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## Measuring Emotions During Epistemic Activities: Psychometric Validation of the Persian Epistemic Emotions Scale\*

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As there are not enough measurement instruments to assess emotions during epistemic activities, this research aimed to evaluate the psychometric properties of the epistemic emotions scale among speakers of the Persian language. The scale has previously been used and studied in different cultural contexts. The present study sought to expand the application of this scale in the Iranian context. A total of 1153 students (58.6% women) within the age range of 17 to 29 years participated in this study. The mean and standard deviation of the age of the participants were 21.63 and 2.24, respectively. The data collection tools in this study were the Epistemic Emotions Scale, the Achievement Emotions Questionnaire, the Academic Buoyancy Scale, and the Academic Satisfaction Scale. CFA was performed to test the factorial structure ( $\chi^2 = 1895.96$ ,  $df = 394$ ,  $GFI = .86$ ,  $CFI = .97$ ,  $IFI = .97$ ,  $NFI = .97$ ,  $NNFI = .96$ ,  $SRMR = .069$ , and  $RMSEA = .086$ ) and its validity and reliability were also evaluated. The seven-factor model of the Epistemic Emotions Scale was the same as that of the original scale version, and the Epistemic Emotions Scale showed good internal consistency with Cronbach's alpha for this scale ranging from .85 to .88.. The results showed that the EES scores also correlated in expected directions with measures of related constructs included in this study

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*Author Note.* Data collection and preliminary analysis was performed as part of the 2021 PhD dissertation.

*Ethical Approval.* The present study has been registered with the ethics code IR.UM.REC.1400.234.

*Declaration of Interest Statement.* The authors declare that there is no conflict of interest.

*Data availability.* The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

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thus also supporting the external validity of this version of the scale. We can conclude that the Epistemic Emotions Scale is a valid and reliable tool for measuring students' epistemic emotions, and as a result, researchers can use this tool for research purposes.

*Keywords:* Epistemic Emotions Scale, Epistemic emotions, Persian language, Iran.

### **Highlights:**

- Epistemic Emotions Scale (EES), an important assessment tool, was validated in Iran.
- Confirmatory factor analysis (CFA) supported the seven-factor model of EES.
- Good psychometric properties of the EES were established on the Iranian data.

## PTSD Symptoms, Driving Stress, and Anxious Driving Behavior Among Novice Drivers\*

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The present study aimed to evaluate how PTSD symptomatology and general daily stress predict anxious driving behavior. A sample of 119 drivers in their first year since obtaining a driving license who were implicated in a minor or major car crash (caused by them or as a victim/witness) in the last year participated in this study (50.9% men,  $M_{age} = 23.78$ ,  $SD = 5.47$ ). The participants completed scales for measuring PTSD symptoms, driving stress dimensions (i.e., aggression, dislike of driving, hazard monitoring, proneness to fatigue, and thrill-seeking), and anxious driving behavior dimensions (i.e., performance deficits, exaggerated safety behavior, and hostile behavior). The results indicated that aggression positively predicted hostile behavior, while dislike of driving was a positive predictor for performance deficits and a negative predictor for hostile behavior. Thrill-seeking and proneness to fatigue positively predicted performance deficits. The theoretical and practical implications of these results are discussed.

**Keywords:** posttraumatic stress, driving stress, anxious driving behavior, novice drivers

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**Ethics statement.** This study’s protocol was designed in concordance with ethical requirements specific to the Faculty of Psychology and Educational Sciences, “Alexandru Ioan Cuza” University (Iasi, Romania), before beginning the study. All participants voluntarily participated in the study and gave written informed consent following the Declaration of Helsinki and the national laws from Romania regarding ethical conduct in scientific research, technological development, and innovation.

**Conflict of interest / Disclosure statement.** The authors declare no financial interests/personal relationships, which may be considered as potential competing interests.

**Data Availability Statement (DAS).** The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

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**Author note.** All authors equally contributed to the present manuscript.

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### **Highlights**

- We explored how PTSD symptoms and daily stress predict predict anxious driving behavior (ADB) among novice drivers.
- Aggression positively predicted hostile behavior.
- Dislike of driving positively predicted performance deficits.
- Dislike of driving negatively predicted hostile behavior.
- Thrill-seeking and proneness to fatigue positively predicted performance deficits.



## The Relationship between Sex, Empathy, Systemizing, and Autistic Traits in Primary School Children\*

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The aim of this study was to determine the relationship between sex, empathy, systemizing, and autistic traits in primary school children. The sample included 353 primary school children aged 7-11 years. The children's versions of the Empathy Quotient – EQ-C, Systemizing Quotient – SQ-C, and children's version of the Autism Spectrum Quotient – AQ– C were used as primary outcome measures. Girls had higher empathy, while boys had higher autistic traits. Empathy and systemizing were moderately positively correlated, but both were good predictors of autistic traits. The effect of sex on autistic traits was mediated by empathy as well as by the difference between systemizing and empathy. These results partially support assumptions of the Empathizing-Systemizing theory and the Hypersystemizing theory of autism, which should be further evaluated in a population with the autism spectrum disorder.

**Keywords:** empathizing, systemizing, Hypersystemizing theory, autism

### Highlights:

- Empathy, systemizing and the difference between the two were predictors of autistic traits in primary school students.
- Girls had higher empathy, while boys had higher autistic traits.
- Sex effect on autistic traits was mediated by the difference between systemizing and empathy and empathy alone.

