

# 27 - Formal thought disorders (FTD)

## Formal thought disorders (FTD):

© SPMM Course thought disorder'. But note that the term FTD increasingly includes both form and stream errors (not content errors) and scales that measure thought disorder do not differentiate stream from form anymore. Formal thought disorders (FTD): Note that various authors have used various terms to describe the FTD. Hence there is a significant overlap among the various terms - the following terms are not mutually exclusive of each other. Various terms denoting FTD: The term paralogia refers to positive FTD - i.e. symptoms of thought disorder that are identified as the presence/appearance of an abnormal element in thought processes (e.g. tangentiality). The term alogia is sometimes used to refer to negative FTD - symptoms considered due to the absence/disappearance of a normal element of thought/speech (e.g. poverty of speech content). Kraepelin used the term akataphasia for FTDs to convey the essence that speech disorders are a result of thought disorder. Blueler's term 'loosening of associations' is often considered to indicate the presence of FTD. Classifications of FTD: Cameron proposed 4 characteristic formal thought disorders - Metonymy: imprecise approximate expressions used as substitute words. For example paperskate for a pen. Asyndesis: This refers to the lack of genuine causal links in speech. For example, 'I got up at eight this morning as well as few birds of different colours on the painting, shrinking all the time to drop few coins. On the floor. All the time.' Overinclusion: In overinclusive thinking ideas that are only remotely related to the concept under consideration become incorporated in the patient's thinking; Conceptual boundaries are lost. This is used to explain the thought disorders in schizophrenia and is different from the mechanism in the flight of ideas. Sorting tests can be used to test overinclusion. It occurs in nearly 50% of schizophrenia patients, especially when acutely ill. Interpenetration: Irrelevant thoughts penetrate ongoing stream of thoughts. Carl (not Kurt) Schneider proposed a different set of 5 elements of FTD Substitution: one thought - often inappropriate, fills the gap between other appropriate, more consistent thoughts. Omission: A chunk of thought goes missing from stream of conversation, patient being unaware - best analysed when written, Fusion: various thoughts fuse together, leading to loss of goal direction. Drivelling: disordered intermixture of constituent parts of one complex thought

© SPMM Course Derailment (aka entgleisen); In derailment normally flowing track of thoughts suddenly change. The determining tendency is preserved but is misdirected. Schneider also described desultory thinking, sometimes considered along with driveling. In desultory thinking, speech is grammatically correct but sudden ideas force their way in from time to time. Each one of these ideas is a simple thought that, if used at the right time would be quite appropriate. Kleist proposed that semantic disturbance of language was more common than grammatical or syntactical errors in schizophrenia. The impact of semantic problems in speech could result in

1. Verbal paraphasia – where meaningful sentences produced in spite of the loss of appropriate words e.g. ‘food filling muscular carton’ for the stomach (a metonym).
2. In literal paraphasia, no one can make out the meaning of sentence spoken except the patient. Grammatical or syntactical disturbances include
3. Agrammatism refers to the loss of parts of speech – e.g. propositions leading to disordered word sequences.
4. In paragrammatism, individual phrases are well constructed and meaningful but they do not fit in with the goal of thought. The content delivered appears mixed up, though individually understandable.

Various features of FTD: Neologism refers to making up a totally new word that is not in dictionary or using a known word with a completely different meaning e.g. ‘Inkur’ for pen (new) or ‘roast’ for pen (different). Stock words are either newly synthesized or already known words but used in an idiosyncratic way repeatedly, often with many meanings and in different contexts, sometimes dominating any discourse. e.g. “The riposte (? dog) runs into my way, always active – when my riposte (?friend) is around, it’s OK, full of riposte (?energy), as everyone likes him, when you throw him some riposte (?food) he stops all that work... comes running.” Thought block is a negative FTD – involves sudden arrest in the flow of thoughts; sometimes resembles an absence seizure though there is no amnesia for the idea that was discussed and no motor accompaniments typical of absences. Patients can elaborate on thought blocking with a delusional content of thought withdrawal. Stilted speech: This refers to pompous, formal speech often in an inappropriate context. Impaired lexical retrieval may underlie stilted speech in schizophrenia. A patient said ‘Pliant rectitude is a trait more appropriate for successful living than hot-headedness, which is either stubborn or crusady. (McKenna, 1994). This patient would not have said ‘pliant rectitude’ or ‘crusady’ unless more common words for the same concepts were not accessible.

