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# Behavior Based Safety BPS 2323

## Sensation, Perception and Perceived Risk

by

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# ACKNOWLEDGEMENT

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# Chapter Description

At the end of this chapter, student should be able to explain about sensation, perception and perceived risk in relation to human being.

## Expected Outcomes

Students able to explain:

- How human generate sensation.
- Why human perception is vary among them.
- What to do to ensure that human perceived risk is high so that, people concern about safety.

References:

1. Geller, E.S. (2001). "Working Safe, 2<sup>nd</sup> ed". Lewis Publishers.
2. Geller, E.S. (2005). Behavior-Based Safety and Occupational Risk Management. *Behavior Modification*. 29(3):539-561.
3. Rundmo, T and Nordfjaern, T (2017). Does risk perception really exist? *Safety Science*. 93:230 – 240.



# Content

- Introduction of sensation
- Perception and the bias to have different perception among human
- Risk judgment and perceived risk



# Introduction

**Sensation**



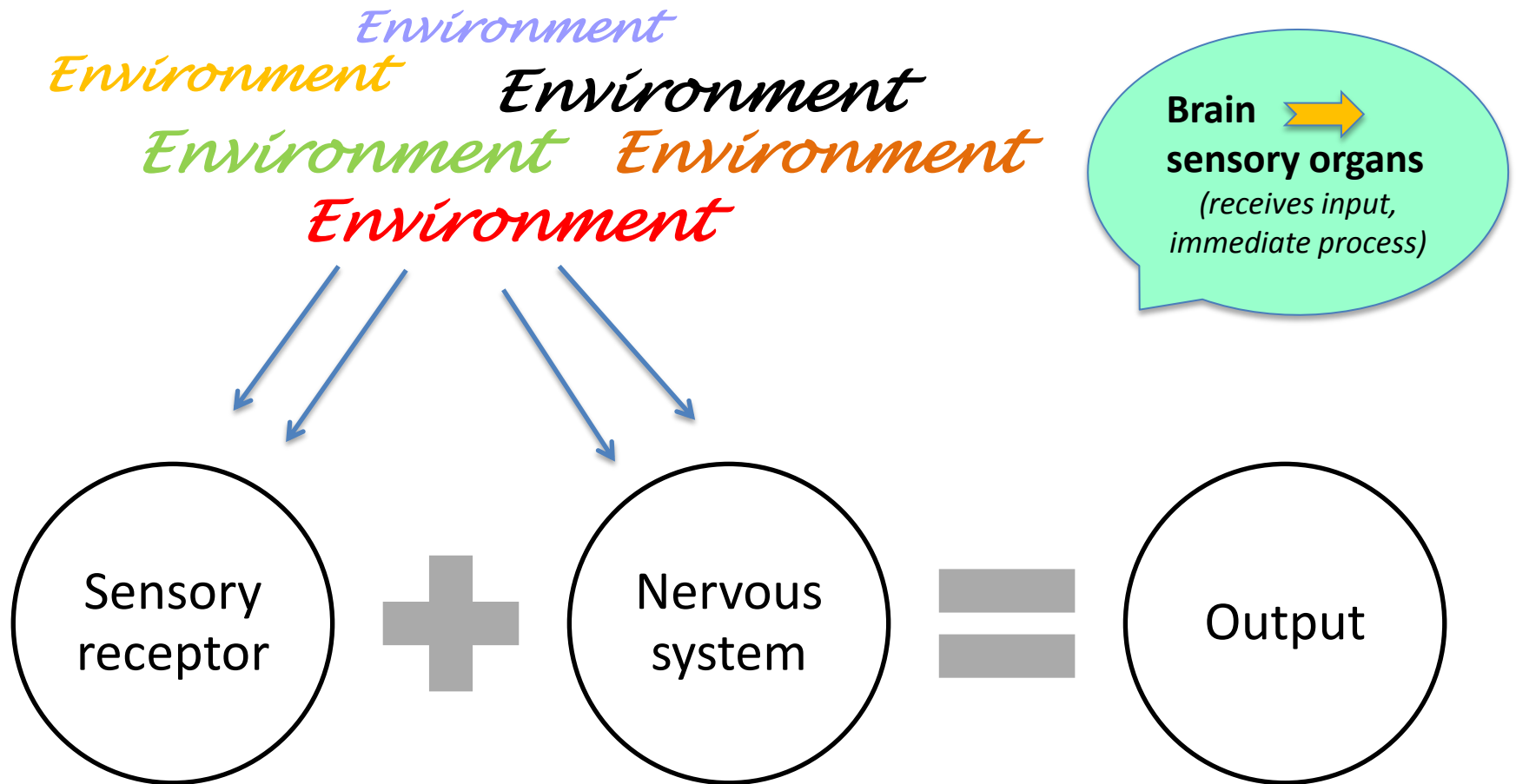
**Perception**



**Perceived Risk**



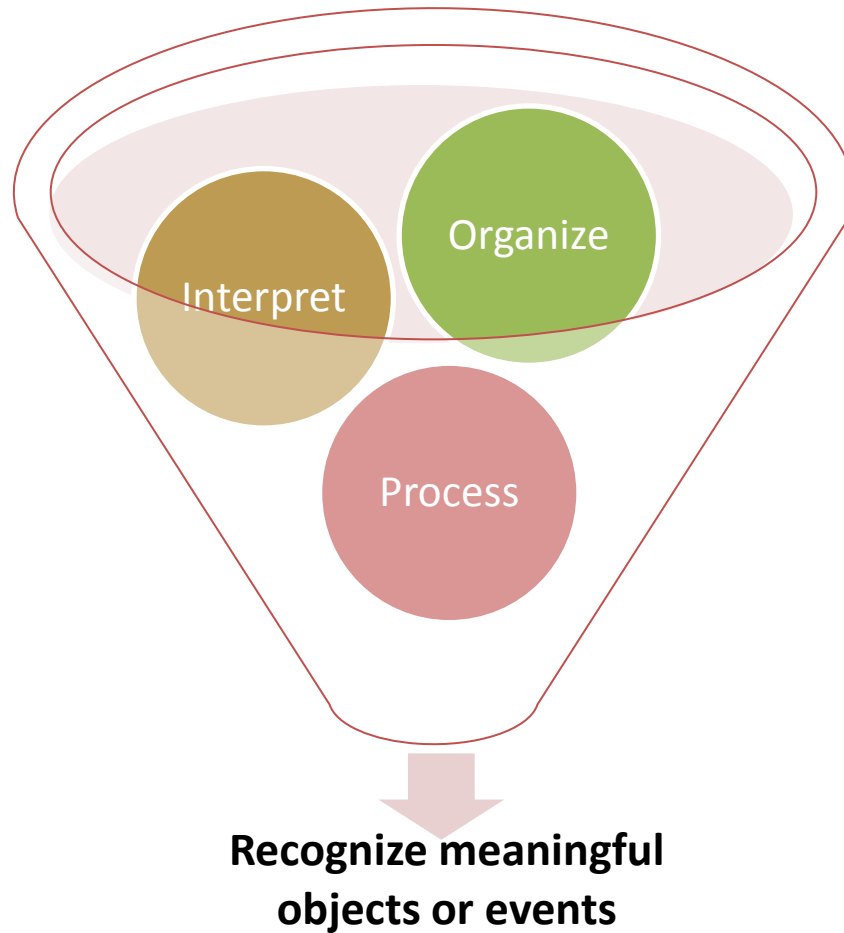
# Sensation



**.BRAIN.**



# Perception



**.BRAIN.**

# Sensation vs Perception

## **Sensation:**

Most of the time is constant among us

## **Perception:**

Vary widely among human



Quickly Say the Color.  
(*Not the word*)

