

A NEW DANGER OF BEHAVIORAL ADDICTION: CRYPTOCURRENCY WITH MOBILE INVESTING

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Summary

Introduction: Cryptocurrencies are a popular investment tool today. However, some studies highlight the investing behavior of cryptocurrencies similar to pathological gambling. Investing behavior becomes risky when it is not based on proper and adequate analysis and carries the possibility of big losses as well as big gains. For this reason, we aimed to determine the potential risky investor profile by age, gender, personality traits and impulsivity levels.

Subjects and Methods: Six hundred and fifty-four cryptocurrencies investors (529 was male, 125 was female, their mean age was 35.6 ± 9.0) participated in this study between June 2022 – August 2022. Participants were administered the Sociodemographic Data Form, the South OAKS Gambling Screen Test – revised (SOGS-r), the Big Five Inventory (BFI-10), and Barratt Impulsiveness Scale-11 (BIS-11).

Results: We found higher neuroticism and impulsivity in possible problematic crypto investors. In addition, extraversion, agreeableness and conscientiousness scores were lower. Additionally, in our regression analyzes we found that younger age and male gender predicted SOGS-r scores. After controlling for age and gender, extraversion negatively and motor impulsivity positively predicted SOGS-r scores.

Discussion: Investing in cryptocurrencies can become a behavioral addiction, similar to pathological gambling. It is important to identify profiles in which investment behavior is risky.

Conclusion: Personality traits and impulsivity may have a significant impact on identifying risky crypto investors and in the treatment process.

Keywords: personality, investment, impulsivity, addiction, gambling

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INTRODUCTION

Cryptocurrency is a decentralized digital currency with a limited supply and no banking restrictions. It is generated by computers and uses blockchain technology to keep the owner's identity anonymous (Singhal et al. 2018). The first cryptocurrency was launched in 2009 and was first used for pizza shopping a year later. For the first time in 2011, a cryptocurrency (altcoin) other than bitcoin was launched. Thus, a new era has begun in the investment sector. In comparison to other investment vehicles, the crypto market is much more volatile. Therefore, emotional and impulsive reactions may replace rational analysis in the crypto market (Aloosh & Ouzan 2020). Furthermore, this market volatility promises to win and lose large sums. For this reason, people's efforts on the market may increase.

Some researchers propose the term "pathological trading," which emphasizes daily functioning and negative psychological impacts (Guglielmo et al. 2016). The concept of crypto addiction has recently been brought up in various studies (Griffiths 2018). Although the term

"addiction" may appear assertive, investment behavior can become a problematic process with high-risk investment instruments. This can lead to behavioral addictions similar to pathological gambling over time (Deck et al. 2014; Arthur et al. 2016).

Investment behavior is an economic strategy that identifies an appropriate and adequate analysis, and a safe and satisfactory return (Graham et al. 2009). On the other hand, gambling or betting behavior is based on luck rather than analysis, and it entails the possibility of enormous losses as well as large winnings (Graham et al. 2009). Therefore, it is critical to discern between actual investment behavior and gambling-like behavioral addiction in the crypto investment business. Previous studies have reported that crypto investors are younger (Bohr & Bashir 2014), more optimistic about getting rich the easy way (Pezzani 2018), have a higher risk propensity (Conlon & McGee 2020), and have more fear of missing out (FOMO) (Pichet 2017) than other investors.

Another focus of research on this topic has been personality traits. It has been reported that neuroticism,

agreeableness, and conscientiousness have essential relations with alcohol, nicotine, cannabis, and gambling. Moreover, personality effects are more evident with pathologic gambling, according to the findings of this study (Dash et al. 2019). These are typically demonstrated for adult pathological gamblers as high neuroticism (or negative affect), low agreeableness (or interpersonal compassion and kindness), and low conscientiousness (or reflecting self-regulation and self-control) (Bagby et al. 2007; MacLaren, Best, et al. 2011; Slutske et al. 2005; Miller et al. 2013). A meta-analysis published in 2011 indicated a consistent link between pathological gambling and neuroticism, dissonance, and disinhibition (MacLaren, Fugelsang, et al. 2011).

Impulsivity is reported as one of the determinants of gambling behavior. It has been shown that there is a consistent relationship between impulsivity and risky investments (Arthur et al. 2016; Jadow & Mowen 2010). Cryptocurrencies, a volatile investment tool, provide more excitement to risk-seeking investors. Previous studies have reported that impulsivity is higher in cryptocurrency investors (Sonkurt & Altınöz 2021).

If investing and gambling behavior are considered as a spectrum, speculative investments lie somewhere in the middle (Arthur et al. 2016). When there are not enough data and analysis, investment behavior becomes speculative. This may cause it to be intertwined with gambling behavior from time to time. In addition, the fundamental expectation in problematic investment is to earn quickly and a lot with little investment. Investments made without detailed analysis can be a kind of game of chance. Therefore, it is critical whether these investment behaviors are just an investment activity or indicate a problematic behavioral process.

Previous research on the relationship between investment behavior and gambling focused on traditional stock market investments. Information about crypto investments is still new, and it is crucial to differentiate it from behavioral addiction. Crypto investment is more closely related to technology, easier to access, and the market is more volatile. Whereas, online trading platforms are essential applications for crypto investments. Previous studies have pointed to excessive behavior and mental health issues with crypto market trading (Oksanen et al. 2022). We think that the possibility of making investments with a mobile phone may cause negative results as well as positive effects in such a volatile investment area. Understanding the psychological factors that point to the risky investor profile will be useful in clinical practice. In our study, we hypothesized that crypto investment attitudes would differ according to sociodemographic data (such as age, gender etc.) and Big Five Personality Traits.

We also hypothesized that there would be a positive correlation between impulsivity and problematic crypto investment attitudes.

SUBJECTS AND METHODS

Sample

An invitation link was generated in Twitter accounts with a total of 22 thousand participants for the study between June 2022 – August 2022. Only mobile investment users were invited for the study. All participants were informed about the study with invitation link. People who volunteered to participate in the study were provided survey links. The research platform used allowed surveys from the same DNS (domain name system) to be filled only once. A total of 713 people participated in the study. Due to random marking or short survey completion times (less than 7 minutes), the results obtained from 59 individuals were not taken into consideration, and analyses were conducted with a total of 654 people. All scales used in this study were self-test. Inclusion criteria for the study were literate, aged between 18-65, investing in a mobile phone, and volunteering. Exclusion criteria were defined as currently taking medication or psychotherapy for an addiction.

Scales

Sociodemographic Data Form: It was specially prepared for this study by the research team. It consists of questions querying demographic data such as age, gender, profit and loss status of the participants, and how long they have been interested in crypto investment.

South OAKS Gambling Screen Test – revised (SOGS-r): It is a scale developed to evaluate pathological gambling behavior (Lesieur & Blume 1987), and the Turkish validity and reliability study of the scale was conducted (Duvarcı & Varan 2001). The internal consistency of the Turkish version of the scale was 0.88 and the test-retest score correlation was 0.95. The highest score attainable on the scale is 19. In the Turkish validity and reliability studies of the scale, scores of 8 and above are considered as ‘probable pathological gambler.’ Instead of the word ‘gambling’ in the scale items, the term ‘crypto investment’ was used for this study. The Cronbach Alpha value of the scale, as used in this study, was found to be .077.

Big Five Inventory (BFI-10): It is a 10-item scale developed from the 44-item Big Five Personality Traits Scale (Rammstedt & John 2007), and a validity and reliability study has been conducted in Turkey (Horzum et

al. 2017). Internal consistency reliability coefficients were .88 for extraversion, .81 for agreeableness, .90 for conscientiousness, .85 for neuroticism, and .84 for openness to experience. The scale consists of 5 sub-dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience. The Cronbach Alpha values of the scale in this study were found as .71 – .80.

Barratt Impulsiveness Scale-11 (BIS-11): It is an 11-item self-report scale developed from the original scale (Spinella 2007), and its Turkish validity and reliability studies have been performed (Güleç et al. 2008). The Cronbach alpha reliability of the Turkish version of the scale was .78 for students and .81 for patients. It has 3 sub-factors: Nonplanning, Motor Impulsivity, and Attentional. High scores on the scale indicate high impulsivity. The Cronbach Alpha value of the scale in this study was found to be .078.

Ethics Committee

Ethics committee approval for the study was obtained from Ufuk University Faculty of Medicine with the letter dated 28.04.2021 and numbered 20210505. An informed consent form was submitted to all participants for the study.

Statistical Method

All data (categorically and continuously) were analyzed using the Statistical Package for Social Sciences Windows Version 15.0 (SPSS) software. Categorical variables were evaluated with the Pearson Chi-square test, and continuous variables were evaluated with the Independent Sample t-test. Bonferroni correction was applied to correct for multiple comparisons. Relationships between scale scores were analyzed using the Pearson Correlation test. The predictive factors of SOGS-r scores were evaluated by multiple linear regression analyses. Regression analysis was applied in two stages. All variables were used in the first step. In the second step, the analysis was applied after controlling for age and gender. For all analyses, $p < .005$ was taken as a basis for significance.

RESULTS

The sociodemographic data of the participants are presented in Table 1. According to these data, 80.9% of the participants were male, their mean age was 35.6 ± 9.0 , and their mean year of education was 16.14 ± 3.60 .

In the second stage, the participants were separated into two groups based on their SOGS-r results as those who scored 8 points and above and those who scored 8 points and below, and they were evaluated. Accordingly, it was determined that the rate of women and individuals over 46 was higher in the group with 0-7 points. In the risky group, those who invested with more than 75% of their savings and those who lost more than 50% compared to the initial situation were significantly higher (Table-1).

Extraversion, agreeableness, and conscientiousness scores were found to be significantly lower in the group that scored 8 and above based on the SOGS-r. Moreover, neuroticism scores and the scores of the three sub-dimensions related to impulsivity were also significantly higher (Table-2).

Pearson correlation analysis was applied to examine the relationship between SOGS-r total scores and other scale scores. There were positive correlations with impulsivity scores, and when BFI-10 scores were considered, there were negative correlations with extraversion, agreeableness, and conscientiousness, and positive correlations with neuroticism (Table-3).

Hierarchical regression analysis was applied to the variables to examine the SOGS-r Aggregation Effect in those who had a mobile investment (crypto/stock market) application on their phone. In our first step, age and female gender variables negatively predicted SOGS-r scores associated with mobile investing (Beta=-0.148, Beta=-0.113), [$R^2 = .37$, $F(2, 651) = 12.641$, $p < .01$] (Step -1). The second step was built after controlling for the effects of age and gender. In this step, significant regression equation was found as [$F(10, 643) = 13.244$, $p < .01$], with an R^2 of .171]. While Motor Impulsivity affected SOGS-r Total positively (Beta=0.240, $p < 0.05$), Extraversion and female gender affected it negatively (Beta=-0.160, Beta=-0.106 $p < 0.05$) (Step -2) (Table-4).

Table-1: Comparison of sociodemographic data according to SOGS-R

		SOGS-R group				Chi-Square	p
		0-7 points		8 and above			
		n	%	n	%		
Age	18-25 years	80 ^a	14.5	22 ^a	21.4	10.260	.016*
	26-35 years	190 ^a	34.5	43 ^a	41.7		
	36-45 years	195 ^a	35.4	32 ^a	31.1		
	≥46 years	86 ^a	15.6	6 ^b	5.8		
Gender	Male	438 ^a	79.5	91 ^b	88.3	4.404	.036*
	Female	113 ^a	20.5	12 ^b	11.7		
Marital Status	Married	317 ^a	58.0	60 ^a	58.8	.376	.829
	Single	220 ^a	40.2	41 ^a	40.2		
	Other	10 ^a	1.8	1 ^a	1.0		
Number of children	0	233 ^a	46.0	42 ^a	46.2	3.387	.336
	1	123 ^a	24.3	29 ^a	31.9		
	2	108 ^a	21.3	15 ^a	16.5		
	≥3	42 ^a	8.3	5 ^a	5.5		
Years of Education	≤ 12 years	80 ^a	14.8	19 ^a	18.8	1.972	.373
	13-16 years	229 ^a	42.4	36 ^a	35.6		
	≥ 17 years	231 ^a	42.8	46 ^a	45.5		
Monthly Income	0 – 5,000 TL	144 ^a	26.4	42 ^b	24.6	12,093	.017*
	5,000 – 10,000 TL	220 ^a	40.3	34 ^a	16.4		
	10,000 – 15,000 TL	94 ^a	17.2	14 ^a	22.7		
	15,000 – 20,000 TL	40 ^a	7.3	8 ^a	23.0		
	≥20,000 TL	48 ^a	8.8	3 ^b	16.7		
Phone Time in Apps	0-15 min	142 ^a	26.8%	18 ^a	18.2%	14.393	.002*
	16-50 min	99 ^a	18.7%	12 ^a	12.1%		
	51-100 min	96 ^a	18.1%	13 ^a	13.1%		
	≥ 100 min	142 ^a	36.3%	56 ^b	56.5%		
Phone Login to Apps	0-5	170 ^a	32.2%	17 ^b	17.9%	8.123	.044*
	6-15	124 ^a	23.5%	25 ^a	26.3%		
	16-50	146 ^a	27.7%	34 ^a	35.8%		
	≥ 50	88 ^a	16.7%	19 ^a	20.0%		
Crypto Investment History	≤ 6 months	243 ^a	44.1%	45 ^a	43.7%	5.297	.258
	6 months-1 year	152 ^a	27.6%	35 ^a	34.0%		
	1-3 years	76 ^a	13.8%	8 ^a	7.8%		
	3-5 years	56 ^a	10.2%	8 ^a	7.8%		
	≥ 5 years	24 ^a	4.4%	7 ^a	6.8%		
What percentage of your savings have you invested in cryptocurrency?	0-25%	294 ^a	53.4%	41 ^b	39.8%	22.910	.000*
	25-50%	103 ^a	18.7%	15 ^a	14.6%		
	50-75%	64 ^a	11.6%	10 ^a	9.7%		
	≥ 75%	80 ^a	14.5%	35 ^b	34.0%		
	I have no investments at the moment	10 ^a	1.8%	2 ^a	1.9%		
Your current financial situation compared to your initial situation?	≥ 50% loss	65 ^a	11.8%	30 ^b	29.1%	32.082	.000*
	25 – 50% loss	102 ^a	18.5%	26 ^a	25.2%		
	Same as start	137 ^a	24.9%	17 ^a	16.5%		
	25-50% profit	115 ^a	20.9%	21 ^b	20.4%		
	≥ 50% profit	125 ^a	22.7%	9 ^b	8.7%		

