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BEING IN CONTACT WITH NATURE, BELONGINGNESS, AND AWE

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Current Trends in Natural Sciences

Abstract
Spending time in nature or simply watching a video or photos from nature seems to improve self-centeredness, becoming aware of personal needs and means to satisfy them. It also has a restoring effect on cognitive functions and the human brain. Fewer studies were conducted on how spending time in nature affects the sense of belonging and the appreciation of other people. The article presents the results of an experiment involving first year Clinical Psychology students participating in a Health Psychology and Psychosomatics course. The participants in the experimental group watched a film presenting the life of several families of animals and birds in the wilderness. Afterwards, they completed two measures: one for the sense of belongingness and the other with awe for the significant people in their life. The control group only completed the questionnaires as part of regular activities. The results show that, after watching the film from wilderness, the feelings of timelessness, the physiological aspects and greatness of awe towards a significant other were significantly affected, while feelings of Self, connectedness, feeling accepted/included or rejected/excluded showed no significant differences for the two groups.

Keywords: acceptance, awareness, compulsions, entitlement, obsessiveness, rejection.

1. INTRODUCTION

Awe is a complex human experience which Immanuel Kant or Emund Burke related with the sublime. Darwin associated it with the emotion of wonder (Yaden et al., 2018) and Maslow with peak experiences and good life in general (Maslow, 2013). The psychological perspective proposed by Keltner and Haidt (2003) refers to the main cognitive appraisals central to awe experiences (e.g. admiration, epiphanic experiences, elevation): vastness and the need for cognitive accommodation of internal structures to assimilate the new experience with an emotional tone on the boundary of fear and pleasure, and other five involved in the hedonic tone of the emotion: beauty, perception of exceptional ability, people who display strength of character as virtues, but also threat, and, on the verge, supernatural causality leading to the idea of an action performed by a supernatural entity.
According to Monroy and Keltner's review (2022) the beneficial effects of awe may be experienced in different contexts: natural environment and phenomenon, mystical encounters and spiritual experiences, collective movement (music, dance and ceremonies), and administration of psychedelics (those involved reported that it produced "one of the most significant spiritual experiences"). The beneficial effects of positive awe, a distinct positive emotion with specific facial expression (more open eyes and mouth, raised inner eyebrows, Shiota et al. 2017) results from setting in motion several

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processes: social integration and prosocial relationality (focused on helping, donating sharing resources) accompanied by a diminished focus on self, resulting in a heightened sense of meaning supported by specific shifts in neurophysiology (reduced sympathetic activation and inflammation and increased oxytocin) with effects size from .20 to .48. This results in reduced anxiety, depression, autoimmune diseases and cardiovascular problems, and less feeling rejected socially. The authors note that "threat-based awe – being in the middle of an earthquake or flood, feeling judged by an omnipotent god, or being part of a protest march that turns violent – are not likely to bring about the benefits of interest here and could yield (Monroy & Keltner, 2022).

Liu and colleagues (2023) took into consideration the double aspects of awe of nature: the positive one (when it is considered a positive emotion), and the negative one (involving threat). While positive awe increases nature connectedness and further well-being, while threatening awe makes people feel more powerless, which added to increased connectedness, led to no effect on well-being.

Sawada and Nomura (2020) showed that both positive and negative awe made people perceive themselves as having a small size. While the openness to experience and conscientiousness (as personality trats), and the sense of connection with community and society remained the same after watching a 2-minutes films with nature inspiring awe (positive or negative), the persons experiencing positive awe reported a higher tolerance for the strong norm violations, but not for weak and appropriate violations of norms, while negative awe did not have a significant effect of all. Positive awe influenced people to volunteer more time for strangers than negative awe, while no matter the valence of awe, it increased the willingness to donate more money, higher awe being associated (Guan, Chen, Liu, & Zha, 2019). Dispositional awe may positively predict prosocial behavior, but only after controlling the sense of a smaller self. The path would be mediated by connectedness with others and nature and by empathy (Jiao & Luo, 2022). One possible explanation would be that awe changes focus from oneself to the exterior, helping in understanding the needs of others, but the self-importance has a distinct effect. Indeed, an acute awareness of a person's suffering, coupled with a sense of a smaller self, would lead to feeling powerless.

