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## Physiology & Behaviour

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### A Social Study on the Conscious Physiology & Behaviour of the Yawn

Rachel Earing <sup>ab</sup> <sup>a</sup> Live4Energy Training College <sup>b</sup> The Great Big Yawn CIC

Research gathered for The Great Big Yawn CIC collated from 15 questions completed by 73 participants from around the globe shows the following results from March 2024 – 10<sup>th</sup> November 2024:-

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#### Abstract

This study explores the diverse interpretations and experiences associated with yawning, as reported by participants in The Great Big Yawn Survey, conducted from March to November 2024. Survey responses reflect varied perceptions of yawning, from physiological interpretations (*e.g., tiredness or need for oxygen*) to more experiential views (*e.g., stress release, energetic shift*). This article examines these insights in relation to current scientific literature, aiming to bridge the observed perceptions of yawning with existing research on its physiological and psychological implications.

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#### Introduction

Yawning is commonly associated with fatigue, boredom, or need for oxygen, yet emerging studies suggest that its mechanisms may also serve functions related to thermoregulation, state transitions, and social signalling. This study investigates how survey participants from The Great Big Yawn project perceive yawning, both through direct experiences and broader associations. By juxtaposing these findings with scientific research, this report aims to deepen understanding of yawning as a multifaceted phenomenon with both physiological and potentially therapeutic relevance.

#### Methodology

The initial survey included responses across a diverse age range and multiple occupations. Survey requests were sent out through Social Media to generate a random selection of results from around the globe. There were 12 multiple choice questions and 2 open comment questions, the survey explored yawning frequency, reasons for stifling yawns, sensory effects, emotional states, and the subjective relief

associated with yawning. Data was analysed to identify trends and correlate them with existing scientific research on yawning's physiological and social aspects.

## Results

### 1. Tiredness and Relaxation

- Many participants described yawning as a response to tiredness, with comments such as *"Tiredness," "Tired,"* and *"A release my body needs."* Some noted a connection to relaxation or unwinding, such as *"Relaxation and/or release"* and *"Feeling comfortable, safe, at home."* These responses align with studies suggesting that yawning may signal a need for rest or provide a state transition from wakefulness to sleep, potentially helping prepare the body for a restful state **\*\***(Gallup, 2011).

### 2. Physiological Needs: Oxygen and Thermoregulation

- Several participants suggested that yawning serves a biological function related to oxygen intake: *"Body needs more oxygen," "It's a sign of a build-up of CO<sup>2</sup> in the lungs,"* and *"A release my body needs."* This perspective is well-supported by scientific literature which posits that yawning increases oxygen intake, reducing CO<sup>2</sup> levels in the blood **\*\***(Provine, 2005). Additionally, recent research highlights the role of yawning in brain cooling through thermoregulation **\*\***(Gallup & Gallup, 2008), a concept echoed by a few participants' descriptions of yawning as a *"shift of energy."*

### 3. Stress and Energy Release

- Some respondents associated yawning with the release of stress and energy: *"Releasing pent-up energy," "A release when stressed,"* and *"A sense of returning to a place where one feels they belong."* These reflections suggest that participants may perceive yawning as part of the body's self-regulatory mechanisms, potentially linked to shifts in energetic or emotional states. Studies have shown that yawning can be part of a coping mechanism during moments of psychological stress, providing a form of autonomic nervous system regulation **\*\***(Baenninger, 1997).

### 4. Social and Contagious Yawning

- Participants noted yawning's contagious effect, with comments like *"I yawn more when I think about yawning or give it some focus"* and *"It's crazy how the mainstream narrative is that it's rude to yawn."* Scientific research on contagious yawning posits that it may be related to empathy and social bonding **\*\***(Platek, Critton, Myers, & Gallup, 2003). Participants' reflections suggest an awareness of social norms

surrounding yawning and its contagious nature, hinting at yawning's role in group dynamics.

### Additional Insights on Yawning

Participants shared broader perspectives on yawning beyond immediate interpretations:

- *"I yawn after healing or energy work," "It can be distracting and stop others talking,"* and *"Yawning is a healthy process and should never be suppressed."* These comments align with recent discussions on yawning's role in therapeutic practices, where it has been linked to relaxation and parasympathetic activation, facilitating a state of calm **\*\***(Levin, 2014).

### Survey Responses on Yawning Perceptions

A summary of key participant responses, representing the primary themes identified, is provided below:

<b>Participants Comments</b>	<b>Theme</b>
<i>Tiredness</i>	<i>Fatigue</i>
<i>Clearing Out Old Information</i>	<i>Energetic Release</i>
<i>A Release My Body Needs</i>	<i>Physiological Regulation</i>
<i>Contagious Effect is Fascinating</i>	<i>Social Interaction</i>
<i>Regulation</i>	<i>Self Regulation and Stress Relief</i>
<i>Yawns are so important and my yawns want to be big yawns</i>	<i>Therapeutic Perception</i>
<i>Watery eyes is what happens most when I yawn</i>	<i>Physical Symptom</i>
<i>I yawn more when I think about yawning or give it some focus.</i>	<i>Contagious Yawning</i>

### Discussion

The survey responses suggest that yawning is perceived by individuals as a complex, multifaceted process with both physiological and psychosocial dimensions. The majority of responses were consistent with traditional views of yawning as an indicator of tiredness and oxygen demand, supporting findings by **\*\***Provine (2005). Additionally, interpretations around relaxation and energy release align with research suggesting yawning's role in emotional and energetic regulation **\*\***(Baenninger, 1997).

Contagious yawning was a recurring theme among participants, indicating potential social bonding and empathy effects, which are well-supported by empirical studies **\*\***(Platek et al., 2003). Furthermore, therapeutic interpretations of yawning, such as

those by participants who associated it with release during healing work, reflect ongoing discussions about yawning's role in complementary therapy and stress relief.

## Conclusion

The findings from The Great Big Yawn Survey reveal that yawning is interpreted through varied lenses, reflecting physical, emotional, and social dimensions. This aligns with scientific literature, which identifies yawning as a multifunctional behaviour involved in physiological regulation, social signalling, and emotional release. The survey results underscore the need for further exploration of yawning's potential therapeutic uses, as participants indicated that yawning in itself might serve as a natural coping mechanism for stress and emotional regulation.

## Acknowledgements

We would like to thank all contributors from around the world who randomly consented to complete the survey for our first batch of yawning results.

This study contributes to a growing body of research on yawning, offering insights into its subjective and therapeutic interpretations within diverse community settings. Further research may reveal even more nuanced applications for yawning in therapeutic practices, particularly in the context of mental and emotional well-being.

## References

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