**RED**

**BLUE**

**GREEN**

**YELLOW**

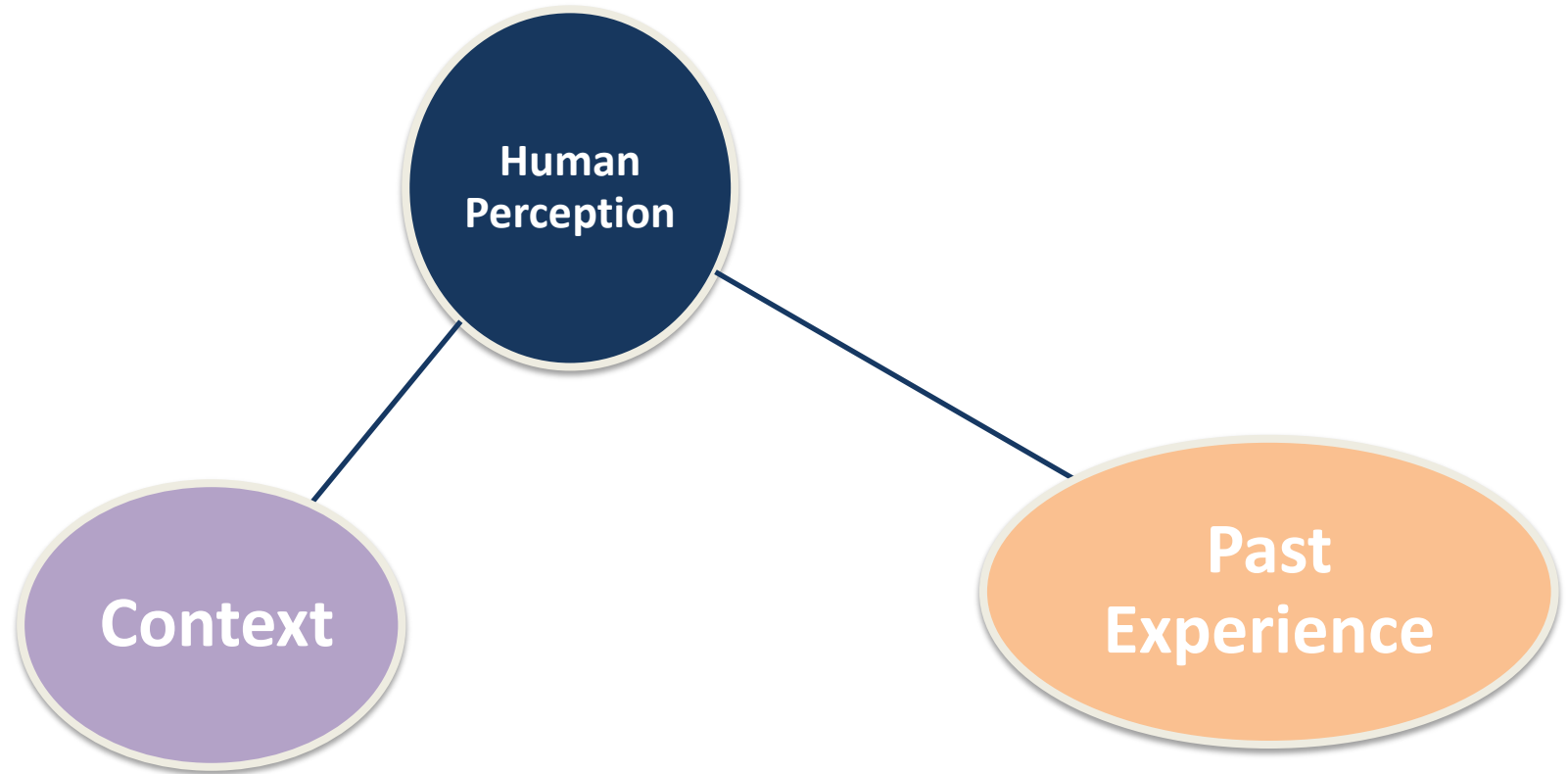
**WHITE**

# Human Sensation and Perception

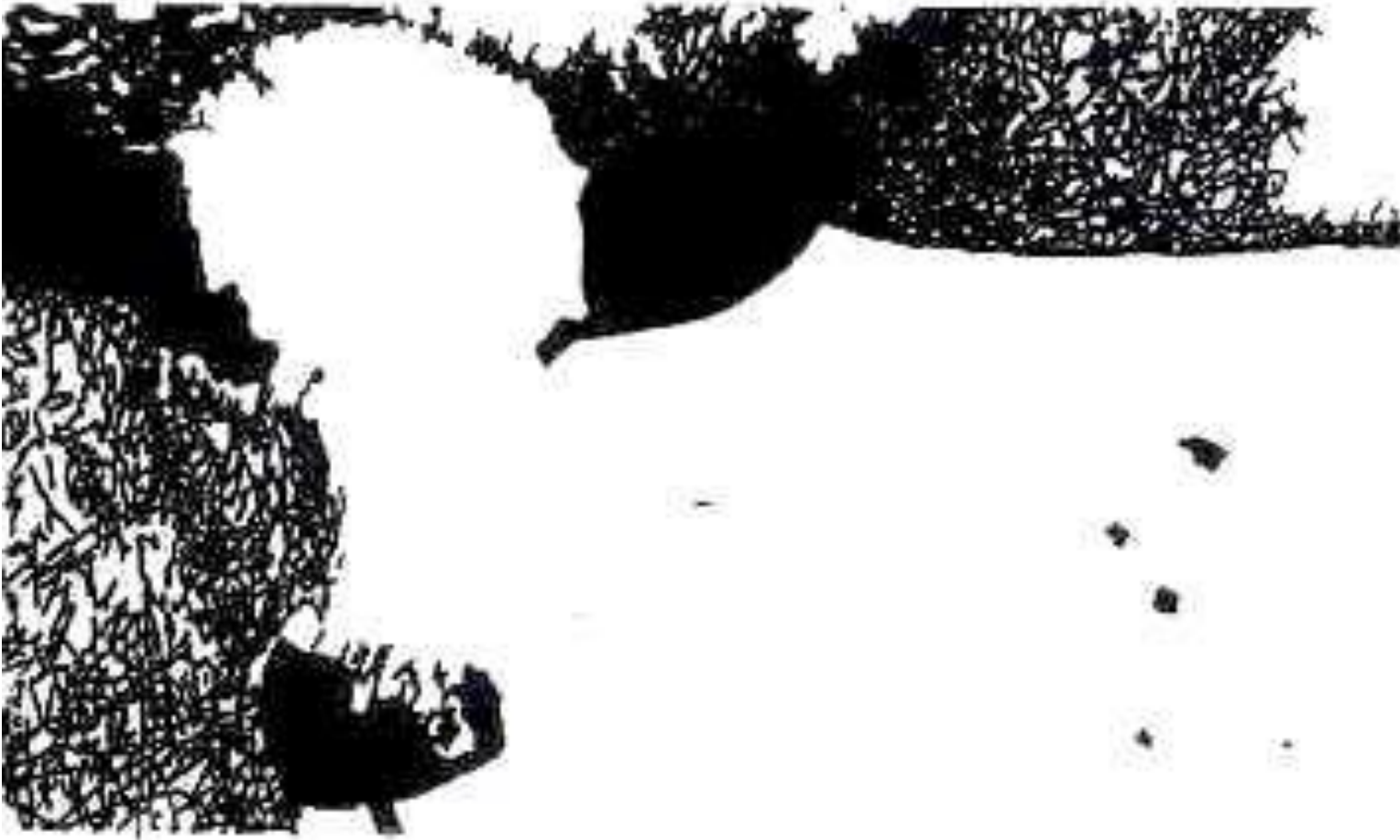
Human sense do not take in **ALL**  
the information that available



# Bias of Human Perception



# Bias in Perception

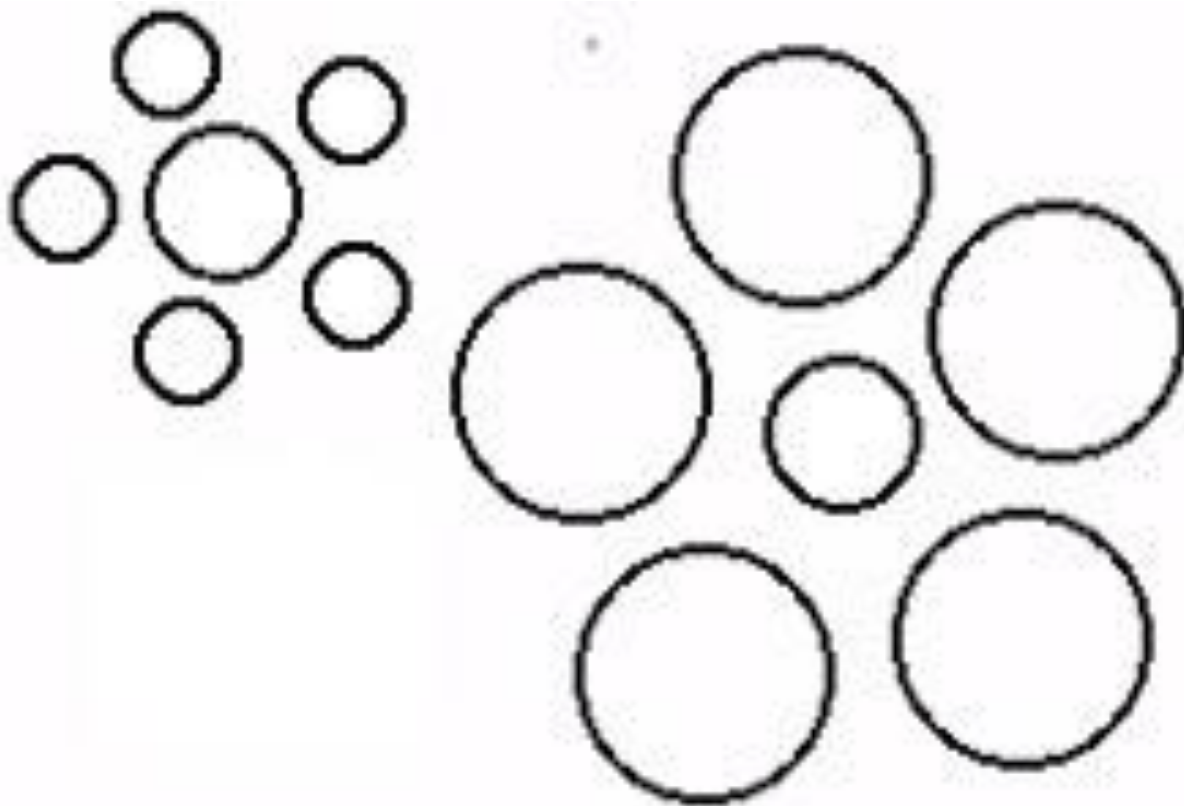


This example is originally from Dallenback, K.M. (1951) *A puzzle-picture with a new principle of concealment*. *American Journal of Psychology*, 54, 431-433. This version is from [http://commons.wikimedia.org/wiki/File:Cow\\_Illusion.jpg](http://commons.wikimedia.org/wiki/File:Cow_Illusion.jpg)

