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Locus Of Control And Beliefs About Superstition And Luck In Adolescents: What's Their Relationship?

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Abstract

The aim of this research was to examine the relationships of locus of control with personal beliefs about superstition and luck expressed by Sicilian middle and late adolescents enrolled from two Public Senior High Schools in East Sicily (Italy). A self-report questionnaire formed by two Semantic Differentials, referred to the concepts of “luck” and “superstition”, the Locus of Control of Behavior Scale (LoC: Craig et al., 1984), the Personal Beliefs in Superstition Scale, and the Personal Beliefs in Good Luck Scale (Darke & Freedman, 1997) were used. Results showed that late adolescents were more internally LoC-believers than middle ones, while middle adolescents were more externally LoC-believers than late ones. Middle adolescents were more superstitious and greatly believed in good luck than late ones. The more the adolescents were internally LoC-believers, the less they believed in superstition; on the contrary, the more the adolescents were externally LoC-believers, the more they've put their faith in superstition and good luck. Future researches could be addressed toward the influence of personality factors and resilience on beliefs about superstition and luck.

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1. Introduction

The belief in superstition and luck is one of the factors that affect behaviors and actions of individuals and is considered a domain-specific concept (e.g., wedding, gambling, sport, academic performance, health, and so on) (Jahoda, 1969). The analysis of this topic revealed several differences between positive and negative superstitions and their effects on individual behaviors: thus, beliefs in positive superstitions, such as “carrying a charm”, “touching wood”, or “crossing fingers” in order to gain good luck, are differently dealt with than negative

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superstitions, such as “breaking a mirror”, “seeing a black cat”, or “Friday 17”. The former ones constitute an external reinforcement for individual actions addressed toward the attainment of desired goals and successes functional to personal growth, while the latter ones are an out of personal control reinforcement of behaviors directed toward the avoiding of the bad luck and harmful consequences for the individual.

Superstition has been analyzed in relation to beliefs in good luck (Darke & Freedman, 1997), personality traits (Wiseman & Watt, 2004), optimism/pessimism orientation (Day & Maltby, 2003), religious beliefs (Stanke & Taylor, 2004; Beck & Miller, 2001; Tobacyk & Milford, 1983), self-efficacy (Tobacyk & Shrader, 1991; Sachs, 2004; Damisch, Stoberock, & Mussweiler, 2010), coping strategies (Irwin, 1994), and locus of control (Peltzer, 2003; Mundada, 2013). For example, Sachs (2004) found that higher scores in beliefs in superstition were associated with lower levels on self-efficacy in Chinese postgraduate students. Day and Maltby (2003) found that beliefs in good luck were significantly related to optimism and irrational beliefs; in addition, negative relationships were found between beliefs in good luck and both depression and anxiety. People who were anxious were more superstitious than those who were not (Wolfradt, 1997; Wiseman & Watt, 2004). Finally, Darke and Freedman (1997) pointed out that some individuals maintained an irrational view of luck as a stable force that influenced events in their own favor, while other individuals seemed to hold the rational beliefs referred to the idea that luck was random and unreliable. Furthermore, the beliefs in good luck showed a considerable amount of stability over time and were significantly related to external locus of control.

Underlining that locus of control consists of the degree to which people report a sense of personal control in daily experiences, this concept has been dichotomized as internal or external locus of control (Rotter, 1966); thus, individuals with an internal locus of control believed that events are the product of their own behaviors, while individuals with an external locus of control believed that the events are the product of chance, luck, or the influence of other people. Specifically, internality refers to the expectancy that one is in control or instrumental in obtaining rewards from one’s environment, while externality refers to the belief that rewards are out of one’s control and determined by luck. Differences for sex were observed in relation to locus of control. For example, Sherman and colleagues (1997) demonstrated that females were more external than males and differed in the perception of control over interpersonal relationships and fundamentally uncontrollable life experiences. On the contrary, in Sagone and De Caroli’s investigation about the relationship between locus of control and academic self-efficacy in three groups of university students, results showed no relevant differences between females and males in all groups of university students.

In an earlier study on the relationship between belief in superstition and locus of control, Peterson (1978) observed that individuals with an external locus of control believed in self-oriented superstitions. As stated by Vyse (1997), “superstitious behavior emerges as a result of uncertainty to circumstances that are inherently random or uncontrollable” (p.201). In relation to the influence of optimism/pessimism orientation, Dember et al. (1989) observed that optimism was associated with the internal locus of control whereas pessimism with the external locus of control and Rudski (2004) found that pessimism was positively correlated with beliefs in superstition. In addition, Tobacyk, Nagot and Miller (1988) pointed out that college students with high personal self-efficacy and interpersonal control reported less beliefs in superstition. Also, low beliefs in self-efficacy expressed by undergraduate students were positively linked with superstitious behaviors (Tobacyk & Shrader, 1991). In addition, Stanke and Taylor (2004) found a low but significant relationship between external locus of control and highly superstitious beliefs. Only in rare cases, as well as in Groth-Marnat and Pegden’s research carried out with undergraduate university students (1998), individuals with internal locus of control expressed a high degree of beliefs in superstitions. More recently, Damisch and colleagues (2013) experimentally verified that activating good-luck-related superstitions through a common action (e.g., keeping one’s fingers crossed) or a lucky charm improved performances in golfing, motor agility, memory, and anagram games. These performances were influenced in turn by changes in perceived self-efficacy: thus, activating good-luck-related superstitions enhanced individuals’ confidence in mastering future tasks which consecutively improved the performance.

Both early and more recent researches found significant differences for sex in relation to beliefs in superstition and usage of superstitious behaviors, noticing that women were more superstitious than men in several aspects of their life (Sumarcenjitha & Sreedhar, 1992; Wolfradt, 1997; Dag, 1999; Wiseman & Watt, 2004; Stanke & Taylor, 2004; George & Sreedhar, 2006). Specifically, in relation to beliefs in good luck (Darke & Freedman, 2007), no significant sex differences were found.

Little evidences were found about the possible relationships between locus of control and beliefs about superstition and luck in adolescence and this constituted the rationale of the current study carried out with a sample

of Sicilian middle and late adolescents. In detail, the central aim of this research will be to examine the relationship between I-E locus of control and social attitudes regarding superstitious beliefs and good luck; the secondary purpose will be to investigate the representation of “superstition” and “luck”; finally, the last purpose will be to analyze sex and age differences in this sample of adolescents.

1.1. Hypotheses

With reference to the relationship among the aforementioned dimensions, we predicted that the internally LoC-believers adolescents will believe less in superstition and good luck (H_{1a}) and will judge less positively the concepts of superstition and luck (H_{1b}). In relation to the existence of differences for sex and age groups, we predicted that boys will be more internally LoC-believers than girls (H_{2a}) and girls will be more externally LoC-believers than boys (H_{2b}); late adolescents will be internally LoC-believers than middle ones (H_{3a}) and middle ones will be more externally LoC-believers than late ones (H_{3b}). In relation to superstitious beliefs, we predicted that girls will be more superstitious than boys (H_{4a}) and middle adolescents will be more superstitious than late ones (H_{4b}). Furthermore, in reference to the representation of “superstition” and “luck”, we hypothesized that girls will judge more positively the concept of superstition and luck than boys (H_{5a}) and middle adolescents will value more positively the concept of superstition and luck than late ones (H_{5b}). Finally, we predicted the existence of a significant relationship between beliefs about superstition and good luck and the positive representation of these two dimensions (H_6).

1.2. Participants

The sample of this research was constituted by 118 Sicilian adolescents (56 boys and 62 girls), divided in two subgroups for age: 49 of 14-16 yrs. (middle adolescents) and 69 of 17-19 yrs. (late adolescents). The original sample was formed by 124 adolescents, but some of them returned the incomplete questionnaire and were excluded by the final sample. Participants were randomly enrolled from two Public Senior High Schools in East Sicily (Italy) and parental consent was obtained for the participation to this study.

1.3. Measures and procedure

We used a self-report and anonymous questionnaire, constituted by the Locus of Control of Behavior Scale (Craig, Franklin, & Andrews, 1984), the Personal Beliefs in Superstition Scale, the Personal Beliefs in Good Luck Scale (Darke & Freedman, 1997), and two Semantic Differentials (Osgood, Tannenbaum, & Suci, 1957) referred to the representation of “superstition” and “luck”. The questionnaire was administered to participants in a small group setting by an expert researcher who explained the instructions to fill in each measure.

