

Diversities among Individuals with Cluttering

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Abstract

Cluttering is a disorder of speech and language processing, resulting in rapid, dysrhythmic, sporadic, unorganized and frequently unintelligible speech. Accurate prevalence figures are not known due to lack of adequate definitions and a significant proportion of clutterers do not seek treatment. Lack of academic training, lack of experience with clutterers and lack of published information are some of the reasons for not focussing on cluttering, a fluency disorder. The present study made an attempt to describe four clients who exhibited stuttering - cluttering symptoms by comparing their case file information. The study focused predominantly on the differential diagnosis of cluttering and other fluency disorders. Because cluttering is a syndrome, some of its identifying symptoms are shared by individuals with stuttering. In clutterers, the distinguishing traits include lack of awareness of communication difficulties, poor self monitoring of speech output, subtle impairment of language formulation problems and family incidence of similar communication problems. Also, the study illustrates the individual variability among individuals who clutter and their heterogeneous clinical manifestations. The possible overlap of between certain features of cluttering and stuttering were also discussed. To conclude that cluttering is a fluency disorder but not same as stuttering which can be getting hold of more systematic information on the nature and symptomatology of cluttering for identifying possible subtypes.

Key words: Prevalence, Stuttering, Tachylalia, Heterogeneity

Traditionally, cluttering has been viewed as a fluency disorder. It is thought to be congenital in nature and is often called a syndrome because of the myriad of symptoms reported to characterize it. Like stuttering (a fluency disorder), cluttering is difficult to define. Weiss (1964) asserted that cluttering is not a specific, isolated disturbance of speech. He maintained that cluttering is the verbal manifestation of central language imbalance in the area of verbal utterance. St. Louis (1992) defined cluttering as a speech-language disorder whose chief characteristics are 1) abnormal fluency that is not stuttering and 2) a rapid and/or irregular speech rate. Daly (1992) defined cluttering as a disorder of both speech and language processing which manifests itself as rapid, dysrhythmic, sporadic, disorganized and frequently inarticulate speech by a person who is largely unaware of or unconcerned about these difficulties.

The definitions and descriptions mentioned above reflect researcher's attempts to examine the specific characteristics they believe to represent cluttering. Each definition is distinguished by each author's perception of the salient characteristics of cluttering. Froeschels (1946) believed that cluttering was caused by incongruity between thinking and speaking. Weiss (1964) listed out three obligatory symptoms that were pathognomonic and essential for diagnosis are: a) Excessive repetitions of speech b) short attention span and poor concentration and c) lack of complete awareness of the problem.

More than four decades ago, Weiss (1964) called cluttering an orphan in the family of speech-language pathology, because it had been neglected and treated as an illegitimate relative of stuttering by most Speech-language pathologists. Many researchers agree that cluttering presents as a syndrome, which may manifest itself differently in different individuals. Daly and Burnett (1999) viewed cluttering as an offspring of stuttering, but more as fraternal twins, cluttering and stuttering are similar in some ways, but vastly different in others. Weiss (1964), Lushsinger and Arnold (1965), Van Riper (1970), Daly (1996) and Daly and Burnett (1999) have compared and contrasted between cluttering and stuttering. Table 1 displays some of the similarities between cluttering and stuttering.

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Features	Cluttering	Stuttering
Rapid rate of speech	+	+
Breathing dysrhythmia	+	+
Silent pauses; hesitations	+	+
Interjections; revisions; filler words	+	+
Poor oral coordination	+	+
Poor eye contact	+	+
Family history	+	+

Table 1: Similarities between cluttering and stuttering

Although cluttering often has been compared with stuttering and referred to as a fluency disorder. Most often, many clinicians find it difficult to differentiate between stuttering and cluttering based on judgement of discontinuities in speech being atypical or abnormal. Individuals who clutter might also stutter. Conversely, those who stutter may exhibit other concomitant speech and language problems, but the presence of other difficulties may not be indicative of cluttering.

