

Establishing Independent Spoon Feeding Through A Structured Motor-Based Shaping Protocol in A Child with Developmental Delay

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Abstract

Self-feeding is one of the developmental milestones that involves the stability of the wrist, grip strength, motor planning and control of the hands which are normally late in children with global developmental delay, which restrict their daily life independence. This paper looked at the success of a systematic motor-based shaping program aimed at considering the emergence of independent spoon holding, scooping, and controlled sipping in a five-year-old child. The poor wrist stabilization, weak grasp and limited movement control were the intervention areas, to which gradual training was applied, starting with assisted stabilization and gradually fading with the increase in skills. The measurement of the outcomes was conducted by way of single-case design with a baseline and intervention condition on the basis of percentages of independent trials, time of steady spoon holding and level of task performance. The findings depicted consistent changes in the stability of the spoon and scooping precision, as well as independent sipping, reduced the use of physical prompts, and enhanced consistency in the results between trials. The results point to the fact that motor-focused, individualized shaping interventions can be successful in developing independent self-feeding skills and improving the functional autonomy of young children with developmental delays.

Keywords: Self-feeding, Spoon feeding, Fine motor control, Developmental delay, Occupational therapy, Motor-based intervention

INTRODUCTION

Independent self-feeding is a complicated functional milestone that occurs as a result of the integrated performance of neural systems conducted by motor planning, posture control, sensory integration, as well as executive control. It also requires the ability to stabilize the wrist, hold a spoon, scoop food and transfer it safely to the mouth, and this requires very specific interactions between cortical motor areas and subcortical structures based on timing, force and feedback. These systems are still in early childhood stages and, therefore, children who have developmental delays are quite susceptible to the issues related to the attainment of feeding independence.

From a neuropsychological perspective, the use of a spoon is a goal-oriented motor activity that requires

involvement of the primary motor area to move the hands and wrists voluntarily, premotor motor areas to plan and sequence, and cerebellum to coordinate and correct mistakes. The somatosensory-cortex also receives both tactile and proprioceptive signals, which helps in checking the grip strength, utensil position and stability of movement. Failure to integrate these systems can result in children displaying lack of wrist stabilization, inconsistent patterns of grasping, tremulous movements, poor gradation of movements and lack of ability to maintain a held position during functional tasks. In that way, although the oral structures permit chewing and swallowing, the sensorimotor control may be impaired, and this limitation may influence the independent feeding to a high degree.

Neurodevelopmental models emphasize that distal control is based on proximal stability. Shoulder, forearm, and wrist musculature are stimulated in a stable fashion to assist dignified finger movements. In the event this proximal-distal coordination is inefficient, the control over actions taking place distally like controlled scooping and transport of spoons becomes infrequent. Proper intervention should thus build the back-up motor control as opposed to basing it only on accomplishment of a task.

The current strategy is based on neuroplasticity, or the ability of the brain to restructure with the help of repetitive meaningful experience. Organized, task-goal practice improves efficiency of synaptic functions in motor and sensory circuits, improving the process of motor plan generation, execution and negative feedback. The successful trials of stabilized grasping and graded spoon movements repeated (repeated, in turn) should assist in adaptive neural reorganization and more regular performance.

Motor-based and sensory-based classical conditioning principles are also included in the protocol. The desired motor patterns are repeatedly linked with foreseeable sensory events, such as tactile feedback with the utensil, proprioceptive feedback with constant positioning of stable joints, and visual feedback with success of scooping. Over time, as a result of this repetitive association the nervous system starts relating effective movement patterns with positive results, making it easier to respond more intuitively to an action. The progressive gradual fading also promotes internal rather than external assistance in terms of control. Even though self-feeding is neuropsychologically taxing, most of the interventions focus on oral-motor or sensory acceptance, yet pay minimal attention to the stabilization of the wrist, grip and steadiness of the movements as fundamental attributes of neural-motor basis. This gap has been filled in the study which investigates a systematic motor-based shaping protocol that is used to train independent spoon holding, scooping, and controlled sipping using graded assistance and reinforcement. The study by the researchers by connecting observable feeding habits such as motor learning and neural adaptation mechanisms to help children become functionally independent in their early childhood gives neuropsychologically informed intervention its significance.