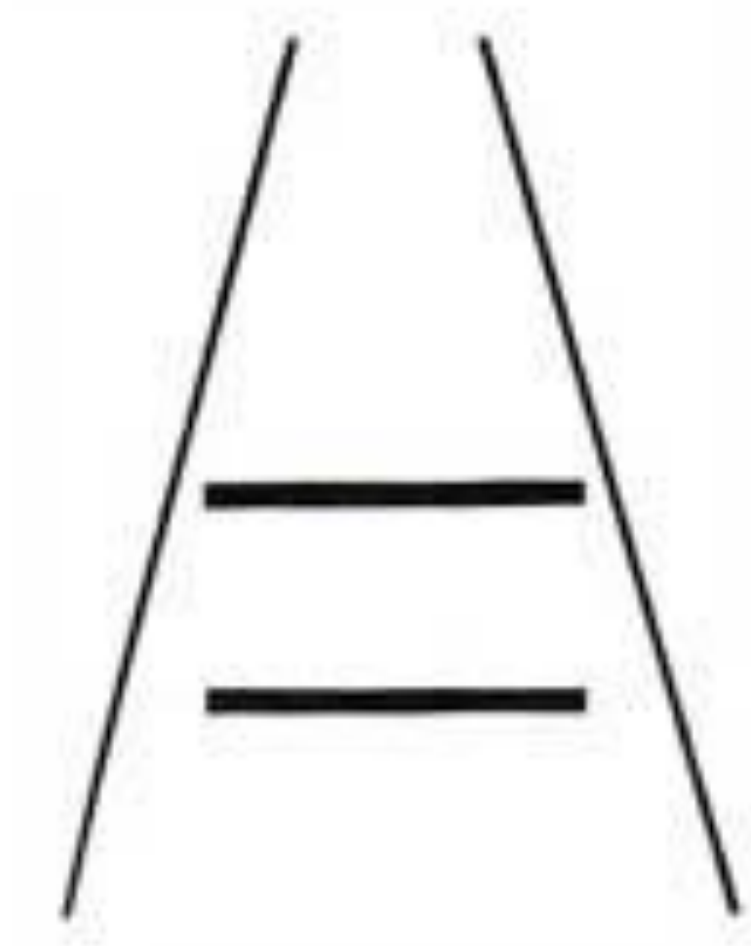


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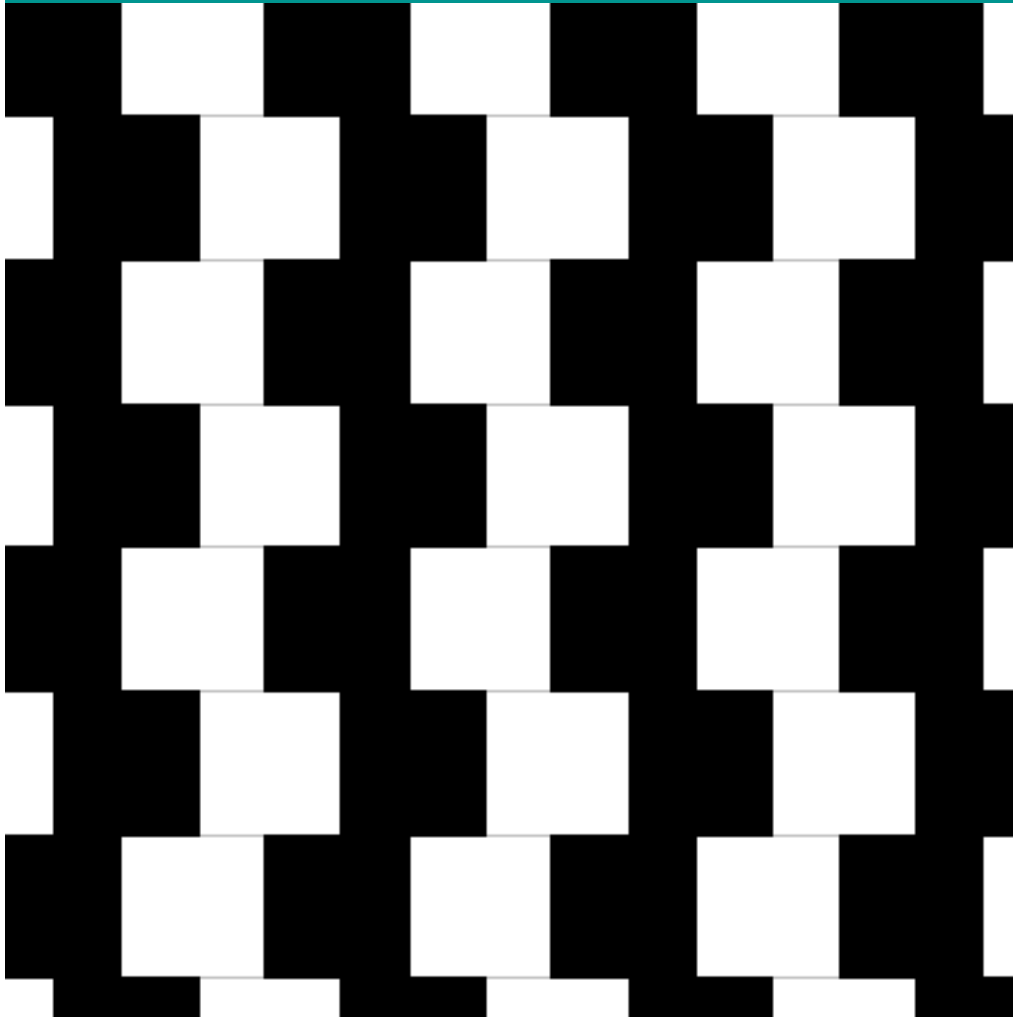
# Bias in Perception



