



## UNDERSTANDING STUDENTS WITH CONVERSION REACTION SYNDROME: A PROPOSED CHC-MHC-FWC FRAMEWORK

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### **Abstract:**

Conversion Reaction Syndrome (CRS) is used to denote individuals who exhibits psychological stress and then converts by reacting it into physical ways. Symptoms in CRS can vary in severity and may affect movement (weakness or paralysis, loss of balance, and seizures) or senses (vision problems, hearing problems, speech problems that results in slurred speech). Psychological stress in students with learning difficulties may come from parental and teachers' expectations, peer pressure, poor academic performance, and the inability to cope with stress. With the passage of time, these stress will be induced and gradually be converted into observable behaviors, usually exhibited with the purpose of avoidance. Currently, there is no operational definition of CRS in the field of special education. In this conceptual paper, the author provides an introduction of CRS, proposes a CHC-MHC-FWC framework to understand the syndrome better, and how it affects students' learning.

**Keywords:** conversion reaction syndrome, Cattell-Horn-Carroll theory, model of hierarchical complexity, feelings wheel chart

### **1. Introduction**

Vivian started her kindergarten at 4 years old full of curiosity and excitement to explore the learning world around her. Every day, she walked along the school's corridor, laughing and talking anything that she came across with her mother. There was so much eagerness in her voice about being at school. But by 6 years of age, what seemed joyful for the rest of her classmates became a struggle for Vivian. She could neither recognise the alphabet order or letter sounds and names. Rhyming words did not come easy for her. Her parents noticed that learning to read was difficult for their daughter.

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Vivian tried to memorise things and avoid reading in class. Eventually, she became socially withdrawn in her class.

John, who was 10 years-old, studied in a mainstream Primary 4 school. Like Vivian, he hardly knows any letter-sound relations and made little progress with reading. In addition, he had been failing his Mathematics since Primary 1. His mother had engaged several tutors to help him cope with his academic studies. John had even gone for counselling sessions for his academic learning in school. John had few friends as many of them jeered at him as he was not academically inclined. He was emotionally and physically sensitive and he displayed intense feelings with outbursts of anger and frustrations, both at home and in school. Teachers had alerted his parents on his academic, social and emotional needs.

The two children mentioned above face challenges in their learning. Their pride is at risk most of the time. Their self-esteem also seems to be eroding day by day. Although they tried to cope, their path and lives are often filled with challenges. Firstly, given the demands of academic education, it will always remain to be a challenge for them. Secondly, these two children feel that they have little or no control of their outcome in things they do. Both body and brain chemistry are triggered now and then and it causes them to be over-reactive. Whenever this happens, it gets them out of control and balance. They cope either by being withdrawn or mentally shut down. Most of the time, the stress in them often wins over them and consequently, they are incapacitated by the perceived threat. Both children may have learning disabilities in school. But their excessive fear and/or anxiety caused by frustration in coping well with academic studies often lead to low self-esteem and peer rejection, which may cause them to be socially isolated. Such fear and/or anxiety, when not being addressed, will be psychologically induced in the child as time goes by. The fear may then be converted to children's reaction with feigning sickness, repeatedly saying that they cannot do the work (e.g., finding it very tough to read a text in front of the class), and feeling cold sweat when they knew that there is a spelling test the next day. Coupled with their learning difficulties, the converted behaviour caused by the sudden and extreme psychological stress due to their inability to perform academically and/or socially, will give rise to the children reacting, or externalising in a manner that may seem to be inappropriate. For example, a child with extreme psychological stress due to his/her inability to perform well academically may refuse to do anything when school work is given to him/her. This term, which is also known as *Conversion Reaction Syndrome*, will be briefly described below.

## 2. Conversion Reaction Syndrome

In the literature of psychiatry, *Conversion Reaction Syndrome* (CRS) is being manifested as a form of psychological defence (coping mechanism) and is known as Hysteria Conversion. Sometimes also known as *la belle indifference*, it is defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM) 4<sup>th</sup> edition-Revised as a

conversion disorder (previously referred to as hysteria) as ‘a relative lack of concern about the nature or implications of the symptoms’ (American Psychiatric Association, 2000). In the DSM-5th edition, conversion disorder is also known as Functional Neurological Symptom Disorder, in which the motor or sensory functions are affected where individuals experience neurological symptoms such as limb weakness, tremors, muscle spasm, loss of vision or double vision, slurred or stuttering speech, and others. These symptoms result in significant impairments in the different areas of one's functioning ability (e.g. academic, daily living, etc.) (American Psychiatric Association, 2013).

According to the International Statistical Classification of Diseases and Related Health Problems-10<sup>th</sup> Revision (ICD-10), a medical classification list by the World Health Organization (WHO), CRS is known as Dissociative & Conversion Disorders. Under code F44, Dissociative & Conversion Disorders is defined as a disorder whose predominant feature is a loss or alteration in physical functioning that suggests a physical disorder but that is actually a direct expression of a psychological conflict or need (WHO, 1992). Such physical disorders are manifested into behaviours which exhibit excessive or uncontrollable emotion, such as fear or panic; mental disorder characterized by emotional excitability and sometimes by amnesia or a physical deficit, such as paralysis, or a sensory deficit, without an organic cause.