PURPOSE OF THE STUDY

The hypothesis of the current research is that systematic, motor-based shaping intervention can be used to achieve independent spoon-feeding and scheduled sipping in a child with Global Developmental Delay. Although chewing and swallowing is intact, the independence of the participant is curtailed by severe weakness in the stability of the wrist, grip strength, and motor planning.

The study is aimed at fundamental neuropsychological elements of self-feeding, namely proprioceptive control and stable object permanence. The intervention is based on a most-to-least prompting hierarchy and task-specific practice by embedding the concepts of motor learning and neuroplasticity. This is a systematic protocol that breaks down feeding into quantifiable sub-skills that are: hand stabilization, guided scooping and incremental sipping of liquids. The evaluation of success is in the time of constant

retention of the spoon, the percentage of free trials, and qualitative control of movement. Finally, the paper aims to confirm a neuropsychologically-informed, clinically-mediated pathway of functional autonomy in children with an oral-motor capacity, but who lack the distal control needed to use utensils.

RESEARCH QUESTION

To what extent does a motor-based structured shaping protocol improve wrist stability, spoon holding, scooping efficiency and controlled spoon tipping in a child with developmental delay through enhancement of sensory-motor coordination and fine motor control during independent feeding?

OBJECTIVES OF THE STUDY

1. To determine the pre-intervention state of the child concerning the ability to hold a spoon steady, to scoop semi-solid food and to drink out of a spoon.
2. To improve wrist stabilization, grasp control, and steadiness of hand movement through graded motor-based training and gradual prompt fading.
3. In order to develop independent spoon and scooping by sequentially modifying the performance of the child towards an independent trial.
4. To condition controlled spoon sipping through the progressively more liquid volume and the physical support reduction on reaching a sufficient balance and transportation abilities.
5. To assess the intervention effectiveness through assessment of change in the proportion of independent trials, the duration of steady spoon holding and quality of feeding performance between sessions.

NEURO-MOTOR RELEVANCE

STEP 1: - SPOON HOLDING (Stability Phase)

Component	Neural & Motor Role
Wrist Stabilization	Cerebellum + premotor cortex regulate muscle tone and prevent tremor
Grip Control	Motor cortex + basal ganglia coordinate finger flexion
Proprioceptive Input	Parietal cortex gives awareness of hand position
Visual Monitoring	Occipital cortex tracks spoon orientation
Attention & Planning	Prefrontal cortex sustains task focus

STEP 2: - SUPPORTED SCOOPING (Guided Transport Phase)

Component	Neural & Motor Role
Hand-Eye Coordination	Occipital → Parietal → Motor pathway guides movement
Depth & Direction	Parietal cortex calculates spoon-bowl relationship
Error Correction	Cerebellum refines trajectory

Force Control	Motor cortex regulates pressure on spoon
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STEP 3: - INDEPENDENT SCOOPING (Motor Autonomy Phase)

Component	Neural & Motor Role
Motor Sequencing	Premotor cortex links scoop → lift
Bilateral Integration	Corpus callosum coordinates trunk + arm
Feedback Processing	Somatosensory cortex refines grip

STEP 4: - SPOON SIPPING (Precision & Control Phase)

Component	Neural & Motor Role
Wrist Rotation	Cerebellum + motor cortex control tipping
Lip-Hand Coordination	Brainstem + motor cortex synchronize
Liquid Control	Sensory cortex detects flow & adjusts angle
Executive Control	Prefrontal cortex regulates pacing

