RESEARCH ARTICLE

Using Factor Analysis to Determine the Most Important Factors Affecting Student Absenteeism at Cihan University-Erbil

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ABSTRACT

The review of the relevant literature reveals that the issue of absenteeism among students was not new. The researcher intended to explore the factors affecting absenteeism and to find a solution to solve this issue. For this purpose, a mixed methods research was designed. To analyze this problem, both quantitative and qualitative research methods were adopted in this study. In quantitative approach, a close-ended questionnaire was developed to collect data. The sample comprised 470 students out of total population of 4892. A descriptive and inferential statistical techniques were used to analyze the data. The outcome of the study shows that common factors such as curriculum and organizational climate, transportation and recreation, administrative procedures, and psychological and economic issues all had an impact on students' absences. Likewise, the results revealed that administrative and motivational factors, including personal organization and adaptations with performance to health and second housing, are the critical factors in the student's absences. Furthermore, gender of the student plays a major role in the student's absenteeism, and the results show that there is a significant difference between male and female students toward the absence of the students.

Keywords: Absenteeism factors, factor analysis, component method, principle component method, Cihan University-Erbil

INTRODUCTION

Factor analysis is an important tool of statistical methods associated with multi-dimensional variables, that is related to a set of phenomena or attributes that help a number of variables such as people. It is a statistical method, because it depends on the first argument at the expense of correlation coefficients between these phenomena. One tries to use the factor analysis to return the causes of a group of characteristics (we call it random variables) to a smaller number of factors which can be measured entirely and can be described in a simplified and accurate manner.[1] Factor analysis can also be defined as a multivariate analysis based on a set of hypotheses using the (correlation matrix) or (covariance matrix) to determine the (hypothetical factors) underlying the nature of interrelated relationships. Internal relationships are among a set of variables taken for a specific phenomenon. These factors are represented by new variables but with fewer original variables. The aim of the analysis is to describe and interpret the phenomena or characteristics of the variables on the basis of few factors as possible.[1,2]

One of the main important factors for the development of society and the country is the reform and improvement of the education system in universities. Many studies have been conducted for this purpose. As a result, a study has been conducted to assess and understand the factors that influence a student's academic performance.[3] Another study focused on student feedback on the teaching methods used by university teachers.[4] A common topic that has been investigated to improve the education system in this region is the online education system, which has been discussed since the outbreak of the coronavirus and has become a supportive and alternative education in the universities of the Kurdistan Region.[5] Another interesting study is to determine the factors that cause university students to hate reading books.[6]

The study of absenteeism is very important for every institution and every teacher to improve the results. The reducing the rate of absenteeism is useful for making the students disciplined, punctual, and consistent.[7,8]

This study aims to find different factors of absenteeism at Cihan University-Erbil and find a solution to reduce it.

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The researcher's effort was to sort out varied significant factors involved in the student's absenteeism at the university level. It has always been a burning issue and especially nowadays since the government is concerned with improving and bringing positive changes to the educational sector.

Prominent level of absenteeism reported as missing 10% or more of the academic year has been a key indicator of student's failure.[9,10]

Student absenteeism been given much attention today, but still it is uncontrollable issue. One thing is clear that this matter is not ignorable rather it needs greater attention and time to look into. Since new college students experience many challenges physically, socially, and mentally.[10,11]

Research Questions

Keeping in view the main objective of the study, the following research questions were made in light of the relevant literature. (1) What are the factors that cause absenteeism among university students? (2) Do the factors of absenteeism affect boys and girls students equally? (3) Are subject matter and the medium of instruction cause student's absenteeism? (4) Is there any significant difference in the perspective of students in the factors of absenteeism?

Students with low attendance attribute their absenteeism to the poor relationship with teachers, university administration, and class fellows. The researcher made a standard about the low attendance by fixed a cut off line which will make decision making easy about the low attendance and the accurate attendance.

Objectives of the Study

The main objectives of the study are as follows:
1. To investigate the effects of absenteeism among students of Cihan University-Erbil
2. To present the basic literature review regarding absenteeism among students
3. To recommend a possible solution for absenteeism after the analysis of the data.

