Steeper Delay Discounting (DD): Predictor for Social Media Addiction

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Why study the Predictors for Social Media Addiction?

Social media addiction is the fastest growing addiction as it is a relatively new form of behavioural addiction. As of January 2019, 44% of the world's population are active social media users; that is around 3.4 billion people taking an active engagement on social media platforms[1].

Finding reliable predictors for Social media addiction would be an important scientific contribution.

What is Delay Discounting (DD)?

Delay discounting, is important in decision-making. It is a critical component in Reinforcement Learning and can be defined as the depreciation of the value of a future reward as a function of time.

High DD means future rewards are not worth much. There is evidence that DD is signaled by serotonin in humans[2].

What evidence is the that higher DD leads to addiction?

MacKillop (2011) provides a meta-analysis of 57 studies concluding that there is strong evidence of greater DD in individuals exhibiting addictive behaviour. These studies include gambling, smoking, drugs and alcohol.

Does higher DD also lead to Social Media Addiction?

This is what this thesis wants to find out focusing on over 250 participants from Kenya. Studies on addiction usually focus on developed countries and no study has looked at the relation between DD and Social Media addiction.

Are there other variables leading to Social Media Addiction?

Yes there is evidence that the following all have a direct or indirect (mediating) impact:

• Age (Reimers, 2009)
• Socio-economic hardship / income (Yang, 2016)
• Self-esteem (Andreasson, 2017)

What are the key hypothesis?

• Socio-economic hardship or low income is directly related to steeper delayed discounting (DD)
• Young age is related to lower self-esteem and higher social media addiction
• Low self-esteem leads to higher social media use and steeper delay discounting
• Steeper DD is directly related to higher social media use

What is the Methodology?

An on-line survey that captures:
• Demographics
• Bergen Social Media Addiction Scale (Andreasson, 2017)
• Self-esteem - Rosenberg Scale (Rosenberg, 1979)
• Monetary Choice Questionnaire for DD (Kirby, 1999)
• Socio-economic hardship Questionnaire

How will you do the Analysis?

Regression and covariance-based structural equation modelling (SEM) will be used to analyse the response data. SPSS and AMOS will be the main tools used for the analysis.

Below is a path diagram showing how we hypothesize the relationship of the variables. The relationship of the variables is shown with a '+' or '-' which means positive or negative correlation.
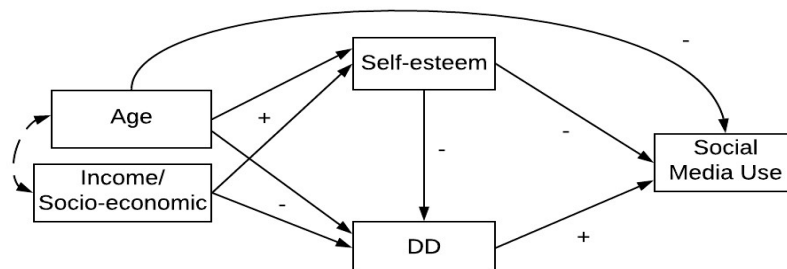
Path Diagram showing hypothesized variables that are predictors for Social Media Use

[1] Internet Trends 2020. Stats & Facts in the U.S. and Worldwide
[2] Schweighofer et al (2008) Low-Serotonin Levels Increase Delayed Reward Discounting in Humans, The Journal of Neuroscience, 28(17):4528–4532
MacKillop J. et al (2011) Delayed reward discounting and addictive behavior: a meta-analysis, Psychopharmacology, 216(3): 305–321
Reimers S. et al (2009) Associations between a one-shot DD and age, income, education and real-world impulsive behavior, Personality and Individual Differences, Vol47(8):973-978
Yang S. L. (2016) Effect of Poverty on Intertemporal Choice and Psychological Explanations, Psychology 7: 1296-1306
Andreasson C.S. et al (2017) The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey
Rosenberg M. (1979) Conceiving the Self. New York: Basic Books
Kirby K. N. et al (1999) Heroin addicts have higher discount rates for delayed rewards than non-drug-using controls. Journal of Experimental Psychology: General, 128, 78–87