n: Number of individuals; %: Column percentage; SD: Standard Deviation; *p<0.05; SOGS-R: South OAKS Gaming Screen Test – revised; Apps: Mobile crypto applications; Each subscript letter denotes a subset of group categories whose column proportions do not differ significantly from each other at the .05 level. Pearson chi-square test

Table-2: Investigation of Scale Scores in Mobile Investors in terms of SOGS-R Total

SOGS-r Total		n	Mean	sd	t	p
BFI- Extraversion	7 and below	551	7.50	1.97	4.303	.000*
	8 and above	103	6.47	2.27		
BFI- Agreeableness	7 and below	551	8.07	1.33	3.221	.002*
	8 and above	103	7.56	1.48		
BFI- Conscientiousness	7 and below	551	7.72	1.59	4.432	.000*
	8 and above	103	6.95	1.75		
BFI- Neuroticism	7 and below	551	5.11	1.73	-4.960	.000*
	8 and above	103	6.05	1.90		
BFI- Openness to Experience	7 and below	551	6.88	1.71	1.758	.079
	8 and above	103	6.55	1.80		
Motor Impulsivity	7 and below	551	8.23	2.12	-7.147	.000*
	8 and above	103	9.90	2.51		
Attention Impulsivity	7 and below	551	9.41	1.85	-4.290	.000*
	8 and above	103	10.30	2.10		
Nonplanning Impulsivity	7 and below	551	9.02	2.66	-6.239	.000*
	8 and above	103	10.82	2.81		
BIS Total	7 and below	551	26.67	5.15	-7.696	.000*
	8 and above	103	31.01	5.82		

*p<.05, SOGS-r: South OAKS Gaming Screen Test – revised, BFI: Big Five Inventory, BIS: Barratt Impulsiveness Scale-11. two-samples t-test.

Table-3: Pearson Correlation for Examining the Relationship of Scales with SOGS-R Total

		SOGS-r	Motor Impulsivity	Attention Impulsivity	Nonplanning Impulsivity
SOGS-r	r	1	.315**	.166**	.261**
BFI- Extraversion	r	-.244**	-.087*	-.071	-.268**
BFI- Agreeableness	r	-.155**	-.234**	-.192**	-.266**
BFI- Conscientiousness	r	-.193**	-.135**	-.184**	-.429**
BFI- Neuroticism	r	.202**	.260**	.177**	.361**
BFI- Openness to Experience	r	-.073	-.003	-.029	-.222**

**p<0.01, SOGS-r: South OAKS Gaming Screen Test – revised, BFI: Big Five Inventory, BIS: Barratt Impulsiveness Scale-11. Pearson Correlation Test.

