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Psychosocial and Personality Factors in Economic Decision Making

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Abstract

Economic decision-making largely affects the lives of the people. The objective of this study was to analyze the relationship among age, gender, and personality with psychosocial factors in economic decision-making. The study sample comprised of 150 businesspersons (men = 90, women= 60). Psychosocial Factor in Economic Decision-Making Scale (Ajmal et al., 2013a, 2013b**)** was used to assess the psychosocial factors that affect economic decision making. The personality was evaluated using Eysenck Personality Questionnaire (Urdu version translated by Amjad & Kausar, 2001). Age was found to have a significant negative relationship with the emotional factor in economic decision-making. However, the emotional and social factors had no relationship with either of the personality dimension while the cognitive factor was found to have a significant negative relationship with neuroticism and psychoticism. Moreover, psychoticism and age negatively predicted the cognitive factor and experience in the business positively predicted the cognitive factor in economic decision-making. The findings hold implications for psychologists, economists, business personnel, and policymakers.

Keywords: Cognitive Factors, Decision Making, Economic Factors, Personality and Social Factors

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Introduction

The process of decision-making involves one of the most complex mechanisms of human thinking. It is a set of cognitive operations which involves the ingredients from the environment with time and place specifications (Lizarraga et al., 2007; Schröder & Freedman, 2020). In the process of decision-making, a decision-maker identifies and weighs different alternative courses of action and selects an appropriate one in each decision situation to achieve the desired result (Eisenfuhr, 2011). The same is true in the case of economic decision-making (Weber & Johnson, 2009). It is a complex process of considering and consolidating different aspects of value-based relevant available choices (Mohr et al., 2010).

Models of Decision Making

Decision-making models across disciplines discuss the nature of decision-making differently. These models can be categorized as rational and non-rational models of decision-making. The rational models of decision-making assume decision-making as a rational process and assume decision-makers as fully informed about all possible options and outcomes of their decisions and processing it in a rational manner in choosing the options. Most of the rational decision-making models came from economics, statistics, and philosophy instead of psychology (Polic, 2009). The proposition that people follow a rational four-step sequence, which is to identify the problem, generate solutions, select an appropriate solution, and evaluate and implement the solution in

their decision-making is central to these models. Furthermore, rational decision-making models assume a cognitive process in decision-making in which each of the steps is in a logical sequential order. The search for a perfect solution, in most rational decision-making models, is seen as a frequent factor in delaying decisions. Moreover, these models negate the role of emotions in decision-making (Green & Shapiro, 1994).

On the other hand, the non-rational models of decision-making which are based on the idea of bounded rationality propose decisions made by decision-makers as based on incomplete information without taking all the alternatives and the outcomes of a decision into consideration and with all the alternatives always evaluated incompletely (Lunenburg, 2010). Non-rational models consider the role of limited human capacity, and of cognitive, emotional, and social factors in decision-making. These theories assume individuals make their decisions partially under the influence of such factors i.e., emotions, cognitive biases, etc. that are substantially beyond human control. It views humans as not only the most intelligent but the most emotional and social species too (Gigerenzer, 2001).

Psychosocial Factors in Economic Decision Making

Everyone, from billionaires investing in real estate to small business owners, makes economic decisions and psychosocial factors almost always come into play when people make their economic decisions (Ingram, 2013). Numerous factors may influence economic decision making which range from cognitive heuristics, biases, and emotions to individual demographics. Businesspersons weigh the benefits and costs of decisions before making their economic decisions. Costs and benefits are the primary specifications that all economic decision-makers consider which depend on variety of psychosocial factors (Folayan et al., 2020).

Cognitive Factors. Behavioral decision theory discusses many cognitive simplifications which an individual employees when he/she deals with different decision situations. In decision-making, decision-makers often take help from their past experiences and tend to compare new problems with past cases to derive useful information and future courses of action (Kasoga & Tegambwage, 2022). This process can greatly benefit effective decision-making and may also lead to cognitive heuristics and biases (Chen & Lee, 2003).

