

NAME OF PRESENTING AUTHOR: Abdel Abdellaoui

EMAIL ADDRESS OF PRESENTING AUTHOR: a.abdellaoui@amsterdamumc.nl

The Genetic and Phenotypic Architecture of Playing Video Games

Abdel Abdellaoui¹, Joelle Pasman², Jorien L. Treur¹, Laura W. Wesseldijk¹, Shu Liu¹, Perline A. Demange³, Dirk J.A. Smit¹, Michel G. Nivard³, Karin J.H. Verweij¹

¹ Department of Psychiatry, Amsterdam UMC, University of Amsterdam, Amsterdam, the Netherlands.

² Behavioural Science Institute, Radboud University Nijmegen, the Netherlands

³ Department of Biological Psychology, VU University, Amsterdam, the Netherlands

KEYWORDS: GWAS; Mendelian Randomization; Video Games

ABSTRACT:

Playing games has always been a universal component of human behavior. Games are usually played for entertainment, but serve as an important tool for social bonding and education as well. Since the advent of video games, they have become an increasingly popular leisure activity. While playing games is generally considered healthy human behavior, the reputation of playing video games is mixed. Many studies show positive relationships between playing video games and cognitive processes, but there is also support for adverse effects on behavior and mental health by excessive use of video games. Few studies have focused on explaining individual differences in playing video games. In this study, we use genome-wide data and a large number of phenotypic measurements in ~450k adults to investigate the associations between genes, behavior, mental health, and playing video games. We perform genome-wide and phenome-wide association studies and investigate causal relationships using Mendelian Randomization and sibling fixed effects designs. With these analyses, we aim to better understand a) why some people play video games more often than others; and b) if there are causal relationships between playing video games, cognition, and mental health and, if so, in what direction.

GRANT SUPPORT: Foundation Volksbond Rotterdam.