

Science, Fads, and Applied Behavior Analysis: A Syndicated Column by:

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Title: The Treatment of Communication Disorders: A Review of Soma®RPM (Rapid
Prompt Method)

One of the primary characteristics of Pervasive Developmental Disorders (PDD) is communication impairment (APA, 2000). These can take many forms, such as a complete lack of or delay in the developmental of spoken language, an inability to use any functional communication, an inability to initiate or sustain reciprocal conversation, and odd speech mannerisms (e.g., scripting).

To treat communication disorders, there exist a large number of therapeutic strategies. Searching “therapies to improve communication in autism” in a Google search yields 6,890,000 results. Included in this vast list are Auditory Integration Training, Speech Therapy, Picture Exchange Communication System, and Music Therapy. Within this list one finds the Soma®RPM (Rapid Prompt Method), developed by Soma Mukhopadhyay (HALO, 2012). The purpose of this article is to review RPM in terms of its conceptual underpinnings, methodology, and – most importantly – the extent to which there exists an empirical research data base showing that this particular method is effective in improving specific aspects of communication. It is important to review RPM for several reasons: (1) upon

examination, its methodology appears to align closely with that of Facilitated Communication (FC), which has been thoroughly discredited as effective and is now considered a fad and ineffective treatment (e.g., Wheeler, 1993); (2) Mukhopadhyay claims that RPM “...is the most direct and unlimited path to learning and communicating” (HALO, 2012) and “always works” for any child with whom it is used (Mukhopadhyay, 2011, personal communication); such a claim of universal effectiveness is alarming and brings to mind the axiom of “extraordinary claims require extraordinary evidence” (Carl Sagan), and (3) it is gaining a high profile of public attention (itself having 1,180,000 hits on Google Search), as evidenced by Mukhopadhyay recently presenting at the prestigious Massachusetts Institute of Technology Simons Initiative on Autism and The Brain (http://autism.mit.edu/past_colloquia).

Mukhopadhyay is the Executive Director of Education of the Helping Autism through Learning and Outreach (HALO), a clinic in Austin Texas, through which she provides 1:1 instruction for students with ASD and other developmental disabilities. The mission of HALO is to use RPM for “...improving academic success and communication for persons with autism and similar disorders” (HALO, 2012). Initially, Mukhopadhyay developed the Rapid Prompt Method around 1991 to help her son, Tito, who was diagnosed with autism at age 3 years. She claims that RPM was responsible for his incredible progress, and subsequently, she began offering it to others.

RPM is a method of promoting expressive language and overall academic success and communication abilities. According to Mukhopadhyay, explaining RPM

requires an understanding of how the brain works, in that RPM is based on the latest brain research, unlike other treatment protocols. Mukhopadhyay believes that persons with autism have altered sensory systems (2008), which contributes to communication dysfunction. Generally speaking, the process of communicating is made up of a number of complex steps. For example, a listener must “take in” information, mentally prepare a response to it, and then utilize the muscular system to physical communicate that response. This elaborate process occurs almost effortlessly and unconsciously for most people, but for children with ASD and other disabilities, this process often breaks down and results in communication disorders. Mukhopadhyay believes that recent research on how the brain functions is able to translate into improved clinical methodologies. The conceptual basis for RPM is a focus on activating “...the reasoning part of the brain so that the student becomes distracted by and engaged in learning” (HALO, 2012). Student progress is enhanced “...through the open learning channel...” by eliciting “... the best out of the child to enable maximum output in that given time. As a student’s cognitive and motor proficiency increases, the sophistication of a student’s response also improves” (HALO, 2012).

Mukhopadhyay (2008) describes the Piagetian system of the four stages of cognitive development and how they relate to persons with autism. Progress through the sensory motor, preoperational thought, concrete operational thought, and formal operational thought stages can be uneven for individuals with autism, but the conceptual paradigm holds true for these learners.

According to Mukhopadhyay, RPM involves the use of prompts across all modalities – auditory, visual, and tactile. Typically, only the instructor and student (usually working in a 1:1 dyad) use paper and pencil during the lessons. Like FC, the RPM teacher facilitates the student’s hand, forearm, or arm, as he or she types, points, or responds in whatever form selected for that student.

One of the rules of RPM is for the teacher to match the pace of teaching to the student’s speed of stereotypic behaviors. So, a teacher might continue speaking, teaching, and asking for responses from the student, at a quick pace if the child is engaging in frequent stereotypy. According to Mukhopadhyay, this results in the student staying focused on the lesson. The type of stereotypy is important, in that it connotes the “learning channel” that might be best used for maximum learning. For example, for a child who engages in ritualistic behavior for apparent auditory feedback, Mukhopadhyay would use auditory stimulation to promote the presentation and learning of lessons.