Literature Review

Task-based and neuromotor interventions have become popular in the rehabilitation of children with developmental coordination disorders (DCD) and other delays. Niemeijer, Smits-Engelsman, and Schoemaker (Niemeijer & Engelsman, 2007, 406-411) carried out a controlled trial of Neuromotor Task Training (NTT), and established the improvement on the Movement Assessment Battery for Children (MABC) and the Test of Gross Motor Development-2 (TGMD-2) in children with DCD after nine sessions, but did not find significant improvement in untreated peers. Notably, the best gains were observed in those tasks which were similar to those which were trained which highlights the concept of task-specificity in motor learning. This observation is similar to my systematic spoon-feeding plan, which focused on a stabilized wrist, the ability to hold the spoon, and the gradual process of scooping, which resulted in significant changes in the utensil handling abilities. Novak and Honan's (Novak & Honan, 2019, 258-273) systematic review also supports task specific and goal directed approach. Their synthesis of 129 studies on 22 childhood disabilities showed that "Goal Directed Training" and "Handwriting Task-Specific Practice" showed such good evidence to support their use that they are "green light" interventions for DCD. Neuromotor Task Training was categorically listed as a goal-directed intervention, supporting the clinical application of this training. The conclusion of this review is that the use of top-down, activity-focused therapies as opposed to impairment-based methods mitigate more favourable functional outcomes. My feeding intervention may be consistent with this evidence because my goals were functional independence in the areas of daily life (self-feeding) rather than isolated muscle strengthening. Sensory integration approaches have always been controversial. Watling and Hauer (Watling & Hauer, 2015, 1-12) reviewed Ayres Sensory Integration (ASI) and sensory-based interventions (SBIs) for autism spectrum

disorder (ASD) and found moderate evidence for ASI and mixed results for such interventions as weighted vests or brushing. Schaaf and Davies (Schaaf & Davies, 2010, 363-367) have stressed that sensory integration theory has evolved, with more definitions being made between Ayres Sensory Integration and other sensory based practices. They point out that adhering to ASI principles, being active, adaptive, and play-based contexts are considered to be the key factors of effectiveness. While my study does not use ASI per se, but rather advises sensory-motor principles (proprioceptive feedback, tactile cues, vestibular exercises) to help in motor planning, wrist stability. This hybridization is the more general trend of assimilating sensory and motor frames for improving functional results.

Lastly, my case study of Veda explains how neuroplasticity can be capitalized on by using structured, motor-type shaping regimens; calling on repetitive, purposeful practice. In addition, the integration of the reinforcement strategies is also compatible with behavioural principles noted in the review by Novak and Honan (Novak & Honan, 2019, 258-273), with coaching and parent-supported interventions rated as the most effective ones.

CASE STUDY

The presented case is of a 5-years old female, named Veda Shukla, who was brought to neuropsychological assessment because of developmental delays and behavioural issues. Her parents stated that she had tantrums, oppositional responses and had troubles following simple instructions which interrupted routines and early learning. There was low compliance observed by teachers in groups and less interaction with peers. She was alert and cooperative but unable to maintain attention and distracted easily by environmental stimuli clinically. There was a mild weakness to upper limbs, lack of fine muscular coordination and use of compensatory postures.

Her developmental history revealed the absence of speech and language development, little babbling, and poor understanding of the auditory input. Socially, she was well bound to be with the caretakers but was resistant to strangers and would tend to retreat or exhibit hostility. Sensory tests showed that the patient has hypersensitivity to the sensory input and proprioception with repetitive movements of the hands as a way of self-regulation. Although the chewing and swallowing could be intact, the motor planning and lack of stability of the wrist restricted her to feeding herself.

According to **DSM-5 criteria** Veda had provisional diagnoses of **Oppositional Defiant Disorder (ODD)**, **Specific Learning Disability**, and **Global Developmental Delay (GDD)** which indicates delays in motor, speech, and social development. These were the causes of her irritability, sensory defensiveness, and inability to be independent. This profile was supported by standardized tests: the **Vineland Social Maturity Scale** demonstrated less adaptation functioning; the **Developmental Screening Test** proved the presence of the global delay; the **Seguin Form Board Test** demonstrated the weaknesses in visual-motor coordination and problem solving. These, combined, offered a ground on which to intervene.

