



**MODIFICATION OF PROLONGED SPEECH THERAPY
IN TREATING STUTTERING AND ITS ASSOCIATED NEGATIVE
TRAITS AMONG ADULTS: CASE OF NAIROBI STAMMERING
SUPPORT GROUP, NAIROBI COUNTY, KENYA**

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Abstract:

The purpose of this study was to evaluate the Prolonged Speech technique's effectiveness in the treatment of stuttering and its associated traits among adults. The main objective of the study was to find out if there is a need for modifying prolonged speech techniques in treating stuttering and its associated traits. An experimental method was used where quantitative and qualitative designs were used. The study was guided by the behaviorist theory proposed by B.F. Skinner. The study was carried out at the Nairobi Stammering Support Group. The participants were ten adults who stutter and were selected through purposive sampling. Questionnaires, interviews, and observations were used to collect the data. A pilot study was carried out. All research instruments were tested for validity and reliability, the data which was corrected was categorized, coded and data was analyzed using qualitative and quantitative techniques. Quantitative data was analyzed using descriptive statistics in the form of percentages and was presented using pie charts and bar graphs. Qualitative data was analyzed after thematically arranging responses according to the research questions and objectives. The study found out that there was a need to modify prolonged speech technique by incorporating other treatment approaches especially cognitive and psychological. The study recommends more research on other stuttering treatment techniques. Further, the study recommends that speech-language therapists assess individual needs before using specific treatment techniques.

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1. Introduction

Stuttering which is the most common fluency disorder is defined as an interruption in the flow of speaking which is characterized by repetitions of; sounds, syllables, words and phrases, sound prolongations, blocks, interjections, and revisions which may affect the rate and rhythm of speech (ASHA, 1993). ASHA further states that dysfluency may occur together with physical tensions, and avoidance of sounds, words, or speaking situations. Stuttering affects people of all racial and economic backgrounds. Stuttering is more common in males than in females. This has been documented by NIDCD – National Institute on Deafness and Other Communication Disorders (2016), which estimated that three times as many boys stutter than girls. Research has found out that stuttering can be treated. Various reports in the literature show that clients can develop and maintain fluency over time. Unlike children, an adult makes a personal decision to seek treatment, (Elena and Pelagie, 2004). This research focused on adults for this same reason. One of the fundamental questions when it comes to the treatment of stuttering is how well some treatments work and how the clinician determines the best type of treatment for a specific client who stutters. The PST is one of the most commonly used techniques in treating stuttering because it is cost-effective, simple, allows minimal contact time between the client and clinician, and requires no specialist equipment (Ward, 2006). There are various types of treatment approaches for stuttering. The three major approaches are the psychological approach, fluency shaping approach, and modifying stuttering approach.

According to Elena and Pelagie (2004), the psychological approach involves psychotherapy to treat attitude towards stuttering while modifying the stuttering approach is meant to help the PWS to stutter fluently. The modifying speech approach which the researcher focused on, facilitates speech that is free of stuttering by modifying the rate, rhythm, and voicing. Apart from these three mainstream therapy approaches there are alternative approaches to stuttering treatment. According to Ward (2006), the alternative approaches include altered feedback therapies. This involves devices that effectively mimic others' speech signals. By masking the client's speech signal the fluency is improved. Another alternative therapy is drug therapy. Ward (2006) stated that there are no large-scale controlled studies on any drug therapies.

The researcher focused on modifying the speech approach whereby prolonged speech technique (PST) is used in the treatment of stuttering. The reasons were because most behavioral treatments for adults who stutter incorporate some variation of prolonged speech procedures which are considered to be reasonably effective with many clients. In addition to this in any fluency-shaping approach, the prolonged speech technique is typically the primary component, (Blomgren, 2013). NIDCD (2016) estimates that more than three million Americans stutter and approximately less than 1% of adults stutter. A study done by Dieudonne (2011) in eleven African countries; Rwanda, South

Africa, Burkina Faso, Mali, Niger, Democratic Republic of Congo, Congo, Chad, Togo, Tanzania, and Central Africa Republic found out that there is little information on prevalence and treatment in the area of stuttering. The study stated that due to little information on treatment, many people who stutter in Africa resort to what is called 'traditional therapy' which uses treatment methods that are not evidence-based. A case study done in Kenya by Okutoyi and Kochung (2016), estimated that in Kenya 440,000 people stutter. This is a number which cannot be ignored and it demands more research in this area.