In making their decisions, people do not follow strict logic, rather they rely heavily on heuristics which may lead to cognitive biases. Heuristically thinking sometimes can result in beneficial judgments and sometimes can lead to poor decisions due to systematic cognitive errors (Kahneman & Tversky, 1973). The use of cognitive heuristics is not limited to laymen only; even experienced businesspersons and trained researchers also use them which may make them prone to cognitive biases. In a survey study with the population of psychologists, the reliance on cognitive heuristics in their judgments was confirmed (Tversky & Kahneman, 1971).

Gilbert (2002) suggested that people at times tend to rely on fast thinking or gut feeling when they must make decisions which can influence their decisions due to different cognitive and emotional factors. Different cognitive factors along with emotions have been further confirmed to influence the risk and reward perceptions while people make their decisions.

Emotional Factors. Decision-makers are not free from the influence of their emotions (Pfister & Bohm, 2008). Bernheim and Rangel (2004) argued that emotional factors which are relevant in economic decision-making play a significant role throughout the decision-making process as in leading, implementing a choice, and experiencing its outcome, have often been neglected in the studies of economists as economics tend to focus on

the rational motivators of behavior. However, decision-making is almost impossible without the involvement of emotions (Bechara et al., 2000).

Bargh and Chartrand (1999) while discussing the role of emotions in economic decision-making suggested that investment behavior can be influenced by the emotions of investors in several ways which are beyond their conscious awareness. They further conclude that different emotions in different intensities have different effects on decision-making. Best (2005) found the influence of emotional attachment on investment decisions in his study of the Internet stock bubble. Investors who associated themselves with the information age also started to invest in internet stocks due to their attachment and perceived social status which suggests an interaction between emotional and social factors.

Social Factors. Several economic theories discussed the influence of social forces on economic behavior (Becker & Murphy 2000). Akerlof and Kranton (2000) found that social factors mold our identities which have an impact on our preferences. Prechter and Parker (2007), while suggesting the importance of social context in economic decision-making, confirmed the impact of social factors on the economy. They suggested that the responses of the decision-makers are different in uncertain social situations from their responses in certain social situations. They further found the role of psychological and social factors in financial instability. Moreover, the role of social factors in economic-decision making is modified by psychosocial factors and personality traits (Borghans et al., 2008). Thus, there are links between social factors and personality in economic decision-making.

Personality Factor in Economic Decision Making

Economic theory has been fundamentally changed by insights from personality psychology. The development in multidimensional screening brings a fundamental reformulation of signaling theory by adding personality to signaling models (Araujo et al., 2007). Cao et al., (2022) suggested the importance of the personality traits of decision-makers in the models of economic decision-making. Several studies confirmed the relationship between different personality characteristics and economic decision-making (Bean, 2010).

Mueller and Plug (2006), while investigating how different personality traits affect performance in distinct areas of economic life and looking for the relationship between the Big Five personality factors and economic preferences, found that personality is likely to affect economic preferences as well as earning capacities. Anderson et al., (2011) suggested the impact of personality traits on economic decision-making as they found a significant association of extraversion with attitude toward risk.

Saihani et al. (2009) found the impact of personality on creativity in decision-making and suggested that four personality dimensions, Agreeableness, Neuroticism, Openness, and Extraversion have a significant influence on creativity in decisions. Lauriola and Levin (2001) while discussing the impact of different personality traits on risk-taking in decision-making, found that the personality trait openness to experience is significantly associated with greater risk-taking while neuroticism is significantly associated with less risk-taking in decision-making.

Eysenck's Three Personality Traits

Eysenck & Eysenck (1975) developed a widely appreciated model of personality. Based on the results of factor analyses of responses on personality questionnaires he identified three dimensions of personality: extraversion, neuroticism and psychoticism. Two of these are also included in the "Big Five" model of personality (McCrae & Costa, 1985).

Extraversion. Extraverts are sociable and active people, they enjoy meeting people and going to parties. The original conception of extraversion linked it to

arousal (Eysenck & Eysenck 1975). He suggested extraverts as showing low levels of cortical arousal while introverts were as overly aroused. Other explanations focused on proposed differences in conditioning. As introverts, because of their higher arousal, were claimed to condition more readily thus were more socialized and more sensitive to social constraints (Eysenck & Eysenck, 1975).

Gray (1981) re-conceptualized the biological bases of extraversion and neuroticism and proposed reflecting differences in sensitivity to reward and punishment. He suggested extraverts as more sensitive to reward, whereas introverts as more sensitive to punishment.