The Locus of Control of Behavior Scale (LoC: Craig et al., 1984) was applied to measure the internal and external locus of control and previously used in relation to academic self-efficacy in university students (Sagone & De Caroli, in press). It was composed by 17 items each valuable on a 6-point Likert scale, ranging from 0 (“strongly disagree”) to 5 intervals (“strongly agree”): e.g., “I can anticipate difficulties and take action to avoid them”, “My mistakes and problems are my responsibility to deal with”. The internal consistency resulted to be satisfactory both for internal LoC ($\alpha = .73$) and external LoC ($\alpha = .76$).

The Personal Beliefs in Superstition Scale was a new scale formed by 16 statements created ad hoc in order to analyze the belief in the most common and diffused superstitions in Sicilian socio-cultural context. Half of statements were referred to the positive superstitious beliefs (e.g., “crossing fingers”, “carrying lucky charms”, and “to born under a lucky star”) and other half concerned the negative superstitious beliefs (e.g., “breaking a mirror”, “number 17”, and “opening the umbrella inside the house”). Participants were asked to indicate their agreement with each statement using a 7-point Likert scale, ranging from 1 (anchored with “strongly disagree”) to 7 intervals (anchored with “strongly agree”). The internal consistency resulted to be satisfactory for total scale ($\alpha = .92$). Summing all responses in order to obtain a single measure of the degree to which participants endorsed these attitudes totaled the total score relating to positive and negative beliefs about superstition.

The Personal Beliefs in Good Luck Scale, developed by Darke and Freedman (1997), was used to measure the personal beliefs in good luck in everyday life and included 15 items ($\alpha = .81$), each valuable on a 6-point Likert scale

(e.g. “I consider myself to be a lucky person”, “I believe in luck”, “Luck is nothing more than random chance”, “I consistently have good luck”), ranging from 1 (equal to “strongly disagree”) to 6 intervals (equal to strongly agree). Low scores on this measure indicated that luck was viewed as random and unreliable trait, while high scores revealed that luck was considered as personal and stable characteristic.

The Semantic Differential Technique (Osgood et al., 1957) was used to analyze the representation of “superstition” ($\alpha=.82$) and “luck” ($\alpha=.81$). These two measures included 28 pairs of opposite adjectives for each concept (e.g., stable-unstable, fragile-resistant) and each opposite adjective was valuable on a 7-point Likert scale. High scores showed a positive valuation of the meaning of these concepts.

The statistical analysis of data was carried out by means of the SPSS 15, using t-tests and linear correlation. Sex and age groups were used as independent variables, while mean scores obtained on semantic differentials, locus of control, and beliefs in superstition and good luck were used as dependent variables.

2. Results

2.1. Locus of control and beliefs in superstition and good luck (H_{1a})

Regarding the relationship between I-E locus of control and beliefs about superstition and luck (Table 1), results showed that the more the adolescents were internally LoC-believers, the less they believed in superstition ($r_{(118)}=-.48, p<.001$); on the contrary, the more the adolescents were externally LoC-believers, the more they've put their faith in superstition ($r_{(118)}=.62, p<.001$) and good luck ($r_{(118)}=.43, p<.001$).

2.2. Locus of control and representation of superstition and luck (H_{1b})

About the relationship between I-E locus of control and representation of “superstition” and “luck” (Table 1), results showed that the more the adolescents were internally LoC-believers, the more they negatively judged the concept of “luck” ($r_{(118)}=-.37, p<.001$); on the contrary, the more the adolescents were externally LoC-believers, the more they positively judged the concept of “luck” ($r_{(118)}=.22, p=.016$).

2.1.1. Locus of control: differences for sex and age groups (H_{2a-2b}) (H_{3a-3b})

Statistical analysis of data demonstrated that middle adolescents were more externally LoC-believers than late ones (middle: $M=21,2$ vs. late: $M=15,3$; $t_{(116)}=4,37, p<.001$), whereas late adolescents were more internally LoC-believers than middle ones (middle: $M=21,2$ vs. late: $M=25,4$; $t_{(116)}=-4,32, p<.001$). No significant differences were observed for sex both in internal (boys: $M=23,5$ vs. girls: $M=23,7$; $t_{(116)}=-,227, p=.82$ ns) and external locus of control (boys: $M=17,2$ vs. girls: $M=18,3$; $t_{(116)}=-,708, p=.48$ ns).