# Bias in Perception



# Bias in Perception



[https://commons.wikimedia.org/wiki/File:Cafe\\_Wall\\_Illusion.png](https://commons.wikimedia.org/wiki/File:Cafe_Wall_Illusion.png)



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# Risk Perception

Workers'  
perception



Demand for risk  
mitigation

**Predictor Variables**

Source: Rundmo and Nordfjaern (2017)



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# Risk Perception

Source: Rundmo and Nordfjaern (2017)

## Predictor Variables



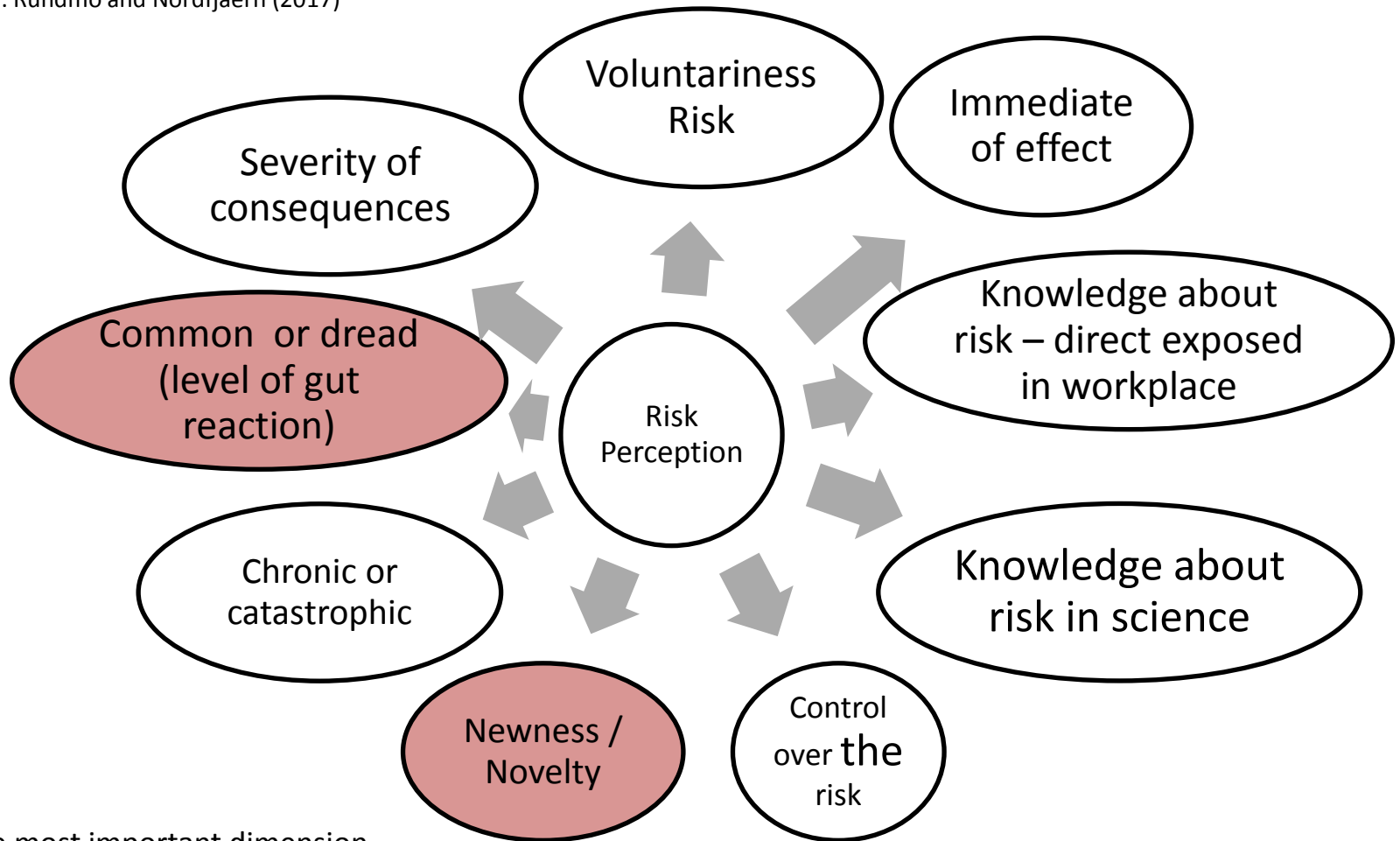
Prophet Muhammad (saw) said,

**“Removing a harmful thing from the path is an act of charity”**

.Sahih al-Bukhari.

# Source of Risk Perception

Source: Rundmo and Nordfjaern (2017)