CRS has also been studied in the field of literacy disorders. According to Manzo and Manzo (1993), “CRS is said to be a subconscious process by which deep emotional conflicts or fears which otherwise would give rise to considerable anxiety are put aside by converting them into an external expression of some type” (p. 410). This term, CRS, originates from a type of somatic disorder known as the conversion reaction.

CRS is thought to be caused by an “internal” conflict that creates extreme psychological stress. Conversion symptoms represent a partial solution to a conflict. A soldier who subconsciously wishes to avoid firing a gun or who may be frightened but ashamed or afraid of showing it, may develop a paralyzed hand. A person who wishes to prevent desertion by a spouse may suddenly exhibit paralysis. In each case the cause is psychological rather than physical.

According to Manzo and Manzo (1993), there are two types of CRS: (1) Somatic, and (2) Physiologic. Both types are alternate expression of the deeper internal conflict. The term “Endogain” is used to denote that students (especially pre-teens) realize that he or she can gain significant attention by not being able to read. The term is defined as a net gain arising from an apparent liability (i.e., the gain in attention is more important than the reading loss).

The psychosocial profile of students with CRS and their families yielded a high frequency of recent familial stress, family communication problems, unresolved grief reactions and school-related and social disturbances (Zeharia, Mukamel, Carel, Weitz, Danziger, & Mimouni, 1999, p. 162). As such, the strong emphasis on academic excellence from schools, parents, and peers places tremendous stress on students. Ultimately, this placed a heavy burden for school-age children as they feel they must

live up to the expectations of parents, teachers, and peers, which could induce a high level of psychological stress in them.

There has been no conclusive definition of CRS from the past literature review in the field of special education. In view of this, the author uses the CHC, MHC and FWC so as to understand CRS better.

### 3. Cattell-Horn-Carroll

The Cattell-Horn-Carroll (CHC) model of intelligence proposes that intelligence comprises of multiple cognitive abilities. Raymond Cattell, John Horn, and John Carroll came together with their contributions and form the CHC theory. The theory which consist of a collection of intelligence uses the concept of “g” as a general and measurable intelligence factor.

The CHC Framework essentially focuses on the cognitive and academic abilities of a person and generally can be classified under 3 strata as shown in the following diagram.

Stratum 3: General Intelligence (*g* factor)

Stratum 2: Broad Abilities: Examples are fluid intelligence (*Gf*), crystallized intelligence (*Gc*), working memory (*Gwm*), etc. (16 types)

Stratum 1: Narrow Abilities: Examples are induction (*Gf-I*), communication ability (*Gc-CM*), meaningful memory (*Glr-MM*) etc (108 types)

Cattell (1963) defined fluid intelligence as “the ability to perceive relationships independent of previous specific practice or instruction concerning those relationships.” Fluid intelligence deals with the ability to think, reason out things and problem. Crystallized intelligence, on the other hand, deals with knowledge that comes from previous learning experiences and is based on facts.

The CHC theory focuses on the child’s cognitive and academic abilities. This area tells us about the child’s different abilities that work together from childhood to adolescence to produce his overall intellectual capacity. Regardless of the different levels of cognitive abilities, there are equal chances that a child will still be affected by CRS.

### 4. Model of Hierarchical Complexity

The Model of Hierarchical Complexity (MHC) is a framework that is used to explore and organize the patterns of human development (Commons, 2007). It is a learning theory that is referenced to when working with behavioral development in human beings. In the MHC framework, a certain ranking had been given according to the different levels of human developmental complexity of a certain behavior. Specifically, tasks are broken down into very fine steps and matched accordingly to the child’s behavior(s) in reaction to that level of developmental complexity. An adapted stage-based model of hierarchical complexity is appended in Table 1 below.

**Table 1:** Stages described in the Model of Hierarchical Complexity (adapted)

Order or Stage	What they do
Stage 0: Calculatory	There is nothing much the child can do
Stage 1: Sensory or motor	Child can see objects and move limbs, lips, eyes, head.
Stage 2: Circular sensor-motor	Child can move their limbs and parts of their face and view things. They begin to react to conditioned stimuli and form responses with discrimination.
Stage 3: Sensory-motor	Child will reach for, touch, or grab things. In terms of speech, child will babble and is beginning to grasp phonemes.
Stage 4: Nominal	Child will find relations in the concepts and uses names

It is beyond the scope of this paper to mention in details on the entire MHC framework. It is briefly mentioned in this paper so as to support the explanation of CRS in respect of understanding the child's behavior to the different stimuli that he/she is being exposed to.

## 5. Feelings Wheel Chart

Another useful component that helps to explain CRS is Feeling Wheel Chart (FWC). FWC, developed by Dr Gloria Willcox (1982), helps one to identify the root of one's feeling which comprises of affect/feelings, emotions and moods. The wheel consists of three concentric rings with inner most being the mood, middle ring the emotions and affect/feelings forming the outermost layer of the wheel.