Table-4: Investigation of the Effect of Variables on SOGS-R Total in Mobile Investors

Step	Independent variable	Unstandardized Coefficients		Standardized Coefficients	t	p	Adjusted R Square
		B	Std. Error	Beta			
Step -1	(Constant)	5.060	.595		8.512	.000*	.037
	Age	-.054	.014	-.148	-3.837	.000*	
	Female	-.939	.321	-.113	-2.925	.004*	
Step -2	(Constant)	2.013	1.545		2.700	.007*	.171
	Age	-.012	.014	-.032	-.834	.404	
	Female	-.883	.303	-.106	2.918	.004*	
	Extraversion	-.255	.067	-.160	-3.799	.000*	
	Agreeableness	-0.38	.094	-.016	-.407	.684	
	Conscientiousness	-.064	.087	-.032	-.737	.462	
	Neuroticism	.094	.076	.051	1.239	.216	
	Openness to Experience	.013	.073	.007	.175	.861	
	Motor Impulsivity	.346	.061	.240	5.636	.000*	
	Attention Impulsivity	-.018	.073	.010	-.242	.809	
	Nonplanning Impulsivity	.096	.056	.081	1.718	.086	

*p<0.05; SOGS-r: South OAKS Gaming Screen Test – revised, BFI: Big Five Inventory, BIS: Barratt Impulsiveness Scale-11. Hierarchical regression analysis.

DISCUSSION

Earlier studies focused on traditional stock market investments. For this reason, we think it will be important to examine the problematic investment behavior, which we will probably encounter frequently in the future, in the crypto investment specific. Our findings indicated lower extraversion, agreeableness, and conscientiousness scores in the group that scored 8 and above in SOGS-r, that is, the group with possible problematic crypto investors. Furthermore, we found scores with higher neuroticism and impulsivity. In terms of openness to experience, we found no difference. SOGS-r scores displayed significant correlations with all impulsivity subscales and personality traits except openness to experience. Finally, we found that younger age and male gender predicted SOGS-r scores. Even after controlling for age and gender, extraversion negatively and motor impulsivity positively predicted SOGS-r scores. We have discussed the possible implications of our findings below.

In terms of gender, 80.9% of those who took part in our study were male. We found that male gender predicted SOGS-r scores. Previous research reports that female investors take less risk and are less impulsive than male investors. Moreover, it is also reported that pathological investment behavior is less in women, and that risky financial investment behavior is more common in young men (Deck et al. 2014; Jadlow & Mowen 2010).

Some studies in the literature have reported evidence that impulsivity is an endophenotypic marker for addiction risk (De Wit 2009). In studies conducted using the Barratt Impulsiveness Scale, high impulsivity scores were reported in pathological gambling (Black et al. 2015; Kräplin et al. 2014). According to SOGS-r, our study found a significant increase in all three sub-factors and total scores related to impulsivity in the group at risk. In a study conducted with “pure” gamblers (without psychiatric comorbidity) in 2017, there were significant differences in Barrat Impulsiveness scores and subscales when addiction severity was evaluated according to SOGS-r.

(Mann et al. 2017) Another important aspect of impulsivity is that it is associated with treatment failure in CBT (Cognitive Behavioral Therapy) programs. Interestingly, only motor impulsivity scores predicted SOGS-r scores in our regression analyses. Motor impulsivity is characterized by impaired ability to inhibit, delay, or pause inappropriate responses. Therefore, this functioning may be expected to be impaired in problematic investors and may explain unsuccessful attempts at discontinuation or treatment. Several past studies reported that investors who watch the market more regularly and qualify as day traders had higher motor impulsivity scores (Sonkurt & Altınöz 2021). A meta-analysis conducted in 2017 examined motor impulsivity in pathological gamblers with the stop-signal reaction time from the stop-signal task, commission errors, omission errors, and Go reaction time from the Go/No-Go task, and the motor impulsiveness subscale of the Barratt Impulsiveness Scale (BIS-Motor), and it was suggested that motor impulsivity might be one of the features of PG (problematic gambling) psychopathology (Chowdhury et al. 2017). Some studies suggest that PG in adulthood can be predicted by the level of impulsivity in childhood and adolescence (Dussault et al. 2011; Pagani et al. 2009). However, we think that, it is also possible that problematic investing behavior can also increase impulsivity, and that there may be a two-way relationship. In addition, the possibility of investing in mobile seems to be a facilitator for impulsive behaviors.