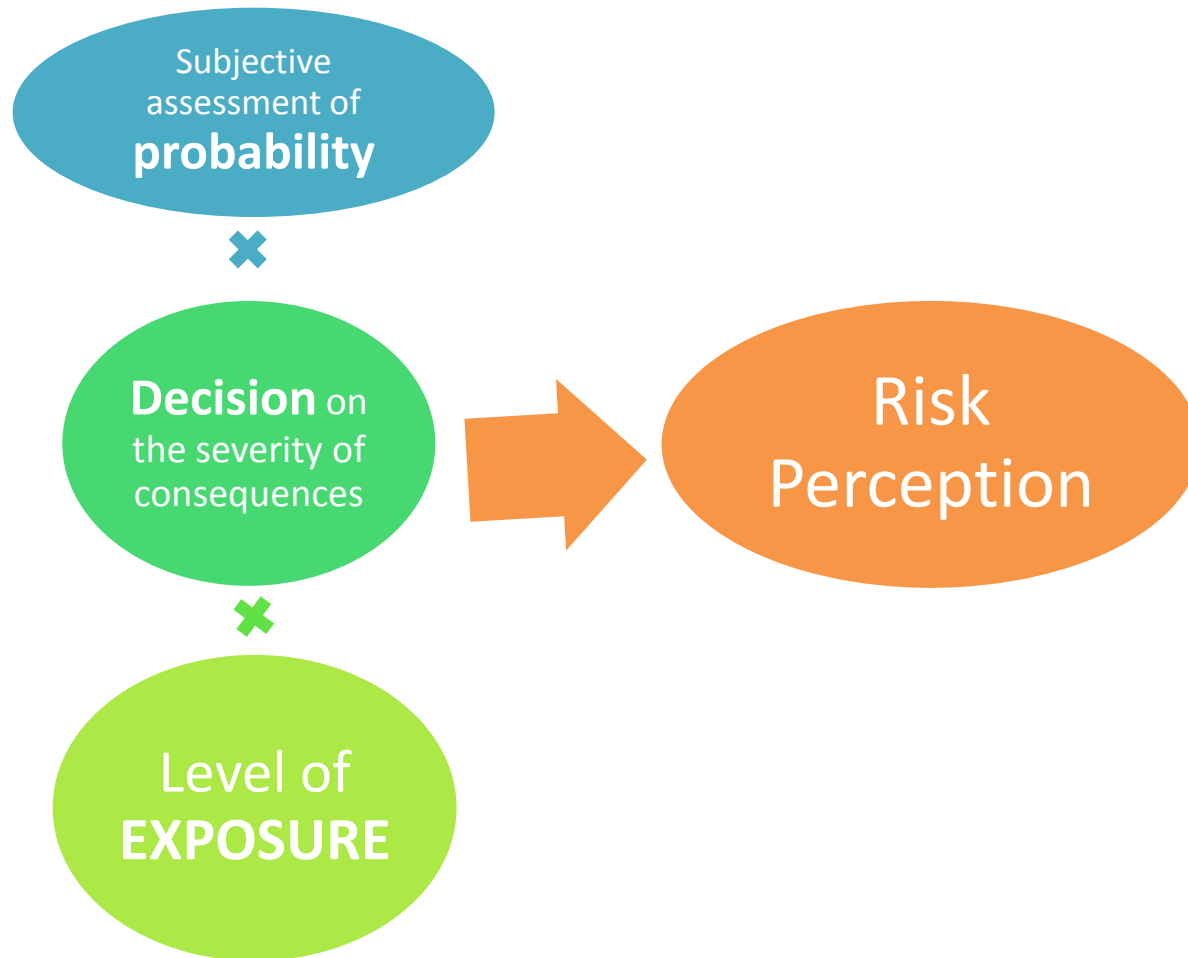


 The most important dimension

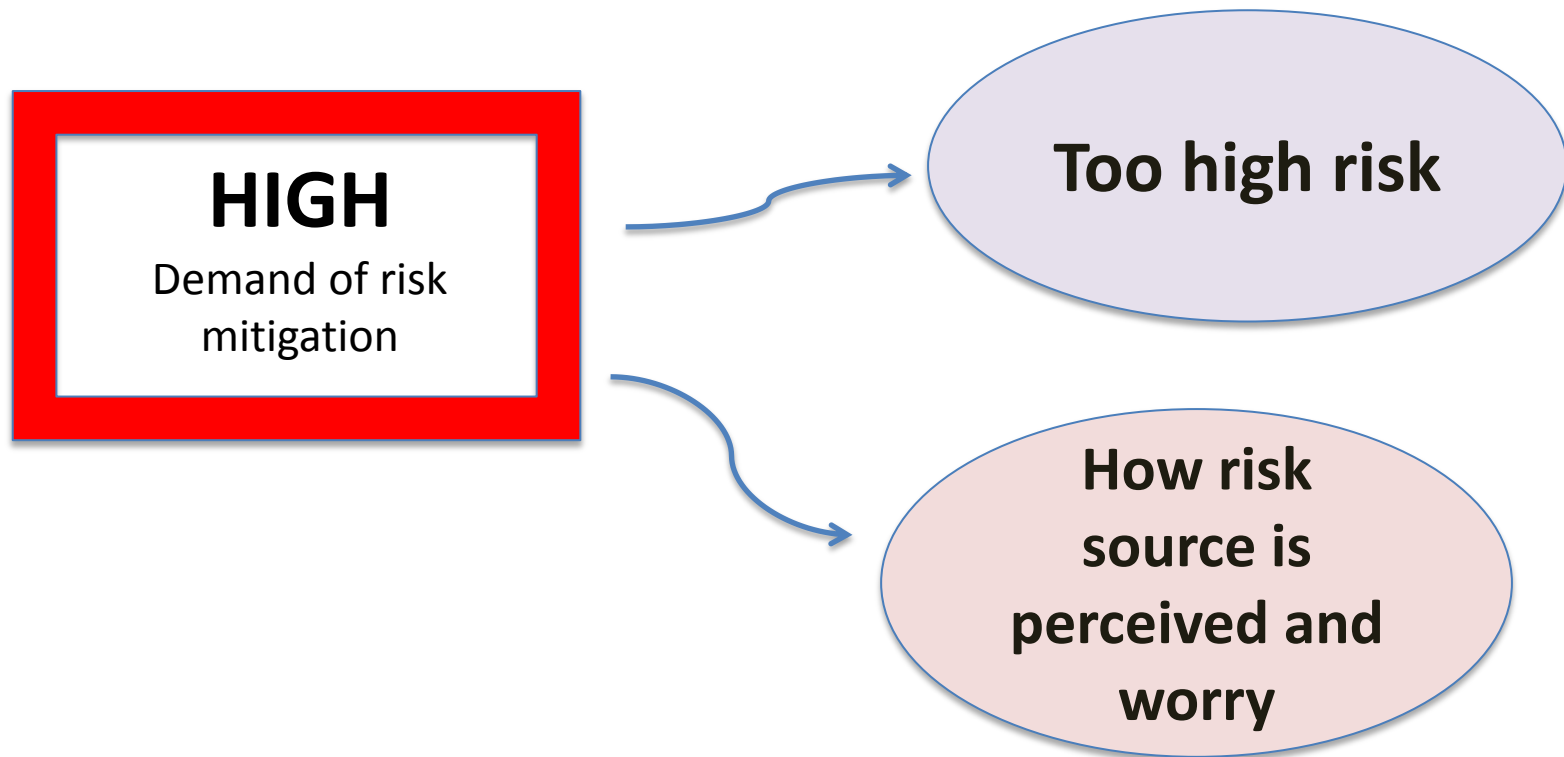


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# Risk Perception (Rule of Thumbs)