The lack of enough research in the area of stuttering was confirmed by Yairi (2013). During his speech at a 2013 conference on stuttering sponsored by NIDCD he stated that *"whereas dry statistical data do not commonly excite the imagination of the researchers or clinicians, the 1% figure has produced an incorrect impression that stuttering is a small problem"*. It has been an important reason why for a long period, the ASHA and many universities de-emphasized academic and clinical training in fluency disorder". This statement relates well to the Kenyan situation where not only the area of fluency disorder has been under-researched but also the area of speech and language disorders has been ignored by the government and learning institutions. It was only in 2014 that two Kenyan universities started to train students in the area of speech and language pathology (Asltk, 2018).

Little is known about stuttering in Kenya. Speech and language therapists who are few are mainly found in major cities and their services are expensive and beyond the reach of many people (Michaela, 2014). A study done by Ndungu and Kinyua (2009) in Kenya, found out that there was significant ignorance of the causes and management procedures of language and speech disorders. The study concluded that there was a need to provide assessment and treatment protocols that are fair, effective, and acceptable. This study examined the effectiveness of one stuttering treatment technique which is PST.

According to Ward (2006), there is no reliable data that indicates that one approach is more likely to produce lasting benefit than another although it seems clear that some clients will definitely fair better with particular approaches. This study provided the necessary data to evaluate the effectiveness of PST in stuttering treatment. Some researchers are against the PST as stated by Ward (2006) that not all observers are impressed by fluency-shaping programs like PST and its resulting speech output. Kalinowski et al., (2006) argues that the habituation of new motor speech patterns simply does not take place and the fluency that results from PST is false and will not be maintained. This study therefore examined some unresolved issues like this.

A study done by O'Brian and others (2003) showed that 55% of participants who practiced PST said that they would still prefer to stutter than to use unnatural speech patterns at least some of the time. This study was to find if the PWS prefers to stutter than to use unnatural speech which is a main characteristic in PST. Nairobi Stammering Support Group (NSSG) was formed in 2002 with the aim of providing support and self-help to people living in Nairobi who stutter and their families. Another aim was to educate the media, teachers, and general public about speech fluency disorders,

distributing information leaflets to the public and finally linking them up with similar support groups internationally. The target population was from this support group.

According to Asha (2018), stuttering treatment involves the clinicians working with clients. This mainly happens in developed countries which have a higher number of clinicians. Due to the shortage of SLTs in Kenya, and having only one SLT who is in the NSSG, older members in this support group train the new members on the PST. There was a need to carry out a study to find the effectiveness of PST and to propose any modifications. A study done by O'Brian, Onslow, Cream, and Packman (2003) in Australia under a project grant from the National Health and Medical Research Council of Australia, on the outcome of the PST model found out that out of the 16 participants who completed the trial requirements including 12 months' post-treatment, data collection showed minimal or no stuttering in every day speaking situation even after 12 months' post-treatment. These adults had minimum clinic contact hours, about 20 hours which is fewer contact hours compared to other techniques. The setting of this experiment was different from the Kenyan setting where this study was carried out. Australia had 4498 SLT by the year 2014 according to Health Workforce Australia (2014). This number was very high compared to Kenya where we had 11 SLTs by the year 2017 (Association of Speech and Language Therapists in Kenya). In Kenya none of the 11 SLTs practice in a school, college, or a public hospital. They practice in private urban hospitals and private clinics. There is therefore an urgent need to examine the issue of treatment effectiveness in stuttering intervention. In Kenya teachers and tutors are not well trained in the early identification and treatment of dysfluency disorders. This therefore calls for more research on fluency disorders and appropriate cost-effective treatment.

