

## **Influence of Gender on the Level of Social Emotional Intelligence**

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### **Abstract**

The main goal of this study was to study social emotional intelligence in male students and female students. The ongoing study is a pilot one. The idea of the study is to reveal the dependence of the level of social emotional intelligence on gender and on the age of students. Social emotional intelligence is represented by three psychological types - extroverts, introverts and ambiverts. The survey was conducted on the basis of the University of International Business named after K. Sagadiyev (Almaty, Kazakhstan) among students of the bachelor's level. Within one month, 65 questionnaires were collected. The questions were answered using the MMPI (Minnesota Multiphasic Personality Inventory) extraversion-introversion scale. In this pilot paper, three hypotheses were put forward, of which two were refuted, one was confirmed: The level of social emotional intelligence of extraversion does not depend on the gender and age of the student. The study then used Exploratory Factor Analysis (EFA) to test the validity of the test design. The results showed that the main two factors of the test are (1) factors focused on the internal experiences of students during communication with other people and (2) students' attitude towards public speaking. The social intelligence of an ambivert is higher than that of others, since emotional intelligence includes two sides: understanding one's own and other people's emotions. In the future, it is planned to conduct a main study with an increase in the number of respondents up to 354 students.

**Keywords:** Gender, Emotional Intelligence, Extraversion, Introversion, Factor Analysis

## **Әлеуметтік эмоционалдық интеллект деңгейіне жыныстың әсері**

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## Түйін

Бұл зерттеудің негізгі мақсаты ер студенттер мен қыздардың әлеуметтік эмоционалды интеллектін зерттеу болды. Ағымдағы зерттеу пилоттық. Зерттеудің идеясы – әлеуметтік эмоционалды интеллект деңгейінің жыныс пен оқушылардың жасына тәуелділігін анықтау. Әлеуметтік эмоционалды интеллект үш психологиялық типпен ұсынылған – экстраверттер, интроверттер және амбиверттер. Сауалнама Қ.Сағадиев атындағы Халықаралық бизнес университетінің базасында (Алматы, Қазақстан) бакалавриат деңгейіндегі студенттер арасында жүргізілді. Бір айдың ішінде 65 сауалнама жиналды. Сұрақтарға MMPI (Minnesota Multiphasic Personality Inventory) экстраверсия-интроверсия шкаласы арқылы жауап берілді. Бұл пилоттық жұмыста үш гипотеза ұсынылды, оның екеуі теріске шығарылды, біреуі расталды: Экстраверсияның әлеуметтік эмоционалды интеллектінің деңгейі студенттің жынысы мен жасына байланысты емес. Содан кейін зерттеу сынақ дизайнының жарамдылығын тексеру үшін барлау факторларын талдауды (EFA) қолданды. Нәтижелер тесттің негізгі екі факторы (1) студенттердің басқа адамдармен қарым-қатынас кезіндегі ішкі тәжірибесіне бағытталған факторлар және (2) студенттердің көпшілік алдында сөйлеуге деген көзқарасы екенін көрсетті. Амбиверттің әлеуметтік интеллектісі басқаларға қарағанда жоғары, өйткені эмоционалды интеллект екі жақты қамтиды: өзінің және басқа адамдардың эмоцияларын түсіну. Болашақта респонденттердің санын 354 студентке дейін арттыру арқылы негізгі зерттеу жүргізу жоспарлануда.

**Түйін сөздер:** гендер, эмоционалды интеллект, экстраверсия, интроверсия, факторлық талдау

## Влияние гендера на уровень социального эмоционального интеллекта

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## Абстракт

Основная цель этого исследования заключалась в изучении социального эмоционального интеллекта у студентов-парней и студентов-девочек. Проводимое исследование является пилотным. Идея исследования состоит в том, чтобы выявить зависимость уровня социального эмоционального интеллекта от гендера и от возраста студентов. Социальный эмоциональный интеллект представлен тремя психологическими типами «экстравертами», «интровертами» и «амбивертами». Проводимый опрос проводился на базе Университета Международного бизнеса имени К.Сагадиева (Алматы, Казахстан) среди студентов уровня бакалавр. В течение одного месяца было собрано 65 анкет. Для ответов на вопросы использовалась шкала экстраверсии-интроверсии MMPI

(Minnesota Multiphasic Personality Inventory). В данной пилотной бумаге было поставлено три гипотезы, из которых две были опровергнуты, одна подтвердилась: Уровень социального эмоционального интеллекта экстраверсии не зависит от гендера и возраста студента. Далее в исследовании был использован Исследовательский факторный анализ (EFA) для проверки валидности построения теста. Результаты показали, что основными двумя факторами теста являются (1) факторы ориентированы на внутренние переживания студентов во время общения с другими людьми и (2) отношение студентов к публичным выступлениям. Социальный интеллект у амбиверта выше, чем у других, так как эмоциональный интеллект включает две стороны: понимание своих и чужих эмоций. В дальнейшем планируется проводить основное исследование с увеличением количества респондентов до 354 студентов.

**Ключевые слова:** гендер, эмоциональный интеллект, экстраверсия, интроверсия, факторный анализ

## Introduction

The problem of human emotional culture has been relevant throughout the history of the development of human society. For this reason, one of the most important problems of gender studies is the study of differences in the field of emotional intelligence, defined as the ability to understand the relationship of a person, represented in emotions, and manage the emotional sphere based on intellectual analysis and synthesis.

The development of the concepts of emotional intelligence is actively carried out by foreign and domestic scientists. According to many researchers, emotional intelligence (EI) includes a number of abilities: accurate recognition of one's own and others' emotions, empathy, management of one's own and others' emotions, strategic use of emotions for motivation and problem solving. Accordingly, the higher the emotional intelligence, the more psychologically flexible the individual is. The main objective of the study is to determine the level of social emotional intelligence (the level of extraversion and introversion) among male and female students.

The predominance of one or another type of personality determines the level of contact of the individual with the social environment. For the first time such a definition of the psychological type of personality as extraversion and introversion was published by K. Jung in his works. Extraversion as a characteristic of individual differences is present in one form or another in most personality models and is associated with the type of emotional intelligence.

### *Research stages.*

1) First you need to determine the questions that will be included in the questionnaire.

2) Next, make a survey by which it will be possible to determine the level of extraversion.

3) The next step is to collect data.

4) Statistical data processing: carrying out factor analysis.

The study presents the following hypotheses:

Hypothesis 1: The level of social emotional intelligence of extraversion directly depends on the person's age.

Hypothesis 2: The level of extraversion directly depends on the person's age.

Hypothesis 3: The level of social emotional intelligence of extraversion does not depend on the gender and age of the student.

## Literature review

For the first time such a definition of the psychological type of personality as extraversion and introversion was published by K. Jung in his works. Extraversion is a socio-psychological property of a person that describes a tendency to a variety of social contacts, such as sociability, talkativeness and sociability, that is, an extrovert is more oriented not to the internal, but to the external world. The definition of "Extraversion" for the first time included the main features of an extrovert, such as sociability, ambition, career aspirations, assertiveness, sociability or contact, and many others (Jung, 2022). It can be seen that extroverts express themselves very easily, they are always focused on results, they love the crowd and the performance of various actions. Sometimes extroverts can feel lonely and empty when they are not in contact with the outside world.

Over time, the study of psychological types was supplemented by later researchers, among whom some singled out extraversion in the most successful people, who most likely had a high chance of procreation along with the risk of premature death. People of this type are prone to risk and may be more likely to find themselves in dangerous situations (Nestler & Goldbeck, 2011).

There are also such opposite quality factors of individual processes or integrative personality characteristics as introversion. This concept includes a focus on the inner world of a person, "field-dependence", the predominance of a rich inner world and expresses the creative abilities of a person (Gershuny et al., 2000).

The behavior of extroverts is very different from the behavior of introverts if these psychological types are "pure", i.e. have pronounced features. However, there are studies that show that "ambiverts" are the most common. This is a type of personality that contains a cross-mixing of two types of personality in men and women. An ambivert can act like an extrovert or introvert in various situations (Cai et al., 2016; Davidson, 2017; Grant, 2013).

The social intelligence of an ambivert is higher than that of others, since emotional intelligence includes two sides: understanding one's own and other people's emotions. Also, the management of emotions of one's own and others, respectively. Moreover, to determine the level of EI scales and subscales that help determine reflection. A certain level of reflexivity is formed in students during their studies at the university: there is a tendency to increase reflexivity from the 1st to the 5th year (Paulauskaite et al., 2022).

The article considers the results of domestic and foreign studies of emotional intelligence among representatives of different sexes. Based on the analysis of the data from these studies, it was found that the overall level of emotional intelligence of men and women (boys and girls, boys and girls) differs slightly, but there are differences in individual components of emotional intelligence. The author concludes that the results of

such studies largely depend on study design, sample size, and other factors. The author also comes to the conclusion that most of the emotional differences between men and women, traditionally associated with the biology of sex, are in fact the result of male and female gender socialization (Zorina, 2021).

Issues relating to the psychological differences between men and women are actively discussed in society. In the modern world, the status of a man and a woman is determined not only by the corresponding physiological characteristics, but also by certain gender roles, which include a set of social norms that determine desirable types of behavior depending on the gender of the individual. In addition, today the socially acceptable image of men and women in the public environment is undergoing major changes. This article highlights the gender aspect of the manifestation of emotional intelligence (Gavrilenko, 2021).

Other scientists present the results of an empirical study of the level of emotional intelligence of psychology students enrolled in different courses. The article discusses not only emotional intelligence in terms of the level of its development among students in different courses of study, but also the subjective perception of young people about their own emotional intelligence and about the emotional intelligence of the immediate social environment (family, friends, teachers) (Klenova, 2018).

Of course, the main studies have previously looked at clinic patients or representatives of various professions, without considering the gender issue (Chou et al., 2017; Cormack et al., 2000; Moore & George, 2011). For example, some internal social intelligence factors associated with personality - Extraversion, Openness/Intelligence, Consciousness, and Pleasantness - are associated with a higher awareness of the need for spiritual care among mental health nurses (Han et al., 2022).

In this paper, such a gap will be filled by studying this type of social emotional intelligence among business university students. The gender factor will also be taken into account during the study.

## **Methodology**

When compiling questions, questions from the questionnaire of Mishkevich A.M. (2019), which helped to draw up a psychological portrait of the student, namely the type of human temperament. Basically, the author used a questionnaire to study the relationship between extraversion and other phenomena that influenced the main patterns of people's behavior in society.

The survey was conducted on the basis of the University of International Business named after K. Sagadiev (Almaty, Kazakhstan) among students of the bachelor's level. Since about 4,500 students study at the university, it is planned to conduct a survey among 354 students in order to determine the level of emotional social intelligence. At this stage, 65 questionnaires were collected within one month, which is 20% of the planned number and allows you to do a pilot study in advance. A total of 65 respondents completed the survey. Among them, 34 male students and 31 female students. Table 1 below shows the questionnaire.

Table 1. Questionnaire

Code	Questions
<i>General questions</i>	
<i>Gender</i>	1-Male; 2-Female
<i>Age</i>	16-18; 19-20; 20-25; 25-30
<i>Special questions</i>	
Q1	Can you be called a calm and reserved person?
Q2	Are you a very talkative person?
Q3	Do you like meeting new people?
Q4	Do you usually take the initiative when meeting new people?
Q5	Do you like a lot of fuss and excitement around you?
Q6	Will you go to a noisy party with a lot of people?
Q7	Do you feel comfortable being in unfamiliar company?

B The questionnaire contains seven questions divided into two blocks: *General questions*, which reflect the proposed hypotheses, and *Special questions*. The second block is represented by two responses: yes (coded 1) and no (coded 2). This extraversion-introversion scale is present in MMPI (Minnesota Multiphasic Personality Inventory), CPI (California Psychological Inventory) and other significant methods (Moore & George, 2011).

Gender is represented by two options: 1-Male; 2-Female, and Age is divided into four groups (*16-18 years old=1; 19-20 years old=2; 20-25 years old=3; 25-30 years old=4*). The table below shows the answer keys for determining the type of personality.

