

The Effectiveness of Skin Cancer Visuals Targeting Minority Populations: Educating Hispanic and African American Participants about Acral Lentiginous Melanoma

BACKGROUND

Acral lentiginous melanoma is an aggressive type of melanoma that occurs equally among people of all skin types (i.e., race/ethnicity)

The incidence of ALM is rising among Hispanic/Latino patients and the mortality rate for ethnic patients is more than double when compared to Caucasian patients.

The current study engages on this issue by investigating whether ALM patient education materials (PEM) featuring models with one of the three skin types yield better results on knowledge, risk perception, and message perception among Hispanic and African American participants.



HYPOTHESES/RQs

H1: The types of PEM and the race/ethnicity of the participants interact such that participants will rate illustration representing one of the skin type higher in (a) quality, (b) memorability, (c) relevance, and is related with greater (d) perceived severity, (e) ALM Knowledge.

H2: Message perception variables (i.e., quality, memorability, and relevance) will mediate the relation of the interaction between the type of PEM and the race/ethnicity of the participants to predict ALM Knowledge

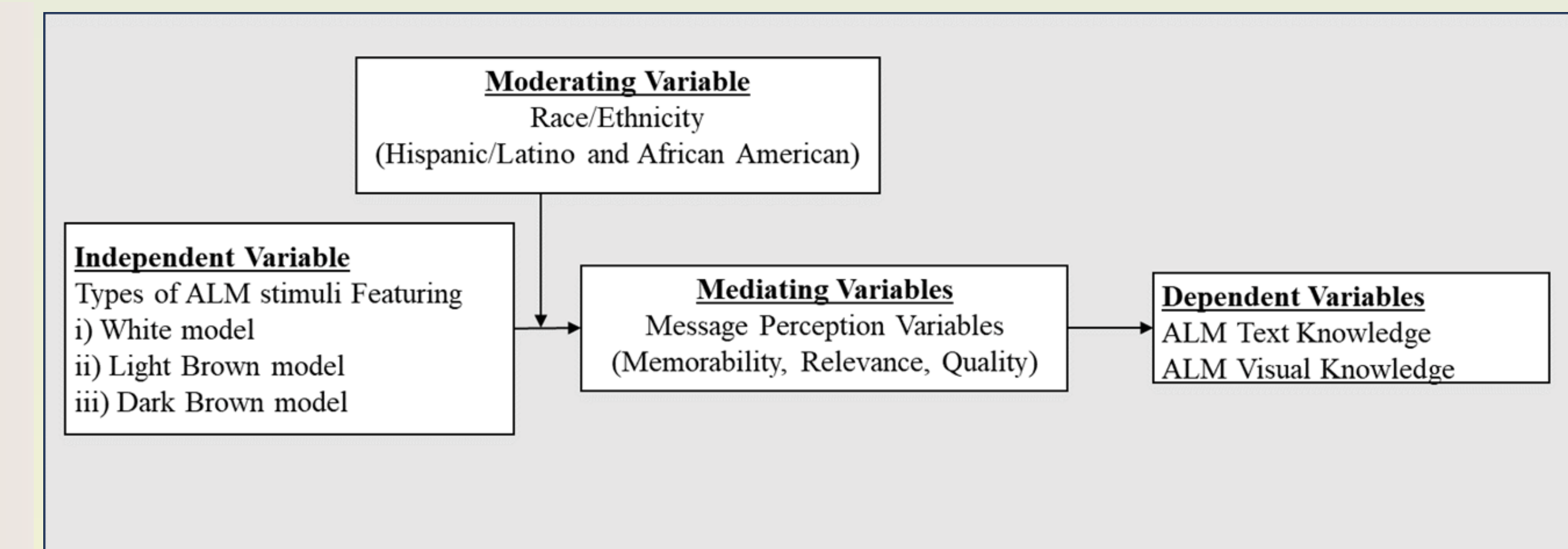
METHOD

Participants (N = 313, Meanage= 46.23, SDage = 16.03, Range = 19-81) who identified as Hispanic/Latino or African American were recruited using Qualtrics panel to participate in a 3 (Types of PEM: white, light brown, and dark brown) × 2 (Ethnicity/Race: Hispanic/Latino and African American) between-participants experiment

KEY RESULTS

3 × 2 Factorial Analysis of Variance (ANOVA)

- Hispanic/Latino perceived the PEM depicting light brown (M = 1.76, SD = 1.59) or dark brown skin models (M = 2.06, SD = 1.16) as more memorable compared to the PEM with white skin model (M = 1.17, SD = 1.76, (p = .041, Cohen's d = .35 and p = .003, Cohen's d = .60 respectively).
- African American participants rated either dark brown (M = 2.07, SD = 1.25) or white skin model (M = 2.14, SD = 1.04) as more memorable compared to the PEM depicting a light brown skin model (M = 1.34, SD = 1.82, p = .011, Cohen's d = .47 and p = .006, Cohen's d = .54 respectively).
- Hispanic/Latino participants reported greater knowledge gain when they were exposed to a dark brown PEM (M = 6.65, SD = 1.13) compared to a white PEM (M = 6.02, SD = 1.42, p = .008, Cohen's d = .49). They also scored higher when exposed to a light brown PEM (M = 6.53, SD = .91) compared to a white PEM (p = .030, Cohen's d = .40).
- There were no significant differences between dark brown and light brown PEM for Hispanic/Latino participants and between dark brown and white PEM for African Americans.



PROCESS Model 8 (Hayes, 2019)

- There was an indirect conditional effect of race/ethnicity on the relation between PEM and ALM knowledge via memorability such that the Hispanic/Latino participants perceived the PEM with dark brown skin model to be more memorable than the one with white skin model and the memorability led to greater ALM knowledge.
- The conditional indirect effect was tested using a percentile bootstrap estimation approach with 5,000 samples and did not include zero

CONCLUSION

Our study demonstrated that patient education materials designed to reach Hispanic/Latino participants should depict the models with either dark brown or light brown skin, whereas patient education materials with models of dark brown or white skin should be receptive to the African American audience. The current study also established perceived message memorability as an important feature of message helping with information retention and increasing knowledge.

REFERENCES

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