

Understanding Personality as a Factor in Determining Liking of Spicy Foods



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“TASTE”

☞ Chemesthesis

☞ Temperature

☞ Touch

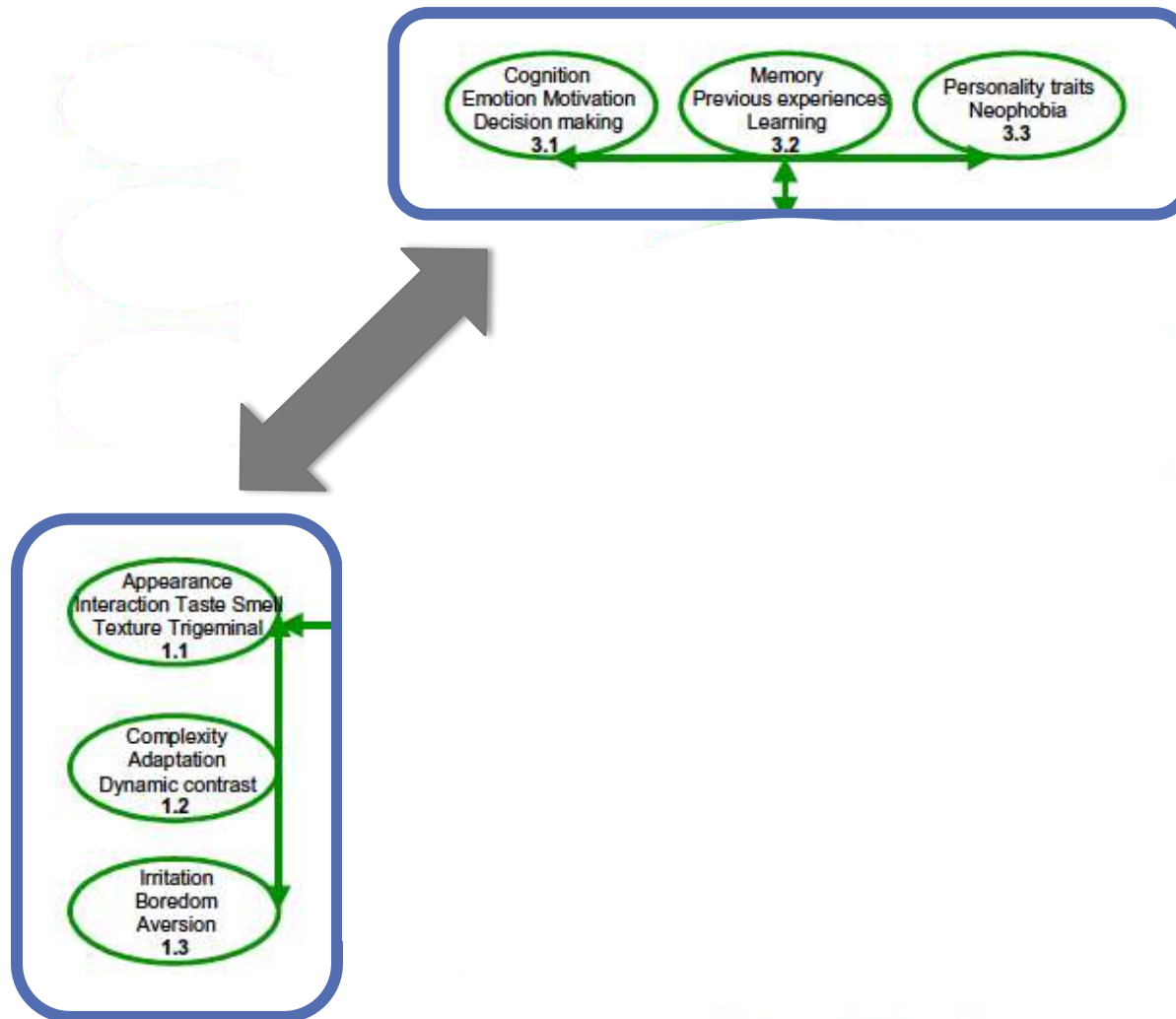
☞ Pain

☞ Similar receptors as sweet, bitter, umami

☞ Genetic variation



FOOD CHOICE



Burn Intensity

Liking

PERSONALITY

🐼 Sensation Seeking Scale (Arnett Inventory, AISS)

🐼 Adapted from Zuckerman Form IV:

🐼 Thrill and Adventure Seeking, Experience Seeking,
Disinhibition, Boredom Susceptibility

🐼 Two subscales: Novelty Seeking, Intensity Seeking

🐼 Sensation Seeking/Novelty Seeking Scales

🐼 Thrill and Adventure Seeking : liking of spicy Asian foods

🐼 Experience Seeking : liking of spicy Asian foods, black pepper

PERSONALITY MEASURES

🐼 Private Body Consciousness (PBC)

- 🐼 Individual sensitivity to bodily responses
- 🐼 more sensitive to burn of chiles

🐼 Sensitivity to Punishment and Sensitivity to Reward Questionnaire (SPSRQ)

- 🐼 Sensitivity to Punishment: Response to novel stimuli
- 🐼 Sensitivity to Reward: Impulsivity
- 🐼 No link yet

PART I: RELATIONSHIPS BETWEEN FOOD CHOICE VARIABLES

1) Liking of spicy meal → Annual Chile Intake

- $r = 0.41$ ($p < 0.0001$)

2) Annual Chile Intake → Burn Intensity (25 uM capsaicin)

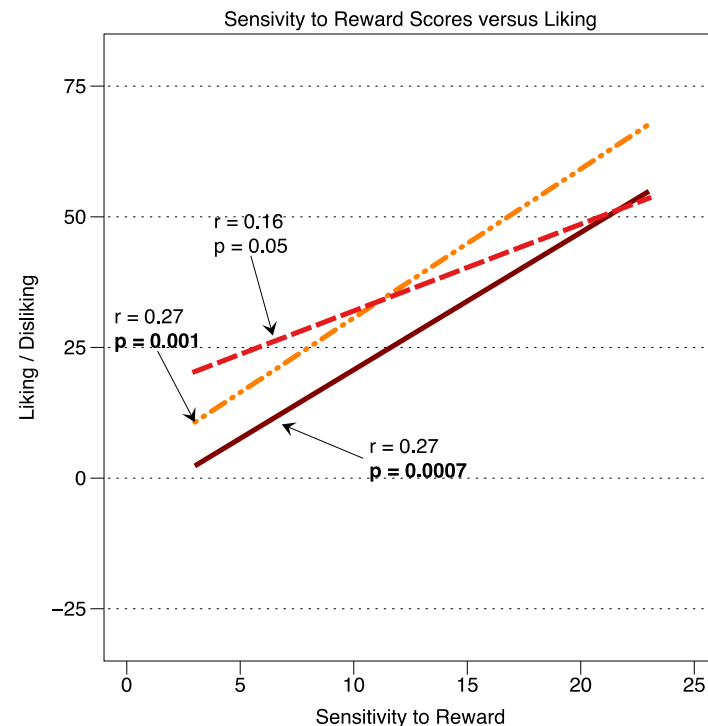
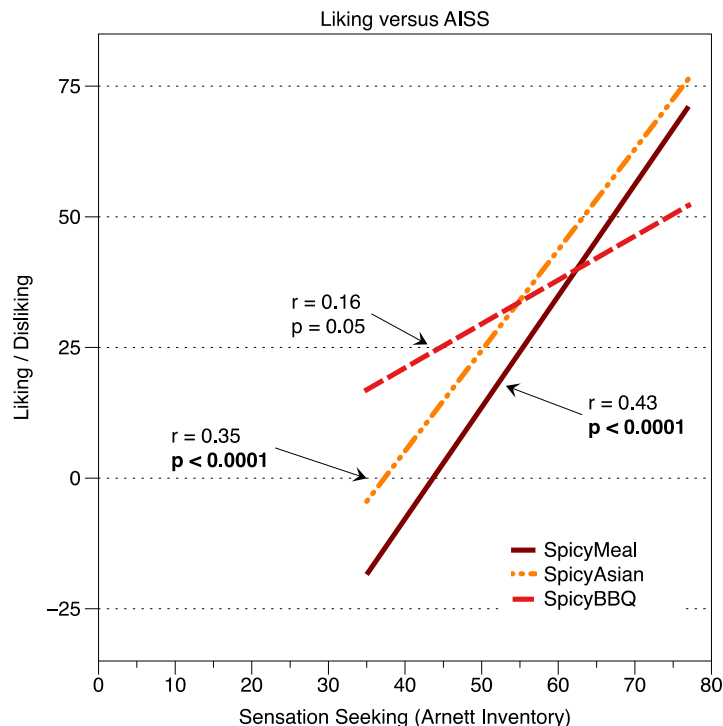
- $r = -0.02$ ($p = 0.77$)