Especially a certain type of awe, moral elevation (Thomson & Siegel, 2015), determines the release of oxytocin, an affiliative hormone, but also with lactation in breastfeeding mothers (Silvers & Haidt, 2008).

A lower sense of belonging was associated with both history of prior suicide attempts and suicidal ideation, and with the severity of depression and hopelessness (Fisher et al., 2015). Thwarted belongingness, when high, along with perceived burdensomeness (feeling like a burden for others) mediated a stronger effect of distress on suicidal ideation (Gill et al. 2023). The effect was more important for burdensomeness. By analyzing the text messages two weeks before the suicide attempt compared with those when they experienced positive or depressive mood, suicidal ideation with no attempt, Ladis and colleagues (2023) found that suicide attempt survivors sent more frequently text referring to thwarted belongingness and burdensomeness in the first situation. The effect was also significant when comparing the positive mood period with that characterized by suicidal ideation. The need to belong and to feel safe are both deficit needs, according to Maslow's theory of motivation, requiring systematic gratification, allowing the person to focus then on the satisfying of the following deficit needs, that of love, appreciation and esteem, and furthermore on the need for Self-actualization, a growth need (Maslow, 2013).

The objective of our research was to investigate the effects a film with the natural life in the wilderness has on the feeling of awe, belongingness and feeling less rejected. The main hypothesis was that

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watching a film with wildlife may make the participants feel more like they belong and less rejected and increase the feeling of awe (especially the feeling of self,

2. MATERIALS AND METHODS

To accomplish the objectives, we conducted a cvasi-experimental study, with psychometric and statistical methods.

The participants in the experiment were 18 persons (9 in the experimental group and 9 in the control one), 8 women in each group, all of them students in the first year at the Clinical Psychology: Assessment and Intervention, as part of a practical activity proposed in a practical lesson on Health Psychology and Psychosomatics. The participants in the experimental group had a mean age of 30.67 (SD=11.38) and those in the control group had a mean age of 45.13 (SD=9.22). The repartition in the experimental group was based on their presence at the same time at the practical lesson (when they were informed about the research and the activity), while the others voluntarily completed the questionnaires online.

Materials and methods:

The General Belongingness Scale (GBS, Malone, Pillow, & Osman, 2012) reunites 2 scales, each with six items, one assessing feeling accepted or included, and the other, with reverse-scored items dedicated to the opposite of feeling rejected or excluded. Both the English online form and the Romanian one have good validity and reliability, the internal consistency (alpha Cronbach), being .703 for the former dimension, and .845 for the latter (Răban-Motounu, 2022), the Romanian version. *The Awe Experience Scale* (AWE-S, Yaden et al. 2018) is a made of 30 items formulated as personal subjective experiences, grouped on six dimensions, each with 5 items: altered time perception, self-diminishment, connectedness, vastness, physical sensations, and need for accommodation. The English form had very good validity and reliability (with alpha Cronbach from .80 to .91, and .93 for the total score). The respondents mention an experience when they have felt awe, and rate on a scale with seven gradations how much they lived a certain subjective experience from *strongly disagree* to *strongly agree.*

Procedure: The participants in the experimental group were those present at a practical lesson in Health Psychology and Psychosomatics. They were invited to watch on a video projector a film about wildlife in different seasons, presenting the life of several families of birds and animals in their natural habitat, including nurturing baby birds and animals. Afterwards they completed the online questionnaires, referring to the awe lived in relation to another person in their life. The participants in the control group filled in the questionnaires anonymously, online, with the same instructions.

3. RESULTS AND DISCUSSIONS

The first hypothesis was that there would be significant differences in feeling Accepted/Included after watching the film from wilderness between the scores from the experimental group and the control group. The collected data did not confirm the hypothesis (t=-,913 p=.375), as shown in Figure 1.

