

# The Predictive Role of Demographic Variables, and Cognitive, Emotional and Spiritual Intelligences in Motivation for Academic Achievement in Female Students

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## Abstract

**Background and Objective:** The importance of spirituality and spiritual growth in humans has attracted increasing attention of psychologists and mental health professionals over the past few decades. Also, motivational factors in cognitive involvement influence the learning process. The purpose of the present study was to investigate the predictive role of demographic, cognitive, emotional and spiritual intelligences in motivation for academic achievement in female students.

**Methods:** This is a causal-comparative descriptive study. The statistical population of the study included all female students aged 12-13 in Tehran. The sample population consisted of 280 girls, who were selected by multistage sampling from public schools. Data were collected using Wechsler Intelligence Test (Fourth Edition), Hermes Motivation for Academic Achievement Questionnaire, Nasserian Spiritual Intelligence, and Socioeconomic Status Questionnaire. The collected data were analyzed using regression analysis. In this study, all ethical issues have been addressed and the authors of the article reported no conflicts of interest.

**Results:** The results showed that there was a direct and significant relationship between motivation for achievement and cognitive, emotional and spiritual intelligences (at 99% level of confidence ( $P < 1\%$ )), meaning that with an increase in the independent variables, i.e., cognitive, emotional, spiritual intelligences, the level of motivation for progress also increased.

**Conclusion:** According to the results, cognitive, emotional and spiritual intelligences had a significant effect on students' motivation for academic achievement and with an increase in each of these variables, the level of motivation for achievement also increased in the students.

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## Summary

### Background and Objective

In all educational systems, the level of academic achievement of students is an indicator of success

in scientific and school activities. Although an IQ test score can be a relatively good criterion for determining one's success, it should be noted that such tests cannot measure all aspects of intelligence. Cognitive intelligence is constant from birth or at least has relative stability.

Conversely, emotional intelligence is a flexible skill that is easy to learn (2). The subject of emotional intelligence and its use in the teaching and learning process is an issue that has attracted considerable attention in educational systems (1). Good emotions and feelings help students to provide the best they can (3). In many studies, emotional intelligence has been identified as one of the most important and powerful factors influencing educational adjustment (4). In summary, emotional intelligence influences students' academic performance in a variety of ways (1). Motivation for academic achievement refers to behaviors that lead to learning and progress (5). Meanwhile, one of the most important factors that can play a role in successful learning of the learner is the motivation for academic achievement (6). Numerous studies have shown that motivational factors affect cognitive engagement and learner control over the learning process (7). The importance of spirituality and spiritual growth in human beings has attracted the increasing attention of psychologists and mental health professionals in the last few decades (8). Artificial intelligence is a unique intelligence used to solve problems and issues related to meaning, life, and values (9).

## Methods

**Compliance with ethical guidelines:** All participants were informed of the purpose of the study and their willingness to participate in the study was ensured before conducting the research, and they were assured that their information would be kept confidential. It was also announced that they were free to leave the study in the sampling stage. In addition, other considerations were also observed including adherence to ethical values in data collection, lack of bias in data analysis, and accuracy in citation.

The statistical population of this cross-sectional study included all female students aged 12-13 in Tehran in 2018. For this purpose, and based on Cohen's table, a sample size of 280 female students from public schools was selected based on multi-stage sampling method. In order to sample in the first stage, one school from each of the 19 education districts in Tehran was randomly selected. In the second stage, the sample members were randomly selected from among the sixth grade students of these schools. The children's parents were then invited to school. The objectives and method of the study were explained to them, and after obtaining their consent, the research questionnaires were distributed to their children by two trained

psychologists. Inclusion criteria were writing literacy, studying in public schools, living with parents, lack of visual impairment or hearing loss and the exclusion criteria were leaving the study during the Wechsler IQ test, random responses to the questionnaire.

## Results

The participants were all 12 years old. In terms of birth order, 264 (97.9%) were the first-third child of the family. Participants' personal reports on the educational status of fathers show that 58 (20.7%) did not have school degree, 130 (46.4%) had diploma and advanced diploma, and 92 (32.9%) had a BA or a higher degree. In the case of the mothers, 40 (14.3%) did not have a diploma, 149 (53.2%) had a diploma and advanced diploma, and 91 (32.5%) had a BA or a higher degree.