Combined tactile and vestibular exercises such as Velcro pick-and-drop exercises, textured mat walks, balance beam exercises, and a motor-based shaping secretariat was organized to feed the spoon. Veda started off reluctantly and wearily, but eventually got better. Fine motor accuracy, tolerance to touch, improved balance and minimized spillage during feeding were better assessed as a result of post-intervention. There was a change between the irritability and the persistence and curiosity, whereas the rapport-building and one-on-one guidance enhanced compliance and participation.

The case of Veda is a good example of how premature and personal interventions, combining sensory play and systematic motor training, are effective. Her progress indicates enhanced sensorimotor as well as

neuroplastic adaptations that detail the oneness in which guided tactile/vestibular activities are capable of improving independence, emotional stability, and academic/social adjustment preparedness.

METHODOLOGY

Research Design

The current research used a single-case observational experimental study in investigating the transformation of independent spoon-feeding skills after a structured, motor-based, shaping protocol. The deconstruction of spoon feeding was performed according to a task-analysis framework, which permitted the systematic observation of the performance in repeated trials. The design was chosen because it would be able to record minor variations in motor control, sensory control and task initiation in a naturalistic clinical setting.

Setting

The research was carried out within a clinical therapy environment which gave the child a controlled but familiar environment. The clinic environment guaranteed the consistency in the posture of seats, type of utensils, food texture, therapist position, and environmental distractions in all sessions.

Participant

Veda is a five-year-old female who has a diagnosis of Specific Learning Disorder, as well as the diagnosis of Oppositional Defiant Disorder. Clinically, she was found to have difficulty in fine motor coordination, stability of the wrist, motor planning, sensory modulation, and sustained attention and this interfered with her capacity to carry out an independent feeding activity. Despite Veda displaying intact swallowing and chewing functions, she experienced problems with self-feeding because of poor grip strength variability, spillage during transportation and sensitivity-based aversion to particular food textures. These traits prequalified her as a candidate of a motor feeding intervention.

Clinical/Therapeutic History

Veda was also on a plan of regular speech and language therapy at the time when the study was conducted. There was no regularity in the delivery of oromotor stimulation at the time of feeding trials, but it was only given when she was noticed to repeatedly insert her fingers into her mouth, which suggested that she was experiencing some sensory discomfort or itchiness of her mouth. This sense sensitivity on the oral cavity was observed to determine her preference of some food texture.

No changes were implemented to her current treatment plan specifically aimed at this research, and no specific feeding-related motor training was added out of the observation sessions.

Duration of the Study

The experiment was carried out during a time range of around 30 days which was split into two phases:

Phase I: Rapport Building (Week One)

This stage was geared towards building therapeutic relationships, introducing the child to the therapist, utensils, feeding arrangement and the workings of the clinic. This was not the phase in which structured scoring was stressed.

Phase II: Data Collection and Observation

The following days were characterized by a routine observation and the documentation of the spoon-feeding performance in a series of repetitions.

Materials

The feeding materials were standard i.e. a child friendly spoon, bowl, semi-solid food textures, and liquid that could be sipped using a spoon. Visual and tactile stimuli have been included according to the research design to aid in the issue of task initiation and motor performance.

Procedure

The process of feeding was divided into four consecutive parts:

1. Spoon Grip
2. Scooping
3. Transport of Spoon to Mouth
4. Sipping Liquid

Each session involved 10 trials in each component which were carried out on a daily basis. In the preliminary tests, Veda received verbal instructions in the form of single-line commands, but not short one or two-word prompts, which is conforming to the research design. Visual and tactile stimuli were used to accompany the verbal words with the aim of enhancing understanding, motor planning and execution.