According to George (1996), affect covers a broad range of feelings that human beings experience. In it, it includes both emotions and moods. Emotions are rather intense feelings that are often directed at someone or something (Frijda, 1993). It is accompanied with clear facial expressions of anger or happiness. Moods, on the other hand, are of a lesser intensity than emotions and generally last longer (hours or days) than emotions. Unlike emotion which is expressive, moods is displayed in a form of a person thinking or brooding over the subject matter (Weiss & Cropanzano, 1996). In many instances, motions and moods can influence each other and stay closely connected. For example, receiving a gift that one has wished for a long time may not only result the person showing emotions of joy but also being happy for a few days.

Knowing the presence of affect, emotions and moods as inseparable components will help us to understand how children manage their feelings under the different situations.

## 6. Combining CHC, MHC and FWC to explain CRS

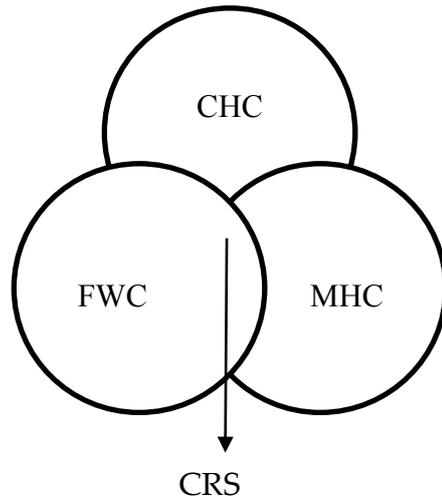
CRS is thought to be caused by an “internal” conflict that creates extreme psychological stress and the conversion symptoms represent a partial solution to a conflict. Episodes of CRS are nearly always triggered by a stressful event, an emotional conflict or another mental health disorder, such as depression. Though there is no exact cause of CRS, it is believed the muscles and senses of the brain are involved where sudden symptoms (either physical or psychological) are manifested after the occurrence of a stressful event (Manzo & Manzo, 1993). The following examples demonstrate how CRS can be triggered under the different circumstances.

Example 1: CRS can be caused by a child with a learning disability (e.g., reading difficulty) as he/she goes through stressful situations. For example, under examination conditions or asked to read a passage in front of his class, it puts the child in a state of anxiety. Due to his Dyslexic condition, no matter how hard the child tries (MHC component constant), he will neither be able to read nor understand. Even with good effort (High Fluid Intelligence, (CHC, Gf)), his condition (Low General Intelligence, (CHC-Gc)) hampers him from going further. As he struggles to read, the chemicals in his brain start to trigger his past negative learning experiences (Hinton, Miyamoto & Della-Chiesa, 2008). Depending on the child’s level of severity, the constant frustrations and failures both in school and the environment can provoke great anxiety (Maslow, 2013). The prolonged negative emotions (FWC component) show fear, anxiety, and grief. The child with CRS will gradually affect learning attitude and aptitude, crippling his desire to learn, thus resulting in a situation called La Belle Indifference.

Example 2: A student who has no learning issues (CHC component constant) but with anger management may show an outburst of irritability or rage so to get attention from the surrounding. In this case, the MHC component is demonstrated very clearly by his hostility, impulsivity, and recurrent aggressive outbursts. The FWC component will most probably show aggressive and frustrated emotions and for the next couple of hours or days, he will be in the angry mood. The CRS triggered in this case is more of emotion and behaviour induced difficulty rather than merely cognition.

Example 3: CRS can also be triggered when a child shows negative thinking or behaving in a way that reflects a pessimistic state of mind. For instance, a child is given a task that he is cognitively able to perform (High General Intelligence, (CHC-Gc)). However, due to some unknown reasons, the child is unwilling to do and finds all excuses to avoid doing the task (Low Fluid Intelligence, (CHC, Gf)). The child exhibits task avoidance behavioral symptoms (MHC component constant) by showing emotions like being critical on the task or hostile towards the people and persistently stay in an unresponsive and skeptical mood through the day of the activity. The CRS triggered in this case is more of attitudinal behavior which is more of his incorrect use of his cognition and thus affecting his willingness to perform.

The proposed CHC-MHC-FWC to explain CRS is shown in Figure 1 below.



**Figure 1:** Proposed framework of CHC-MHC-FWC to explain CRS

## 7. Conclusion

Treatment for CRS typically consists of either psychotherapy or physical therapy. The focus of psychotherapy is to help the child understand the emotional conflict behind his physical symptoms, and to resolve this underlying psychological distress. Students with CRS are often viewed as lazy and uncooperative in class. Educators need to have a better understanding of CRS so that students with this syndrome will not be labeled or ostracized. It is hoped that this paper can provide an overview of CRS so that educators can better support students with this syndrome socially and emotionally.

## Acknowledgement

The author wishes to thank Mr. Arnold Chua Chee Keong, a certified educational therapist for his invaluable advice.

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