The results showed that at 99% confidence level ( $P < 0.01$ ) in a domain test, there was a direct and significant relationship between motivation to make progress and cognitive, emotional and spiritual intelligence. In other words, with an increase in the independent variables (cognitive, emotional, spiritual intelligences), the motivation to make progress also increases. The results of regression analysis indicated that there were multiple relationships between the research variables; That is, according to the significance level of t-tests, the independent variables could significantly predict the motivation for progress ( $P < 0.001$ ;  $F = 26.77$ ;  $R^2_{adj} = 0.341$ ;  $R^2 = 0.227$ ).

By observing the standard coefficients of beta, it can be concluded that with a one-unit change in the standard coefficients of beta, by controlling other variables, the dependent variable also changes by 1 standard deviation. According to the coefficients of B, it can be inferred that among the predictor variables, emotional intelligence ( $B = 0.36$ ;  $t = 6.15$ ) has a higher predictive power compared to the average ( $T = 0.51$ ,  $B17 = 0.30$ ).

## Conclusion

Motivation and involvement of students in progress-based behaviors is an important point for teachers, parents and educators in the learning process (10) and learning to identify sources of motivation in students is one of the most important factors (11). Understanding the importance of this issue indicates that there are factors other than cognitive intelligence that can affect students' academic achievement. The findings of the present study showed that emotional and spiritual intelligence are effective in increasing the motivation for progress.

Emotional intelligence, as one of the factors regulating cognitive ability, has been considered and used by many psychologists in designing emotional and social adjustment programs for children, adolescents and young people (1).

Also, according to the results obtained from the present study, there is a positive and significant relationship between the components of emotional intelligence, which are mainly intrapersonal skills, and spiritual intelligence (12).

On the other hand, there was a significant relationship between the components of spiritual intelligence (existential thinking, transcendent consciousness, the production of personal meaning and the development of the state of consciousness) and the motivation for progress; That is, with the increase of spiritual intelligence and its related components, the motivation for academic progress also increases (12).

Spiritual intelligence is mainly concerned with one's mental ability. This intelligence gives the individual a general view of life and all sensory experiences and enables the individual to frame and reinterpret experiences (13).

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### Ethical considerations

The Ethics Committee in Biomedical Research of Shahid Beheshti University of Medical Sciences has confirmed this research.

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### Conflict of interest

The authors did not report any conflicts of interest in this study.

### Authors' contributions

Initial idea and design, data collection and writing the method and introduction sections: First and Second Authors; Data analysis and interpretation: Third Author; Review of the important contents of the article: Fifth Author; and writing the discussion and conclusion sections and revision of the text: Fourth and Sixth Authors.

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## تأثير توقعات متغيرات المعرفة المجتمعية والذكاء المعرفي والانفعالي والمعنوي على حوافز التطور الدراسي عند التلامذة الإناث

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### الملخص

### معلومات المادة

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### الكلمات الرئيسية:

دوافع التقدم الدراسي

الذكاء المعرفي

الذكاء المعنوي

الذكاء الانفعالي

**خلفية البحث وأهدافه:** لقد أثارت أهمية البعد المعنوي والنمو المعنوي في الإنسان اهتمام علماء النفس ومتخصصو الصحة النفسية بما بنحو متزايد خلال العقود الأخيرة. كما أن الدراسات تشير إلى دخالة الدوافع في عملية التعلم عند المواجهة المعرفية. ومن هنا فإن هذا التحقيق يهدف إلى دراسة تأثير توقعات متغيرات المعرفة المجتمعية والذكاء المعرفي والانفعالي والمعنوي على حوافز التطور الدراسي.

**منهجية البحث:** تعتبر هذه الدراسة وصفية من نوع العلي-المقارن. ويشمل مجال الدراسة جميع الطلبة الإناث اللائي تتراوح أعمارهن من ١٢ إلى ١٣ عاماً في مدينة طهران في عام ٢٠١٨ حيث تم اختيار نموذج منهن بمقدار ٢٨٠ طالبة وفقاً لطريقة النمذجة متعددة المراحل من المدارس الحكومية. وقد تم جمع البيانات من خلال الاستفادة من اختبار الذكاء لويكسلر -النسخة الرابعة-، واختبار دوافع التقدم لهرمنس، والذكاء المعنوي لناصري، والذكاء الانفعالي لشوت، واختبار الوضع الاجتماعي والاقتصادي. وتم تفكيكها وتحليلها استناداً إلى تحليل ركيسون. وقد تمت مراعاة جميع الجوانب الأخلاقية في هذه الدراسة، ولم يلحظ مؤلفو المقالة أي تقرير لتعارض المصالح.

