

The K-State emoji scale is an effective tool for measuring kids' emotional response to products in Korea and the United States.



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A multi-factorial cross-cultural study: applying the K-State emoji scale across countries, products and different ages of kids

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INTRODUCTION

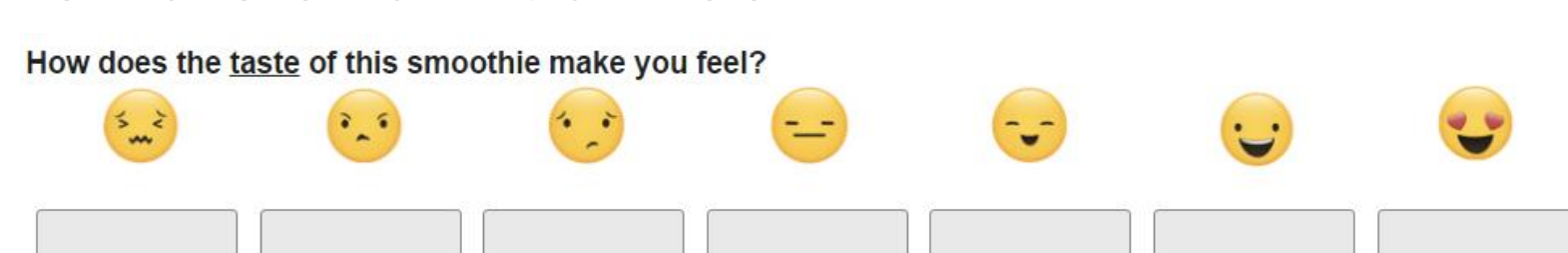
Emoji have emerged as a valuable medium for product research among children. As emoji are visual and have ubiquitous meanings, they may be applied across many cultures. The K-State emoji scale has been developed to use emoji for measuring consumers' emotional responses to products.

OBJECTIVE

To determine if the K-State emoji scale is a suitable tool for differentiating consumer products based on consumer responses.

MATERIALS & METHODS

- Products evaluated: Protein smoothie, probiotic powder, gummy multi-vitamin and chewable multi-vitamin
- Participants: 3-12 years old, approx. 60 kids per product per country
- Locations: Seoul, Korea and Olathe, Kansas, USA
- Data collected with Compusense Cloud (Compusense, Inc., Guelph, Ontario, Canada)
- Questionnaires included*:
 - Emoji items: Appearance, Overall, Flavor**, Texture and Mouthfeel**
 - Just About Right items: Flavor strength**, Sweetness** and Sourness**
 - Other items: Expectation**, Aftertaste detection**, Purchase interest** and Flavor/product ranking

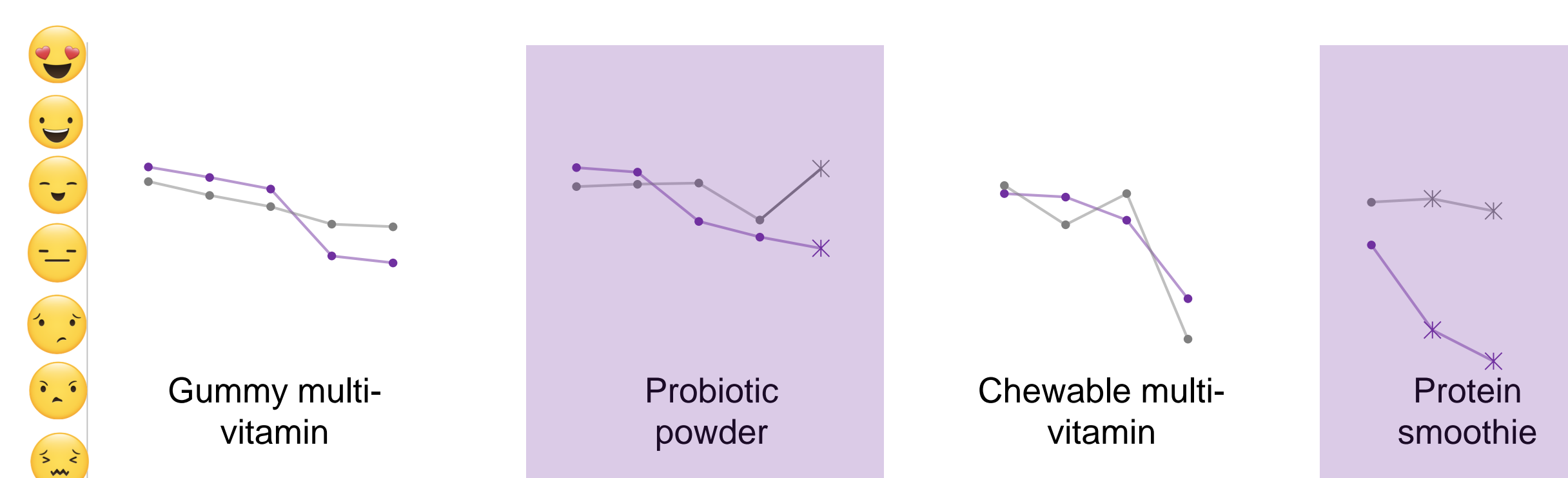


*Additional product-specific questions included
 **Questions only asked to kids ages 8-12

RESULTS

Question: When making products for Korean and US kids, can I just field my sensory tests in the US?

Answer: No – A well liked product in one country may be unacceptable in another country.



- **Korean** and **US** kids' product ratings were comparable, except for their ratings of probiotic powders and protein smoothies.
- Responses from US kids only differentiated among the chewable vitamins, Korea kids differentiated acceptance of all samples in all four product categories.

Question: It's logistically more difficult to test with younger kids, so can I just test with older kids?

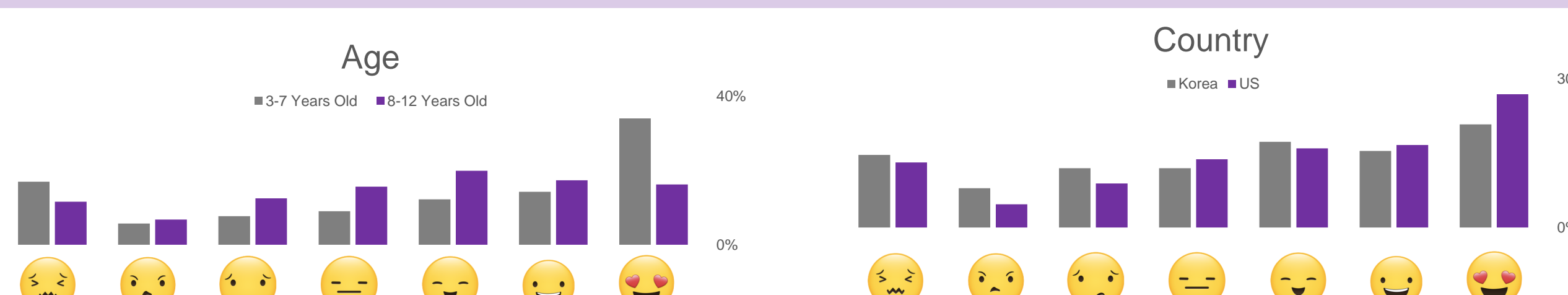
Answer: Yes – The acceptance patterns for young and older kids were similar.



- Acceptance patterns for the products evaluated were similar, **younger** kids rated protein smoothies significantly higher than their **older** counterparts.

Question: Does scale usage vary by age and country of origin?

Answer: Yes



- The frequency distribution of responses among younger kids was noticeably different from older kids. Younger kids were 8.9 times more likely to exclusively utilize the most positive emoji than older kids were.
- While kids in both countries used the entire scale, US kids were 7.0 times more likely to exclusively utilize the most positive response option than their Korean counterparts.

DISCUSSION

- Product development took place in the US, where smoothies are very popular, and Korea, where smoothies are considered novel. This research suggests Korean kids were less familiar with smoothies than their US counterparts, which is a likely explanation why these samples were rated lower by Korean children. Results are affected by cultural preferences and emphasize the value of conducting consumer research in all intended markets.
- Korean kids tended to use less of the middle points and more of the high and low ends of the scale than the US kids. This suggests Korean kids expressed more extreme feelings, such as love (heart eyes emoji) or hate (confounded emoji), toward the samples. This is contrary to historical statements about Asian consumers being less critical of disliked products according to findings by Yang and Lee (2018).
- Younger kids were more likely to utilize a positive straight-line response style, yielding higher ratings than older children. This finding is consistent with Pagliarini, Gabbiadini, & Ratti (2005), who found older children provided lower food quality ratings than younger children. While ratings were generally higher among younger kids, their relative acceptance patterns were comparable to older kids.
- Overall, the K-State emoji scale was found to be effective for measuring kids' emotional response to products in both Korea and the US and was used to aid in the development process.

REFERENCES

1. Pagliarini, E., Gabbiadini, N., & Ratti, S. (2005). Consumer testing with children on food combinations for school lunch. *Food Quality and Preference*, 16(2), 131-138. doi:10.1016/j.foodqual.2004.03.001
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