Research Hypothesis

Based on the objective and the conceptual framework of this study, null hypothesis is developed as follows:

H_{01}: There is no significant difference between male and female students toward student's absenteeism.

H_{02}: There is no relationship between subject interest and student's absenteeism.

H_{03}: There is no relationship between lecturer's skills and student's absenteeism.

H_{04}: There is no relationship between student's attitude and student's absenteeism.

H_{05}: There is no relationship between health problems and student's absenteeism.

The Objectives of Using the Factor Analysis

The main objectives of factor analysis can be summarized in the following points:

1. Interdependency and pattern delineation: The method of factor analysis explanation reveals the (patterns) separate of the relations between the variables and return the causes of those variables to the lowest number of factors, in which the strength of the relationship of each variable is determined by these patterns
2. Parsimony or data reduction: If we have a large number of private observations of a large set of variables, these data can be concentrated in the form of a few factors that represent the variables in describing the phenomenon and clarify relationship between them
3. Hypothesis testing: The factor analysis can be used to test the validity of the determinants of the type of factors affecting a set of variables, depending on the factor matrix
4. Data transformation: The global analysis helps to transform data into another image in which certain conditions can be applied to some statistical methods on it
5. Scaling: The method of factor analysis is useful in exploring new areas. Factor analysis reduces complex relationships between a set of variables to a simple linear image
6. Multicollineartiy: A factor analysis method contributes to addressing the problem of linear multiplicity, to convert variables associated with unrelated factors.[2,12-14]

LITERATURE REVIEW

Factor Model

The model of the factor analysis of p (p - dimensional) of the sample his size is n that it is based on a linear function of p the mean variables and m of the common factors, in which (M <p) and to (p) of the unique factors for each variable, the factor model will be as follows:[12,13]

$$\underline{X}_{px1} = \underline{\mu}_{px1} + \Lambda_{pxm}\underline{F}_{mx1} + \underline{U}_{px1} \qquad (1)$$

Where:
X: Represents the random vector of observed variables.
μ: Represents the vector of variables.
A: The loading factors matrix represents the changes.
F: Is the random vector of the common factors selected from pvariables.
U: Represents the random vector of the only variables of the variables.

Basic Assumption of Factor Analysis

The basic hypothesis of factor analysis is based on the existence of correlations between a set of variables unstudied and that these correlations are the result of the existence of interrelated factors, in which the factor analysis seeks to explain these linkages with the least number of independent factors among them, this hypothesis assumes the standard value (standard Value) of the variables, which may be distributed in natural distribution with a mean of zero well as for the elimination of variables.[15,16]

Based on this hypothesis, the vector of the media and the variance of the variables will be zero vectors,

$$Var(\underline{X}) = \underline{I} \text{ and } E(\underline{X}) = \underline{\mu} = \underline{o}$$

In this case, the factor model takes the following form:

$$\underline{Z}_{p*1} = \Lambda_{p*m}\underline{F}_{m*1} + \underline{U}_{p*1} \qquad (2)$$

For the covariance matrix for each of the common factor drivers (F) and the only factors (U) assuming that, they are independent:

$$E\begin{pmatrix}\underline{F}\\\underline{U}\end{pmatrix}\begin{pmatrix}\underline{F}' & \underline{U}'\end{pmatrix} = \begin{bmatrix} E(F\underline{F}') & E(\underline{FU}') \\ E(\underline{UF}') & E(\underline{UU}') \end{bmatrix} = \begin{bmatrix} \Phi_{m\times m} & O_{m\times n} \\ O_{n\times m} & \Psi_{n\times m} \end{bmatrix}$$

Whereas:

Φ: Represents the heterogeneity matrix of the common factors $(\underline{F})$.

Ψ: The country matrix represents single factor variance.

As for the matrix of variance of the variables $(\underline{X})$ and (Σ) denoted by:

$$E(\underline{X}\underline{X}') = \sum_{p*p}$$

So (Σ) that it is a symmetric positive definite and full rank matrix.

