

An emotional journey from definition to measurement: a review on food evoked emotions



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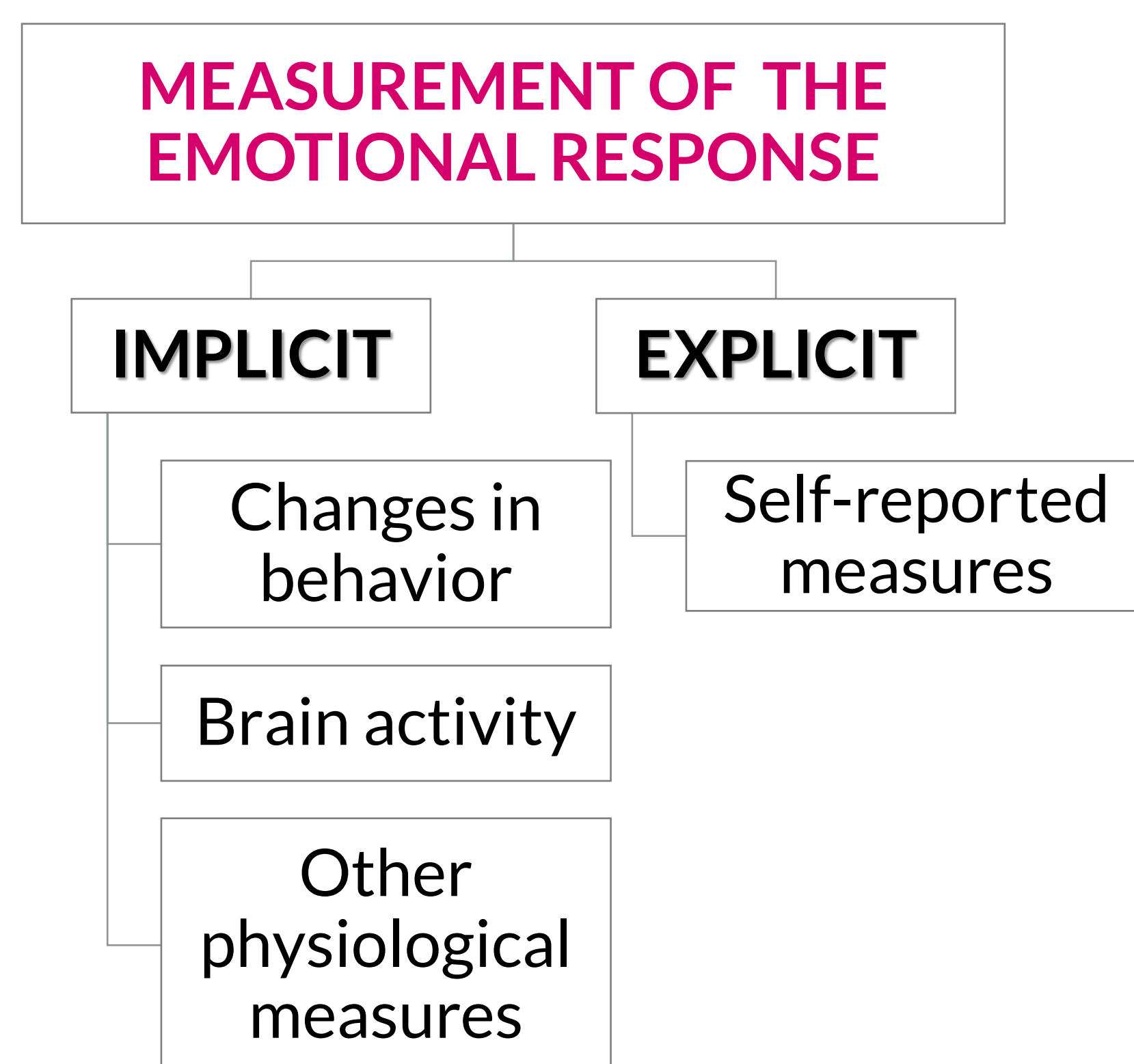
BACKGROUND: One of the aspects which differentiate consumers' responses towards food product consumption and choice is the **emotional response**.

A deep knowledge about what an emotion is and how can it be **measured** might help researchers to choose the most appropriate method for the purpose of a specific study.

This poster shows a classification of the different methods used to measure the emotional response.

RESULTS

- There are two different types of measurements: implicit and explicit.



- Each method has **pros** and **cons**, so there is not a single method suitable to collect the emotional response. The combination of some of them is the best solution.

Emotions are complex to measure because they involve five components. It does not exist a single method capable to collect the information that better fits to the real emotional response. The combination of different methodologies seems to be the better option to obtain a more realistic approach to emotions.

EMOTION COMPONENT	MEASUREMENT METHODOLOGIES	
EXPRESSION Communication of reaction and behavioral intention	Face (Implicit)	Facial Action Coding System (FACS), Electromyography (EMG), Automated facial image analysis, Thermal analysis of facial muscle contractions.
	Voice (Implicit)	Amplitude, Frequency
ACTION TENDENCIES Preparation and direction of action	Explicit	Push and pull reactions (cards, joysticks) Self-reports of action tendencies
	Implicit	Frontal asymmetry by Electroencephalography (EEG) Electromyography (EMG)
BODILY REACTIONS System regulation	Implicit	Cardiovascular measures (e.g.: heart rate), Electrodermal measures (e.g.: skin conductance), Respiratory activity, pupil diameter
	Explicit	"emBODY tool": consumers color regions whose activity becomes stronger (subjective perception)
APPRAISAL Evaluation of objects and events	Explicit	Self-reported questionnaires
	Implicit	Facial expressions, Voice, Physiological measures Brain-imaging methodologies
FEELINGS Monitoring of internal state and organism-environment interaction	Explicit	Self-reported: verbal or non-verbal measures
	Implicit	Physiological measures (e.g.: skin resistance) Brain-imaging methodologies

"There is no single gold-standard method for emotional measurement, and only by assessing all components of the emotional response, a comprehensive measure of an emotion could be obtained".

(Scherer, 2005)

PROS AND CONS OF IMPLICIT AND EXPLICIT METHODS

IMPLICIT METHODS

Pros	Cons
<ul style="list-style-type: none"> - Good continuity. - Reflect unconscious emotional response. - Record the evolution of the emotional response. 	<ul style="list-style-type: none"> - Most of the implicit methods measure arousal or activation rather the valence. - Require huge training in collection and interpretation of data. - Different process could "hide" implicit measures : food consumption process, mind state of consumer, and variations in the nervous system, etc.

EXPLICIT METHODS

Pros	Cons
<ul style="list-style-type: none"> - Good ability to measure and to detect subtle differences in emotions. - Easy to use. - Easy to interpret. - Cheaper than implicit ones. 	<ul style="list-style-type: none"> - They are not continuous. - Suffer from response biases. - May not cover subconscious processes.

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