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## **Fear of Missing Out as a Mediator and Social Capital as a Moderator of the Relationship Between the Narcissism and the Social Media Use Among Adolescents\***

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Many risk behaviors, such as cigarette smoking, excessive alcohol consumption, and problematic social media use (PSMU), are formed and developed during adolescence. These risk behaviors may become even more acute with lasting global economic impacts of the 2020-2022 COVID-19 pandemic. Previous research indicates that narcissism can lead to problematic social media use; however, there is a gap in the knowledge about the mediating and moderating variables facilitating this relationship. This study examines the role of fear of missing out (FoMO) as a mediator in this relationship and the role of social capital as a moderator for this mediation effect among Chinese adolescents during the 2020-2022 COVID-19 pandemic. A total of 1380 adolescents (825 females) anonymously completed the questionnaires which assessed the four variables of interest. Our results showed that fear of missing out mediated the associations between self-superior and other-inferior narcissism and problematic social media use, and this effect was stronger with other-inferior narcissism.

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*Authors note.* Lilan Jiang and Aitao Lu are the first authors.

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Additionally, social capital strengthened the mediation effect of fear of missing out in the relationships between self-superior and other-inferior narcissism and problematic social media use. The results have critical implications for the prevention of adolescents' PSMU.

*Keywords:* self-superior narcissism, other-inferior narcissism, problematic social media use, fear of missing out, social capital, COVID-19

### **Highlights:**

- FoMO mediated the associations between self-superior and other-inferior narcissism and PSMU.
- The mediation effect of FoMO was stronger with other-inferior narcissism.
- Social capital moderated the mediation effect of FoMO in two types of narcissism.

## Disintegration and Context Processing in AX-CPT\*

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This study aimed to explore the relationship between Disintegration (proneness to psychotic like experiences & behaviours) and achievement in the AX Continuous Performance Task (AX-CPT), which is assumed to measure the efficiency of context processing. The study involved 273 university students. In order to test the research hypotheses, a series of hierarchical multiple regressions was performed. Control variables, including intelligence and basic personality traits, were placed in the first two blocks of regression, while Disintegration was placed in the third block. The criteria used in the analysis were: failure to give an accurate answer to the target stimulus pairs (AX), at the level of the task as a whole, as well as at the level of different interstimulus intervals (total AX errors, AX errors at shorter and AX errors at longer interstimulus interval), mislabeling of a non-target stimulus as a target (total BX errors), the average time of correct responses to stimulus pairs (elapsed time between the presentation of a stimulus pair on the screen and the response as to whether the target stimulus pair was presented – mean reaction time for: AX stimulus pairs at shorter and longer interstimulus interval, total AX, BX and AY stimulus pairs), as well as general sensitivity to context – index  $d'$ . Disintegration did not prove to be a significant predictor of these indices of the efficiency of context processing above other predictors. Various indices of task performance are consistently related only to intelligence. The sporadic contribution of other personality traits seems to reflect mostly a general importance of motivation for this type of cognitive tasks.

**Keywords:** Disintegration, context-processing, AX-CPT

### Highlights:

- The study explored the relationship between Disintegration and context processing measured by AX-CPT task, when sociodemographic characteristics, intelligence and basic personality traits are controlled.
- Disintegration did not prove to be a significant predictor of context processing.
- It is necessary to control for intelligence when investigating the relationship between personality traits and achievement in cognitive tasks such as AX-CPT.

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## Fear of COVID-19 and Sleep Problems in Turkish Young Adults: Mediating Roles of Happiness and Problematic Social Networking Sites Use\*

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There is burgeoning evidence showing the negative impact of fear of COVID-19 on various mental health outcomes. Little is known about the underlying mechanism of the relationship between fear of COVID-19 and sleep problems in times of health crisis. This study aims to examine whether fear of COVID-19 was associated with sleep problems through happiness and problematic social networking sites (SNS) use. Participants included 506 young adults (67.6% females; mean age =  $28.23 \pm 8.73$  years) drawn from the general public in Turkey. Results showed that fear of COVID-19 had a significant predictive effect on happiness ( $\beta = -.15, p < .01$ ), problematic SNS use ( $\beta = 0.32, p < .01$ ), and sleep problems ( $\beta = .36, p < 0.01$ ). Most importantly, happiness (effect = 0.02, 95% CI [0.01, 0.04]) and problematic SNS use (effect = 0.07, 95% CI [0.04, 0.11]) mediated the impact of fear of COVID-19 on sleep problems. These findings suggest that happiness and problematic SNS use are important factors that can help explain the association between fear of COVID-19 and sleep problems among young adults. Intervention and prevention programs can be developed to reduce the effect of fear of COVID-19 pandemic on sleep problems of young adults by considering the roles of happiness and SNS use in the context of health crises or other stressful situations.

**Keywords:** Fear of COVID-19, sleep problems, happiness, problematic social networking sites use, Turkish young adults

### Highlights:

- Fear of COVID-19 negatively predicted happiness and positively predicted problematic SNS use and sleep problems.
- Happiness and problematic SNS use negatively and positively predicted sleep problems, respectively.
- Happiness and problematic SNS use served as significant mediators in the association between fear of COVID-19 and sleep problems.

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