

Understanding Self-Talk on a Mirror Tracing Task: A Qualitative Inquiry

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INTRODUCTION

Gaining a better understanding of self-talk (ST) while performing a novel psychomotor task (mirror tracing task) was explored using a phenomenological approach in which recorded results were compared to the ST data of diverse research disciplines to more fully understand ST and its reported functions. Participants, asked to complete three trials of the task, were presented with two open-ended questions regarding their inherent ST before, during and after each trial of the task: (1) self-reported ST, and (2) self-reported ST function. The responses of the 8 participants (over 7,500 words) were audio recorded, transcribed, and analyzed. The recorded data were coded using groupings derived from existing literature and categorized based upon inductive reasoning (emergent from collected data). We expected to find instructional and negative ST due to the difficulty and type of task, based upon the current research. Our results have revealed the use of motivational, instructional, positive, and negative ST (e.g., “I can do this!”, “Stay between the line”, and “Oh, no!”). Additionally, unique categories of ST have emerged, such as prayer and no ST. The results of this study are beneficial to improving our insight into the array of ST used while performing a difficult and novel fine motor task. The information collected from this study can be used as a foundation toward further understanding ST during other novel tasks and recommend its further study in a variety of disciplines.

PURPOSE

The purpose of this study was to gain a better understanding of ST (what) and its reported functions (why) while performing a fine motor task.

METHODS

IRB Approval. The study was approved by the Institutional Review Board (Human Subjects) at Texas A&M University-Kingsville.

Subjects. All subjects provided informed consent prior to data collection. Males and females from south Texas were voluntarily recruited to take part of this study. A majority of the participants in this study were students from Texas A&M University-Kingsville.

Qualitative Approach. This study followed a phenomenological approach and used existing literature to understand existing self-talk categories.

Methods. Before the task began, the investigator informed each participant of the definition of ST by reading the following description from Gammage, et al. (2001, p. 235), based on Hackfort and Schwenkmezger’s (1993) definition:

“Self-talk is best thought of as what you say to yourself. It can involve what you say to yourself out loud or what you say in your mind, so only you can hear what is being said. This study is concerned with your use of self-talk prior to, during, and after exercise. Self-talk may be associated with emotions (e.g., ‘psyching’ yourself up), staying focused (e.g., concentrating for the full duration of an exercise session), maintaining motivation (e.g., to keep pushing yourself to your max near the end of a tiring session), or for learning/improving exercise skills (e.g., correcting form).”

Each subject performed three trials of the mirror tracing task while answering two open-ended questions before, during, and after each trial: a.) What specific self-talk are you currently engaging in? and b.) Why are you engaging in the specific self-talk you just reported? The responses and reactions of the participants were audio recorded, transcribed, and analyzed for data collection and analysis.

Existing Categories. Previous researchers have identified several categories of ST during performance including instructional, motivational, positive, negative, and neutral ST according to (Cutton & Hearon 2014; Gammage et al., 2001; Hardy, 2006; Van Raalte et al., 2014).

Positive ST: Refers to a type of ST that is more optimistic and uplifting during performance (Hardy, 2006).

Negative ST: Can be defined as any phrase that is used as criticism towards one’s own performance or self and is characterized as being harsh or critical (Hardy, 2006).

Neutral ST: Neutral ST is also worth mentioning because it is a type of ST that does not explicitly fit into the positive or negative category (Gammage et al., 2001).

Motivational ST: Motivational ST is identified as any statement that is used to either encourage or discourage the participant (Van Raalte et al., 2014). It is vital to note that motivational ST can be classified as positive or negative due to the type of motivation and the context being used at the time.

METHODS, cont.

Instructional ST: Any statement made referring to technique, strategy, or direction while performing and tends to be more task specific (Cutton & Hearon; Van Raalte et al., 2014).

Data Analysis. The audio recorded responses of the participants were transcribed and categorized in the appropriate ST category determined by the two investigators. Then a minimum of 80% intercoder agreement for the ST categorizations was reached. This agreement was conducted periodically to ensure the data remained reliable throughout the study. Frequency counts of the ST types were conducted and displayed in a frequency tree. Tables of the known and emerging ST types used were displayed in the tables below to demonstrate when each type was used according to the question being asked.