Neuroticism. Eysenck described neuroticism as showing differences in the intensity of emotional experience. As Gray (1981) suggested neuroticism as indicative of a higher sensitivity to punishment, it is close to a number of other traits such as trait anxiety or negative emotionality. It might be expected that individuals high in neuroticism might be more prone to use drugs in order to reduce or avoid negative emotional states (Eysenck & Eysenck, 1975).

Psychoticism. The third of Eysenck's personality dimensions, the psychoticism, is less well defined than extraversion and neuroticism. Individuals high on psychoticism are tough-minded, non-conformist, willing to take risks and may engage in antisocial behavior. However, revisions to the scale have moved away from this view and recent explanations emphasize impulsive nonconformity. The scale has certain similarities to sensation seeking and if the trait relates to a disorder it is psychopathy/antisocial personality disorder, rather than psychosis. While on the "Big Five" model high psychoticism overlaps with low scores on the traits of agreeableness and conscientiousness (Eysenck & Eysenck, 1975).

Models of decision making in general and model of economic decision making in particular are divided into two different and completely opposite paradigms, i.e. rational and non-rational paradigms of decision making. Rational models of decision making, which are mostly given by economists, statisticians, and philosophers instead of psychologists, are of more like mathematical nature, assumed human as rational decision maker after having all the necessary information and processing it in an ideal way (Polic, 2009). While non-rational models of decision making took human factor into account and asserted that it is impossible for a human being to get all necessary information and processing it in an ideal way when making decisions. These models take Homo sapiens not just most intelligent but most emotional and social species as well, thus assume the presence of a number of psychosocial factors in economic decision making (Gigerenzer, 2001). However, above mentioned evidences suggest the role of different psychosocial and personality factors in economic decision making.

Rationale of the Study

Economic decisions play a vital role in determining the lives of people as they spend much of their time in activities related to economic concerns, and their economic conditions largely affect their lives. Psychosocial and personality factors in economic decision-making, a concept primarily based on the non-rational theories of decision-making, are important to study for several reasons. Psychosocial and personality factors largely affect the process of economic decision-making as driven by their cognitive, emotional, and personality dynamics, people tend to make their economic decisions. The modern disciplines of psychology and economics have much in common, yet these are two different fields with different trainings and mindsets of psychologists and economists. Consequently, the experts in these fields tend to see things differently and the academic communication between psychology and economics is not sufficient. It was decades after the emergence of behavioral economics when psychologists

started to study economic phenomena from psychological perspectives and relatively the new emerging field of economic psychology started to focus on the issues which were neglected by behavioral economists (Frey & Stutzer, 2007). This study views an economic phenomenon from a psychological perspective. This study will prove a groundbreaking work in economic psychology which is an ignored area by behavioral and economic scientists in this region and the findings of this study are equally useful for psychologists, economists, businesspeople, and economic policy makers.

Objective

The objective of this study was to assess psychosocial factors in economic decision-making and the relationship of these factors with the age, business experience, and personality of an individual.

Hypotheses

There is a relationship between age, personality traits, and psychosocial factors in economic decision-making.

Age, business experience, and personality traits are likely to predict the psychosocial factors in economic decision-making.

Method

Sample

The sample of 150 participants of small and medium enterprises (SMEs) self-made businesspersons (Men = 90 and Women = 60), ages ranging from 20 to 65, was drawn from different areas of Lahore city Pakistan.

The demographic information of the participants shows that the mean age for both male and female participants is 40 years. The education of most of the male participants was matriculation while the education of most of the female participants was graduation. Most of the male (76.7 %) and female (81.7%) participants were married. Moreover, the mean business experience of male and female participants was 15 and 11 years respectively.

Measures

Scale for Psychosocial Factors in Economic Decision-Making

A scale for Psychosocial Factors in Economic Decision Making (Ajmal et al., 2013a, 2013b) was used to assess the psychosocial factors that affect economic decision-making. It consists of 30 items with 5 points rating scale: 0 = extremely disagree; 1 = disagree; 2 = neutral; 3 = agree and 4 = extremely disagree. It includes three categories of factors of economic decision making i.e., Emotional factor consisted of 11 items (e.g., Do your economic decisions are different, when you are angry than those when you are normal?); Cognitive factor consisted of 11 items (e.g., Do you make your economic decisions on readily available information?); Social factor consisted of 8 items (e.g., Do you imitate others in making your economic decisions).

