The Effect of Diet and Exercise on Mood and Self-Motivation

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Abstract

- **Objective**: This study aimed to evaluate the effectiveness of a tyrosine-rich diet in promoting aerobic exercise, strength training, or both, and its impact positive mood and on
- Methodology: An anonymous online survey was distributed via social media, including questions on demographics, diet, exercise habits, and self-motivation. The collected data were analyzed using Pearson's SPSS Correlation Analysis in

• Key Findings:

- A negative correlation was found between eating nuts and feelings of hopelessness (p < 0.05), suggesting improved mood with tyrosine-rich food intake.
- There was a significant positive correlation between consuming yogurt and making a resolution to change something (p<0.01)
- A positive correlation was observed between the duration of exercise per session and the ability to set personal goals and track progress (p < 0.01).
- Conclusion: Consuming a tyrosine-rich diet and exercising has a positive correlation with and mood

Research Question

Is a tyrosine-rich diet correlated with increased motivation in the presence or absence of exercise?

Introduction

- Tyrosine is a precursor to dopamine, which plays a crucial role in learning, memory, attention, and motivation.
- Tyrosine is converted into L-DOPA and then dopamine, which plays a key role in mood, motivation, and behavior
- Higher dietary tyrosine intake has been linked to improved cognitive function and working memory.
- Autonomous self-regulation (intrinsic motivation) is a key factor in maintaining regular exercise habits.
- Exercise enhances perceived competence, creating a positive feedback loop that reinforces motivation.
- A combination of diet, exercise, and motivational strategies (e.g., motivational interviewing) leads to the greatest improvements in behavior and well-being.

Acknowledgements

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Methods and Demographics

motivation.

28. version

motivation.



Age Ranges: 151 (18-29) 15 (30-39) 52 (40-49) 87 (50 and above) Gender: 215 females 90 males

Region: 304 North America 1 Australia

Education: 119 (2-4 years of College) 108 (High School) 61 (Masters) 8 (Professional degree) 6 (Doctoral degree) 3 (Less than High School)

Results

Table 1. Yogurt Consumption and Motivation			
Pearson Coefficient			
al 0.149**			
ent 0.120*			
ou 0.146*			
0.178**			
r lamb and Mood and Motivation			
Pearson Coefficient k			
-0.117**			
0.158**			
ggs and Motivation			
Pearson Coefficient			

Relationship	Pearson Coefficient
Consuming eggs and as soon as you see a problem being able to look for possible solutions	0.167**
Consuming eggs and keeping track of progress towards goals	0.116*

Legend: * Correlation is significant at the 0.05 level (2-tailed) ****** Correlation is significant at the 0.01 level (2-tailed)

Relations
Exercise
Exercise yourself
Exercise
Exercise it
Exercise do it
Exercise
Exercise possible
Exercise and payin
Exercise
Exercise progress
Relation
Exercis hopeles
Exercis depres
Exercis to acco
Exercis lot of w
Exercis goal an
Exercis change
Exercis a plan t
Exercis you see possible
Exercis make a
Exercis

track o Exercis

Less than High School High School

- 2 or 4 Years of College Degree (AA, BA)
- Master's Degree
- Doctoral Degree Professional Degree (MD, JD
- PharmD, ...
- North America/Central America
- South America Europe

Australia

- Middle East/North Afric

Distribution

ext Message, Facebook

nstagram, GroupMe

illi.

Statistics

Pearson Correlation Analys

- $\Omega \Omega$
- **Participants** otal Responses: 30:



Diet, Exercise, and Motivation Survey

Table 4. How long individuals exercise and motivation			
Relationship	Pearson Coefficient		
Exercise and feeling that everything was an effort	-0.115*		
Exercise and being able to accomplish goals set for yourself	0.218**		
Exercise and having a lot of willpower	0.346**		
Exercise and having a goal and planning how to react	h 0.271**		
Exercise and wanting a change and being confident to lo it	o 0.232**		
Exercise and sticking to a plan that is working well	0.187**		
Exercise and seeing a problem and looking for possible solutions	0.188**		
Exercise and making a resolution to change somethin and paying a lot of attention to how it's going	ig 0.177**		
Exercise and keeping track of progress towards goals	0.272**		
Exercise and setting goals and keeping track of the progress	0.266**		
Table 5. Exercise for physical reasons and motivation			
Relationship	Pearson Coefficient		
Exercise for physical reasons and feeling hopeless	-0.130*		
Exercise for physical reasons and feeling depressed that nothing that can cheer you up	-0.118*		
Exercise for physical reasons and being able to accomplish goals set for yourself	0.194**		
Exercise for physical reasons and having a lot of willpower	0.240**		
Exercise for physical reasons and setting goal and planning on how to reach it	0.190**		
Exercise for physical reasons and if you want change being confident that you could do it	0.260**		
Exercise for physical reasons and sticking to a plan that is working well	0.186**		
Exercise for physical reasons and as soon as you see a possible you start looking for possible solutions	0.193**		
Exercise for physical reasons and if you make a resolution to change something you pay a lot of attention to how you're doing	0.159**		
Exercise for physical reasons and keeping track of progress towards goals	0.240**		
Exercise for physical reasons and setting goals for yourself and keeping track of	0.142*		

Discussion:

- solving tendencies
- effect
- persistence
- goal making behaviors
- increased motivation

Conclusion:

- processes
- sustaining healthy behaviors
- overall well being

Future Work and Limitations

- of the findings.
- tyrosine levels), to enhance data accuracy.

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Discussion and Conclusion

• There was a significant positive correlation between consuming yogurt and making a resolution to change something and paying attention to it, suggesting a link between yogurt intake and behavior change

• Consuming eggs is positively correlated with seeing a problem and being able to look for possible solutions, which may reflect improved problem

• There is a negative correlation between consuming lean beef or lamb and feeling restless or fidgety, suggesting a possible calming or regulatory

• Consuming lean beef or lamb and having a lot of willpower was also positively correlated, indicating a potential link to self control or

• Exercising for mental and social reasons is positively correlated with keeping track of progress toward goals and setting goals, and having a lot of willpower suggesting that intrinsic motivations for exercise supports

• These findings align with previous research studies:

• Li, Y. et. al (2020) found that higher dietary protein intake from animal meat and eggs was associated with better cognitive performance

• Barnes, M. S., & Cassidy, T. (2018) found that exercise when combined with diet and motivational support was positively correlated with

• These findings support the idea that dietary choices, particularly those in which are tyrosine-rich such as yogurt, eggs, and beef, are positively associated with motivation, setting and striving for goals, and cognitive

• Exercise motivated by intrinsic goals is strongly linked to willpower and goal tracking, reinforcing the role of autonomous self regulation in

• Diet and exercise interact with motivations systems in order to promote

• Sample Diversity & Size: The participant pool may have been limited in demographic diversity (e.g., age, fitness levels, diet types). Future research should aim for a larger and more representative sample to ensure broader generalizability

• Self-Report Limitations: The study relied on Google Form survey responses, which may introduce self-report bias due to subjective interpretations of mood, motivation, and dietary intake. Future studies should incorporate objective measures, such as wearable fitness trackers or biochemical markers (e.g., blood

References