© SPMM Course Flight of ideas is characteristic of mania. Here thoughts follow each other so rapidly, that there is no general direction for thinking. Hence, chance associations take place to connect succeeding thoughts. These chance associations may arise from distractions in the environment or distractions in the elements of one’s own or someone else’s speech. An external environment driven association could be the following one - when talking about his breakfast, hears rustling newspaper and jumps to the topic of Iraq war or cost of petrol or elections, etc. Being cued by verbal associations (i.e. sound of words spoken) can be of three types:

1. Clang associations where thoughts are associated by the initial syllabic structure of words rather than their meaning. e.g., clover, cloud, clap, clan, etc. Others include
2. Punning: Here words get associated as one word has dual meaning e.g. fast – ‘to starve’ or ‘speed up’ and

3. Rhyming: Here words get associated as they have similar sounds e.g. cat, rat, bat, etc. In schizophrenic FTD, clang occurs in more often with first syllables as opposed to clangs in poetry, humour and manic speech where they occur more at the end syllables.
- Vorbeireden is talking past the point leading to approximate but not accurate answers to questions asked in an interview. It is described as a type of formal thought disorder, different from the flight of ideas. Though often described along with the Ganser syndrome, it is not exclusive to Ganser's syndrome. It is also seen in acute schizophrenia and hebephrenic schizophrenia. Vorbeireden ('talking past the point') is often used interchangeably with vorbeigehen ('going past the point'), although the latter was originally defined as part of the 'Ganser syndrome', whereby some criminals would give incorrect answers ('approximate answers') to simple questions that none the less suggested that the correct answer was known (e.g. saying dogs have five legs).
- Circumstantiality: In circumstantiality, thinking proceeds slowly, with many unnecessary details and digressions, before returning to the point. It is seen in some patients with temporal lobe epilepsy or alcohol-induced persisting dementia, learning difficulty and in obsessional personalities. It is a formal thought disorder where figure-ground differentiation apparently fails but not due to affective changes such as mania.
- Tangentiality: Circumstantiality must be differentiated from tangentiality - the patient never reaches the point in tangentiality, whereas they do reach the point in circumstantiality. Imagine a spiral that eventually touches its centre, while tangent scrapes through the edge and never reaches the centre. Circumstantiality may be related to loosened associations and usually develops within the setting of a delusional mood in schizophrenia; it may be due to an impairment of a central filtering process that normally inhibits external sensations and internal thoughts that are irrelevant to a given focus of attention.
- Concrete thinking: It is seen as literalness of expression and understanding, with failed abstraction. It is recognisable clinically but difficult to measure using psychometry. Goldstein studied this loss of abstract

© SPMM Course thinking which can be tested using proverbs and similarities test. It seems concrete thinking is evident in speech-disordered (FTD) schizophrenia patients, but not the non-FTD group (Allen 1984). It is also seen in fronto temporal dementia. Testing the linguistics of schizophrenia:

1. Word association tests are abnormal in schizophrenia - despite the context of usage, patients preferred dominant meaning of a word e.g. court means 'law-room' not tennis court, in spite of the context of discussion being sports.
2. In cloze procedure parts of recorded speech are deleted to see if meaning could be still predicted; predictability was reduced in schizophrenia. In reverse cloze procedure patients are asked to predict the missing elements of someone else's speech- again schizophrenia group performed worse in prediction.
3. Type -token ratio refers to the ratio between number of different words used during a discourse and total number of spoken words. Impoverished vocabulary was noted with low type-token ratio among schizophrenia patients.
4. Cohesion analysis (analysing links between sentences and words in a discourse) shows that schizophrenia patients use less referential ties (using pronouns without mentioning a subject in first place) and more lexical ties (connected words). Also, patients make more errors than controls when asked to construct complex sentences from simple phrases

(Hunt test). Measuring FTD: Thought Language & Communication scale (TLC: Andreasen) and Thought and Language Index (TLI: Liddle) are commonly used scales. The latter uses projective stimuli from Thematic Apperception Test to elicit thought disturbances. Of various thought disorders classified by Andreasen, clanging and flight are more common in mania while derailment (loosening) and thought blocking and to some extent tangentiality, poverty of content of speech are seen often in schizophrenia - other items were largely non-specific. FTD is suggestive but not pathognomonic of schizophrenia; it is also seen in organic syndromes such as epilepsy. What causes Schizophrenic Speech Disturbance? There are various explanations from different scientific disciplines.

5. Von Domarus proposed that FTD is a result of loss of deductive reasoning - illogical thinking. (Von Domarus law - Kiwi cannot fly (premise 1), Kiwi is a bird (premise 2) - so birds cannot fly (conclusion); note that the inferences are based on insufficient premises.)
6. Schizophrenic thought disorder could be measured using Kelly's personal construct theory - based repertory grids (Bannister). The patient is asked to score different elements (can be relatives or friends) under different constructs (qualities of them). Normally one would expect congruence between different constructs scored for an element, e.g. Mum is helpful, and she is also kind and supportive. But in schizophrenia the predictability of an element's quality using prior constructs is affected. (Mum is helpful but scores low on kindness and support offered). This is called serial invalidation and is more pronounced for peoples than objects, showing that thought disorder affects interpersonal realm more than other spheres. The scores can be used to draw a semantic

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