

Contents lists available at [ScienceDirect](#)

## Journal of Adolescence

journal homepage: [www.elsevier.com/locate/jado](http://www.elsevier.com/locate/jado)

## Magical thinking and decision-making strategies among late adolescent regular gamblers: A mediation model



Alessia Passanisi, Giuseppe Craparo, Ugo Pace\*

Kore University of Enna, Italy

## ARTICLE INFO

## Article history:

Received 25 January 2017

Received in revised form 18 May 2017

Accepted 25 May 2017

## Keywords:

Late adolescents

Gambling

Decision-making

Magical thinking

## ABSTRACT

In the present study, the relation between the tendency to seek supernatural connections between external events and one's own thoughts, words, and actions and gambling among late adolescents has been studied. Psychologists have called this tendency magical thinking. The principal aim of the present study was to test the fit of an explanatory model of risk that starts from magical thinking and passes through maladaptive decision-making strategies, culminating with pathological gambling. Two hundred twenty-two Italian late adolescents, regularly attending bingo halls, aged between 19 and 21 years, completed measures on magical thinking, decision-making strategies, and gambling. Results highlight that young adults adopting dysfunctional modes of thought (i.e. magical thinking) tend to engage with maladaptive styles of decision-making that predispose them to gamble.

© 2017 The Foundation for Professionals in Services for Adolescents. Published by Elsevier Ltd. All rights reserved.

Evidence supporting the significance of higher-order cognitive control in maintaining goal-directed behavior may offer an explanation about reasons why cognitive strategies may be associated with continuous implementation of dysfunctional behaviors (Ashare, Falcone & Lerman, 2014). In particular periods of human development, such as adolescence, during which thinking strategies are under construction, the study of the relationship between cognitive systems and consequent adaptive or non-adaptive behaviors can be considered very important to prevent disadvantage or psychopathology (Krok, 2015; Michael & Attias, 2016). Nevertheless, in studies on risk factors linked to gambling during adolescent development, few studies have been conducted on the relationship between magical ideation or superstition considered a dimension of abnormal, rather than normal, personality variation such as rational and logical thought (Cosenza & Nigro, 2015; Savage, et al., 2014), and cognitive factors such as decision-making styles. The mechanism of deciding on the basis of instantaneous reward or, conversely, on postponed but important reward, is considered a crucial point in the functional psychosocial developmental trajectory. An adaptive decision-making function should be based on the postponement of impulsive urges leading to immediate gratification and perseverance in goal-directed behavior to achieve positive outcomes in the future. Conversely, in at-risk or addicted behaviors, the selection of important choices is conditioned by factors very far from a rationale pathway, such as magical thinking or superstition (e.g., Joukhador, Blaszczyński, & Maccallum, 2004; Kramer & Block, 2008). In the psychology literature, a great amount of research on gambling has led to the suggestion that there might be a general predisposition toward addiction in some individuals (Shaffer & Albanese, 2004), which irrationally would push people to continue actions that lead inevitably to failure strategies. As reported in recent research, these predispositions have been identified through personality characteristics; among these, impulsivity (Passanisi & Pace, 2017) and sensation seeking would play a key

\* Corresponding author. University Kore of Enna – Cittadella Universitaria, 94100 Enna, Italy.

E-mail address: [ugopax@gmail.com](mailto:ugopax@gmail.com) (U. Pace).