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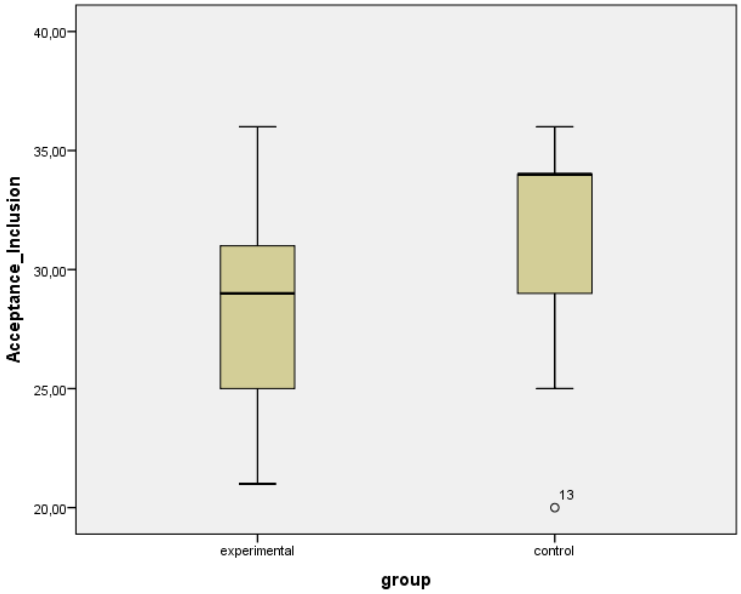

Figure 1. The differences between the experimental and the control group on the Acceptance/Inclusion dimension of GBS

The second hypothesis was that watching the film from nature would determine differences in the feeling of exclusion (ore rejected). The data did not confirm the second hypothesis either (t=.000, p=1.0) (Figure 2).

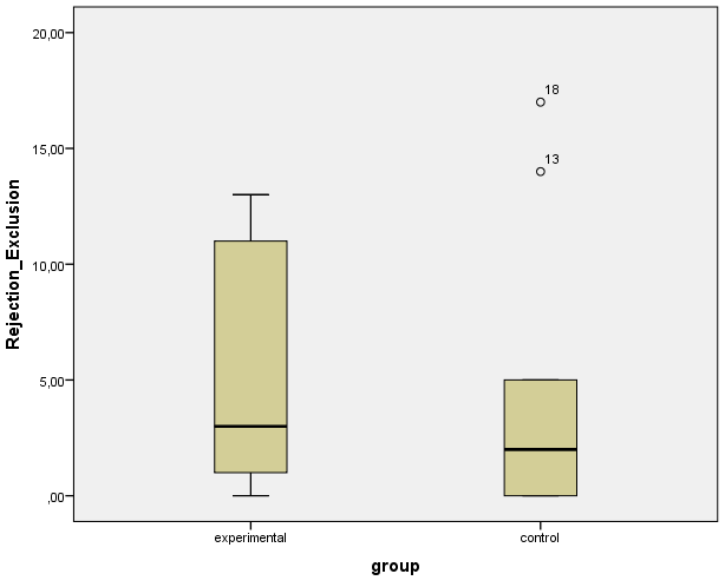

Figure 2. The differences between the experimental and the control group on the Rejection/Exclusion dimension of GBS

The third hypothesis was that watching the film from wilderness would determine a difference in the scores on the different dimension of awe. The participants in the experimental group had significantly lower scores on the total *Awe-Scale* (t=-2.809, p=.0131, see Figure3), explained by the decrease of scores on the a*ltered time perception* (t=-3.364, p=.004, as in Figure 4), v*astness* (t=-2.637, p=.018,

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as in Figure 5), and on the *physical sensations* dimensions of awe (t=-2,819, p=.012, as illustrated in Figure 6). The data did not show any significant difference for the other aspects of awe: S*elf-diminishment* (t=-.563, p=.581, Figure 7), *connectedness* (t=-1.793, p=.092, Figure 7) nor for *the need for accommodation* (t=-1.949, p=.069, Figure 8).