Eysenck Personality Questionnaire (EPQ)

The Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975**)** translated (Amjad & Kausar, 2001) into Urdu was used to assess three major dimensions of personality that account for most of the variance in personality**.** EPQ is a two-point scale i.e., the respondents must answer as "yes" or "no". It consists of 90 items, out of these 20 items fall on the Extraversion scale, 26 items fall on the Neuroticism scale, 21 items fall on the Lie scale, and 23 items fall on the Psychoticism scale.

Extroversion (E) scales measures extrovert personality versus introvert personality (e.g., Are you a talkative person?). Cut off point for males are 14 whereas for females it is 13. Neuroticism (N) scale measures a genetic predisposition towards becoming neurotic (e.g., Does your mood go up and down?). It is concerned with personality variables underlying behaviors which neurotic exhibit only in extreme cases. Cut off point for males are 10 whereas for females it is 12. Lie (L) scale attempts to measure a tendency on the part of some subjects to "fake good" (e.g., Are all your

habits good and desirable?). This tendency is particularly marked when the questionnaire is administered under conditions where such tendency would seem appropriate (e.g., as part of an employment interview). No definite cut off is point is suggested, it is dependent on age, as it decreases with age in children and increases with adults. Psychoticism (P) scale measures a genetic predisposition towards becoming either psychotic or psychopathic (e.g., Would you like, other people to be afraid of you?). Cut off point for males are 4 and for females are 3 (Eysenck & Eysenck, 1975). Test-retest reliability for the N, E, P, and L scales of the EPQ (Adult) ranges from .78 to .89 and alpha reliability ranges from .72 to .84. The alpha reliability of the N, E, and P scales is .74, .72, and .51 respectively.

Procedure

After obtaining formal permission from the individuals, the assessment was carried out. For this purpose, only those participants were selected for data collection who matched the given inclusion criteria. A written consent was sought from participants in which the nature of the study was mentioned. The participants were approached in their business places. The response rate in the case of both male and female participants was 80% and 60% respectively. The participants completed the given questionnaires in the presence of the researcher. It took 20 to 30 minutes to complete both scales for each individual.

Results

The data analytic strategy involved performing (1) Descriptive analysis (2) Pearson product-moment correlation and (3) a series of regression analyses by using SPSS (Field, 2005).

The demographic information of the participants showed that mean age for both male and female participants was around 40 years. The education of the majority of the male participants was matriculation while the education of the majority of the female participant was graduation. Majority of the male (76.7 %) and female (81.7%) participants were married. Moreover, majority of the participants both males (50%) and females (63.3%) started their business for last 5 to 10 years; while the rest of the participants were with business duration more than 10 years.

Table 1

Demographic Characteristics of the Sample (N=150)

Characteristics	**Men (*n*=90)**		**Women (*n*=60)**		**Total Sample (*N*=150)**	
	M (SD)	***f (%)***	***M (SD)***	***f (%)***	***M (SD)***	***f (%)***
Age	40.13 (14.41)		39.42 (11.69)		39.85 (13.35)	
Education						
Matriculation		32 (35.6%)		14 (23.3%)		46 (30.7%)
Intermediate		22 (24.4%)		15 (25%)		37 (24.7%)
Graduation		22 (24.4%)		21 (35%)		43 (28.7%)
Masters and above		14 (15.6%)		10 (16.7%)		24 (16%)
Marital Status						
Married		69 (76.7%)		49 (81.7%)		118 (78.7%)
Unmarried		21 (23.3%)		11 (18.3%)		32 (21.3%)

Duration of Business			
5 to 10 years	45(50%)	38 (63.3%)	83 (55.3%)
11 to 15 years	12 (13.3%)	6 (10%)	18 (12.0%)
16 to 20 years	9 (10%)	8 (13.3%)	17 (11.3%)
21 to 25 years	4 (4.4%)	5 (8.3%)	9 (6%)
26 to 30 years	12 (13.3%)	3 (5%)	15 (10%)
30 and above	8 (8.9%)	0 (0%)	8 (5.3%)

Table 2

Descriptive Statistics for Study Variables (N=150)

Variables	*M*	*SD*	Min - Max Score	α
Emotional	5.10	1.30	.55 - 7.82	.75
Cognitive	5.42	1.17	.55 - 7.64	.77
Social	4.59	1.34	.25 - 7.25	.69
Psychoticism	6.54	2.15	1.60 - 12.80	.51
Extroversion	12.33	3.64	2.86 - 20	.72
Neuroticism	9.42	3.58	.87 - 18.26	.74

The results showed that the mean score of emotional factor in economic decision is higher than cognitive and social factors. On the other hand, average scores of extroversion is higher than psychoticism and neuroticism (Table 2).

