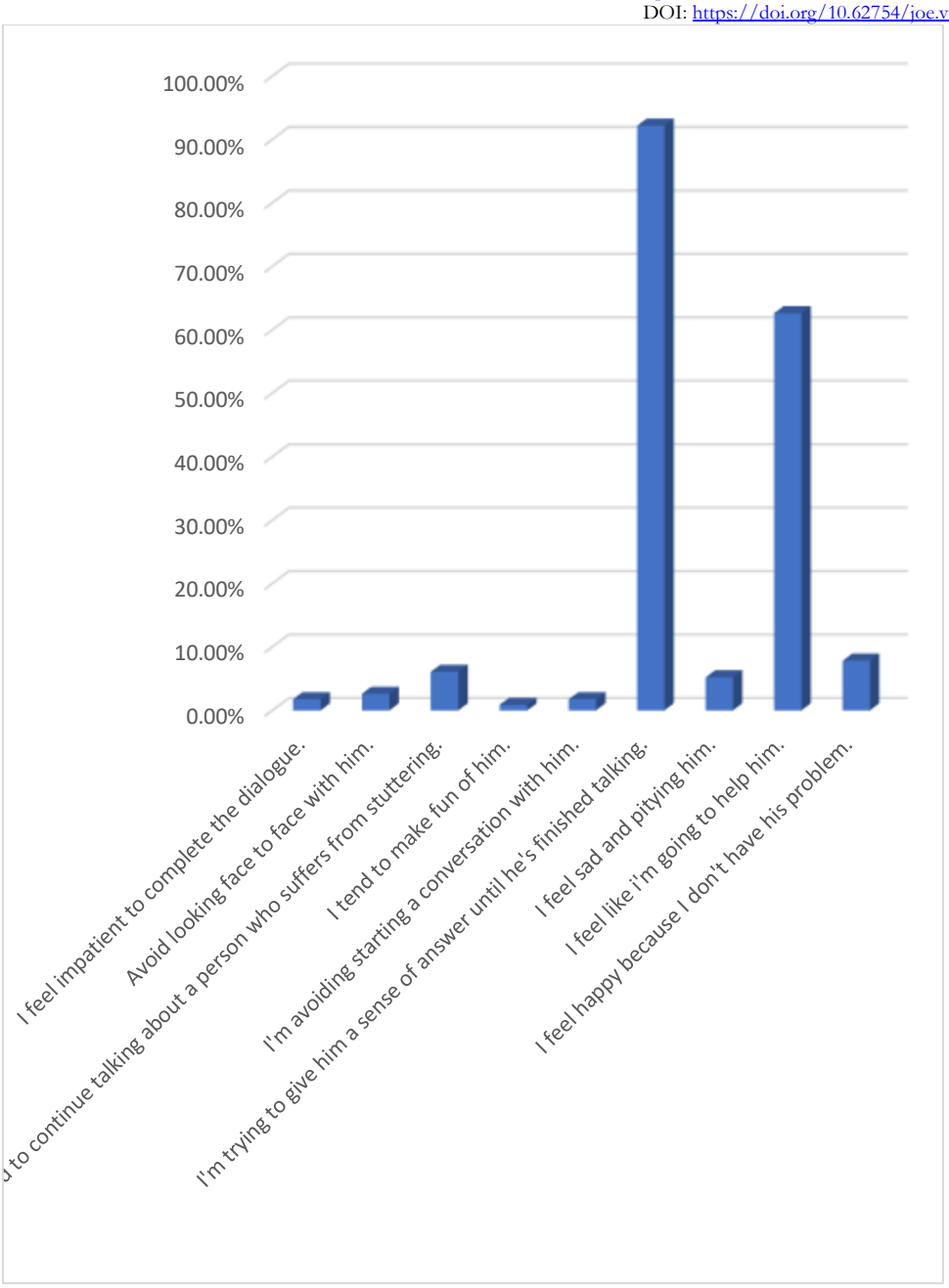

Figure 11. Physical Health of the Participants

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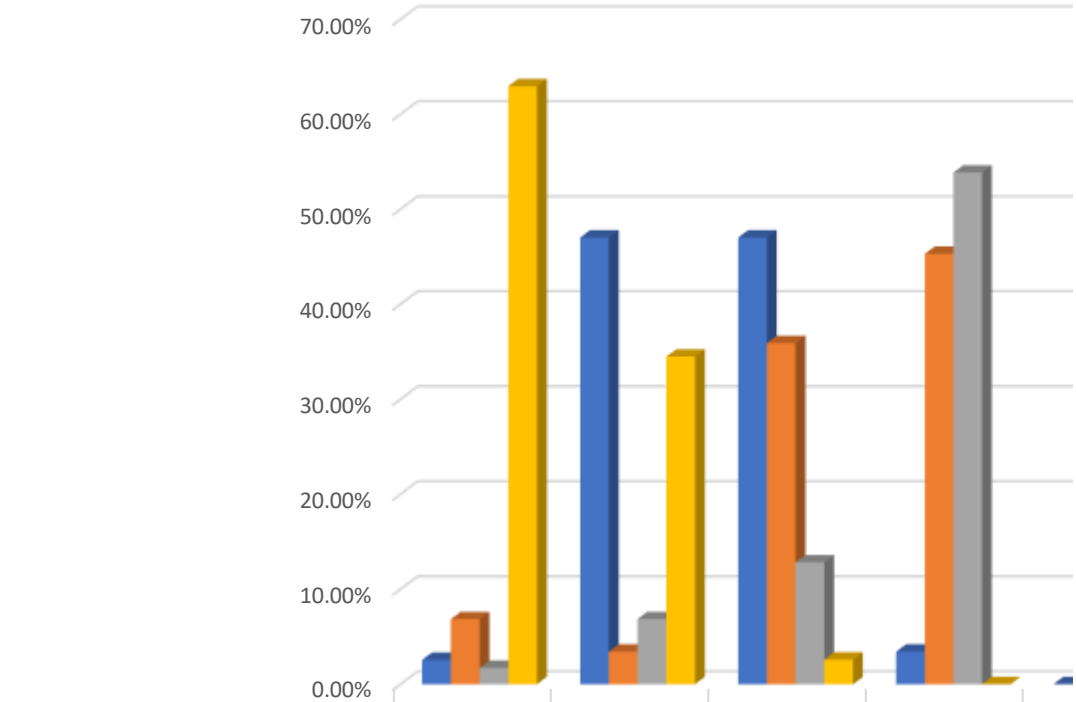

	Very high	High	Average	Low	V
9. I think the level of intelligence in individuals with stuttering	2.56%	47.01%	47.01%	3.42%	
10. You think stuttering has affected academic achievement in individuals who suffer from stuttering	6.84%	3.42%	35.90%	45.30%	
12. You think stuttering has affected the social relationships of stuttering patients in a way	1.71%	6.84%	12.82%	53.85%	2
17. I think the stuttering treatment	62.93%	34.48%	2.59%	0.00%	

Figure 12. Perception of Stuttering Individuals