

**Emotion and emotion regulation beliefs as a moderator between morningness-eveningness and dark traits: a study on normal population**

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**Introduction**

Adaptive management of emotions is essential for mental health (Aldao, Nolen-Hoeksema, and Schweizer, 2010; Eisenberg, Fabes, Guthrie, and Reiser, 2000). The emotional regulation involves monitoring, evaluating, and modifying emotional responses to achieve goals (Thompson, 1994). There are many individual differences in emotional abilities, including the identification and understanding of their emotions and others, the causes and effects of various emotions and the strategies used to regulate emotions (Cummings, 1987; Denham, 1998). These differences in emotional processes and management of emotions have wide implications in many psychological functions (Denham, 1986; Eisenberg et al., 2000). Findings show that emotional dysregulation affects the psychiatric pathology (Aldao et al., 2010). Among the pathological traits that have attracted a lot of attention in recent years, are dark traits. Dark traits are Narcissistic, Machiavellianism and Psychopathic, which are independent, but related to one another (Palos and Williams, 2002). The defect in the emotional experience is considered as the main factor in the dark traits (Jansson and Kross, 2013). The biological structure of the personality that appears to be involved in explaining individual differences in personality dark tendencies is the morning-evening type. The trait of morning-evening is known as the biological dimension of the personality, which is largely the result of heredity (Adan, Archer, Hidalgo, Di Milia, Natale, and Randler, 2012). In addition to the physiological differences between morning to evening type (for example, patterns of cortisol and melatonin secretion), some psychological differences have also been reported between these two types. The current study investigated the relationships between morningness-eveningness, emotion and emotion regulation beliefs and dark traits.

**Method**

The study participants were 439 students who were selected through multi-stage cluster sampling. Inclusion criteria were being aged 18 or older

and all participants reported that they had not been diagnosed as a medical case (physical, but not necessarily psychological disorders) by a doctor. Participants with a psychotic disorder, abuse acute suicidality, insufficient language skills, or severe cognitive impairment were excluded. Participants completed a series of questionnaires following an informed consent procedure and were provided with debriefing information on the purpose of the study and given a list of community counseling agencies at the end of the survey. Of the total participants, 404 were undergraduate student (92%), and 35 ones were masters and higher education students (8%), 139 participants were male (31.7%) and 300 ones were female (68.3%). Respectively, the students' ages' mean and standard deviation were 19.85 and 1.78 in males, 19.81 and 1.81 in females.

### Results

Descriptive statistics and bivariate correlations among the study variables were presented in Table 1. Skew ness and kurtosis were within a conventional range (-1 to 1; George and Mallery, 2003) for all of the variables. Bivariate correlations showed that regulation worth, as a positive emotional attitude, was associated with morningness tendencies (see Table 1). Morningness positively associated with narcissism and psychopathic tendencies (see Table 1). The negative dimensions of emotional attitudes, including emotion constraint and hijacking were positively associated with dark triad traits, but the regulation worth, as a positive emotional attitude had negative correlations with Machiavellianism and Narcissism and a positive correlation with psychopathic tendencies. Moderation was tested using Sobel's test. We tested whether the emotional attitudes moderated the relationships between the Morningness-Eveningness and dark triad traits. In order to determine the extent to which emotional attitudes were involved in these moderation effects, we conducted the moderation analyses for dark triad traits. The difference in narcissism trait was partially moderated by regulation worth ( $z=2.01, p<.05$ ). The difference in psychopathy trait was partially moderated by regulation worth ( $z=2.34, p<.05$ ). In other cases, dimensions of emotional attitudes were not moderating the path between morningness-eveningness and dark triad traits (See table 3).

### Discussion and Conclusion

The aim of the current study was to examine whether emotion and emotion regulation beliefs can help explain the relationship between morningness-eveningness and dark traits. As was expected, negative emotion beliefs (Emotion Constraint and Hijacking) were associated with dark traits. In addition, results from the moderator analysis suggest that the

relationship between morningness-eveningness and dark traits were partially mediated via emotion and emotion regulation beliefs. We believe that these findings add knowledge to the emotion and emotion beliefs and demonstrate the importance of emotion beliefs and emotion dysregulation to psychopathology in various ways. Despite interesting findings, there are several limitations of the current study which worth noting. First, participants' report was obtained retrospectively, therefore, recall bias could have impacted some of the participants' self-reporting. Additionally, it is unclear whether the sample of the present study is presenting with diagnosable levels of the dark traits symptoms.

**Keywords:** Emotion Beliefs, Dark traits, Morningness, Eveningness, Moderator