1.1 Purpose of the Study

The purpose of this study was to find out if there is a need for modifying PST in treating stuttering and its associated negative traits.

1.2 Conceptual Framework

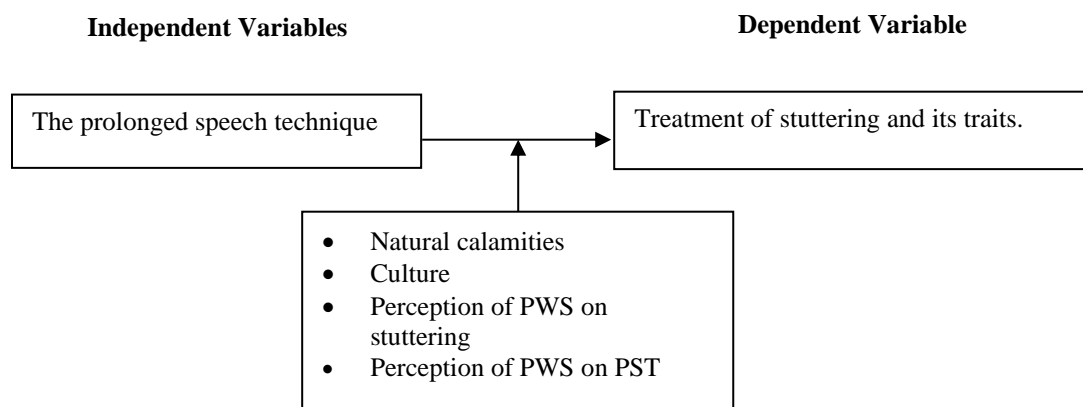


Figure 1: Conceptual Framework

2. Literature Review

This section discusses the theoretical framework and the literature related to the study topic.

2.1 Theoretical Framework

Studies on whether or not to modify the prolonged speech treatment technique are still ongoing. Most of the studies about the results of stuttering therapy have suggested the necessity of modifications of the therapy program for more effective and lasting results. Bothe (2006) stated that future studies will be extremely valuable in determining not only the effects of the prolonged speech technique but also the interactive elements of other stuttering treatment programs. According to Ward (2006), stuttering treatment therapy is moving away from the PST for the treatment of adults who stutter and towards a more integrated cognitive treatment approach.

This study will find out if prolonged speech is able to address the client's needs, if not the study will investigate how the technique can be modified to cater to individual needs. A study done by Klompas and Ross (2004) in South Africa on adults who stutter and impacted their quality of life where sixteen adults ranging between twenty to fifty-nine years found that most participants believed that stuttering had affected their self-esteem, and self-image and had evoked strong negative emotions within them. The study recommended the need to modify treatment programs and incorporate subjective feelings about stuttering into the clinical practice of speech and language therapy.

A study done by McMicken and Vento-Wilson (2012), at California University to document the reduction of overt stuttering behaviors of a long-term stutter. The research design was a case study of a 47-year-old man with a 44-year history of stuttering. The effectiveness of treatment was defined as speech free of overt dysfluencies, natural sounding appearing spontaneous across settings and communication partners. After treatment the client reported he was still getting used to how his speech feels and sounds, he also reported he felt anxious sometimes. The final finding reported that the operant conditioning approaches have demonstrated an increase in fluency among people who stutter but further research is needed to identify appropriate modifications to establish treatments to meet the client's individual needs. The proposed study was therefore to establish if any modification is needed to make PST effective in treating stuttering and associated traits.

3. Methodology

3.1 Research Design and Target Population

This study adopted an experimental design using a mixed method. The respondents required information was recorded before the treatment and recorded again after treatment. The respondents required information was recorded before the treatment and

recorded again after treatment. Observations whereby the researcher used the formulas for calculating the frequency of stuttering and rate of speech in PWS in a span of two months while practicing PST. A questionnaire in the form of a checklist was used for self-rating in a span of two months while practicing PST. This design evaluated the effectiveness of the PST in treating stuttering and its associated traits in adults with stuttering. The target population was fifteen PWS who had practiced the PST.

