Perceived Immune Quality and Disassortative Mating: An Experimental Approach

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INTRODUCTION

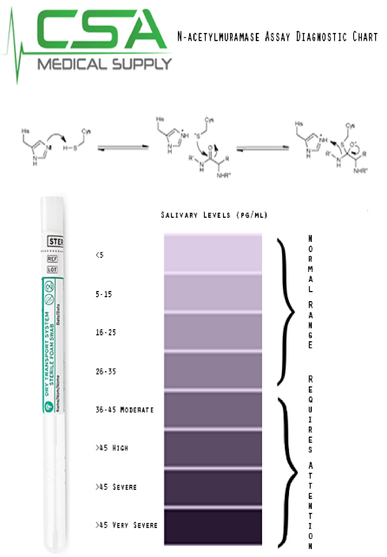
- Research finds that people most often prefer romantic partners similar to themselves. This pattern of preferring similarity in potential mates, often referred to as *assortative* mating, has been found for a wide variety of traits, including physical appearance (Kocsor et al., 2011), as well as sociological factors like educational attainment and socioeconomic status (Schwartz, 2013).
- Although humans are often found to mate assortatively, research in non-human animals suggests that certain species will mate disassortatively – preferring more disimilarity in potential mates – when vulnerability to disease is high (Campbell et al., 2017). Disassortative mating when one is vulnerable to disease fosters genetic diversity in offspring, which increases the likelihood that they will have a set of immune genes that can reduce disease risk.
- We examined if individuals would be more likely to report motivations to mate disassortatively when experimentally primed to believe they were vulnerable to disease.

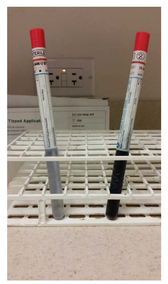
METHOD

- Eighty-seven college undergraduates (43 male, 44 female) participated.
- Participants entered the lab and were told that their saliva would be assayed for the enzyme *N-acetylmuramase*, a fictional enzyme related to poor immune function that we used as part of the ruse.
- After saliva was collected, participants were left alone with their processed sample which indicated whether they had high levels of the enzyme (sample changed to dark purple; poor immune function) or low levels (sample remained clear). See 'Experimental Manipulation' for more details.
- After the priming procedure, participants indicated agreement with 10 statements about their preference for dissimilarity in potential romantic partners (e.g., "I am most attracted to dating partners who seem exotic and are dissimilar to me"). Items were formed into a mean composite (α = .79).

EXPERIMENTAL MANIPULATION

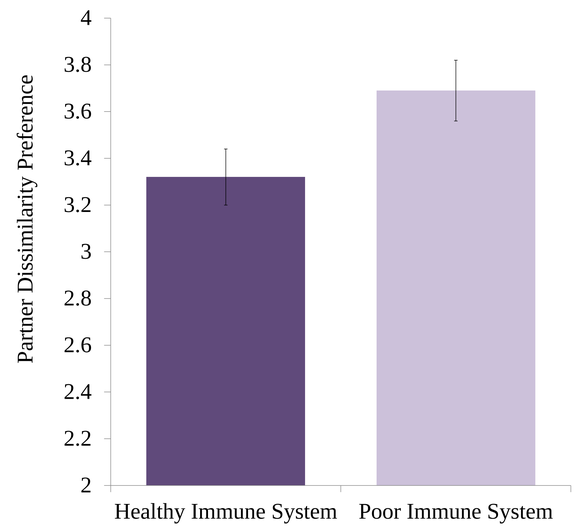
- The participants were told that *N-acetylmuramase* was an enzyme linked to poor immune function and susceptibility to disease.
- They were instructed that if their saliva turned a dark purple, they had high levels of the enzyme and poor immune function. If the saliva remained clear, they had low levels and a healthy immune system.
- Participants were left alone with their saliva tube and we used an Iodine Clock Reaction to control whether or not the liquid in the tube changed colors.
- The reaction involves mixing vitamin C, water, iodine, laundry starch, and hydrogen peroxide.





RESULTS

- We conducted an independent samples t-test to compare preferences for dissimilarity in romantic partners between the poor immune system feedback, and healthy immune system feedback conditions.
- Results revealed a significant difference between conditions, with those receiving feedback indicating they had a poor immune system reporting greater desire for dissimilarity in romantic partners, $M_{\text{poor immune}} = 3.69$, $SD_{\text{poor immune}} = .81$; $M_{\text{healthy immune}} = 3.32$, $SD_{\text{healthy immune}} = .85$, $t(85) = -2.07$, $p = .04$, $d = .42$.



DISCUSSION AND FUTURE DIRECTIONS

- Results of the current experiment revealed that – compared to those primed to believe they have a healthy immune system – those told that they have a poor immune system reported desiring more dissimilarity in romantic partners.
- We are currently collecting additional participants to test for moderation of this effect by gender.
- We are also adding a true control condition to determine whether the belief that one has a poor immune system increases desire for dissimilarity, the belief that one has a healthy immune system leads to greater desire for similarity, or both.

REFERENCES

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