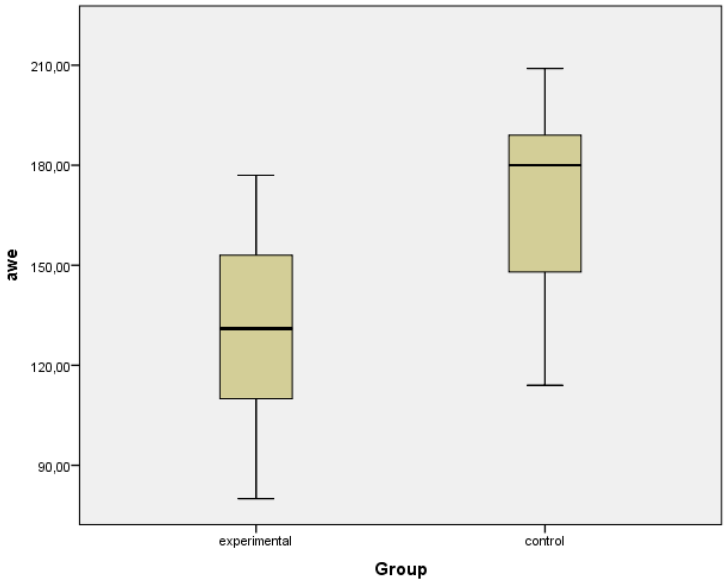

Figure 3. The differences between the experimental and the control group on the AWE-Scale

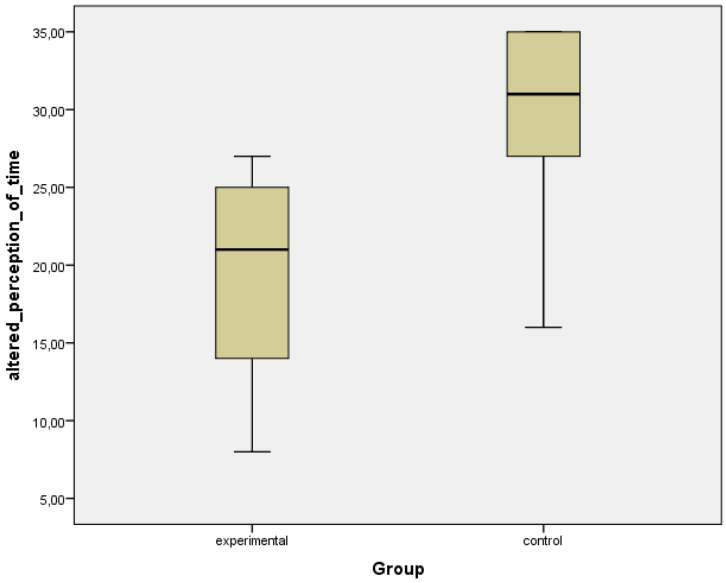

Figure 4. The differences between the experimental and the control group on the Altered perception of time dimension of AWE-S

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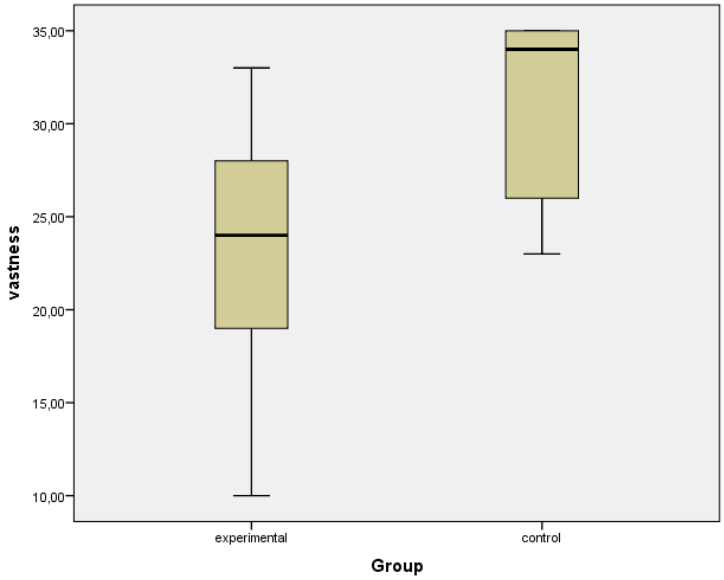

Figure 5. The differences between the experimental and the control group on the Vastness dimension of AWE-S