Some of the issues and controversies about cluttering are unlike stuttering. The purpose of this study is to raise critical issues regarding the nature of cluttering and to provide some clinical guidelines for the assessment and treatment of this multifaceted disorder. That is, a) Does cluttering exist as a disorder distinct from stuttering? b) Do clutterers have co-existing articulation and language disorders? c) Is cluttering the result of an underlying organic/genetic factor? d) Are rate difficulties vital to cluttering? The answers for these questions posed might be cleared by discussing some clinical case reports. The following are summary of case profiles of four individuals with fluency problems. These clients were fascinating because there were many overlapping features of stuttering and cluttering. Also attempts were made to correlate the clinical features exhibited by individuals who clutter with the literature.

All the clients reported below were diagnosed by Speech language pathologist of more than 5 years of experience in assessing and treating fluency disorders and a clinical psychologist where, all the clients showed normal intelligence defined as a full scale IQ greater than 80 on WISC (The Wechsler Intelligence Scale for Children) and WAIS (Wechsler Adult Intelligence Scale). An ex-post-facto research design was used to study the four clients with cluttering.

Case Reports

Subject 1: A 20 year adult male was reported with a complaint of fast rate of speech since childhood. Initially, he was not aware of his problem. His parents and friends made him aware by insisting to speak slowly. His mother had the same problem during childhood but could overcome it without any speech therapy. General speech evaluation revealed fast rate of speech, festinating speech, repetition of words, occasional filled pauses, unfilled pauses, removal of natural pauses and inappropriate use of vocal punctuation marks. In addition to these dysfluencies, the evident articulatory errors noticed were weak syllable deletion, cluster reduction, simplification of multisyllabic words, metathesis, omissions and distortion of /s/ and /ʃ/ sounds. His Diadochokinetic (DDK) rate was 11-13 syllables/second. Narration and conversation revealed noted simplification of sentences and poor grammar. His reading was characterised by skipping of lines and words and lack of pauses between sentences. His writing sample revealed repetition of words like 'in' and some grammatical errors like confusion of articles ('a' for 'an') and also with plurals ('this' for 'these' and 'a' for 'an'). Some secondary behaviour noted were eye blinking, frequent gulping of air/inhalation and hand movements. The patient reported to have academic difficulties till seventh standard but after that, his academic skills has improved.

Subject 2: A 22 year male presented with a five year history of unintelligible speech. The course of onset was sudden (i.e. due to parent's fight and family tensions). Initially he was not aware of the problem but become aware when others insisted him to speak slowly. His elder brother had the same problem. The client has difficulty in paying attention for longer time. General speech evaluation revealed fast rate of speech, festinating speech, jumbling of syntactic structure, omissions, repetitions, prolongations and pauses. Among pauses, filled pauses were more apparent. Misarticulations of /s/ and /ʃ/ sound were found to be more apparent in the initial position. His

maximum phonation duration was 32 sec for /a/ and /i/ and 28 sec for /u/. His DDK rate was 13 syllables/second and reading rate was 197 words/minute. There were very few instances of situational variability reported like avoiding speaking in professional seminars and facing interviews. Avoidance of eye contact was observed frequently.

Subject 3: A 30 year adult male reported with the complaint of mispronunciation of /l/, /j/, /ʃ/, /n/ and /ŋ/ sounds apparently more in initial position. His problem tends to worsen when he is under stressful condition like talking to elders and higher authorities. The problem was reported to have started due to wrong modelling of teachers. Poor attention span was reported. Initially he was not aware of his problem. Became aware when his friends told him to speak slowly. Reported to have problem only in Kannada language and occasionally substitutes some sounds in Tulu for Kannada. General speech evaluation revealed festinating speech and fast rate of speech, but the DDK was found to be slightly more than the normal (8-9 syllables/second). Kannada Articulation Test (KAT) was administered and it revealed that the client has distorted production of liquids and nasal sounds. Also, these errors were found to be situational (i.e. under stress, while talking to elders and higher authorities)

Subject 4: A 10 year old male child was brought with the complaint of unintelligible speech since five years. Initially, the child and his parents were not aware of the problem. They become aware when the clients' teacher informed the parents. The client was hyperactive and talkative. General speech evaluation revealed fast rate of speech, whole word repetitions, prolongations, frequent pauses and hesitations. DDK rate was 7-9 syllables/second and maximum phonation duration was 10 seconds for /a/, /i/ and /u/. Oral cavity examination revealed normal structure and function except high arched palate, due to which the client could not make a contact with palate. KAT was administered and the sounds misarticulated in isolation and in word level included /r/, /v/, /h/, /l/, /j/, /s/, /z/ and /d/. Distortion errors were more evident in clusters. His reading was characterised by repetition of sounds and words. The patient was academically an average student. Problems in writing noted were occurrence of spelling mistakes seen in Kannada.

