

Oral presentation

## Psychophysiological indices in psychotherapy research

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Psychophysiology has been traditionally defined as the scientific discipline that studies the relationship of physiological and psychological variables. Therefore, it is not surprising that research into psychological changes related to psychotherapeutic interventions has been conducted through a variety of psycho-physiological methods over the last 50 years. Psychotherapeutic approaches as diverse as psychodynamically oriented psychotherapy, behaviour modification, cognitive therapy, biofeedback and autogenic trainings, progressive relaxation or even hypnosis, have all been investigated in conjunction with some form of psychophysiological assessment. A number of studies, even since the mid-1950s, utilizing mostly peripheral psychophysiological measures have investigated the process of psychotherapy. Concepts derived from the insight-oriented psychotherapy, such as empathy, conflict and transference-countertransference exchanges or processes related to learning theory, such as acquisition, habituation or extinction, identified as essential ingredients of a psychotherapeutic setting have been investigated in relation to either individual responding, or as a function of interpersonal interaction. In the mid-1970s the psychophysiological approach to psychotherapy concentrated on multiple physiological assessments across various response systems (subjective, cognitive, behavioural, verbal etc), a trend that led to considerable conceptual developments, in spite of the fact that the measures employed concerned almost exclusively autonomic responses. An interesting contribution to psychotherapy research, during that period, stems from the so-called Social Psycho-physiology. A number of studies concerning aspects of dyadic communication, such as expressed emotions in family settings, non-verbal interactions, EMG-assisted facial expression of emotions etc, added to our knowledge of the processes involved in the

interpersonal communication. Finally, over the last decade, psychophysiological assessment incorporated the technological facilities provided by the development of imaging techniques, such as integrated ERPs, PET, SPECT and fMRI, although the findings thus far are not conclusive. The interpretation of psychophysiological data in psychotherapy research is confounded by the following factors: (a) the earlier psychophysiological findings concerned mostly single, as well as peripheral variables, (b) the more recent findings based on novel technologies are preliminary and require replication, (c) there is still need to examine patterns of physiological responses rather than magnitudes or latencies, (d) the "specificity" of psychophysiological responses should be clarified through consistent correlational studies with the data stemming from other biological disciplines and (e) a psychotherapy session is by definition a highly uncontrolled situation in laboratory terms. However, psychophysiology still consists a part of clinical neuroscience and in the light of recent brain research (indicating that the boundaries between psychological theories, as well as between biological disciplines have become less distinct), its contribution to the biopsychosocial orientation of current psychotherapy research could be valuable.