Moreover, since the goal in factor analysis is to estimate the parameters of the model, it was necessary to express the model (2) in a more appropriate form, since:

$$\sum = E(\underline{X}\underline{X}') = E(A\underline{F} + \underline{U})(A\underline{F} + \underline{U})'$$

$$= AE(\underline{F}\underline{F}')A' + AE(\underline{F}\underline{U}') + E(\underline{U}\underline{F}')A' + E(\underline{U}\underline{U}')$$

The structural matrix (Ω), which represents the covariance between observed variables and factors, they are:

$$\Omega_{p\times m} = E(\underline{X}\underline{F}') = A\Phi$$

These hypotheses divide the total variation into three variations.

Common Variance

Represents a part of the total variance that is associated with the rest of the variables and is calculated from the coefficients of the general factors and symbolized by the symbol (h_j^2).[13,17]

$$h_j^2 = a_{j1}^2 + a_{j2}^2 + ... + a_{jm}^2 \qquad (3)$$

Specific Variance

It represents a part of the total variance that is not associated with the other variables, but is associated with the same variable, which is part of the only factor variation that equals

$$U_j^2 = b_j^2 + e_j^2 \qquad (4)$$

Where:

U_j^2: Is the only factor variation.

b_j^2: Variance of the variable j.

e_j^2: Error variance.

Error Variance

Which is not explained by the common factors that can be described as residual or error, is the variation resulting from errors in the sample drag or measurement or any changes that lead to data instability and symbolizes (e_j^2).[13,16]

$$e_j^2 = 1 - (h_j^2 + b_j^2) \qquad (5)$$

It is worth mentioning that factor analysis cannot be used if the sample size is less than 50 observations, and it is preferably when the sample size contains 100 observations or more.

The Commonalities

The standard value is the sum of the squares of the saturations of the factors of that variable, and it represents the common variance that is explained by the common factors extracted from the correlation matrix analysis, that is, it represents the extent of interference between the variables and the common factors:[13,17]

$$h_j^2 = a_{j1}^2 + a_{j2}^2 + ... + a_{jm}^2 \qquad \text{Where} \qquad j=1,2,3,.........,\quad p$$

$i=1,2,3,......, m$

Or

$$h_j^2 = \sum_{i=1}^{m} a_{ij}^2$$

Many of the factor analysis methods are needed when applying the factor analysis to an initial estimate of the quantities of communion (h_j^2) and placing them in the diagonal elements of the correlation matrix (R) instead of the units. These methods are the method of analysis of the main factor used in our research, which needed to estimate these values and place them in the main diameter of the correlation matrix.[17-19]

Many of the factor analysis methods, including the main factor analysis method, need when used to a preliminary estimate of the quantities of commonness and put them in the diagonal elements of the correlation matrix instead of the units; then, it is called the reduced correlation matrix, and one of the characteristics of the common values is that they are always positive values, Its value lies between zero and one (because it is part of the total variance, which is equal to one), that is, it:[14,16,19]

$$0 \le h_j^2 \le 1$$

Factor Analysis Methods

There are several ways to estimate the matrix of factor loading for the first solution, the following is the most common:

1. Principal components method
2. Factor method principal
3. Method maximum – likelihood
4. Image method
5. Unweighted least squares
6. Generalized least squares
7. Alpha method

8. The centered method
9. Rao method.

We will explain the main vehicle method, for adoption in the applied side, because it is more accurate in estimation.[15,20,21]

Principle Component Method

The basic idea of this method is to find the main universes, the number of which is equal to the number of studied variables (X_j) where $(j=1,2,3,\ldots,p)$ that follow the multivariate normal distribution with the aver mean of the population (μ) and the covariance and covariance matrix (Σ), meaning that $(\underline{\mu}, \sum) \sim \underline{X}$ and then choose the first component of the main components, which is modified to find the following model:[16,19,22,23]

$$\left. \begin{array}{l} X_1 = L_{11}F_1 + L_{12}F_2 + \ldots\ldots\ldots + L_{1m}F_m + U_1 \\ \\ X_p = L_{p1}F_1 + L_{p2}F_2 + \ldots\ldots\ldots + L_{pm}F_m + U_p \end{array} \right\} \qquad (6)$$

where:
$F_{1\ldots}F_m$: Represent the unrelated general factors that were extracted from (p) the variables.
L_{ji}: Represents the factor loading (i) of the variable (j).
$U_1\ldots U_p$: Are the only factors

METHODOLOGY

The results of this study will be based on the literature review and the responses collected from students through questionnaires. The response rate was appropriate to analyze the data. Data were analyzed in percentage response of respondents and using factor analysis.

The sample size is 470 students out of total population of 4892. The sample was calculated based on (5%) margin of error.

The respondent was divided into 240 female students a 51.06% and 230 of the respondents were male 48.94%.

The study was conducted on the basis of a sample of 470 students selected randomly. The data were collected by survey questionnaire as a mean tool. After classifying the data from the forms of the sample, each statement was calculated as a variable given symbols, using the statistical package (SPSS-25). The data include a set of variables to explain the reasons for absence students.

RESULTS AND DISCUSSION

The purpose of this study is to determine the factors influencing students' absences, to show the most important variables and their sequence in terms of their effect on the studied phenomenon for the method of factor analysis, the principal components were used to analyze the correlation matrix of the studied variables, and based on the matrix of the coefficients of the circulating factors in a manner (Varimax) and show the importance of each variable based on the relationship of this variable with other variables.

The number of moral factors was selected according to (Kaiser Scale) based on the characteristic values (the factor variation), keeping any factor with Eigen value greater than one. The significance of the loadings for each factor was determined on the basis of the comparison between factor loadings, where the largest load value was selected in each factor, and then, it is compared with other factor loads for same variables. The (Varimax) matrix was applied on all students and it was taken into consideration for the purpose of knowledge and distinguishing the reasons for absenteeism.

The Principal Components (P.C): The First Stage for All Students

In Table 1, we present the results obtained in this way for 470 students and that represent the size of the sample (males and females).

It is noted from the table that the total number of factor variances is equal to 24, which represents the total variance of all the variables studied (the standard values). The shaded parts indicate the presence of the nine main significant factors effect on the reasons for absence of both genders together,

Table 1: Analysis using the main compounds method for all students (male and female)

Factor	Factor variance (distinguished value)	Variance ratio factor	Cumulative percentage of variance
1	4.295	17.897	17.897
2	2.321	9.67	27.568
3	1.887	7.861	35.428
4	1.556	6.481	41.91
5	1.379	5.745	47.655
6	1.266	5.276	52.931
7	1.197	4.987	57.918
8	1.139	4.748	62.666
9	1.064	4.433	67.099
10	0.865	3.605	70.704
11	0.85	3.543	74.247
12	0.821	3.419	77.666
13	0.703	2.931	80.597
14	0.652	2.716	83.313
15	0.571	2.38	85.693
16	0.55	2.294	87.986
17	0.496	2.067	90.053
18	0.455	1.896	91.949
19	0.41	1.707	93.656
20	0.382	1.59	95.246
21	0.344	1.434	96.681
22	0.328	1.365	98.046
23	0.267	1.113	99.158
24	0.202	0.842	100
Total	24	100	

which represent the number of factors whose value exceeds one. These nine factors explain a percentage (67.099%) of the total variance of variables explained by these nine factors. Although they explain different percentages of variation, but they important in determining the variables affecting the absence of students and these nine factors are explained, respectively, 17.897%, 9.670%, 7.861%, 6.481%, 5.745%, 5.276%, 4.987%, 4.748%, and 4.443% of the total variance.