3.2 Research Instruments and Data Collection

This section included a description of the instruments that were used in the study. Test tools observation and questionnaires were used to collect data. The researcher used the Wright and Ayre Stuttering Self-Rating Profile (WASSP). According to Kumar (2014), observation is a purposeful, systematic, and selective way of watching and listening to an interaction or a phenomenon as it takes place. The researcher participated in observation by engaging PWS practicing PST in verbal conversation to record their speech behavior. The researcher calculated the percentage of stuttered syllables (%SS), speaking rate (in syllables per minute, SPM), and articulatory rate (in syllables per minute, SPM). This was repeated after two months of treatment. The behaviour was then recorded in a descriptive format which was changed into categories after analysis and classification. The researcher visited the site for familiarization. Baseline data was collected from the respondents, the respondents went through eight weeks of treatment of stuttering and its associated traits. Data was recorded before and after treatment. The target sample filled out the informed consent form. The sampled PWS filled in the form to participate in the research questionnaire. During the questionnaire, the question was explained to PWS before they answered. The researcher also participated in the observation and confidentiality was ensured.

3.3 Sampling Techniques and Sample Size

This study purposively sampled 10 members from NSSG. Purposive sampling involves the researcher selecting a sample that he/she judges that its characteristics meet the purpose of the study (Kumar, 2014). According to Kumar (2014), sampling in qualitative research is guided by the researcher's own judgment as to who is likely to give or provide the researcher with the required information. The sample size was 10 PWS who were members of NSSG who were using PST to treat stuttering and its associated traits.

3.4 Pilot study

Mugenda & Mugenda (2003) state that piloting ensures that research instruments are stated clearly and have the same meaning to all respondents. Piloting was done at the support group center in Nairobi where 4 PWS members of NSSG who were purposively picked were issued with the questionnaire, their speech was recorded and observed, and then they went through the PST to treat their stuttering for one month. After one month of treatment, they were again issued with the same questionnaire, their speech was

recorded and observed analyzed. The area that was ambiguous was rectified before the actual study. These respondents were not involved in the final study.

3.5 Data Analysis

Quantitative data was coded and then run through the SPS application and then it was reported using inferential statistics which included tables and graphs. Qualitative data was read reportedly to identify patterns and themes, it was then reported narratively. Content analysis was used whereby the data was analyzed per objective and then categorized for the purpose of summarization and tabulation. This did not involve coding and classifying the qualitative data collected to highlight the findings. The researcher quantified the qualitative data by creating codes and themes.

4. Results and Discussions

4.1 Need for Modifying PST in Treating Stuttering and its Associated Negative Traits

The study objective was to find out if there's a need to modify PST in the treatment of stuttering and its associated traits. From the comments of the respondents, it was very clear that there is a need to modify the PST to cater to individual client's needs.

Respondent 1 clearly stated that the PST didn't treat fear of speaking. Respondent 4 said that the PST didn't treat the negative feelings towards stuttering while Respondent 7 stated that the PST did not help in reducing social anxiety and finally, respondent 9 still suffered from low self-esteem even after treatment.

From the findings it is clear that the majority of respondents as represented by 50% needed different types of therapies to address their individual needs. These findings imply that there is a need for modifying PST in treating stuttering and its associated negative traits. These findings concur with those of Ward (2006), who alluded that, stuttering treatment therapy is moving away from the PST for the treatment of adults who stutter and towards a more integrated cognitive treatment approach. Additionally, psychological counseling as the method of treating stuttering as highlighted by Lindsay and Langevin (2017), states that stuttering can elicit anxiety and other psychological and emotional reactions, therefore there is a need for psychological counseling as a part and parcel of stuttering treatment. This study recommends that there is a need for integrating PST with other therapies to enhance the effectiveness of treatment plans for stuttering and its associated negative traits.

