

Real Talk: Some Thoughts on the Integration of Neurological and Psychophysiological Measurement Methods into Communication Research

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SUMMARY

For the advancement of communication research, it is necessary to quantify the effect of different communication behaviors. The integration of neurological and psychophysiological measurements methods offers one approach to establish quantified, evidence-based communication research. This commentary elaborates on the integration of neurological and psychophysiological measurement methods into communication research in the medical setting and highlights some advantages of this approach. The aim is to increase the awareness of communication as a helpful tool in medical practice and research.

Introduction

Seriously ill patients face many threats including the burden of a diagnosis, poor perspectives, multiple decisions about treatment, and the uncertainty about one's future [1]. Communication research can help both the clinician and patient to face and overcome these threats. For instance, previous studies have demonstrated that whether the clinician uses helpful or harmful communication behaviors towards a patient influences affective and cognitive patient outcomes differently [1-5]. Helpful communication is characterized by clinician-expressed empathy and patient-centered exploration of personal needs and preferences, while harmful communication is characterized by the lack of discussing possible treatments, not listening to the patient, and making vague promises [4]. An example of harmful communication behavior is any situation in which the clinician does not see the patient as a person and excludes the patient from the conversation, e.g., by saying "The tumor doesn't seem to be growing. We will continue this treatment." The helpful version would be something like "The tumor doesn't seem to be growing, which is good. How do you feel? Are you experiencing symptoms?" [4]. To emphasize these different

effects of communication behavior, it is necessary to quantify patient outcomes in detail, and to provide an evidence-based foundation. One promising approach is quantifying the effects of communication behavior on patients' neurology and psychophysiology. Neurological and psychophysiological measurement methods in communication research can help to link communication behaviors to clinician-patient outcomes.

Why Adopting Communication?

You may ask yourself why it is important to adjust communication behavior as a clinician. This is because of the patient's "double need" [3]: On one hand, the patient needs to know and understand the illness and treatment options. On the other hand, the patient needs to feel known and understood by the clinician. One can argue that this double need is more likely to be fulfilled if the patient's stress level is low because cognitive capacities are less restricted, and when the patient's affect is positive, i.e., when the patient trusts the clinician. Although it is known that the clinician's communication influences the patient's cognitive and affective functioning, the scientific interest to

identify the neurological and psychophysiological underpinnings of this influence is increasing slowly [5]. This slow increase in the field of communication research in the medical context can be explained by different reasons. Often, communication research is disregarded as a scientific field due to interdisciplinary nature which may establish the impression of communication research as a less rigorous approach. Additionally, communication research often comprises qualitative over quantitative methods which may add to this perception. However, integrating neurological and psychophysiological measurement methods can provide objective measures that go beyond common qualitative methods such as observational studies and self-reports, thereby establishing an evidence-based communication research. Generally, the integration of neurological and psychophysiological measurement methods can enhance the understanding of various aspects of communication in the medical setting, and improve patient-outcomes: Firstly, incorporating these measurement methods into medical education can facilitate the training of medical professional to communicate effectively.

For instance, real-time feedback on professionals' communication behavior and the effect on patients' neurological and physiological responses allows professionals to develop appropriate skills for patient care. Simultaneously can the integration of neurological and psychophysiological measurement methods help researchers understand emotional and cognitive responses of medical professionals during difficult conversations (e.g., breaking bad news or end-of-life decisions). This understanding can help to manage difficult conversations. Secondly, understanding the neurological and physiological underpinnings of communication can facilitate the reduction of negative emotions such as anxiety. Thus, real-time feedback based on neurological and psychophysiological measurement methods can facilitate designing interventions that mitigate negative emotions. Additionally, communication lies at the core for conveying treatment options and ensuring patients' compliance. Thus, using neurological and psychophysiological measurement methods to monitor patients' responses, researchers and medical professionals can assess the impact of different communication behaviors on these patient-outcomes. Moreover, this can help to enhance patients' satisfaction and compliance. Therefore, the integration of neurological and psychophysiological measurement methods can help to develop personalized communication approaches. Overall, the neurological and psychophysiological measurement methods provide objective data about patients' responses

to different communication behavior. By monitoring neurological and psychophysiological measures, researchers gain insights into patients' affective states, stress levels, and cognitive processes during medical interactions. These insights facilitate the identification of helpful communication behavior, and tailor interactions to individual patients' needs.

Conclusion

To promote evidence-based communication research, researchers should integrate neurological and psychophysiological measurement methods into their communication research. By quantifying the effects of communication behavior on patients' neurology and psychophysiology, researchers can derive objective measures. This approach can enhance the understanding of how communication impacts cognitive and affective patient-outcomes. Eventually, it enables to adjust communication behavior accordingly. For the medical setting, this means that clinicians can facilitate patient-centered communication behaviors, including active listening, discussing treatment options, showing empathy, and addressing the patients' (double) need. Finally, these management practices for researchers and clinicians can lead to improved patient-outcomes and more efficient healthcare services.

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