3) Burn Intensity (25 uM capsaicin) → Liking of spicy foods

- $r = -0.20$ (**$p = 0.0064$**) Spicy meal
- $r = -0.08$ ($p = 0.26$) Spicy Asian food
- $r = -0.14$ ($p=0.07$) Spicy BBQ

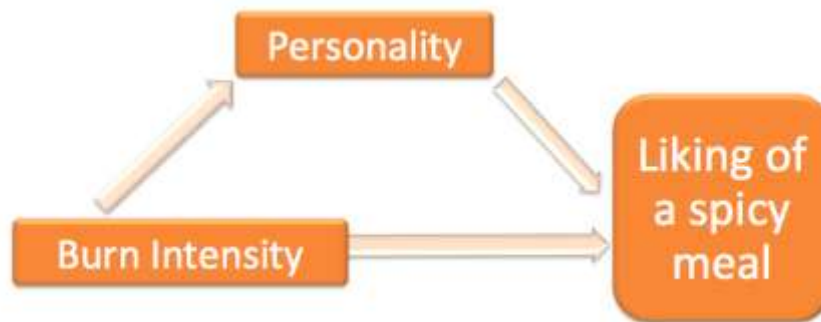
RESULTS

- No relationship: PBC or short TPQ-NS
- Positive relationship between liking of spicy foods (meals and Asian foods) and Sensation Seeking and Sensitivity to Reward

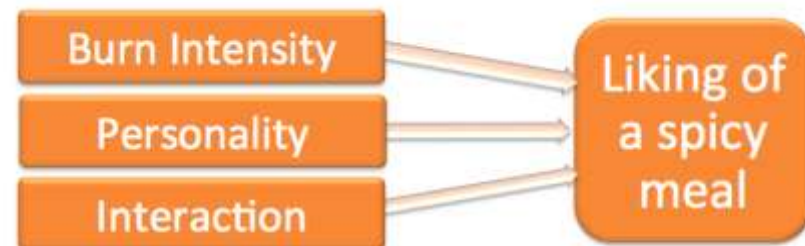


PART II: MEDIATION AND MODERATION ANALYSIS

- 🦋 **AISS split into Novelty and Intensity Seeking subscales**
 - 🦋 Which drives relationship?
- 🦋 **Mediator and moderator analysis**