role in gambling behaviors. In particular, [Donati, Chiesi, and Primi \(2013\)](#) found sensation seeking and superstitious thinking to be significant predictors of at-risk/problem gambling. These findings are in line with previous research, which has shown that the desire for intense sensory experiences was predictive of problem gambling behavior in male and female adolescents ([Gupta & Derevensky, 1998](#); [Nower, Derevensky, & Gupta, 2004](#)), and that irrational beliefs were strong predictors of problematic gambling ([Moore & Ohtsuka, 1999a, 1999b](#)). As stated, conversely, few empirical studies have investigated the tendency to seek supernatural connections between external events and one's own thoughts, words, and actions, together with its relationship with cognitive variables such as decision making. Several studies have underlined that adolescent gamblers believe that they can control random events ([Moore & Ohtsuka, 1999a, 1999b](#)) or believe they have the so-called "hot hand," thinking that having won consecutive bets means to be hot and, consequently, to win again ([Källmén, Andersson, & Andren, 2008](#)); moreover, adolescents believe in good luck ([Chiu & Storm, 2010](#)). Further, young people often tend to place too much importance on one aspect of an event, which produces an error in predicting future outcomes of that event. [Donati, Chiesi, and Primi \(2015\)](#), in this sense, have underlined that probabilistic reasoning characterizes adolescents' decision-making explicitly risky: if a wrong assessment of the probability guides an action, it is very likely that the adolescent will underestimate the real risk of his or her actions and may come to be in an unsafe situation. Some decisions, which appear to be made on the basis of cognitive biases and heuristics, such as the gambler's fallacy ([Tversky, 1974](#)), a well-known bias in probabilistic reasoning stemming from the belief that the likelihood of an event is related to preceding, independent outcomes (e.g., in roulette, after a long sequence of red, black is judged to be more likely than red on the next spin) can be considered unconscious and tend to involve automatic processing, which differs from a second mode, a slow and more difficult rule-based processing mode based on effort-consuming systematic reasoning ([Gunn & Finn, 2015](#)). May we label these kinds of decisions, which are not based on formal logic or reason, as magical? We could say so, as magical thinking is usually characterized by attributions about causality that defy either physical laws or culturally accepted explanations ([Gregory & Mustata, 2012](#)). In fact, thoughts and external events linked in a way that cannot be rationally explained by physical laws or culturally acceptable explanations are known as magical thinking. Magical thinking characterizes people who believe "that their thoughts, words or action might, or will in some manner, cause or prevent a specific outcome in some way that defies the normal laws of cause and effect" ([American Psychiatric Association, 2000](#), p. 825). In non-clinical people (that is, when it is not associated with psychiatric illness), it generally plays a role regarding personal security. Magical thinking among adolescents, for instance, gives them the opportunity to explain and control what they believe is uncertain ([Subbotsky, 2010](#)), providing the feeling of not being helpless and at the mercy of the unpredictable. From a developmental point of view, magical thinking has been associated with early childhood as being pre-symbolic, in that stage of life in which the mind is unable to differentiate the real from the symbolic, or the signifier from the signified ([Piaget, 1962](#)). Magic relates closely to symbolic function: Magical thinking is considered as utilizing a pre-symbolic mode of thought. The thinking process would depend on the existence of an object rather than on mental representations ([Levens, 1995](#)). Lack in the process of symbolization is, for this reason, often present in people affected by addiction, linked to substance or to behaviors. In people for which thought and action are easily mixed, lack of control over impulses causes them to act out, since it becomes difficult to separate a thought from the need to put it immediately into action ([Levens, 1995](#); [Ng-Knight et al., 2016](#)). Thus, they would tend to engage in dysfunctional decision-making styles. On the basis of the aforementioned considerations, the principal aim of the present study was to test the fit of an explanatory model of risk that starts from magical thinking and passes through maladaptive decision-making strategies, culminating with pathological gambling. Previous studies have simply shown the presence, in pathological gamblers, of maladaptive strategies of decision-making, often linked to impulsivity or sensation-seeking. In this study, however, we sought to explore, in a group of late adolescent regular gamblers, a model of mediation in which the predictive function of magical thinking on pathological gambling can be mediated by maladaptive decision-making.

## 1. Method

### 1.1. Participants

Participants were 222 Caucasian late adolescents (53% males,  $n = 116$ ) ages from 19 to 21 years ( $M = 19.7$ ;  $SD = 3.1$ ) recruited in Betting or Bingo halls. Gender, age and place of gambling (46% attended Sport Betting Centres, 54% attended Bingo Hall) were similarly distributed. Only late adolescents who played at least once a week, and defined by [Griffiths \(1994c\)](#) as regular gamblers, were involved.

### 1.2. Measures

#### 1.2.1. Magical thinking

Magical ideation scale (MIS; [Eckblad & Chapman, 1983](#)). This measure consists of 30 dichotomous true-false items exploring magical beliefs based on a definition of magical thinking as 'belief in forms of causation that by conventional standards are invalid'. The scale was originally developed with a normative sample to assess magical ideation in schizotypy and has been demonstrated to show construct validity as a measure of schizotypy. The scale was originally developed with a

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات