

# Light and food: The effect of chronotype on the risk to develop an eating disorder is moderated by body image perception

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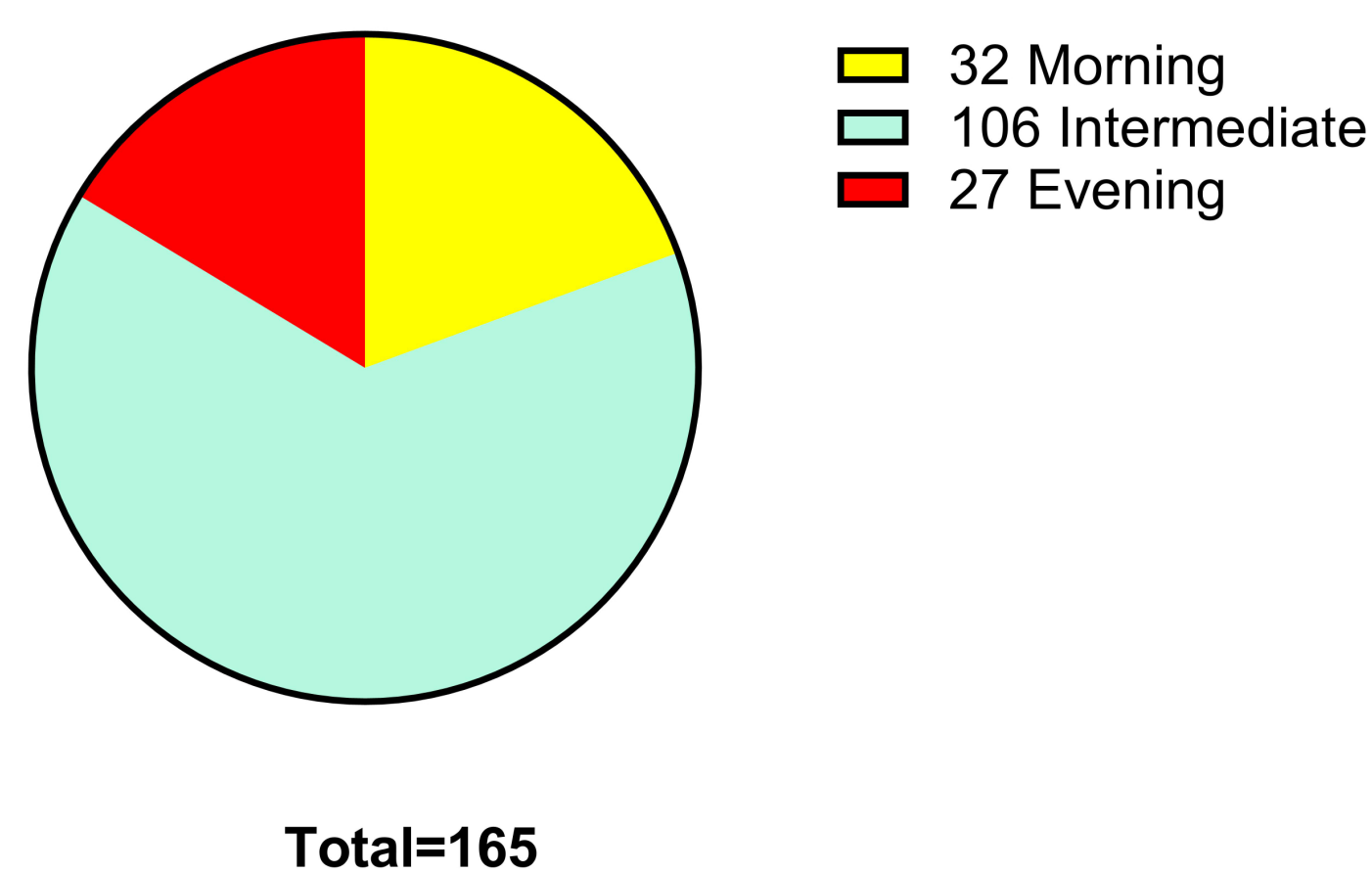
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## INTRODUCTION

Chronotype, indicative of an individual's preference for morningness or eveningness throughout a 24-hour period, assumes a pivotal role in regulating diverse physiological and behavioral processes under the influence of the biological clock. Existing research has delineated substantial differences between evening types (ET) and morning types (MT) concerning personality traits, health outcomes, and overall well-being. This study delves into the intricate connections among chronotype, perceived body image, and the susceptibility to developing eating disorders.

## METHODS

Online questionnaires were completed by 165 participants (mean age = 35.45±11.89) to assess their chronotype, body image perception, and risk of developing an eating disorder. The questionnaires used were the Morningness-Eveningness Questionnaire (MEQ), Body Shape Questionnaire (BSQ), and Eating Attitudes Test-26 (EAT-26), respectively.



Chronotype distribution in cohort

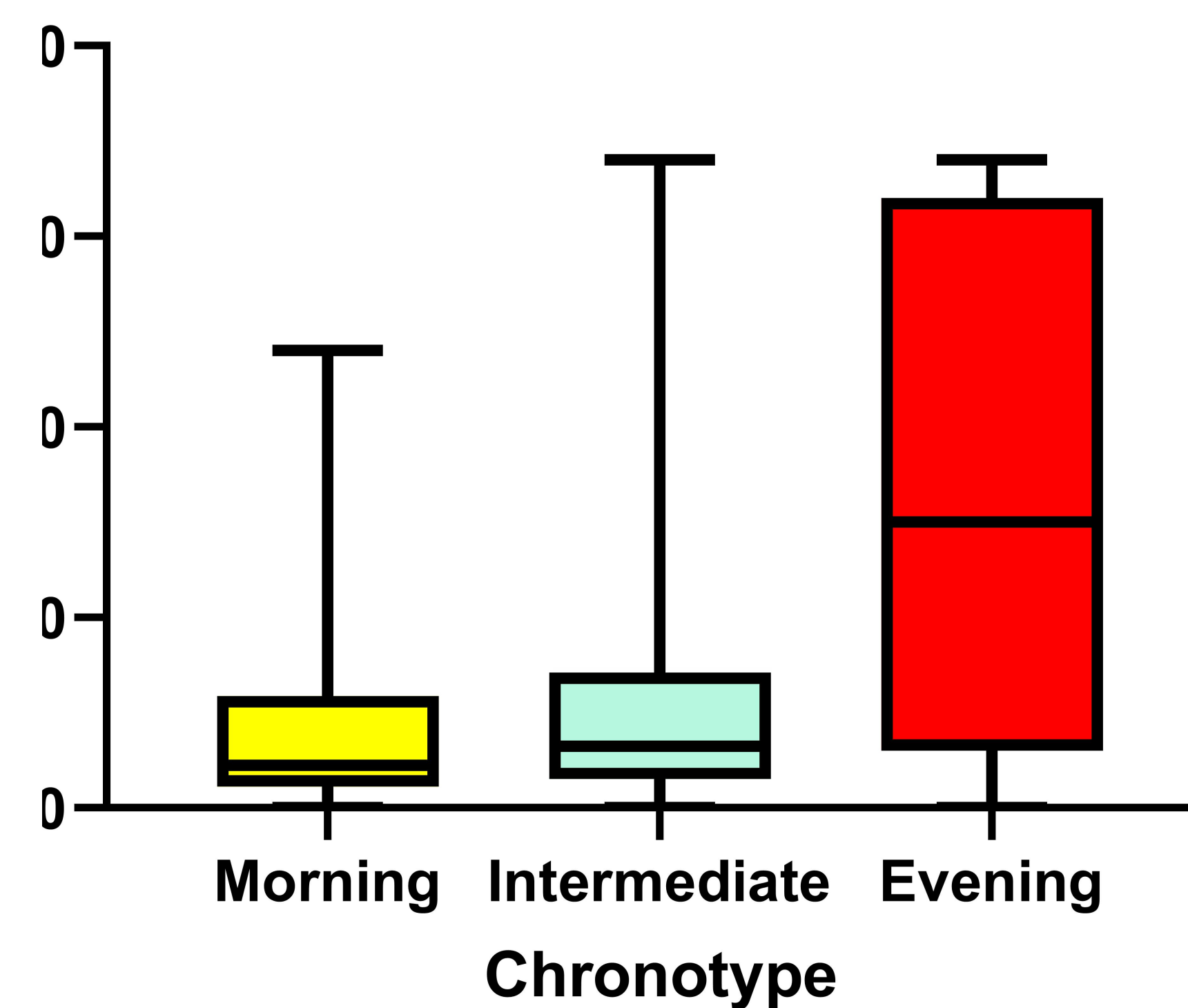
## RESULTS

Significant associations between chronotype and both body image and eating disorder risk was found, where ET exhibited poorer outcomes compared to MT and IT ( $r=-0.49$ ,  $p<0.001$ ,  $r=-0.53$ ,  $p<0.001$  respectively). The correlation between body shape perception and the risk to develop an eating disorder was also significant ( $r=0.86$ ,  $p<0.001$ ).