Mediation model



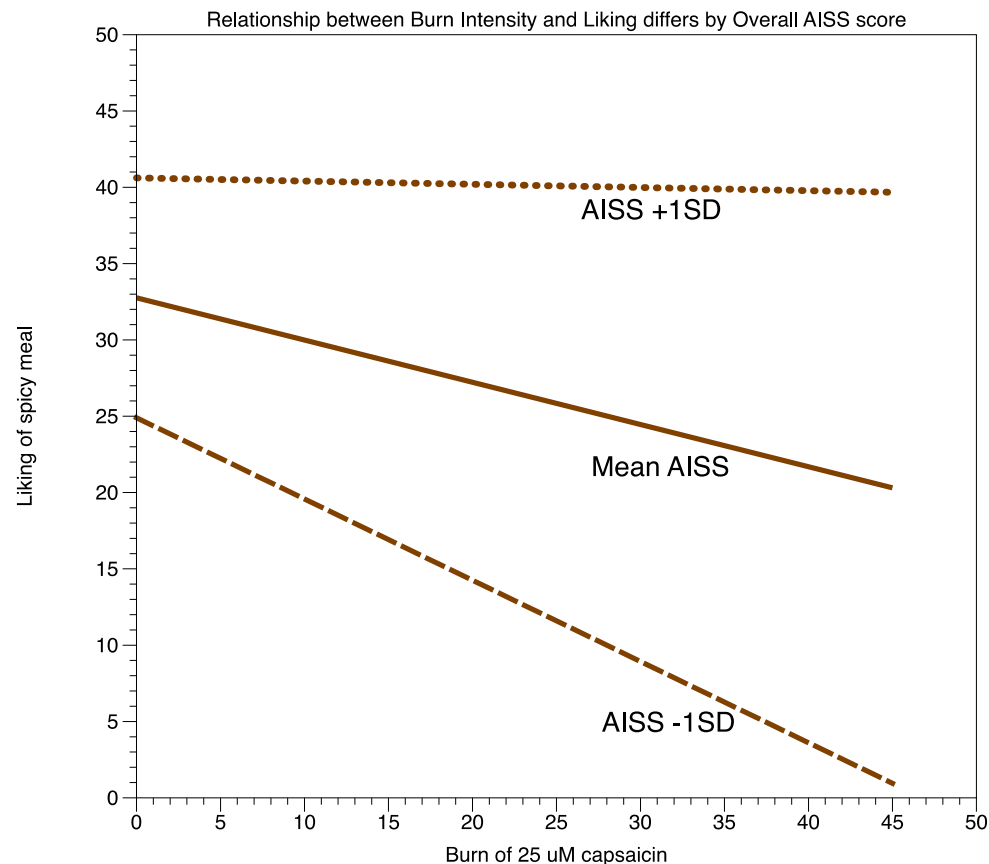
Moderation model

RESULTS: MEDIATION

- **Sensation Seeking (AISS) partially mediates the relationship between burn intensity and liking of spicy meal**
- **Intensity Seeking and Novelty Seeking subscales partially mediate relationship**

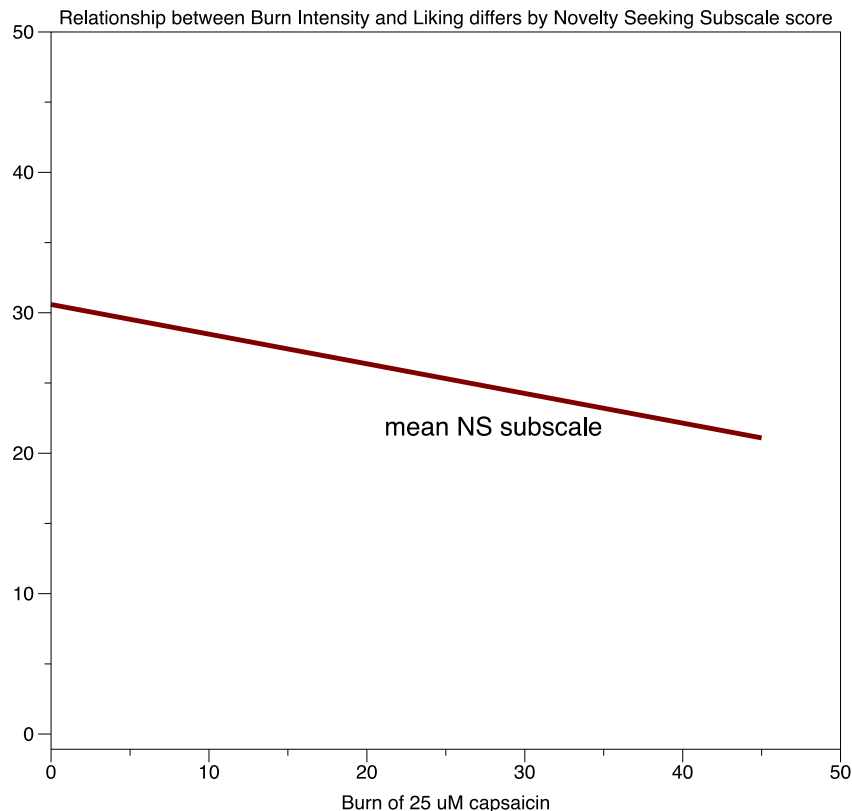
RESULTS: MODERATION

- 🐼 Sensation Seeking moderates relationship between burn sensitivity and liking of spicy meal