The immediate fading was used as sessions went on. As the sessions progressed, at times Veda was given non-verbal support (positioning and gesture-based support) and tactile feedback which helped her in the initiation of the tasks. She was found to teach and initiate the feeding activity on her own at some points after non-verbal encouragement. This level of prompting was however not continued further within the study because of the short time of the observation phase.

Error Correction

It was done through an organized and regular order of error correction during sessions. When there was spillage or spoons dropped, the trial was stopped and the posture of the child was restored to make the trunk and upper-limb in the right position. The therapist then made a simple demonstration of the correct movement pattern then left the task to the attempt of the child with the same level of physical support as before, only one level greater. This way was effective to provide learning with guided correction and to achieve success in the task and avoid frustration.

Reinforcement Strategy

Regular positive reinforcement was employed as a measure to keep the participants motivated and engaged during the trials. The preferred snack item was provided to Veda after the completion of every trial. Along with it, after every step immediate praises were given as well like, “Good Scoop” and after each session 2-minute play time was given with preferred toys. This type of reinforcing schedule was maintained throughout the sessions so as to reduce variability associated with motivation and compliance.

Observation and Recording

A structured observation sheet based on the experiment design was used to record the observations of the experiments on a daily basis. The following were recorded per feeding component;

- successful trials in 10 trials.
- frequency of spoon dropping
- degree of spill (none, slight, moderate or severe)
- indications of difficulty (i.e., dribbling, coughing or refusal).

Immediately after every session, observations were made so that there was accuracy and consistency.

Management of Extraneous Variables

Even though the participant was undergoing parallel therapeutic services, the study had minimal feeding-specific motor practice. Clinic environment, materials, timely hierarchy, reinforcement plan, and trial

structure were the same throughout all observation days, so it is possible to track the performance systematically under the conditions of the required study.

OBSERVATION TABLES

Table 1. Spoon Grip Performance Across Sessions

Day	Held Spoon Independently (out of 10)	Spoon Drops (frequency)
1	7/10	3
2	8/10	2
3	8/10	2
4	10/10	0
5	8/10	2
6	9/10	0
7	10/10	0
8	9/10	1
9	9/10	0
10	10/10	0

Table 2. Scooping Ability Across Sessions

Day	Successful Scoops (out of 10)	Prompt Level Required
1	7/10	Full Prompt
2	9/10	Full Prompt
3	7/10	Partial / Elbow Cue / None (varied)
4	10/10	Elbow Cue
5	8/10	Elbow Cue
6	8/10	Elbow Cue
7	10/10	Partial / Elbow Cue / None (varied)
8	9/10	None

9	10/10	Elbow Cue
10	10/10	Elbow Cue

Table 3. Transport of Food to Mouth

Day	Successful Transfers (out of 10)	Spillage Level
1	7/10	Moderate
2	8/10	Mild
3	7/10	None–Moderate
4	10/10	None–Mild
5	8/10	Mild–Moderate
6	5/10	Mild–Major
7	10/10	Mild
8	8/10	Mild
9	9/10	None–Mild
10	10/10	Mild–Moderate

