

Bridging the Gap: A Biopsychosocial Approach to Brain AVM Diagnosis through Lived Experience

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Introduction

- **Background-** Arteriovenous malformations (AVMs) are rare tangles of abnormal vessels that bypass the capillary system, potentially causing hemorrhage, seizures, stroke, or neurological deficits and often requiring complex medical decision making. (Zuurbier & Al-Shahi Salman, 2019; Cohen-Gadol, 2024; England, 2020)
- **Impacts-** Individuals with AVMs report limitations in physical, psychological, and social functioning including pain, anxiety, depression, role disruption, reduced independence, and decreased quality of life which directly affect participation in daily activities, work, and meaningful occupations. (England, 2020; Vanderschaf et al., 2002; Cohen-Gadol, 2024)
- **OT Practice-** Occupational therapy supports individuals with AVMs by addressing functional, cognitive, emotional and role related challenges through holistic, client centered strategies that promote safety, adaptation and empowerment in daily life. (Client-centered practice principles; Engel's Biopsychosocial Model; ARISE framework)

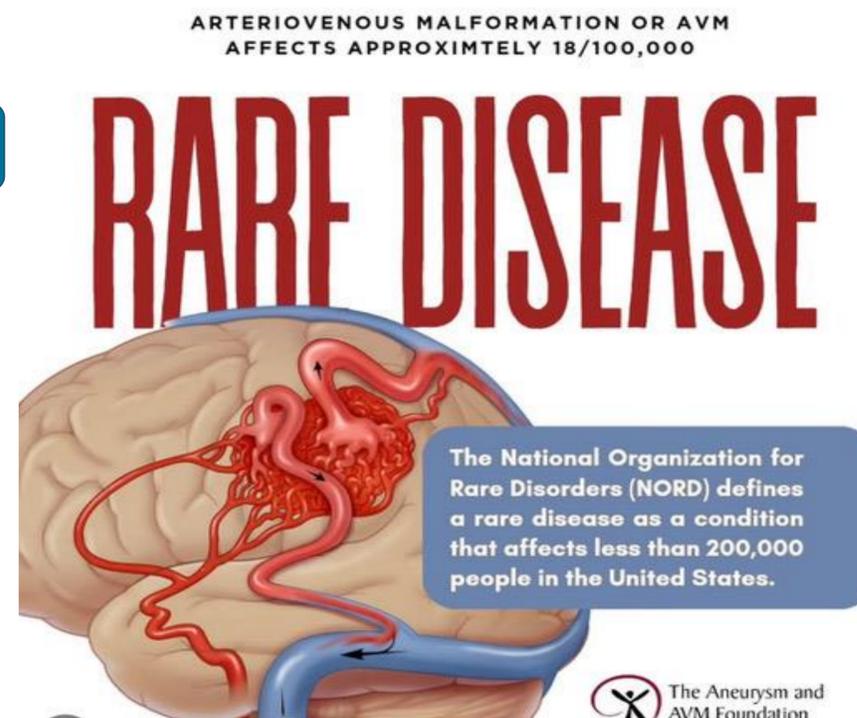
Methods

- Completed comprehensive literature review on AVM and biopsychosocial model
- Needs assessment revealed limited exposure to Biopsychosocial model in HPU OTD curriculum
- Developed educational modules for OT students enrolled in Biopsychosocial course with a focus on understanding AVM, its diagnosis and its multidimensional impacts on an individual.
- Created a case study based on lived experience highlighting the challenges, coping processes and support needs of individuals with AVM.
- Designed a client simulation to allow students to practice integrating knowledge, support resources, intervention planning, followed by a student reflection..
- Integrated HPU OTD core values, Aloha, Kuleana, Pono, Kokua, and Laulima into all learning activities to promote compassionate care, shared responsibility, collaboration and ethical practice.

Purpose/Aims

- To enhance students' understanding of the biopsychosocial impacts of an AVM diagnosis through lived experience, informed learning
- To integrate client centered approaches within OT education and apply holistic reasoning to complex neurological conditions like AVM
- Increase student knowledge on risks and functional implications while strengthening understanding on impacts of daily life, roles, and participation.
- Provide experiential learning through a lived experience case study and client simulation

Figure 1
AVM Statistic



Note: Image from The Aneurysm and AVM Foundation. <https://www.taafonline.org/>. Reprinted with permission (email).

Project Description

- This project was a collaboration with an OT educator at HPU to develop an educational module applying the Biopsychosocial model in OT practice to bridge the gap between student understanding of AVM based on lived experience.
- 33 first year OTD students participated in online learning and a live synchronous session followed by a client case simulation and reflection.

Results/Outcomes

- Prior to educational modules, 0% of the class of 33 students had prior knowledge of AVM
- 100% of the class reported increased understanding and awareness of this rare condition
- "I loved getting to learn more about AVM, especially when we had the opportunity to speak to someone who actually had AVM. This was so helpful to go through a Telehealth appointment with a real person, who didn't have to role play their life, but could just engage us." -OTS
- "I learned that AVM can really impact participation in occupations, as well as an individual's roles and routines." -OTS

Discussion

- Direct interaction with an individual with AVM enabled students to more fully understand the biopsychosocial impacts of the condition, fostering deeper empathy and stronger clinical reasoning.
- The Telehealth simulation offered an authentic opportunity to apply client-centered OT approaches, reinforcing skills needed for real-world practice.
- Student reflections further emphasized that learning from someone with lived experience enhanced their appreciation of how AVM affects occupational performance, daily routines, and role participation.

References