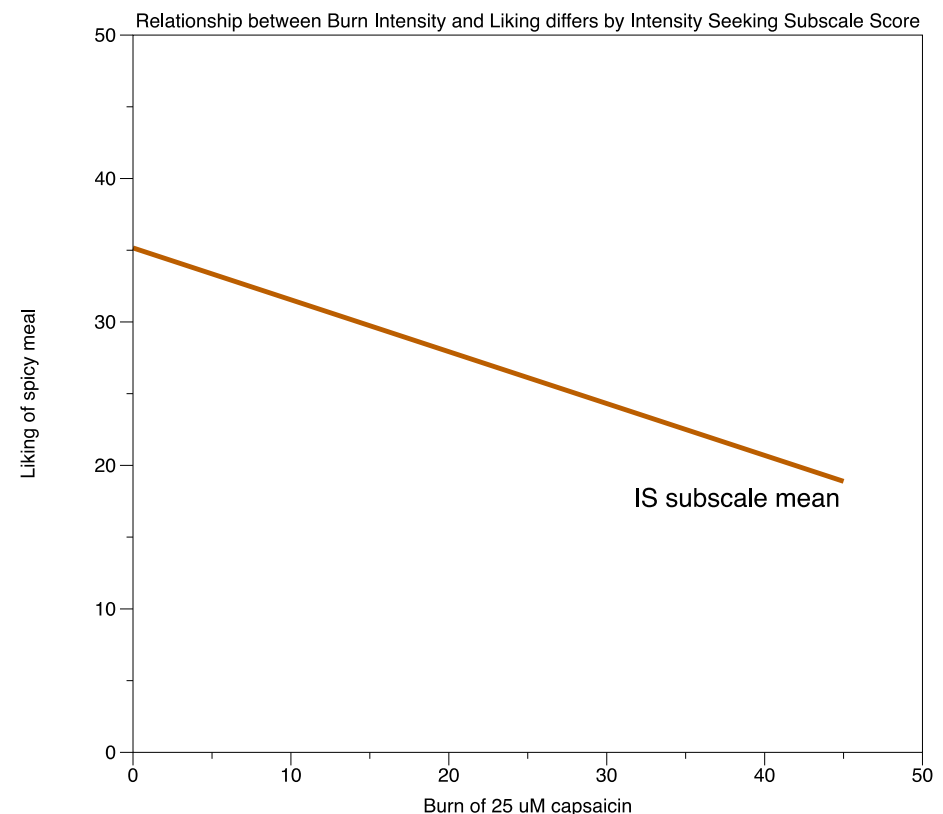


RESULTS: MODERATION

- 🐼 Sensation Seeking subscales moderate relationship between burn intensity and liking of spicy meal



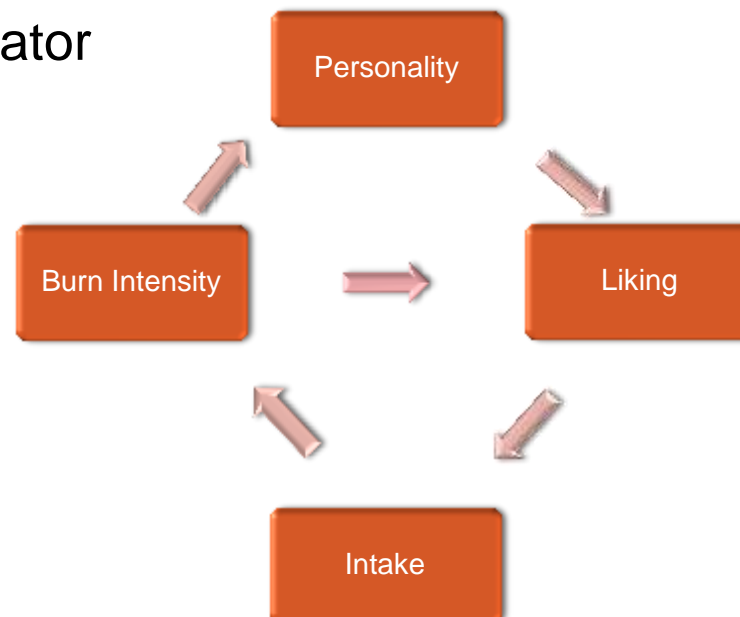
Main Effect – Novelty Seeking: **p = 0.04**
 Interaction – Novelty Seeking x Burn: **p = 0.03**



Main Effect – Intensity Seeking: **p = 0.82**
 Interaction – Intensity Seeking x Burn: **p = 0.04**

CONCLUSIONS

- 🐼 **Burn intensity linked with liking of spicy foods**
- 🐼 **Liking of spicy foods predicts annual chile intake**
- 🐼 **No desensitization**
- 🐼 **SS and SR are associated with liking of spicy foods**
 - 🐼 SS Total, IS, and NS act as mediator and moderator



LIMITATIONS

- ❧ **Chile Intake measure doesn't capture whole story**
 - ❧ dose, other chemesthetic agents... (TRPV1 vs. TRPA1)
- ❧ **Individual's conception of what is 'spicy'**
 - ❧ Does mild salsa actually contain any chiles?
 - ❧ Indian food is full of aromatic spices, but need not be hot



THE END