RESULTS

Figure 1: Frequency of ST by Category

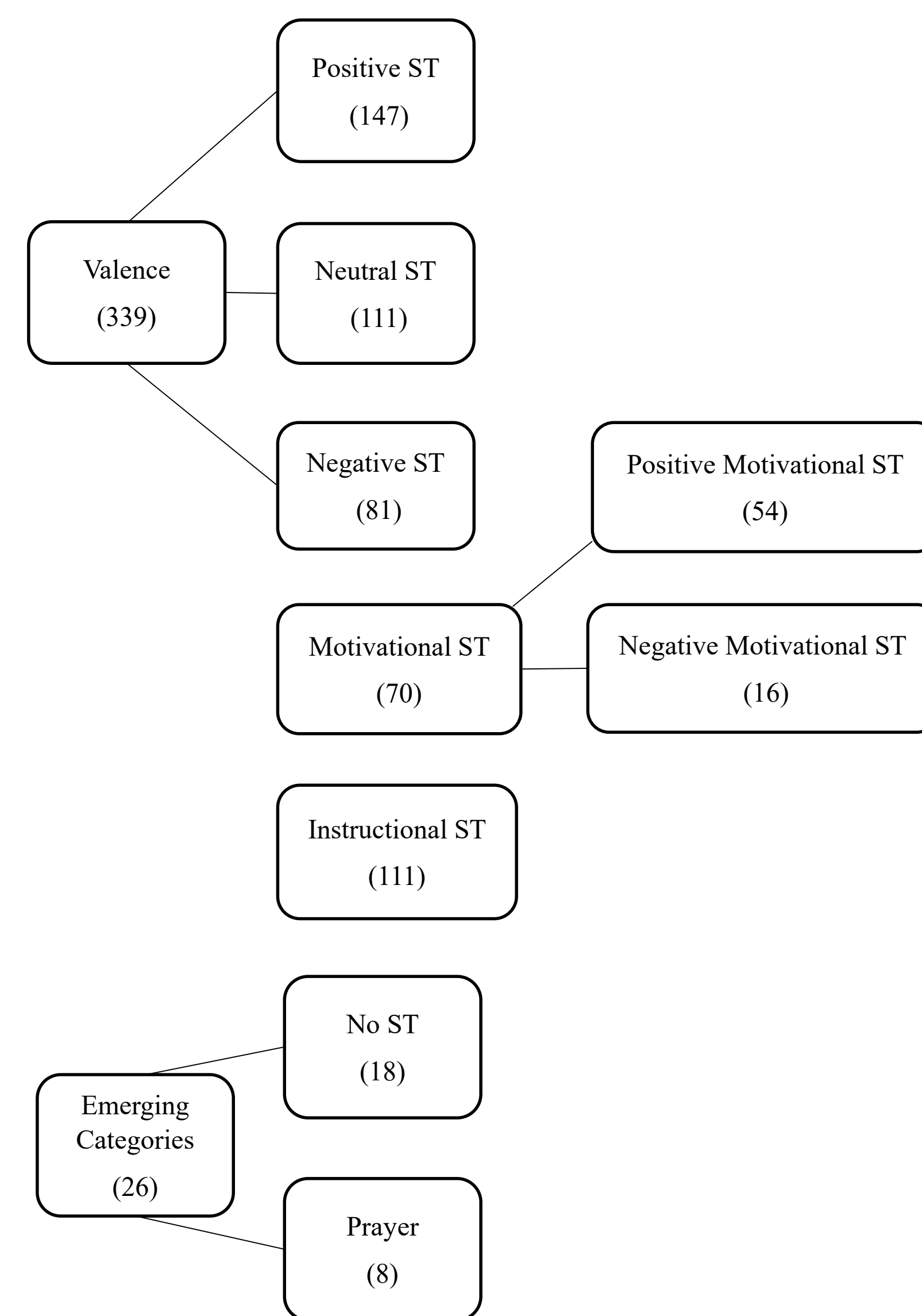


Table 1: Most Commonly Used ST Types During Study

	Trial 1	Trial 2	Trial 3
What specific self-talk are you currently engaging in?	Before: Negative ST During: Instructional ST After: Instructional ST	Before: Motivational ST During: Positive ST After: Instructional ST	Before: Motivational ST During: Negative ST After: Positive ST
Why are you engaging in the specific self-talk you just reported?	Before: Negative ST During: Instructional ST After: Positive ST	Before: Positive ST During: Positive ST After: Positive ST	Before: Motivational ST During: Negative ST After: Positive ST

Table 2: Unique ST Types Used During Study

	Trial 1	Trial 2	Trial 3
What specific self-talk are you currently engaging in?	Before: No ST During: Prayer, No ST After: N/A	Before: No ST During: N/A After: Prayer	Before: N/A During: No ST After: Prayer, No ST
Why are you engaging in the specific self-talk you just reported?	Before: No ST During: Prayer After: N/A	Before: No ST During: No ST After: No ST	Before: No ST During: N/A After: No ST

RESULTS, cont.

Participant Quotes

Positive ST: “I’m thinking to myself trying to tell myself that okay I’m gonna do better because now I know how I did it the first time and I guess with practice... doing it once it kinda helped me to do it a second time.”

Negative ST: “I just messed up numerous times. Um, and I got nervous. I just... and I just started doubting myself immediately. I just messed up.”

Motivational ST: “I got this. I got this. Okay. Oh my God. I’m doing it. I’m almost done.”

Instructional ST: “Just uh...Right, left, up, down.”

No ST: “I don’t know. I’m really blank the whole time. I’m not even thinking.”

Prayer: “Well for that point I prayed again and that was mostly just what I was doing. Relying on my prayer to get me through it.”

CONCLUSIONS

The purpose of this study was to understand the use of reported ST (What) and its reported functions while performing a fine motor task (Why). We found that the participants engaged in more positive ST than neutral or negative ST. Our findings also revealed that more instructional ST was utilized than motivational ST. Upon data analysis, two categories of ST emerged including ‘Prayer’ and ‘No ST’. Negative ST and instructional ST were used most frequently Before and During Trial 1 of the task. Positive ST was commonly used Before, During, and After Trial 2. A mix of positive, negative, and motivational ST was used Before, During, and After Trial 3, respectively.