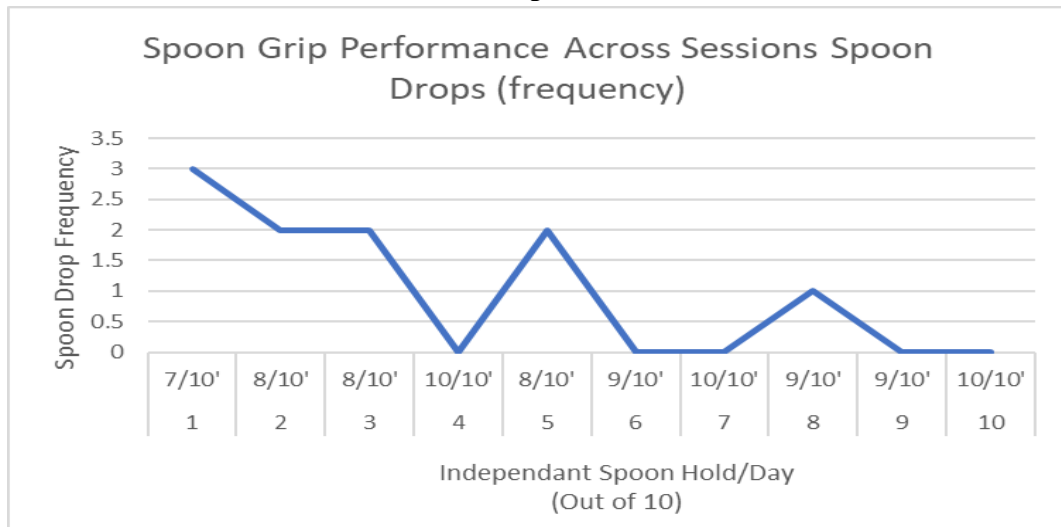
Table 4. Liquid Sipping Skills

Day	Successful Sips (out of 10)	Dribbling	Coughing	Refusal
1	7/10	Yes	No	No
2	8/10	Yes	No	No
3	7/10	Yes	No	No
4	8/10	Yes	No	No
5	8/10	Yes	No	No
6	6/10	Yes	No	No
7	5/10	Yes	No	No
8	9/10	Yes	No	No

9	9/10	Yes	No	No
10	10/10	Yes	No	Yes

RESULT AND INTERPRETATION

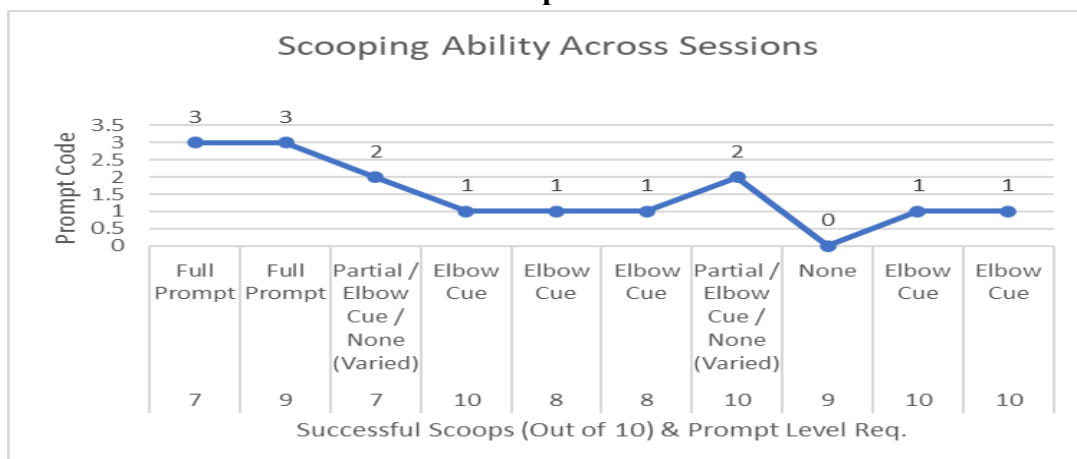
Graph 1:



Throughout 10 intervention sessions, the pattern of improvement of the spoon grip was evident. In the first few sessions (Day 1-3), the child showed some independence since he managed to hold the spoon in 7-8 of 10 trials, but there were the occasional drop, which showed lack of wrist stability, and control of grip was immature. On Day 4, the performance had risen to 10/10 successes and this indicates that there was rapid learning of the motor skills as soon as they became familiar with the task.

Day 5 (8/10) showed a minor variation probably caused by exhaustion or change of attention and that is common with pediatric clinical groups. Since Day 6, the performance was stabilized on the high level (9-10/10) nearly without drops of spoon. This tendency shows the enhancement of fine motor coordination, strength of a grip, and permanent postural stability. Comprehensively, the level of spoon grip skills was almost at the status of independence through the mid-intervention and was held at the same level up to the end of the sessions.

Graph 2.