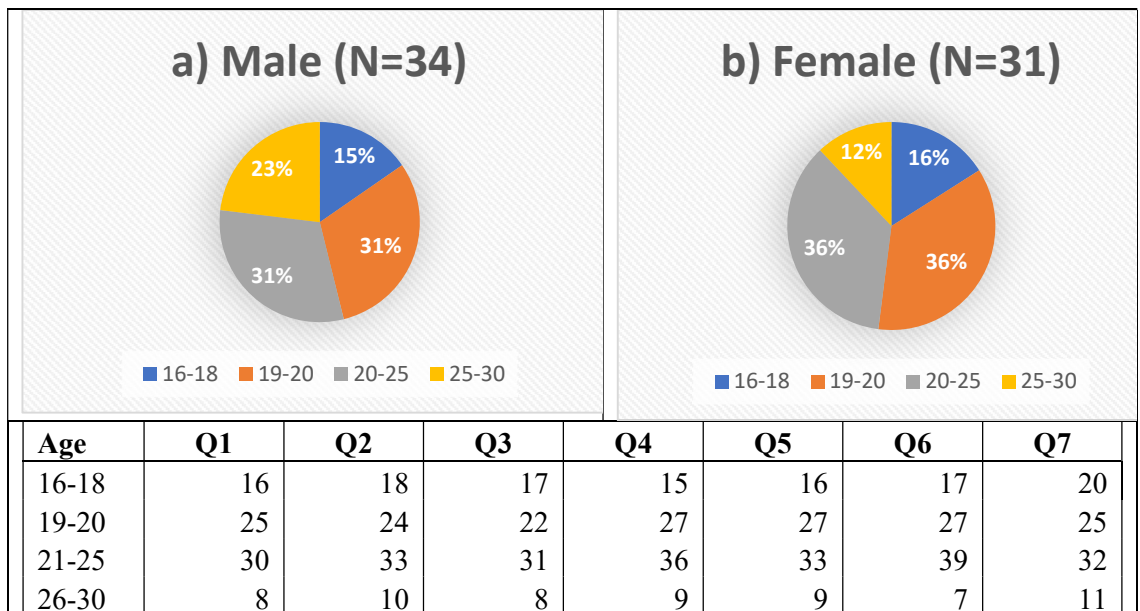
Table 2. Key responses to the online questionnaire.

Тип личности	Answer	Question	Answer	Тип личности
Introvert	No -2	Q1	Yes - 1	Extrovert
	Yes - 1	Q2	No - 2	
	Yes - 1	Q3	No - 2	
	Yes - 1	Q4	No - 2	
	Yes - 1	Q5	No - 2	
	Yes - 1	Q6	No - 2	
	Yes - 1	Q7	No - 2	

Answers were provided by all respondents (there were no missing questions). If the respondent answers according to this key, then his social personality type can be attributed to an extrovert or introvert. Table 2 and Figures 1 and 2 below show the distribution of responses to questions by age.

Table 2. Distribution of respondents' answers by age.





The table shows that most of the respondents to all the questions are senior students who are included in the third age group: 21-25 years old. The survey also shows that male respondents aged 19-20 and 20-25 years old make up the same number, and the smallest percentage is male respondents aged 16-18 years. Female respondents aged 19-20 and 20-25 make up the same percentage, i.e. 36%, with the smallest percentage being female respondents aged 25-30.

Of the submitted questionnaires, only 5 showed the type of answer "Extrovert". Of these, three are boys and two are girls. Three of the students are in the second age group (19-20 years old), one in the third (20-25) and one in the fourth (25-30 years). This is a positive indicator of social emotional intelligence, because such people are often more cheerful, positive, open to the world and luck. Society cannot exist without such people. They are most often motivated to succeed and get along better in a team.

The psychological type "introvert" is a person focused on his own inner world; psychological character of a self-absorbed personality. It should be noted that this type of personality was completely absent, which indicates the presence of a large number of the mixed type "ambivert" (60 students of both gender). The conclusion that can be drawn from the data obtained is that correlation analysis is carried out if there are at least 30 observations. Since pure personality types do not make up this number, correlation analysis cannot be applied. Therefore, further factor analysis was carried out, the results of which are presented in Table 3 below.

Table 3. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,514
Bartlett's Test of Sphericity	Approx. Chi-Square	17,783
	df	10
	Sig.	,059

The calculations were carried out in the IBM SPSS Statistics program. As can be seen from the table, the results of the Kaiser-Meyer-Olkin Measure of Sampling Adequacy are more than 0.5, which, according to the Chaddock scale, shows the presence of a correlation. This means that the presented model works (significant). It is important to note that when all 7 questions were analyzed by the program, the first coefficients were less than 0.5. Therefore, logically, questions Q2 and Q3 were removed.

Table 4. Rotated Component Matrix (Rotation converged in 3 iterations).

№ of questions	Component		Question
	1	2	
Q5	,833		Do you like a lot of fuss and excitement around you?
Q4	,809		Do you usually take the initiative when meeting new people?
Q1		,703	Can you be called a calm and reserved person?
Q7		,579	Will you go to a noisy party with a lot of people?
Q6		,558	Do you feel comfortable being in unfamiliar company?

Note: Extraction Method: Principal Component Analysis.

The rotation method was Varimax with Kaiser Normalization was a rotated component matrix. As you can see, the program broke all the questions into two factors. The first factor includes the following questions: Q4 and Q5. The second factor includes other questions Q1, Q6 and Q7.

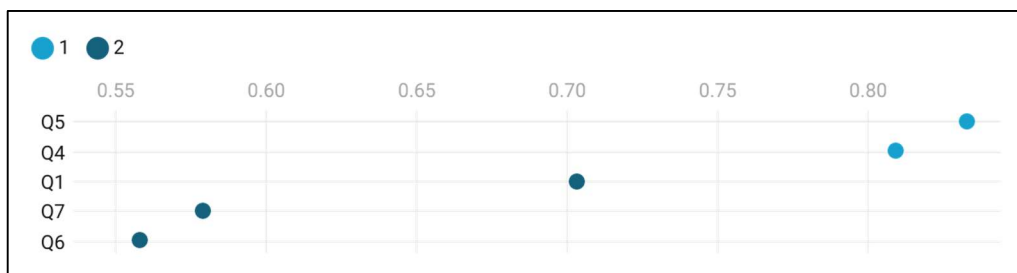


Figure 1 - Factors obtained as a result of the study.

Logically, the first factor can be correlated with the internal experiences of students who find themselves in a new situation, meet new people, get to know people and, based on the situation, plan their behavior. The second factor rather concerns the student's behavior in public: speaking on stage, in front of classmates, handing over educational material and similar public situations.

**Results.** This pilot study allowed us to solve the following tasks:

(1) To test the hypotheses, it was planned to use correlation to determine the influence of gender and age on the level of internal social emotional intelligence. In this case, out of 65 respondents, only 5 people were a pure psychological type - an "extrovert". This is 8%. The pure type of "introvert" as a result of the survey was not identified. This means that most students are "ambiverts" and have psychological flexibility and high emotional intelligence.



(2) The two-choice scale will be replaced in the future by the five-choice Likert scale.

(3) Factor analysis also revealed two main factors in the behavior of ambivert students. These two factors are focused on the internal experiences of students during communication with other people and the attitude of students to public speaking.

(4) It is planned to increase the questionnaire to the number of 15 questions, which will be narrower and will be aimed at studying emotional intelligence, which reflects the behavior of students during the performance in primary and senior courses.

Thus, the following hypotheses are concluded:

Hypothesis 1: The level of social emotional intelligence of extraversion directly depends on the age of a person – it is rejected.

Hypothesis 2: The level of extraversion directly depends on the age of a person – it is rejected.

Hypothesis 3: The level of social emotional intelligence of extraversion does not depend on the gender and age of the student – it is accepted.

## Conclusion

Summarizing the data obtained, we can say that the specifics of contact with the outside world at the level of perception and at the social level differently affect the manifestation of intellectual creative abilities and, possibly, their formation.

The ability to recognize and manage one's own emotions and the emotions of other people, the ability to empathize are necessary professionally significant qualities. Universities are interested in the development of emotional intelligence in students, since the level of EI has a positive effect on the manifestation of professional qualities in any specialty.

As a result of the study, the third hypothesis was confirmed, the leading factors of emotional intelligence in boys and girls were identified, and a qualitative description of the structure of emotional intelligence was given. The study expands the understanding of the specifics and gender differences in emotional intelligence in older adolescence. The results obtained can be applied in developmental psychological counseling, in correctional and developmental work with adolescents; on their basis, recommendations can be formulated for the development of emotional intelligence of adolescents depending on gender.

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