



The Parietal Lobe and Its Role in Clinical Treatment

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Abstract

We know through research that the parietal lobe is the epicenter of our belief systems, specifically that of faith. This writer wonders what role this epicenter might play when it comes to self-esteem or limiting beliefs about oneself. Could it influence the outcome of therapeutic interventions? If so, how? If we as humans hold steadfast to our abstract beliefs about philosophy and religion, do we in fact hold as tightly to the beliefs we have about ourselves? This review aims to examine the existing research on the parietal lobe and its role in mental health treatment outcomes combined with the writer's clinical experience around what clients believe about themselves and how that impacts their treatment outcomes. Examination of this work will be guided by one hypothesis, "The parietal lobe can significantly influence self-esteem, which impacts mental health treatment outcomes."

Keywords: Parietal Lobe; Mental Health; Self-Esteem; Self-Acceptance; Belief System; Treatment Outcomes

Definitions

- Self-Esteem: confidence in one's own worth
- Self-Acceptance: accepting all parts of oneself, including strengths and weaknesses without judgement
- Beliefs: the acceptance of what is believed to be true

Introduction

These questions are not a new age phenomenon. We know that human beings have always asked questions about why we are here and what our purpose is. Somehow, we have been able to move forward and navigate the world successfully without knowing these answers for sure. People have been willing to die to protect their beliefs about religion or their higher power. When we really think about mental health, people have been willing to do the same for the beliefs they hold about themselves. When clients can no longer live with what they believe to be too heavy, too painful, too burdensome, we know that death by suicide can become an option. This writer posits that the same part of the brain that

keeps us rooted in convictions that we often cannot see or prove but believe so strongly we are unwilling to consider any other perspective, is the same part that also causes clients to be unable or unwilling to reconsider the beliefs and narratives that they hold about themselves. The purpose of this review is to explore this assumption through existing research, concentrating on the function of the parietal lobe and connecting its possible role in mental health treatment outcomes.

Methodology

Several researchers have employed a quantitative approach to gathering data in regard to the function of the parietal lobe as well as outcomes related to these results. The most frequently used data collection method according to the literature has been combining performance assessments and tasks with neuroimaging to measure activity in the parietal region during those tasks, as completed by Baldo JV, et al. [1]. MRI and PET scans are also utilized in measuring



brain activity during assessments. Cognitive neuroscience, neuroimaging and lesion mapping are among the most popular research methods being used to measure the function of the parietal lobe as utilized in a study done by Grafman J, et al. [2].

While the existing methodology focuses on the quantitative data collection of brain imaging during the performance of various tasks, this writer believes that a mixed methods approach would be best to incorporate the aspects of parietal lobe functioning on mental health. While there have been studies measuring correlations between “connectivity strength in this region (parietal cortex) with a number of cognitive-behavioural outcomes, including measures of attention, depression and anxiety” [3] there would be benefit of conducting focus groups or interviews to add a qualitative component to data collection.

An approach this writer would recommend is neuroimaging of parietal lobe activity of participants stating a negative core belief about themselves and then having them state something that they do not inherently believe about themselves to compare the differences, if any. This would help support or disprove the idea that the parietal lobe is impacted by or in some way affects the way in which a person responds to what they believe about themselves. This would also lead to further study on how to modify treatment approaches.

Brief Review of Literature

Kluger J [4] stated, “What makes the parietal lobe special is not where it lives but what it does — particularly concerning matters of faith” [4]. The author goes on to explain that when the parietal lobe is at work, especially during activities such as prayer and meditation, it can feel as though “...the very boundaries of your body had dissolved...” [4].

According to research conducted by Newberg A, et al. [5], “...the only way the mind can know the self, and experience the difference between the self and the rest of reality, is through the elaborate, restless effort of the brain” [5]. The parietal lobe is one of the parts of the brain that collaborates to create the verbal conceptual association area which is vital to the development of consciousness and expression of consciousness through language [5]. This being said, it could be argued that if a client extrapolates in their consciousness that they are a bad person or unworthy, that this becomes their reality. If this is their reality, they believe it to be true and therefore have a difficult time considering any other perspective.

Boyer P [6] suggested that “People do not generally have religious beliefs because they have pondered the evidence

for or against the actual existence of particular supernatural agents. Rather, they grow into finding a culturally acquired description of such agents intuitively plausible” [6]. In relation to the parietal lobe and its function over the belief system, this again ties in with what people believe about themselves. Sometimes, our clients do not have evidence to support the negative things they say and believe about themselves, rather they begin to find these beliefs plausible because of a reference to someone else. What another person may have done or said, or an instance that could somehow help them solidify why this belief must be true.