# Risk Perception



Source: Rundmo and Nordfjaern (2017)



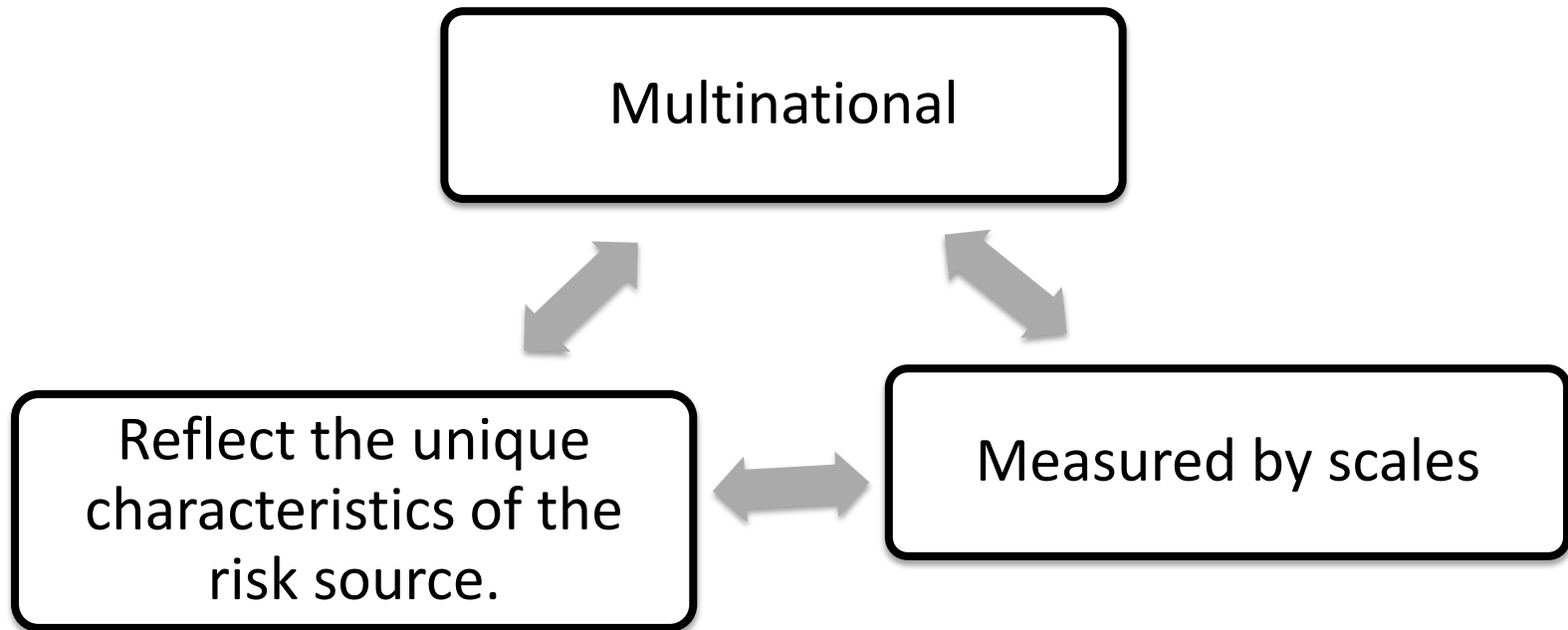
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# Risk Judgment and Perception



# Perceived Risk ...

the degree to which people feel they're at **risk** of a threat to their health



# ...Perceived Risk

**Experience workers tend to perceive a relatively low level of risk.**

Have **more choices** such as can move whenever they want – perceive less stress

Familiarity to the risk.  
Familiarity , more powerful than choice. Reduced perceive risk  
*(e.g. when first learning to drive)*