2.1.2. Beliefs in superstition and good luck: differences for sex and age groups (H_{4a-4b})

Middle adolescents were more superstitious (middle: $M=51,8$ vs. late: $M=34,5$; $t_{(116)}=4,91, p<.001$) and greatly believed in good luck (middle: $M=43,9$ vs. late: $M=39,2$; $t_{(116)}=2,23, p=.028$) than late ones. No significant differences for sex both in personal beliefs in superstition (boys: $M=41,4$ vs. girls: $M=41,9$; $t_{(116)}=-,142, p=.88$ ns) and in good luck (boys: $M=40,9$ vs. girls: $M=41,3$; $t_{(116)}=-,142, p=.86$ ns) were found.

2.2.1. Representation of superstition and luck: differences for sex and age groups (H_{5a-5b})

Statistical analysis of data demonstrated that participants judged the concept of “superstition” below the intermediate point equal to 4 ($M=3,78, sd=.72$) compared to the concept of “luck” above the intermediate point ($M=4,22, sd=.57$) in a significantly different way ($t_{(117)}=-7,31, p<.001$), without differences for sex and age.

2.3. Personal beliefs and representation of superstition and luck (H_6)

Regarding the relationship between beliefs about superstition and good luck and representation of these two dimensions (Table 1), results demonstrated that the more the adolescents believed in superstition, the more they expressed a positive representation of superstition ($r_{(118)}=.36$, $p<.001$) and good luck ($r_{(118)}=.46$, $p<.001$); furthermore, the more the adolescents believed in good luck, the more they expressed a positive representation of good luck ($r_{(118)}=.37$, $p<.001$) and superstition ($r_{(118)}=.23$, $p=.011$).

Table 1. Linear correlations among the analyzed dimensions – Total sample ($n=118$)

| | Internal LoC | External LoC | Belief about superstition | Belief about good luck | Concept of superstition | Concept of luck |
|---------------------------|--------------|--------------|---------------------------|------------------------|-------------------------|-----------------|
| Internal LoC | 1 | | | | | |
| External LoC | -.44(**) | 1 | | | | |
| Belief about superstition | -.48(**) | .62(**) | 1 | | | |
| Belief about good luck | -.20(*) | .43(**) | .69(**) | 1 | | |
| Concept of superstition | -.16 | .19(*) | .36(**) | .23(*) | 1 | |
| Concept of luck | -.37(**) | .22(*) | .46(**) | .37(**) | .50(**) | 1 |

Levels of significance for ** $p<.001$ and * $p<.05$

3. Discussion and conclusion

Results of the current study showed a confirmation of the central hypothesis according to which the internally LoC-believers adolescents expressed a low degree of belief in superstition and good luck; consistently, the externally LoC-believers adolescents have put their faith in the strength of superstition and good luck. Furthermore, the internally LoC-believers adolescents negatively judged the concept of “luck” and, on the contrary, the externally LoC-believers adolescents positively valued the concept of “luck”. Lastly, the more the adolescents expressed a high degree of belief in superstition and in the power of good luck, the more they positively judged the concepts of superstition and luck. The finding of a significant correlation between external locus of control and high degree of belief in superstition supported the assumption proposed by previous scholars, according to which there may be a strong link between the holding of superstitious beliefs and the need to cope with the uncontrollability of life also during the adolescence.

In reference to the differences for sex and age groups, the initial hypotheses of this investigation were partially confirmed only for the influence of age on the analyzed dimensions: thus, middle adolescents believed that luck affected the course of their own life events, whereas late adolescents believed that life events were under their control rather than under the positive effects of good luck. Consistently with the previous evidence, late adolescents were less superstitious and had put less their faith in good luck than middle ones. This datum could be explained with reference to the development of cognitive maturity functional to the overcoming of magical thinking typically present in childhood. Finally, contrary to all expectations, the hypothesized superiority of girls on boys in relation to the beliefs in superstition and good luck was not confirmed.

Future researches could be addressed toward the analysis of influence of personality traits, resilience, self-efficacy, and purpose in life as essential facet of psychological well being in adolescence on beliefs about superstition and good luck.

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