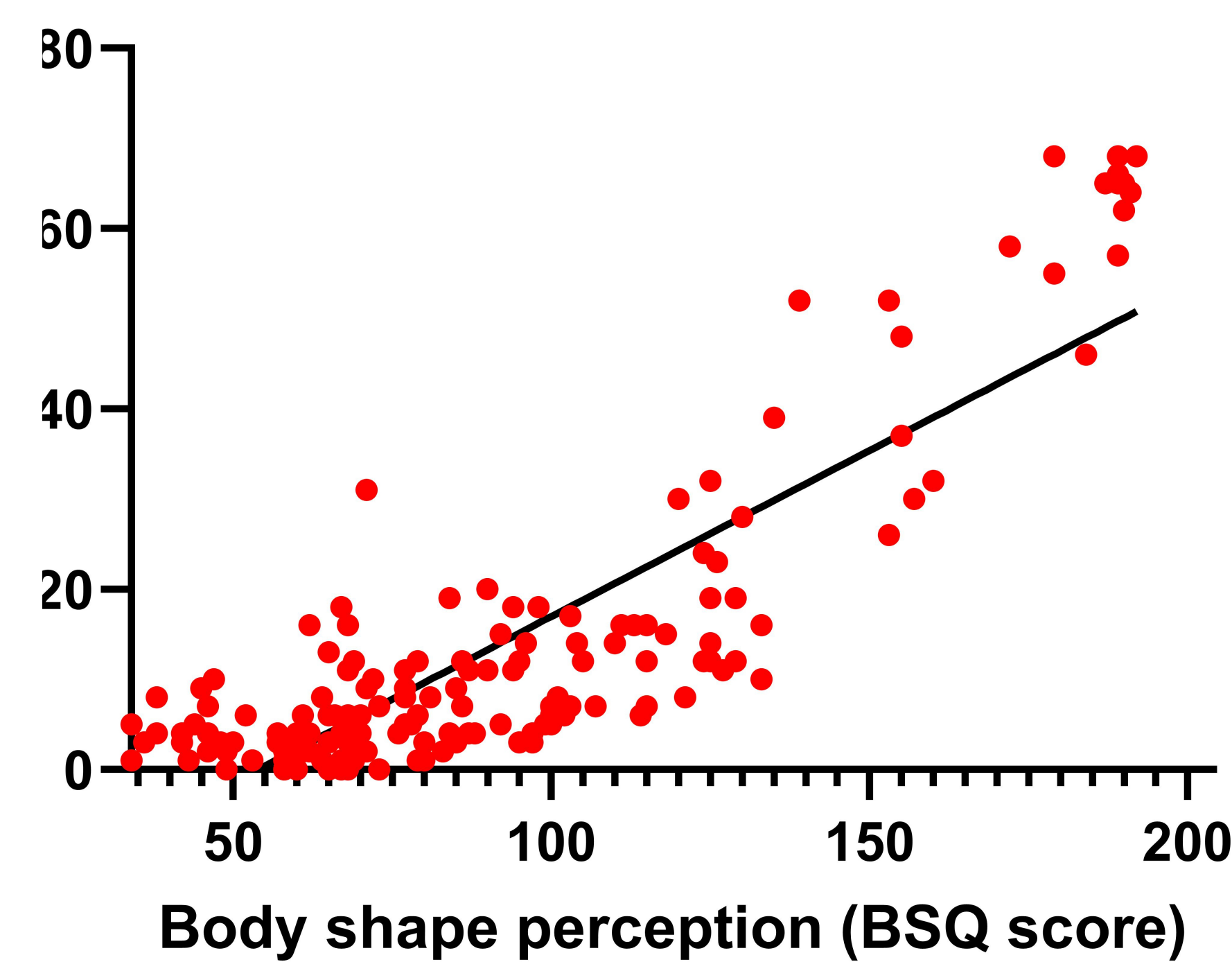
In a moderation analysis involving body image as a moderator, body image was found to moderate the association between chronotype and eating disorder risk. A more negative body image and a higher likelihood of having an evening preference, were associated with higher risk of developing an eating disorder ( $b=-0.006$ ,  $SE=0.0009$ ,  $p<0.001$ ).