Regarding personality traits, our findings point to lower extraversion, agreeableness, conscientiousness, and higher neuroticism scores in the risk group. Studies addressing the “Big Five” personality traits have reported significant differences between pathological and non-pathological gamblers in openness to experience, conscientiousness, agreeableness, and neuroticism (MacLaren, Best, et al. 2011; Bagby et al. 2007). In a study of “pure” gamblers without psychiatric comorbidities and addictions, including smoking, it was found that gamblers had higher neuroticism, lower extraversion, lower openness to experience, lower agreeableness, and lower conscientiousness, in addition to higher impulsivity scores compared to the control group. Furthermore, it has been reported that the severity of gambling behavior has negative correlations with agreeableness and conscientiousness (Mann et al. 2017).

It can be expected that there is a relationship between personality traits and pathology. For instance, high neuroticism indicates a tendency to negative affect (Lahey 2009), and together with impulsivity, it can lead to risky ways of reducing negative affect, such as betting. Low conscientiousness is associated with impulsivity, and they are more likely to engage in high-risk behaviors (Raynor & Levine 2009). In our study, financial losses were found

to be higher in the group with possible problematic investors. Financial and social problems may have led to higher neuroticism and lower extraversion scores. Higher neuroticism and lower extraversion scores also have an impact on risky investment. Therefore, longitudinal studies will be important for a clear understanding of this relationship.

Extraversion refers to the level of social interaction of individuals (McCrae & Costa 1987). Many studies point to extraversion and pathological Internet use (Servidio 2014; Diana & Xavier 2014). At the same time, extroverted individuals can establish more satisfying interpersonal relationships in their daily lives. This reduces their interest in virtual relationships and virtual attitudes. Cryptocurrency investments are notable for being a virtual world and technology-based investing platform. Therefore, the crypto-investment market can be a particularly suitable environment for people with low extraversion qualities because it does not require much socialization and is easily accessible from a phone or computer. Extraversion has been linked to a variety of risky behaviors, including online betting (Palomäki et al. 2021), according to several studies (Oehler & Wedlich 2018). However, it is also suggested that extroversion predicts gambling in adulthood without directing a person to engage in risky gambling activity (Mackinnon et al. 2017). As an aspect of extraversion, social motives have been reported to be positively related to time spent in gambling, but unrelated to money wasted or pathological gambling behavior (Lambe et al. 2015). That is, extraversion in adulthood may help people retain a healthy, non-problematic behavior pattern, even in high-risk trading environments. Most probably, the relationship between personality traits and problematic investin behaviour is bidirectional, that is, personality traits affect problematic investin behaviour and problematic investin behaviour-related problems affect personality traits.

Our main limitation was the cross-sectional design of our study. The crypto market is extremely volatile, and it can fluctuate between bullish and bearish periods in its dealings. The cross-sectional design also points to the relationship between personality traits and impulsivity and investment behaviors, but causality can be difficult to interpret. Second, there may be different predictors of investment behavior by gender. Male and female participants were not equally included in the study. Therefore, no gender-based assessments were made. However, male investors are more common in other studies, similar to our study. Therefore, our study may reflect a general population. Third, other addictions that may be related to gambling were not examined in our study. Furthermore, our study relied on self-report scales, which could lead to reporting bias. Finally, the participants of our

study only reflect the Turkish population. Nevertheless, we believe that our research will be beneficial in gaining basic knowledge regarding cryptocurrency investments. To our knowledge, our study is the first in the literature to examine crypto investment behavior and sociodemographic criteria (such as age, gender), personality traits, and impulsivity. Crypto investments are expected to become more prevalent as a behavioral addiction in the future, and we must continue to explore appropriate intervention targets.

CONCLUSION

In conclusion, we leave the benefits and drawbacks of crypto investments to economists. However, it may be helpful to consider investing behavior on a scale that extends to gambling behavior. This perspective can help us identify the risky investor profile and foresee potential negative outcomes. We determined the risky investment

profile as young age, male gender, and motor impulsivity. Extraversion seemed to be a protective personality trait. This information may be essential for prevention gambling behaviors in psychiatry practice. In this regard, we believe that longitudinal studies, in particular, will be beneficial.

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