In a study completed by Herwig U, et al. [7] “...parietal regions show relevance for self-related cognitions, with in part self-specificity in terms of comparison with the known-, unknown and perception-conditions” [7]. It posits that a person’s overall sense of self or belief in oneself is considerably impacted by this area of the brain. With these findings, it is further supported that there is more than simply low self-esteem at play for some of our clients, rather the negative beliefs they have about themselves have more of a neurological basis than a pathological one. This is important in treatment approach because we must navigate more than just self-defeating thoughts, we are navigating core beliefs embedded in the neural pathways of an individual.

Mancinnes DL [8] suggested that “...focus on self-acceptance beliefs during a clinical assessment or intervention for any general psychological disturbance. It may be that when people become psychologically distressed, they engage in conditional self-acceptance thinking. Interventions designed to support and encourage more unconditional self-acceptance, and less self-rating would therefore be helpful in raising the general psychological health of clients” [8]. Conditional self-acceptance based on one’s core belief of themselves, consistently negatively impacts their psychological health. This study suggests that interventions should focus less on the negative beliefs about themselves and more on strengthening unconditional self-acceptance which leads to a decrease in anxiety and depression according to the author [8].

Jibeen T [9] indicated that “contemporary research on individual differences in unconditional self-acceptance indicates that lower level of unconditional self-acceptance is deleterious to well-being and, in some cases, could lead to some mental disorders” [9]. It has been said that a person can only meet you as deeply as they have met themselves. We see in the research that those who do not have unconditional self-acceptance or negative beliefs about themselves have a very difficult time seeing themselves in any other way, therefore making it difficult to complete favorable treatment outcomes.

Implications

It has been argued that there could be a link to the parietal lobe and self-esteem or self-acceptance. Studies have shown that this part of the brain is where our core beliefs and convictions are held, usually the mystical or religious, however, emerging research is correlating this lobe with belief of oneself. This connection has profound clinical significance as it pertains to mental health treatment intervention models. Using this knowledge, clinicians can begin to get a better sense of why some clients may present as stuck or unable to move from some of their self-defeating or limiting beliefs. Unlocking the power of the parietal lobe can perhaps be the key to helping clients move forward in their treatment and healing by accessing the function of the mid-brain area utilizing various intervention methods, such as Brainspotting. Corrigan F, et al. [10] experts in Brainspotting, suggested “while the linkage of memory, emotion, and body sensation may require the parietal and frontal interconnections – and resolution in the prefrontal cortex – we suggest that the capacity for healing of the altered feeling about the self is occurring in the midbrain...” [10]. Again, we see evidence of the important role that the parietal lobe plays, even in phenomena such as trauma events, further supporting the idea that the key to wellness for some of our clients is understanding this part of the brain and how it works.

Haller S, et al. [11] found in their study that, “Activation in fronto-parietal networks may normalize after CBT in unmedicated pediatric anxiety patients. Limbic regions may be less amenable to acute CBT effects” [11]. Being able to study mental health interventions such as CBT as it connects to the parietal regions of the brain is an excellent starting point to go deeper and hopefully conducting more phenomenological studies.

Utilizing qualitative study approaches combined with data driven quantitative approaches will provide researchers with a better insight into participants’ reasoning and rationale behind their beliefs and why they often have a difficult time releasing them in order to move forward in their treatment. This information will help inform mental health clinicians in regard to using what they know about the parietal lobe and then what they know about their client to create treatment interventions that can help them move through clinical challenges and obstacles associated with lack of self-esteem and acceptance.

Conclusions, Limitation & Recommendations

The literature has suggested overwhelming, useful correlations and practice-changing information, however there is limited quantitative research focusing on the parietal

lobe, self-belief and mental health outcomes exclusively, rather the focus has been more on parietal lobe damage and its effects on mental health as well as function during assigned tasks. Further research in the aforementioned areas is needed and warranted to begin broaching implications for practice.

There is no doubt in this writer’s mind that the function of the parietal lobe impacts how tightly clients hold on to their beliefs, including those beliefs they have about themselves. Of course, the empirical research is limited and more targeted phenomenological studies would further support the emerging research.

We know from what has already been studied, that the parietal lobe is connected to self-acceptance and self-esteem and that for some clients, this may be the thing that allows them to move toward mind health, or keeps them stuck and unwilling to abandon self-defeating beliefs and narratives. These implications can help create real change in the field of mental health, allowing clinicians a broader understanding of ambivalence, resistance and plateaus in the treatment process.

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