Table 3

Relationship between Demographics, Personality, and Psychosocial Factors in Economic Decision Making (N = 150)

	Variables	*M*	*SD*	1	2	*3*	4	5	6	7	8
1.	Age of the Participants	39.85	13.35	-							
2.	Emotional Factor	5.10	1.30	-.16*	-.12	-					
3.	Cognitive Factor	5.42	1.17	-.01	.13	.41**	-				
4.	Social Factor	4.59	1.34	-.11	-.09	.55**	.31**	-			
5.	Psychoticism	6.54	2.15	-.07	-.09	-.08	-.24**	.05	-		
6.	Extroversion	12.33	3.64	-.09	.05	-.03	.07	.02	.02	-	
7.	Neuroticism	9.42	3.58	-.16*	-.15	.06	-.17*	.07	.10	-.20*	-

Note: $^{*}p<.05$, $^{**}p<.01$

Results indicated that age has a significant negative relationship with the emotional factor in economic decision-making and with neuroticism. Emotional and social factors had no relationship with all three personality dimensions while the cognitive factor in economic decision-making had a significant negative relationship with two personality dimensions i.e., psychoticism and neuroticism. Furthermore, psychoticism was also significantly

negatively correlated with neuroticism (Table 3).

Table 4

Regression Analysis for Age, Business Experience, and Personality Factors Predicting Emotional Factor in Economic Decision-Making (N=150)

Variables	*B*	*β*	*SE*
Age of the Participant	-0.06	-.16	0.01
Business Experience	0.00	.00	0.01
Psychoticism	-0.06	-.10	0.05
Extroversion	-0.01	-.03	0.03
Neuroticism	0.01	.03	0.03
R^2	0.04		
F	1.18		

Note: $^{*}p<.05$, $^{**}p<.01$

Results of linear regression analysis showed that age, business experience, and none of the personality dimensions predicted the emotional factor in economic decision making (Table 4).

Table 5

Regression Analysis for Age, Business Experience, and Personality Factors Predicting the Cognitive Factor in Economic Decision-Making (N=150)

Variables	*B*	*β*	*SE*
Age of the Participant	-0.02	-.26*	0.01
Business Experience	0.03	.28**	0.01
Psychoticism	-0.12	-.22**	0.66
Extroversion	0.01	.01	0.04
Neuroticism	-0.05	-.15	0.03
R^2	0.12		
F	4.01**		

Note: $^{*}p<.05$, $^{**}p<.01$

The analysis revealed that age and psychoticism negatively predicted the cognitive factor in economic decision-making. On the other hand, business experience positively predicted the cognitive factor in economic decision-making. While all other variables did not show significant prediction for the cognitive factor (Table 5).

Table 6

Regression Analysis for Age, Business Experience, and Personality Factors Predicting the Social Factor in Economic Decision-Making (N=150)

Variables	*B*	*β*	*SE*
Age of the Participant	-0.01	-.08	0.01
Business Experience	-0.01	-.02	0.02
Psychoticism	0.02	.04	0.05
Extroversion	0.01	.03	0.03
Neuroticism	0.02	.06	0.03
R^2	.02		
F	.57		

Note: $^{*}p<.05$, $^{**}p<.01$

Results of linear regression analysis showed age, business experience, and none of the personality dimensions predicted the social factor in economic decision-making (Table 6).

Discussion

The present research aimed to investigate gender, age, and personality differences in psychosocial factors in economic decision-making. In this study, age was found to have a significant negative relationship with the emotional factor in economic decision-making and with neuroticism which is consistent with the other findings on age-related differences in economic decision-making as Lizarraga et al., (2007) found that old people give less importance to emotions in their decision making. As far as business experience is concerned it has no significant relationship with any psychosocial factors in economic decision making or with either of personality dimensions. The result of the present study is also supported by the study conducted by Baiocco et al. (2009). However, the findings of the study conducted by De-Wit et al. (2007) did not find the same.