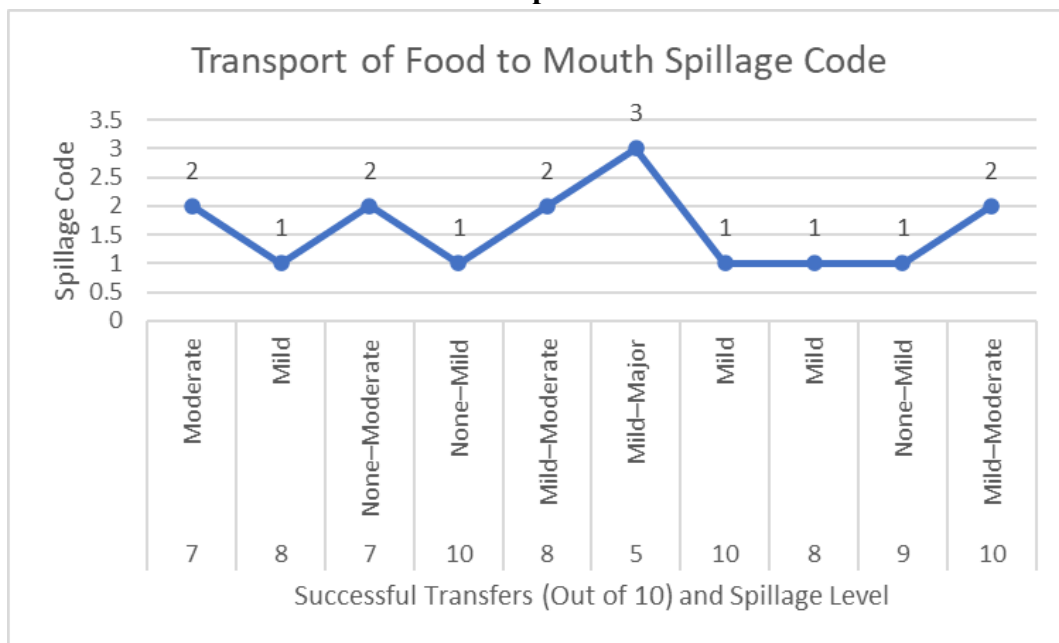


Graph 2 shows there is an apparent inverse relationship between scooping performance and prompt level with respect to sessions. During the first sessions (Days 1-2), there was moderate scooping accuracy (7-9/10) that had to be fully physically prompted. Through overtime, the support level also declined to include full prompt to elbow cue and eventually independent performances.

Since Day 4, the accuracy of scooping has increased to 8-10 successful cases with minimal assistance of therapists which demonstrates higher accuracy of the wrist control, motor planning and stability of the tasks. Day 8 was the day of independent performance with minimum support or the demonstration of the functional skills acquisition. Despite that slight variations in prompt level were measured in subsequent sessions high scooping accuracy remained.

On the whole, it can be concluded that the graph demonstrates the improvement of motor functions with decreased dependence on extrinsic encouragement, which implies successful learning of skills with the help of graduated intervention.

Graph 3.



Graph 3 demonstrates the alterations in the spillage severity in the 10 sessions of the interventions during the transport stage of self-feeding. To achieve statistical representation, the spillage levels were put in an ordinal code system; 0 = None, 1 = Mild, 2 = Moderate, and 3 = Major. In cases where combined levels were observed (i.e. None-Moderate or Mild-Major), the more severe level was coded to indicate the maximum level of difficulty in that particular session.

At the baseline (Day 1), the spillage was to be coded as Moderate (2), which suggested that there was observable loss of food during transfer. On Day 2, there was a minor decrease in the severity (Mild; Code 1), but on Day 3, the severity went back to a higher range (Code 2). By Day 4, spillage went to None-Mild (coded as 1), and the accuracy of transfers was also higher (10/10 successful transfers).