Discussion

The common features noted in the four clients were unawareness of their problem, fast rate of speech, reduced attention span, repetition of words and phrases and articulation problem specifically in the production of sibilant sounds (subject 1 and 2 showed distortion of /s/ and /ʃ/ sounds, subject 3 showed misarticulation of /ʃ/ and subject 4 showed distortion of /s/ and /z/ sounds). This is in agreement with Weiss's (1964) obligatory symptoms who stated that lack of awareness, poor attention and concentration and excessive repetition of words are essential for diagnosis of cluttering. In contrast, individuals who stutter do not exhibit 'lack of awareness' of the problem. Daly and Burnett (1999) also reported that individuals who stutter are aware of their speech problem unlike clutterers.

Daly and Burnett (1999) reported that rapid rate of speech is one of the frequently reported symptoms associated with cluttering. But it should not be used alone as an indicator to diagnose cluttering because even a person with stuttering exhibit fast rate of speech. Further, Weiss (1964) added that signs of faulty integration may be better criteria. Subjects 1 and 4 showed weak syllable deletion, cluster reduction, simplification of multisyllabic words, and additions and omissions of sounds. All these features can be attributed to the language difficulties. Hence the symptoms exhibited by four cases were in support with the findings of Daly and Burnett (1999) who reported that the clutterers have inability to integrate and execute multistep complex task or disorganized thoughts. The omission of sounds and deletion of syllables in these subjects are attributed to coarticulation effect (Preus, 1992) who reported that the high degree of coarticulation resulting in omissions of sounds and syllables.

Amazingly, all the four clients showed rapid and accelerated rate of speech. Subject 1, 2 and 3 even exhibited festinating speech, which is believed to be one of the core features of cluttering (Wohl, 1970). In contrast, individuals who stutter do not exhibit festinating speech. Many of the clients in the study were found to have anomalies in the production of sibilants (/s/, /ʃ/ and /z/), liquids (/l/, and /j/) and nasals (/n/, and /ŋ/) and stops (/d/). 26% and 29.2% of speech therapist from USA and UK respectively, reported that misarticulations were observed in individuals with cluttering (St. Louis and Hinzman, 1986; St. Louis and Rustin, 1989). Daly and Burnette (1999) also reported that the articulatory errors are seen in clutterers as a coexisting features, and the present findings (articulatory errors in clutterers) supported the previous findings.

The informal writing sample was elicited from subject 1 which is characterised by incomplete sentences, inappropriate punctuation, omission of noun phrases in sentence subjects and misspelled words. Certain reading errors observed were skipping of words and lines, lack of pauses between sentences. Whereas subject 2 also showed writing errors like jumbling of syntactic structure. This error was also seen prominently during speaking. Subject 4 showed repetition and omission of words while reading and spelling mistakes while writing. Overall the writing sample of four subjects was characterised by simple sentence structure with grammatical errors or misspellings. This can be attributed to poor language formulation. Several authors have reported that clutterers do have concomitant reading (Weiss, 1968) and writing problem (Orton, 1973; Spandino, 1941; Sheperd, 1960 and Roman-Goldzieher, 1963). The written language difficulties in clutterers were associated with disorganized expressive language (Williams and Wener, 1996). The present findings support the previous findings who reported clutterers exhibit reading and writing difficulties. Daly and Burnett (1999) and St. Louis and Rustin (1989) believed that reading and writing problems may help in differentiating clutterers. Subject 3 exhibited substitution of Tulu words for Kannada words. This code switching aspect could be attributed to learnt behaviour as a coping strategy which pays way for further investigation into code switching behaviours in clutterers.