Power of **PUBLICITY.**

*Increase perceived risk*

*media*

*television*

Sympathy for **VICTIMS**

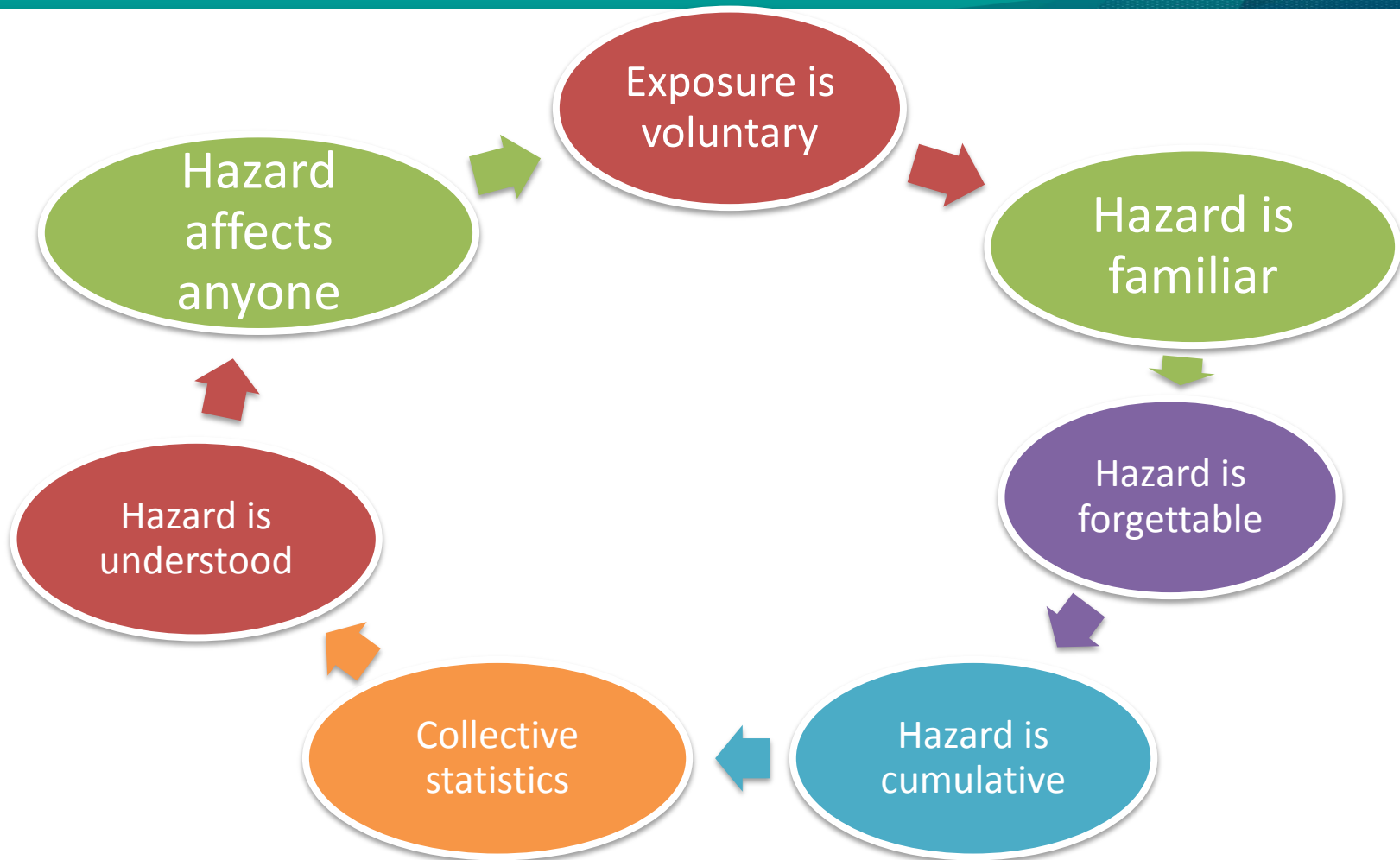
*Increase perceived risk*

Individual experiences

Personal stories

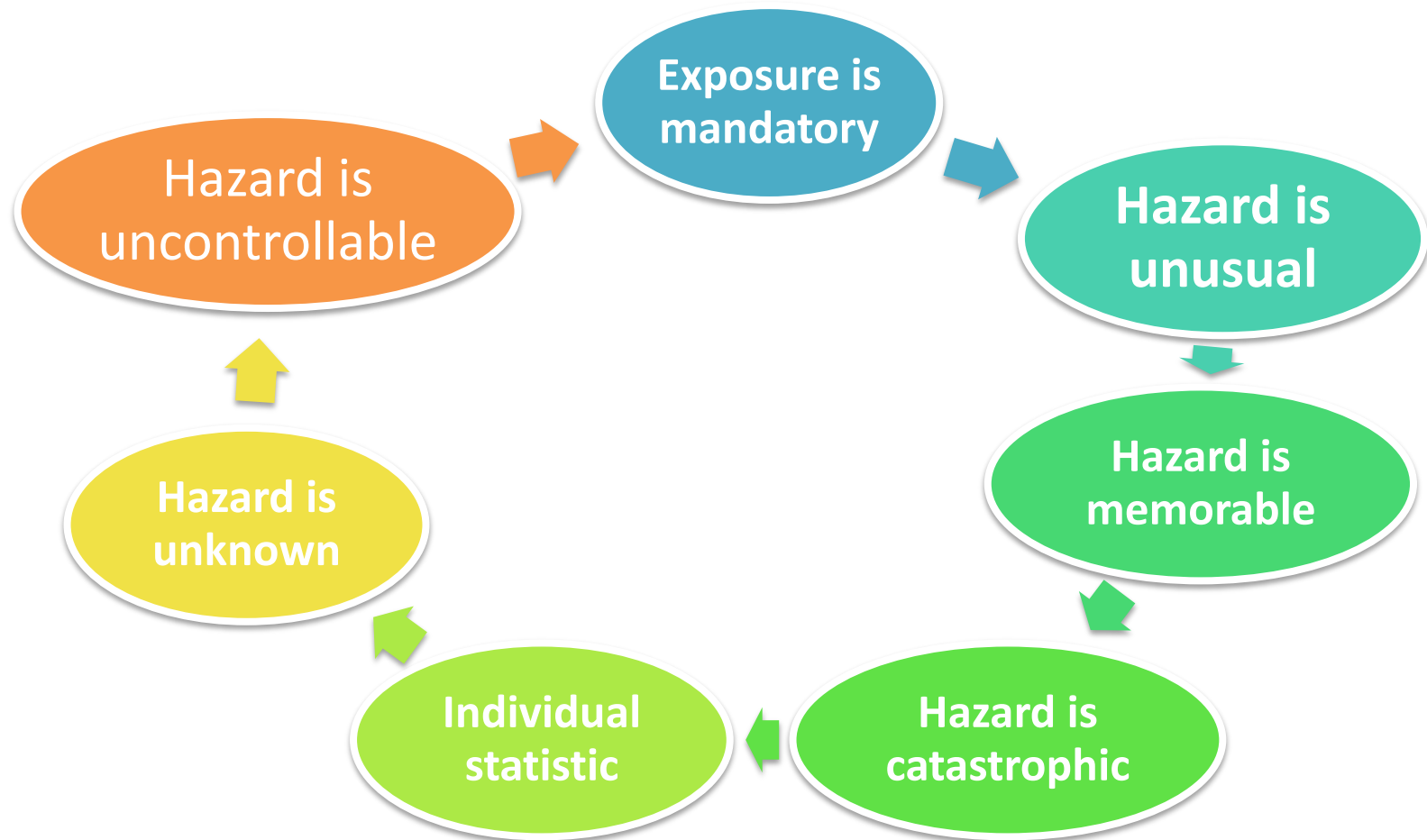


# Factors that REDUCE workers perception to risk





# Factors that INCREASE Workers Perception to Risk



# Conclusion

Human almost have same sensation if exposed to same exposure

Personal experience and context may influence human perception

Human perception towards occupational risk may affects expectation, which eventually affect behavior



# Thank You