

WIU CENTENNIAL HONORS COLLEGE
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Abstract

Poster

Major: Psychology

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Light Preference as an Indicator of Anxiety in Zebrafish

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Furthering our knowledge and understanding of young zebrafish behavior, especially as it pertains to affective processes and anxiety, can be immensely helpful in understanding and treating mental health disorders. Through the development of model systems, we can measure and manipulate behavior and anxiety-like responses. The aim of this study is to assess the larval zebrafish's preference to light or dark when given the choice between the two. Furthermore, if phototaxis is in some way stimulated by affective processes, the phototactic response might be altered by the antidepressant drug escitalopram. Twelve zebrafish larvae were sampled and tested on days five, 10, 30, and 60. The fish were placed in an open tank to establish a preference for either the left or right side. After this a black cover was placed on one side of the tank to measure preference to light/dark. A second group of fish were dosed with 1.5 μ g/L of escitalopram and then tested utilizing the same method. The results suggest that at five and ten days post fertilization, zebrafish larvae display strong positive phototaxis. When tested at 30 days, the light preference began to diminish, and at 60 days it diminished significantly. In the fish dosed with escitalopram, there was a preference for light, however, the numbers display a smaller preference than those displayed by the control group.