Due to the intricate nature of the fine motor task, it was hypothesized (and data confirmed) instructional ST would be prevalent in our findings. Surprisingly, given the difficulty of the task, participants engaged in more positive ST than negative ST. This could be attributed to the participants’ eventual success on the task. No ST was rarely reported During the task; participants revealed the reason for engaging in no ST (Why) was due to a lack of focus or concentration. ‘Prayer’ is an emerging category most commonly defined as speech directed towards God or one’s soul (Dinkler, 2015). ‘Prayer’ was used throughout the duration of the study; however, it was more prevalent During and After the task. This study does face some limitations due to the open-ended nature of the study. As suggested by Cutton & Hearon (2014), the ST reported by the participants may not be fully accurate due to not being willing to reveal some of their ST, therefore creating a gap of error in the study. However, ST responses were recorded before, during, and immediately following each trial, unlike other studies wherein ST is gathered later, sometimes days later (Cutton & Hearon, 2014; Fritsch et al., 2022). Another limitation is that the investigators may interpret the given ST responses differently than how the participant intended (Van Raalte et al., 2014). One way this limitation was reduced was by asking each participant why they engaged in the ST they reported. However, it does not fully dismiss the error of interpretation that may have been created.

The results of this study are beneficial to improving our insight into the array of ST used while performing a difficult and novel fine motor task. The information collected from this study can be used as a foundation toward further understanding ST during other novel tasks and recommend its further study in a variety of disciplines (Fritsch et al., 2022; Brown, 2012; Puchalska-Wasył, 2015; and Dinkler, 2015).

REFERENCES