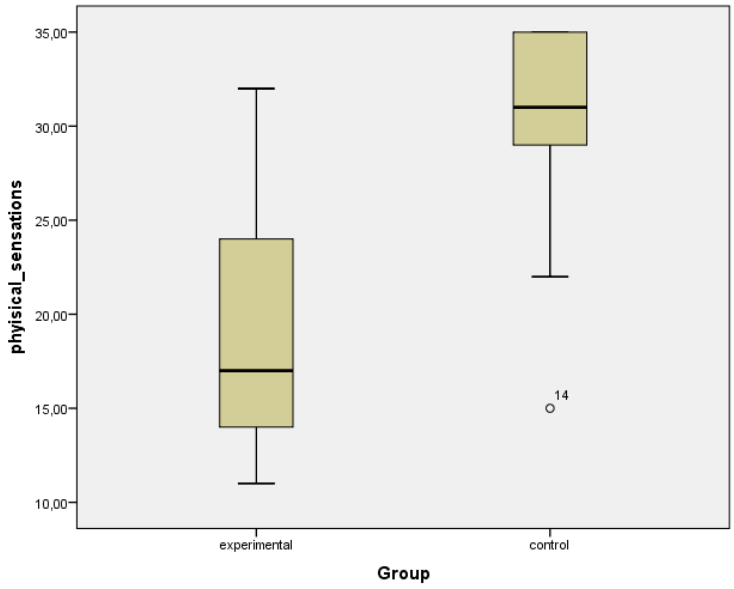

Figure 6. The differences between the experimental and the control group on the Physical sensations dimension of AWE-S

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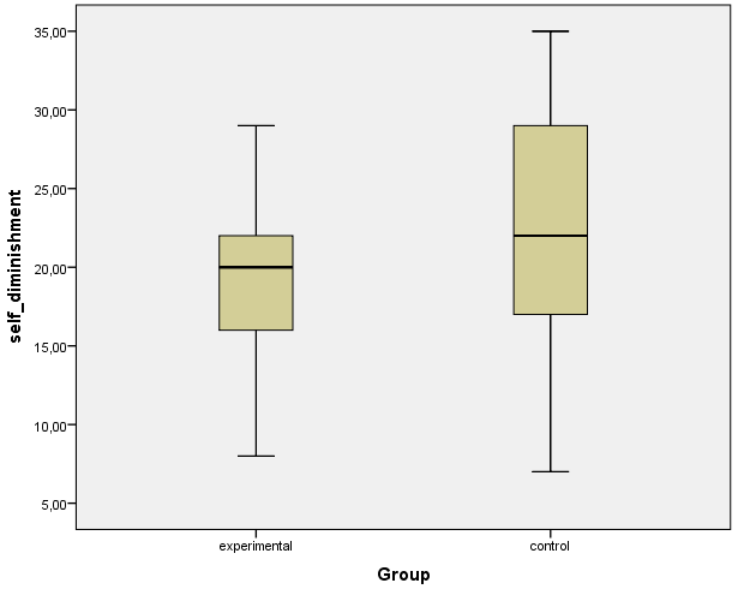

Figure 7. The differences between the experimental and the control group on the Self-diminshment dimension of AWE-S

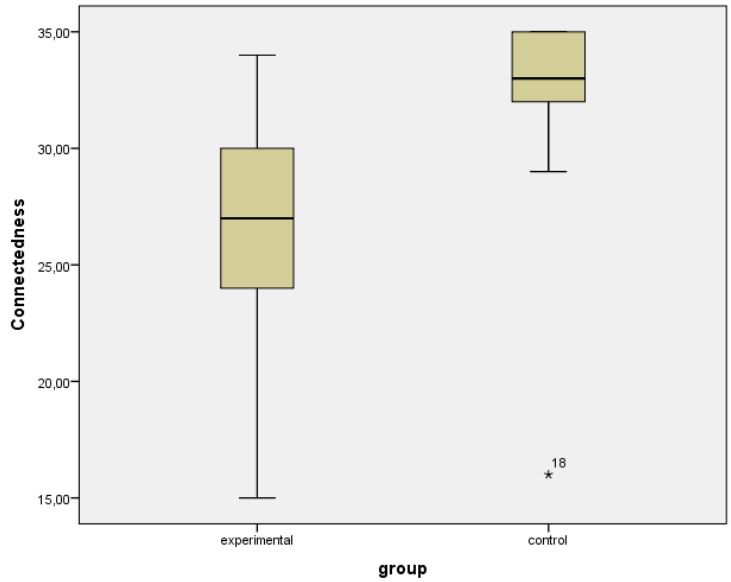

Figure 8. The differences between the experimental and the control group on the Connectedness dimension of AWE-S