There was variability at the middle of the intervention, Day 6 recording the lowest level of successful transfers (5/10) and the most severe spillage (Mild-Major; Code 3), which showed temporary loss of motor coordination. But this regression did not last long. Since Day 7, the spillage intensity decreased steadily to Mild degrees (Code 1) and successful transfer raised their performance to 8-10 of 10 trials.

In general, the graph shows that though there were changes over time, especially in the middle period, the severity of the spillage had an overall downward curve. These results of severity reduction and more successful transfers indicate the ability to coordinate motor actions, have a more stable wrist, and coordinate proximal and distal upper-limb activities better when transporting food.

Lastly, table 4 shows that there is a general positive change in the performance to do the liquid sipping during the 10 sessions. The success level grew 7-8/10 in the initial sessions to 9-10/10 in the end sessions even though there was an interim decrease on Days 6 and 7 (6/10 and 5/10). This intermediate trough was succeeded by steady recovery and peak performance by Day 10.

It was noted to have dribbling in all the sessions, so it has perseverance but decreasing oral-motor incompetence. There were no cases of coughing, which was a good sign of safe swallowing during the intervention. On Day 10, only one refusal was observed; nevertheless, performance was the same as on Day 10 (10/10), and it was rather a sign of behavioural inconsistency than the backwardness of the skill. In general, progressive changes in terms of efficiency in sipping accompanied by overall swallow safety were observed, but slight oral-motor control difficulties occurred.

LIMITATIONS

1. Single-case design: This research was carried out in a single child (Veda), thereby restricting the potential to apply the research results to other children with Global Developmental Delay or other motor deficits.
2. Minimally long intervention period: Though the intervention was organized into 6 weeks, assessment of long-term retention and skills maintenance was not done in the aftermath of the intervention.
3. Environmental control: The sessions were held under a controlled environment with premeditated position, pre-determined utensil usage with supervision by the therapist. The extension to a natural home or school may not be generalized.
4. Caregiver variability: Despite parent training, there may have been variation in consistency, rapid fading and reinforcement at home, which could have affected performance.
5. Motor-specific focus: The intervention was mainly focused on the stability of the wrists and the motor control. Wider range of sensory processing, attention and motivational determinants were not independently determined.
6. Measurement sensitivity: The results were reported as a success in percentage and behaviours that could be observed. Biomechanical alterations (e.g. grip strength, tremor amplitude) that were fine-grained were not objectively measured.

RECOMMENDATIONS

- To enhance the external validity and provide the ability to compare the developmental profiles, larger sample size should be used to enhance the validity of the study in the future.
- Pre-intervention and post-intervention standardized motor assessment instruments would help to enhance objective outcome measurement.
- Follow-up (3-6 months) should be done in the long term to determine retention and generalization of the skills to other settings and food textures.
- Bilateral coordination training and proximal core-strengthening can also be introduced to receive a further positive impact on distal control (The furthest parts of the body to the center of the body which are under specific control is known as distal control. The hands, fingers, feet, and toes fall under this

category. In motor development and learning, it typically means the delicate motor control of the hand and fingers.)

- The protocols can consider more adaptive utensils (angled spoons, dynamic grip aids) as compared to weighted spoons to identify the best assistive support in future.
- A checklist on the fidelity of caregivers can enhance uniformity in home realisation.

CONCLUSION

The current structured intervention of shaping is illustrated by improvement of Veda in her stability of holding the spoon, scooping accuracy and precision of sipping the spoon. The gradual fading of progression, proximal stabilization and task specific motor training were associated with better control and less spillage of the wrist and minimized the spillage reduction within the session. The multiple-baseline method was used to aid in the slow learning of precursory elements of motor behaviours before moving on to complex feeding behaviour patterns. The positive outcome of independent trials is that functional self-feed skills can be effectively developed using refined motor based occupational therapy interventions amongst children with Global Developmental Delay.

All in all, the intervention emphasizes the significance of gradual task analysis, motor stabilization, and the use of reinforcements in stimulating functional independence in feeding.

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