**الكشوفات:** تشير النتائج إلى وجود علاقة مباشرة وذات معنى بين دوافع التقدم من جهة والذكاء المعرفي والانفعالي والمعنوي من جهة أخرى (بمستوى اطمئنان يبلغ ٩٩ بالمائة " $P < 0.001$ ") في اختبار مجال ما). وبعبارة أخرى، فإنه مع زيادة معيار المتغيرات المستقلة (الذكاء المعرفي والانفعالي والمعنوي) فإن مستوى دوافع التقدم يزيد أيضاً.

**الاستنتاج:** طبقاً للنتائج الحاصلة فإن للذكاء المعرفي والانفعالي والمعنوي تأثيراً ذا معنى على مستوى دوافع التقدم الدراسي عند التلاميذ. ومع زيادة أي من هذه المتغيرات فإن مستوى دوافع التقدم يزيد عند التلاميذ.

يتم استناد المقالة على الترتيب التالي:

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## نقش پیش‌بینی‌کنندگی متغیرهای جمعیت‌شناختی و هوش شناختی، هیجانی و معنوی در انگیزه پیشرفت تحصیلی دانش‌آموزان دختر

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### چکیده

**سابقه و هدف:** اهمیت معنویت و رشد معنوی در انسان، در چند دهه گذشته به‌صورتی روزافزون توجه روان‌شناسان و متخصصان بهداشت روانی را به خود جلب کرده است. همچنین مطالعات نشان داده که عوامل انگیزشی در درگیری شناختی بر فرایند یادگیری تأثیرگذار است. از این‌رو هدف پژوهش حاضر بررسی نقش پیش‌بینی‌کنندگی متغیرهای جمعیت‌شناختی و هوش شناختی، هیجانی و معنوی بر انگیزه پیشرفت تحصیلی بود.

**روش کار:** این مطالعه توصیفی از نوع علی-مقایسه‌ای است. جامعه آماری پژوهش کلیه دانش‌آموزان دختر ۱۲ تا ۱۳ سال شهر تهران در سال ۱۳۹۷ بودند که از میان آنان نمونه‌ای به حجم ۲۸۰ نفر به‌روش نمونه‌گیری چندمرحله‌ای از مدارس دولتی انتخاب شد. داده‌ها با استفاده از آزمون هوشی وکسلر (ویرایش چهارم)، پرسش‌نامه‌های انگیزه پیشرفت هرمنس، هوش معنوی ناصری، هوش هیجانی شوت و پرسش‌نامه وضعیت اجتماعی و اقتصادی جمع‌آوری؛ و با استفاده از تحلیل رگرسیون تجزیه و تحلیل شد. در این پژوهش همه موارد اخلاقی رعایت شده است و مؤلفان مقاله هیچ‌گونه تضاد منافی گزارش نکرده‌اند.

**یافته‌ها:** نتایج نشان داد که انگیزش پیشرفت با هوش شناختی، هیجانی و معنوی رابطه مستقیم و معنی‌داری داشت (با سطح اطمینان ۹۹ درصد ( $P < 0.01$ )). به عبارتی با افزایش میزان متغیرهای مستقل (هوش شناختی، هیجانی و معنوی)، سطح انگیزش پیشرفت نیز افزایش یافت.

**نتیجه‌گیری:** بر اساس نتایج به‌دست‌آمده، هوش شناختی، هیجانی و معنوی تأثیر معناداری بر میزان انگیزش پیشرفت تحصیلی دانش‌آموزان دارد و با افزایش هر یک از این متغیرها، سطح انگیزه پیشرفت در دانش‌آموزان بالا می‌رود.

### اطلاعات مقاله

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### واژگان کلیدی:

انگیزه پیشرفت تحصیلی

هوش شناختی

هوش معنوی

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استناد مقاله به این صورت است:

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