An interesting ploy is the use of tearing paper during the lesson. Mukhopadhyay explains that by doing so, it provides a multisensory prompt (auditory, visual, and kinesthetic) to assist the student to remain focused on the learning activity. The teacher is asked to sit on the right side of the student to, again, stimulate left-brain auditory learning.

Another teaching rule is to change the subject matter of the lesson to stimulate the side of the brain one wishes to stimulate, particularly the left side that presumably controls communication. Typically, a lesson begins with a few questions or sentences related to a single topic or focus. Possible answers are initially written

on paper. The teacher taps the choices of answers while reading them out loud, and then encourages the student to select one. As progress ensues, Mukhopadhyay increases the response requirement of the student, from picking up pieces of paper, to pointing to the answers, then to pointing to letters to spell out the answers.

Mukhopadhyay claims that she has worked with over 600 clients, ranging in ages from 2-50 years. These included persons who are nonverbal, verbal, echolalia, “low” or “high” functioning. She claims that RPM is effective for most any student (HALO, 2012), and “always works” (MIT, 2012).

Given the increasing demand for evidenced-based practices in autism and education in general (No Child Left Behind, 2012), it is important to ask what evidence exists that RPM causes any improvement in communication, academics, or social skills? As noted earlier, Mukhopadhyay claims that RPM has been effective for most students (HALO, 2012), and admitted, “It always works” (MIT, 2012). One level of evidence is personal reports of progress from people who have used RPM. At the HALO website, there are several testimonials from parents that support the improvement of their children after beginning RPM.

A more stringent (and more valid) level of evidence is empirical investigations using commonly accepted research methodology. To search for studies that may have involved a more scientifically-based assessment of RPM effectiveness, online searches of professional databases were conducted. Three major databases were used, EBSCO, Lexis-Nexis, and PubMed Central. Within these were searched Academic Search Premier, CINAHL Plus with full Text, eBook Collection, Education Full Text, Education Research Complete, ERIC, Health Source,

Health Sources: Nursing/Academic Edition, MasterFILE Premier, MEDLINE, MLA International Bibliography, Newspaper Source, Primary Search, Professional Development Collection, PsycARTICLES, and SocINDEX with Full Text. The following key terms were used to conduct the search: SOMA, RAPID PROMPTING METHOD, RAPID PROMPTING, SOMA RAPID PROMPTING METHOD.

A total of 14 articles were found. Ten were book reviews of autism that included Mukhopadhyay and the RPM. The remaining four involved newspaper or popular magazines (e.g., Ladies Home Journal) that provided human-interest stories about this treatment approach towards autism, Mukhopadhyay, and her son. No article was found that described an attempt to systematically test the effectiveness of RPM under controlled conditions commonly used in a scientific approach. There is no known research to support many of the strategies incorporated into her method, including the tearing of paper (to maintain focus) and sitting on the right side of the student (to stimulate left-brain auditory learning).

Another consideration which impacts the degree to which consumers could be confident of RPM being effective relates to the theoretical underpinnings of this approach. Mukhopadhyay asserts that persons with autism have altered sensory systems. However, currently there is no consensus on whether or not that is true, and the evidence that exists suggests that it is not (e.g., Smith, Mruzek, & Monzingo, 2005). Mukhopadhyay claims that RPM is unique among therapies due to its foundation on current brain research. However, little is published on exactly the brain research that is applicable to her treatment, and notably absent are studies linking improvements in brain status to RPM, or exactly how her methods

compensate for alleged brain dysfunction. Lastly, Mukhopadhyay holds degrees in Education and Chemistry. Although her academic background is noteworthy, she has not apparently been formally trained in neuroscience, neurology, or other areas that would provide expert preparation in translating brain research to autism treatment.

Conclusions and Recommendations

RPM is a popular method used to treat communication disorders in individuals with ASD and similar disabilities. Unfortunately, as of this date, there exist no research studies conducted to ascertain whether or not RPM is responsible for any improvement of any autistic symptomology. Although testimonies from parents and consumers of RPM support the effectiveness of this approach, the standard of acceptable evidence remains that obtained from a scientific analysis. This scientific approach involves commonly accepted criteria for acceptable research, such as the use of research designs, operational definitions of key terms, clear descriptions of the treatment strategies and approaches, reliability and validity of measurement, and replications of effect.

At this point in time Soma®RPM must be considered an unproven treatment. It appears to fall into the category of pseudo scientific treatments, which is a class of unproven therapies that appear to be based on science, but yet fail to demonstrate scientifically supported positive results. Although absence of evidence is not in and of itself evidence of absence of effectiveness, clinicians and treatment providers should not at this time recommend this treatment approach for use. Parents and caregivers should examine the therapies that are evidenced-based that could

positively enhance communication abilities, such as speech therapy and PECS. At this point in time, RPM should only be used in research contexts, in which experimenters test the effectiveness of RPM under controlled conditions. Perhaps such studies will show it to be effective. Until then, interventionists should not consider its use and instead adhere to using methods proven to be evidenced-based practices.

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