Subjects	Clinical features of stuttering seen in these subjects.	Clinical features of stuttering
Subject 1	Fast rate, repetition of words, filled and unfilled pauses, secondaries like eye blinking, frequent gulping of air and movement of hands and presence of familial history.	Fast rate, repetitions, silent pauses, hesitations, prolongations, interjections, revisions, filler words, word substitution, circumlocutions, secondaries, situational variability, heightened awareness of the disfluencies and familial history.
Subject 2	Fast rate, prolongations, omissions, filled pauses, situational variability, secondaries like poor eye-contact and presence of familial history.	
Subject 3	Fast rate, prolongations, omissions, filled pauses, situational variability and secondaries like poor eye-contact.	
Subject 4	Fast rate and hesitations.	

Table 2: Clinical features of stuttering seen in these clients as against those in stutters.

All the four clients exhibited stuttering-like disfluencies. Table 2 indicates the clinical features of stuttering seen in these clients as against those in stutters. The only difference is that the stuttering repetitions are sound, syllable repetitions, whereas clutterers exhibit repetitions of longer and whole words or phrases. In the contrary, individuals who stutter exhibit repetition of sounds and short words (Daly and Burnett, 1999). Further, individuals who stutter are usually dysfluent in their initial sounds when beginning to speak and become more fluent towards the end of utterance. In contrast, clutterers are fluent at the start of utterance but their speaking rate increases and intelligibility decreases towards the end of utterance. Hence the diagnosis should be based on the nature of problem the individual manifests.

Sl.No.	Cluttering features	Subject 1	Subject 2	Subject 3	Subject 4
1	Self awareness of the problem	-	-	-	-
2	Attention & concentration difficulties	+	+	+	?
3	Articulation difficulties	+	+	+	+
4	Reading & writing difficulties	+	?	-	+
5	Rate of speech	Fast	Fast	Fast	Fast
6	Festinating speech	+	+	+	?
7	Family history	+	+	?	?
8	Secondary behaviours	+	+	-	?
9	Respiratory dysrhythmia	+	-	-	-

Table 3: Summary of cluttering symptoms from four clutterers

(‘ — ’ indicates absent, ‘+’ indicates present, ‘?’ indicates information not available from the file)

Table 3 shows the summary of cluttering features in four clients with cluttering. Comparison of symptoms exhibited by four clients, revealed that some features are present in some clients and others are not, which suggested that cluttering is a heterogeneous group. Some of them showed reading and writing difficulties, poor attention and concentration, impulsivity and verbose, but others

did not. From the above findings, probably the clients 1, 2 and 4 could be cluttering-stuttering subjects and client 3 could be a probable clutterer. Administration of Daly's (1992-1993) check list for possible cluttering could yield appropriate diagnosis for confirmation for subgrouping which needs to be addressed further. Clients exhibiting a combination of cluttering and stuttering symptoms may be more common than previously thought. Preus (1992) suggested that cluttering and stuttering may coexist in appropriately 35% of stuttering cases. By and large, the clinician must be aware of these individual variations in the clinical picture of certain disorders like cluttering, while diagnosing and treating the disorders.

Answering the four questions which were asked earlier, cluttering exhibits as a different entity and distinct from stuttering, but from the present study it might coexists with stuttering. Also, the clutterers do have articulation and language difficulties as a co-existing disorder. All the clients reported had some familial incidence; hence it has some organic/genetic factor. The rate was relatively higher in all the four clients than in normals (DDK rate), thus the rate difficulties are vital to cluttering.

Conclusions

Since it is a retrospective study, certain details were not available from the case files. Review of literature shows that language difficulties mentioned in these clients, reading and writing problems exhibited by them and misarticulations are the typical features of cluttering and that are not seen in stutterers. Though, there is some variations in the symptom manifestation, the clinicians must be aware of these individual variations. Also, the three obligatory symptoms given by Weiss (1964) were essential for diagnosis. Hence one should be careful in diagnosing individuals with cluttering because it is often confused with stuttering. Although, clinicians must know that individuals exhibiting features of cluttering do not fit neatly into one diagnostic category. Therefore, the assessment process must be comprehensive, with thorough data collection being essential.