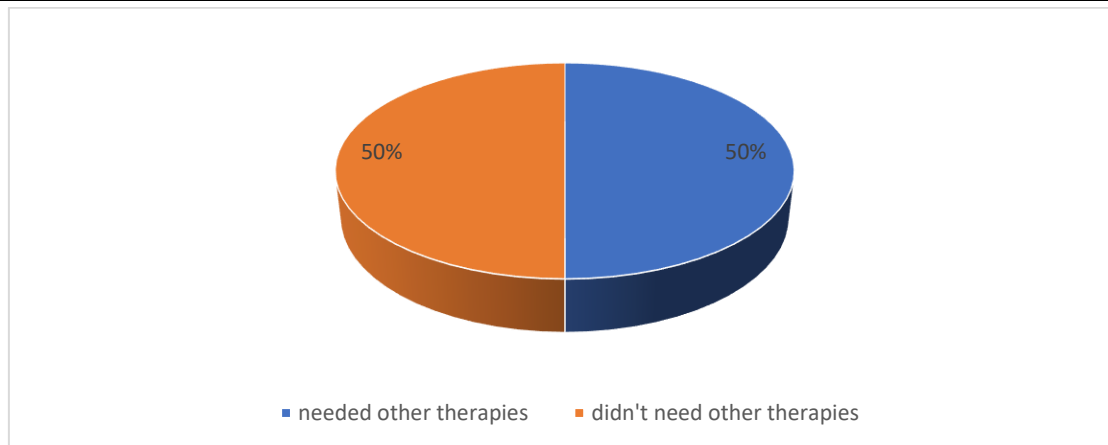


Figure 1: Clients who need other therapies to treat stuttering and its associated negative traits

From the findings in the figure above, it is clear that the majority of respondents as denoted by 50% required psychological counselling whereas 50% were able to achieve fluency and treatment of negative traits associated with stuttering. These findings imply that psychological counselling and the incorporation of subjective feelings about stuttering are the key modifier approaches to help PST in treating stuttering and its associated negative traits. These findings are in line with those of Klompas and Ross (2004) who conducted a study in South Africa on adults who stutter and their impact on quality of life where sixteen adults ranging between twenty to fifty-nine years found that the most participants believed that stuttering had affected their self-esteem, self-image and had evoked strong negative emotions within them. The study recommended the need to modify treatment programs and incorporate subjective feelings about stuttering into the clinical practice of speech and language therapy. Additionally, the findings are in line with those of Alanna and Marilyn (2017) who stated that stuttering can elicit anxiety and other psychological and emotional reactions, therefore there is a need for psychological counseling as a part and parcel of stuttering treatment. According to Blomgren (2013), there is currently no cure for stuttering, all therapy techniques are compensatory. Any stuttering treatment should be a long-term strategy of teaching clients to be their own clinicians.

5. Conclusions

The study established that half of the respondents in this study had a positive perception towards PST as a treatment technique for stuttering and its associated negative traits, which in turn enhanced the success and effectiveness of this treatment method towards stuttering and its associated negative traits as displayed from the respondents' data. Furthermore, the study established that there was the need for modifying PST in treating stuttering and its associated negative traits, these strategies that would enhance PST included psychological counselling and incorporation of subjective feelings about

stuttering which would help in treating stuttering effectively as well as reducing the negative traits like emotional and psychological problems.

6. Recommendations

On the fourth objective that sought to establish the need for modifying PST in treating stuttering and its associated negative traits, the study found out that there is a need for PST modification to promote the success of the treatment of stuttering and its associated negative traits. This study recommends that there is a need for integrating PST with other therapies to enhance the effectiveness of treatment plans for stuttering and its associated negative traits. Additionally, the study recommended the need to modify treatment programs and incorporate subjective feelings about stuttering into the clinical practice of speech and language therapy. Stuttering can elicit anxiety and other psychological and emotional reactions; therefore there is a need for psychological counseling to be a part of stuttering treatment. Studies to explore other treatment techniques for both adults and children as well as studies to explore long-term effects (more than 12 months) after PST are highly suggested.

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Conflict of Interest Statement

The authors declare no conflicts of interest.

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