One of the findings of this study suggested a non-significant relationship between business experience and psychosocial factors in economic decision-making. It can be argued that the psychosocial factors in economic decision-making are based on the non-rational theories of decision-making which suggest these factors as non-rational parts of human decision-making and are beyond human control which may cause even experienced investors to make irrational decisions (Ariely, 2008).

Further in the present study, emotional and social factors were found to have no relationship with all three personality types while the cognitive factor in economic decision-making had a negative relationship with two personality dimensions i.e., psychoticism and neuroticism which is congruous with the previous findings as Singh et al. (2022) found the relationship between different personality dimensions and economic decision making. Bean (2010) also found a significant relationship between personality dimensions and economic decisions. It can be said that psychosis is characterized by distortion in thinking (McCreery, 2008). People with psychoticism, unlike healthy people tend to use unrealistic cognition when it comes to practical affairs like economic decision-making.

The present study also showed that age and psychoticism negatively predict the cognitive factor in economic decision-making. On the other hand, experience in business positively predicted the cognitive factor in economic decision-making while emotional and social factors were not predicted by age, business experience, or any of the personality dimensions. Findings in the field of economic psychology suggested some predictions in economic and investment decision-making from personality dimensions and traits as Davis et al. (2007) found an association between personality traits such as impulsivity, sensitivity to reward and punishment, and poor decision-making which may be consistent with one of the findings of the present study indirectly as psychoticism is found to be negatively predicts cognitive factor in economic decision making.

As far as the positive prediction of the cognitive factor from business experience is concerned, there is a popular saying that there is no substitute for experience (Coelho, 1993), it can be said that by spending more time in business, businesspersons have been learned to think rationally while making their economic decisions by the virtue of their business experience. There is a need to research the topics which even come exclusively in the domain of psychology with interdisciplinary approaches to make the research more applicable in real-life settings (Ajmal et al., 2022). Moreover, there is a need to train interdisciplinary researchers to better understand and

research interdisciplinary phenomena (Ajmal & Rasool, 2023).

Limitations and Suggestions

The study has limited generalizability as the participants were SME owners and the findings of this study cannot be generalized to the big businesses.

The sample size was relatively small consisting of 150 participants with 60 female and 90 male participants; the sample size should be enlarged to get more reliable results for future study.

Psychosocial factors in economic decision-making can be studied in the context of effective economic decision-making, using the findings of this study future research can be focused on it.

Implications

Economic affairs play a very important role in determining the life courses of people and economic decision-making is pivotal in one's economic life. This study provides empirical as well as psychological insights into the process of economic decision-making and sorts out the psychosocial and personality factors in economic decision-making and the relationship of these factors with the age and business experience of a person. The findings of the present study will help the economists, business researchers, and businesspeople to understand the role of the psychosocial factors in economic decision-making and they would better be able to understand the process of economic decision-making and consequently would be able to make better economic decisions. Moreover, this study would be helpful for economic policymakers, financial institutions, etc. in adopting beneficial strategies for businesses.

Conclusion

The present work found the relevance of psychosocial and personality factors in economic decision-making. This study confirms that none of the personality dimensions significantly predict emotional and social factors, but psychoticism negatively predicts the cognitive factor in economic decision-making. Moreover, the age of the economic decision-makers has been found to have a significant negative relationship with the emotional factor in economic decision-making. The present study provides insights into the very phenomenon of economic decision-making and suggests guidelines and lines of thinking for future research in economic decision-making in general and in psychosocial factors in economic decision-making in particular.

Contribution of Authors

Ali Ajmal: Conceptualization, Investigation, Methodology, Data Curation, Formal Analysis, Writing – Original Draft

Rukhsana Kousar: Methodology, Writing - Reviewing & Editing

Iram Fatima: Conceptualization, Methodology, Writing - Reviewing & Editing, Supervision

Conflict of Interest

There is no conflict of interest declared by the authors.

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Data Availability Statement

The datasets of the current study are not available publicly due to ethical reasons but are available from the corresponding author [A.A.] upon the reasonable request.

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