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# Translating Neurobiological Knowledge into Trauma-Informed Occupational Therapy

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## BACKGROUND

There is a growing need for an expanded understanding of the experience of trauma in light of many socio-political and cultural events of the previous years (Cénat & Dalexis, 2020; Crosby et. al, 2020; Taylor, 2020). Trauma-informed protocols in psychiatry and neuropsychotherapy detail neurobiological mechanisms involved in traumatic responses and mention the use of occupation as a therapeutic tool (Levine et al., 2018; Porges, 2021). Occupational therapy literature mentions a growing understanding of neuroscience that is leading to trauma-informed protocol reform, however, consistently concludes with the acknowledgment that more information is needed (Cerny, 2016; Edgelow et. al, 2020; Fraser et. al, 2017). The problem is that there is a significant connection between occupation and neurobiology that remains unexplored (Bailliard & Whigham, 2017; Fraser et. al, 2019; Williams, 2017).

## PURPOSE

The purpose of this project is to advocate for the significance of occupation as a therapeutic tool for traumatic stress through the knowledge translation of neurobiological mechanisms.

## METHODS

### Scoping Review

- 11 peer-reviewed articles
- 6 non-peer-reviewed manuscripts
- 10 hours of observation
- More information is detailed via linked QR codes below

### Phenomenological Qualitative Research Study

- Six participants recruited via virtual networking
- Licensed occupational therapists
- Ages of 18 to 75
- 0 to 40 years of experience with individuals who have experienced trauma
- Coding and thematic analysis by the student investigator, supervising principal investigator, and co-investigator

## PRELIMINARY RESULTS

Themes	Quotes
<b>The significance of occupation for individuals who have experienced trauma is currently underrepresented.</b>	<ul style="list-style-type: none"> <li>- “Two things that they highly recommend for trauma for our teenage type kids, one is yoga and other meditation, two is theatrics.”</li> <li>- Talking isn’t quite it [...] like a lot of times people do active activities to deal with their big emotions.”</li> <li>- “Occupations are like medicine for your brain.”</li> <li>- “Laying on a couch isn’t cutting it.”</li> </ul>
<b>Therapists and staff often make judgments during therapeutic interactions that reveal an incomplete understanding of how to identify and address a trauma response.</b>	<ul style="list-style-type: none"> <li>- “The therapist didn’t necessarily recognize that as being a trauma trigger[...].”</li> <li>- “You know they’d do an evaluation and they’d immediately label them as a person that’s like [...] malingering, or these words, and these labels, and the stigma about people, when if you dig a little bit deeper, there may have been trauma going on.”</li> </ul>
<b>There is a need for a universal approach to all therapeutic interactions that acknowledges the ubiquitousness and pervasiveness of trauma.</b>	<ul style="list-style-type: none"> <li>- “But I think there’s a gap in all the people on the ground and I’m thinking of like everybody, not just OT.”</li> <li>- “I think it’s ‘cause we’re all experiencing a very traumatic, I don’t wanna say it, unprecedented time.”</li> <li>- “I think there’s a lack of trauma-informed training and care across everything. I think it impacts everything.”</li> </ul>
<b>The neurobiology of trauma is a central component of occupational engagement.</b>	<ul style="list-style-type: none"> <li>- “I think the neurobiology piece is kind of central.”</li> <li>- “She’s in her primitive brain. She’s like fight or flight. She’s kind of, you know, triggered by this whole[...]this location, this environment, the context like, of course, you can’t focus on the grocery list.”</li> <li>- “So, like if your regulation is poor, it doesn’t matter how great the rest of your skills are. You have a very shaky foundation.”</li> </ul>

## DISCUSSION

Preliminary themes reveal a gap in knowledge translation between trauma-informed occupational therapy and neurobiological mechanisms involved in the experience of trauma. Occupational therapists discussed therapeutic concepts that included neurobiological concepts, but consistently stated that more information would be of benefit not only for occupational therapy, but for all individuals who interact with anyone who has experienced trauma.

## IMPLICATIONS

- **The neurobiology of trauma is inextricable from occupational engagement.**
- **There is a need for more information detailing the intricate connections between participation in occupation and the experience of trauma.**
- **Understanding how neurobiological mechanisms are involved in the therapeutic process will inform better trauma-informed practice for occupational therapists.**
- **A common framework that is available to all individuals involved in the therapeutic process with a detailed universal approach to the experience of trauma will unify therapists and staff and ultimately improve care for this population.**

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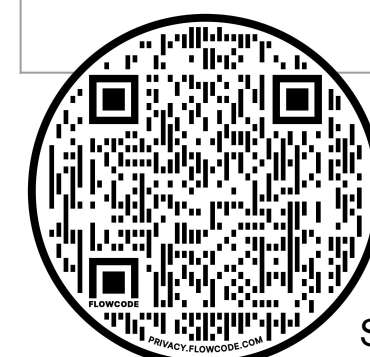
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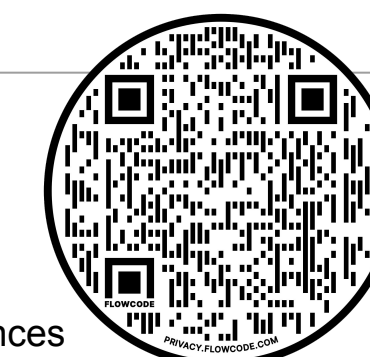
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Scoping Review Process

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Scoping Review References