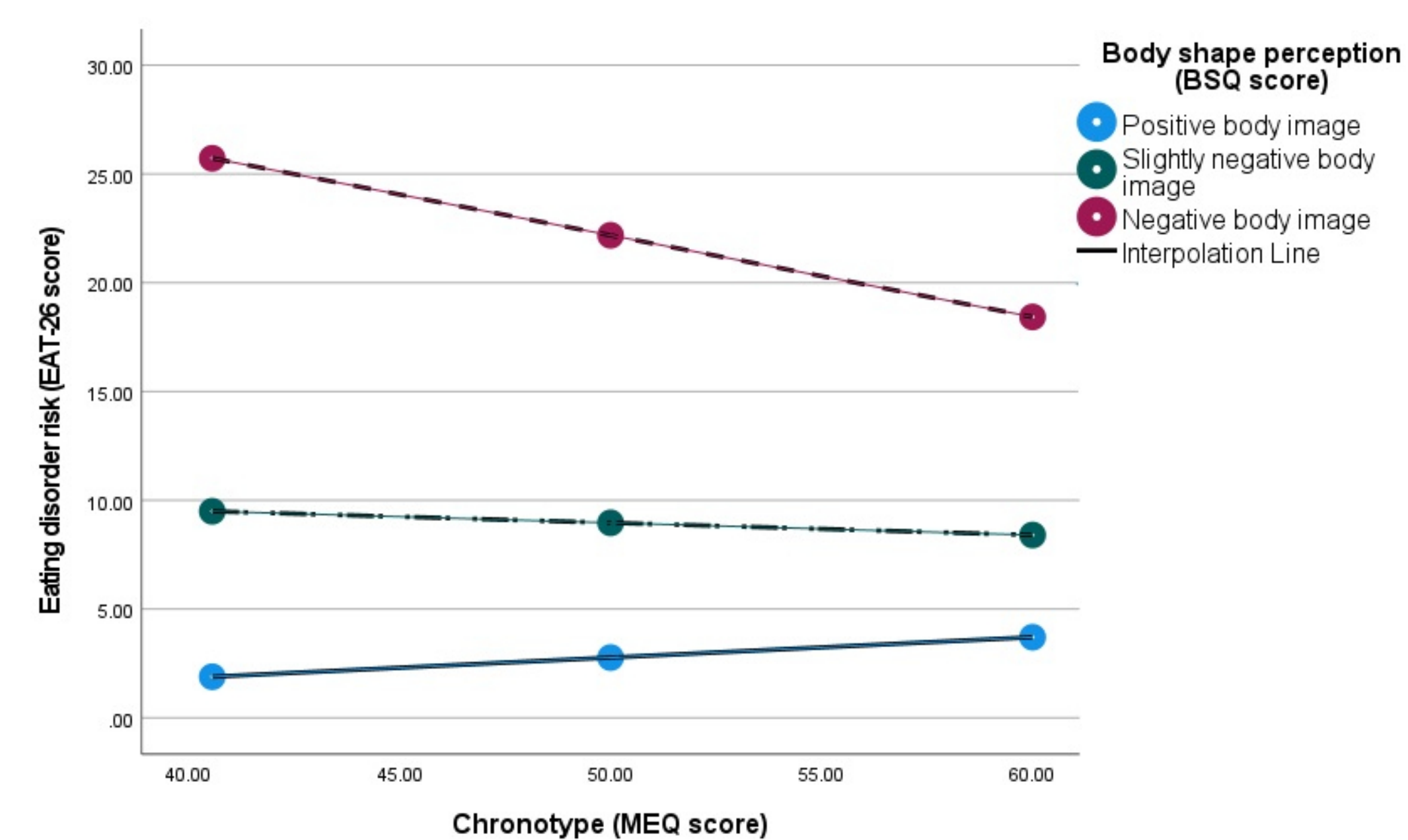
## RESULTS



Differences on the risk to develop an eating disorder based on chronotype, [ $F(2,162)=25.12$ ,  $p<0.001$ , Cohen's  $d=1.53$ ].



The correlation between body shape perception and the risk to develop an eating disorder ( $r=0.86$ ,  $p<0.001$ ).



## CONCLUSION

In the current study we demonstrate that eveningness is associated with higher propensity to develop an eating disorder, with a moderating role of body image perception.

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**Chronotherapy interventions might be a possible adjunctive intervention in the prevention and treatment of eating disorders.**