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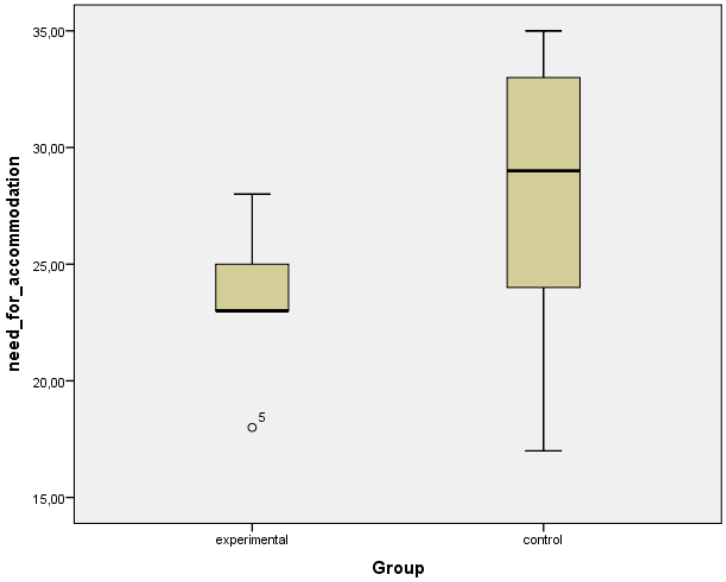

Figure 9. The differences between the experimental and the control group on the Need for accommodation dimension of AWE-S

The objective of our research was to study the effects watching a movie with families of birds and animals living in wilderness has on belongingness and the awe feeling in relation to another person. While the feeling of being included, accepted and the lack of feeling rejected or excluded showed no significant modification, the feeling of awe when thinking of a significant other decreased significantly. There were especially three dimensions responsible for this modification: the alteration of time perception, becoming aware of the vastness, and the physical sensations in the recalled situation(s). The other dimensions, self-diminishment, need-for-accommodation, and connectedness, showed no differences. Seeing the natural life of families of animals in nature did not impose a need to adjust the personal meaning system, to integrate the new experience. Experience with a film from nature does not increase the sense of connection with other people, nor the feeling of belonging. One can notice the interesting combination between the lack of change in the self-diminishment and the lowering of the recollection of changes in the physical sensations and the perception of time, indicating a possible adjustment in the perspective of self-in the world, integrating the self-knowledge after the awe experience in the model of the world and processes that are the base of time perception. It seems that the participants watching the movie presenting the life cycle in nature across one year also integrated the idea of change and some internal, intuitive model of change allowing them to have a more nuanced and natural perception and understanding. While adjusting the internal model of the functioning of the self into the environment, the person does not feel less connected, as if she becomes more aware and accepting of oneself as an individuality, but capable of sensing the changes in the world around and using them intuitively to further support the feeling of belonginess, even though different from the world around. This creates an internal basis for lowering the probability of living negative awe in the future, with all the negative effects. This is in line with the findings of Vitalia (2017), that getting in sensorial contact with natural elements helps in reducing state anxiety Starting from this experiment, further research may integrate more specific assessments of these functions and measurement of awe in the present.

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4. CONCLUSIONS

Watching a film from nature seems to give the opportunity to adjust in a safe environment the personal model of the world, facilitating the development of self-image and the dynamic model of the world, and thus reducing the possibility to experience negative awe in the future. Getting closer to nature does not make people feel further from others but activates personal ways of processing that help in accommodating to living the experience of awe in general, maintaining the sense of belonging. Further research is necessary to explore in detail the effects of such an experience on the sense of self, perception of time and other psychological mechanisms, like working memory, and attention.

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