From the present study, clinicians and researchers will be able to identify clusters of components that accompany or contribute to cluttering. It should be possible to subgroups of cluttering, depending on the components or combinations of characteristics found in different individuals. The possible subgrouping would have direct bearing in designing appropriate treatment programs. Hence it would become a challenge, as a professional, to participate in the discovery of evaluation and treatment strategies for cluttering. It thus remains important to carry out in-depth investigation of clients who initially show sufficient symptoms to warrant a diagnosis of cluttering. Thus, the speech language pathologists should adopt the 'orphan' in the family of speech-language pathology and give it the care and attention it deserves.

References

- Daly, D.A. (1992). Helping the cluttering: Therapy considerations. In F. L. Myers & K.O. St. Louis (Eds.), *Cluttering: A Clinical perspective*. Kibworth, England: Far Communications, pp. 107-124, (reissued in 1996 by Singular, San Diego, CA).
- Daly, D.A. (1992-1993). Cluttering: Another fluency syndrome. *The clinical Connection*, 6, 47.
- Daly, D.A. (1996). *The source for stuttering and cluttering*. East Moline, IL: Linguisystem, Inc.
- Daly, D A. & Burnett, M.L. (1999). Cluttering: Traditional views and new perspectives. In R.F. Curlee (Ed.), *Stuttering and related disorders of fluency*, pp. 222-254. New York: Thieme Medical Publishers.
- Froeschels, E. (1946). Cluttering. *Journal of Speech Disorders*, 11, 31-36.
- Luchsinger, R. & Arnold, G.E. (1965). *Voice-Speech-language, Clinical Communicology: Its Physiology and Pathology*. Belmont, CA: Wadsworth Publishing Company.
- Orton. (1973). *Reading, Writing, Speech Problems in children*. Norton: New York.
- Preus, A. (1992). Cluttering and stuttering: Related, different, or antagonistic disorders? In F.L. Myers and K.O. St. Louis (Eds.), *Cluttering: A Clinical Perspective*. Kibworth, England: Far Communications, pp. 55-77, (reissued in 1996 by Singular, San Diego, CA).

- Roman-Goldzieher, K. (1963). Studies in tachyphemia: VI. Diagnosis of Developmental language disorders. *Logos*, 4, 3-9.
- Sheperd, G. (1960). Studies in tachyphemia: II. Phonetic descriptions of cluttered speech. *Logos*, 3, 73-81.
- Spandino, E.J. (1941). *Writing and laterality characteristics of stuttering children*. Teachers collage, New York.
- St. Louis, K.O. (1992). On defining cluttering. In F.L. Myers & K. O. St. Louis (Eds.), *Cluttering: A Clinical perspective*. Kibworth, Great Britain: Far Communications, pp. 37-53, (reissued in 1996 by Singular, San Diego, CA).
- St. Louis, K. O., & Hinzman, A. R. (1986). Studies of cluttering: Perceptions of cluttering by speech-language pathologists and educators. *Journal of Fluency Disorders*, 11, 131-149.
- St. Louis, K.O. & Rustin, L. (1989). Professional awareness of cluttering. In F.L. Myers & K.O. St. Louis (Eds.), *Cluttering: A Clinical perspective*. Kibworth, Great Britain: Far Communications, pp. 23-35, (reissued in 1996 by Singular, San Diego, CA).
- Van Riper, C. (1970). Stuttering and cluttering: The differential diagnosis. *Folia Phoniartica (basel)*, 22, 347-353.
- Weiss, D.A. (1964) *Cluttering*. Englewood Cliffs, NJ: Prentice-Hall.
- Weiss, D.A. (1968) Cluttering: Central Language Imbalance. *Pediatric Clinics of North America*, 15, 705-720.
- Williams, D.F & Wener, D.L. (1996). Cluttering and stuttering exhibited in a young professional. *Journal of Fluency disorders*. 21, 261-269.

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