First Factor

This factor is important in influencing the causes of absence, where it explains (17.897%) of the total variance. This factor is saturated with significant saturation for the following variables and according in sequence: depending on the book only to explaining the academic subjects X21 and by amount of 0.696 and the value of communality is 0.573, difficulty of a number of subjects x22 by amount of 0.674 and the value of communality is 0.625, incompatibility between students X17 by amount of 0.614 and the value of communality is 0.539, the non-encouraging way of teachers in presenting the course material X2 by amount of 0.570 and the value of communality is 0.706, the weakness of the humanitarian relations between teachers and students X1 by amount of 0.551 and the value of communality is 0.714, student unwillingness to education X7 by amount of 0.511, and the value of communality 0.612. The weakness of academic subjects to motivate student X20 by amount of 0.485 and the value of communality is 0.644 within the saturation of this factor and in both genders and the quantities shown in the shaded parts of the table. This factor can be called (scientific) factor which is an important indicator to determine the reasons for absence of students in both genders.

This factor can be called the curriculum factor and the social and organizational climate. It can be said that the depending on the book in the commentary may be difficult to understand the student and that the lack of the introduction of examples and evidence may lead the student to a state of helplessness and lack of desire to lecture and then evade attending lectures on this side, and on the other hand, it can be said that the lack of an adequate social climate in the college reflects the negative effects on harmony which leads the student to search for other groups with them and, thus, was always absent. On the other hand, there is a lack of interest in the humanitarian aspect in dealing with students and weakness in consideration about their feelings, desire, and circumstances. In addition, the limited number of teachers makes it difficult to deal with both academic as well as the human side of the student. Therefore, understanding the students' circumstances can be a helpful tool to decrease absenteeism.

In particular, the modern literature in the field of education and psychology refers to the importance of using psychological methods to link the subject to the needs of students and their interests and tendencies, all this leads to the departure of students from the study schedule and then their absence from lectures.

Second Factor

This factor is very important and comes in second place in terms of importance, which it interprets (9.670%) of the total variance and this factor satisfies a significant saturation of the following variables and in sequence, Unhealthy conditions in the accommodation X24 by amount of 0.845 and the value of communality is 0.775, failure to provide appropriate classroom environment X8 by amount of 0.845% and the value of communality 0.755, and also poor living conditions of university students X6 by amount of 0.626 and the value of communality is 0.612. The weakness of the moral imprints of this factor in both genders are called the second administrative and scientific factor.

This factor can be called accommodation factor and economy first. The problem of student stability is a fundamental factor affecting the extent of his commitment to the continuation, especially in the beginning of the academic course. Lack of good health conditions in the accommodation of the heating and furniture and other conditions can be leading to infection diseases. Hence, it can be counted among the reasons for the absence of students from this permanence on the one hand, and on the other hand, a number of students from outside the center of the province maybe delay in obtaining accommodation due to the frequent procedures and complexities of routine as well as the concern of providing accommodation that burdens the students. This will result in the inability of students to connect to the school, and on the other hand, the nature of the economic conditions experienced by the student, which reflected the impact especially on the students' ability to maintain their commitment due to the high wages of travel compared to the potential of students, especially those who suffer from poor living conditions, constant absences.

Third Factor

This factor comes in third place in terms of importance, it explains 7.861% of the total variance and saturated this factor by amount of 0.639, 0.795 and the value of communality is 0.745, 0.676 of the variables lack of transportation facilities X5, and lack of comfort in university campuses X16. This factor can be called (transportation and recreational) factor. The lack of means of transport and the inability of the student to pay the transportation fees may result in a lack of commitment. On the other hand, the absence of students may sometimes refer to psychological reasons related to the student's need for resting, so the lack of comfort causes the student to feel a sense of distress and tension and resort to other places away from the college, which leads the student to the absence of permanence.

Fourth Factor

This factor comes in fourth place in terms of importance, it explains 6.481% of the total variance and saturated this factor by amount of 0.691, 0.805 and the value of communality is 0.599, 0.744 of the variables unclear vision of future career for college graduates X12 and Management delay announcement of results X10. This factor can be called (Future and administrative) factor. As we say, this factor can be referred to the acceptance controls, as well as the lack of the future, which affects in some way the motivation of the students negatively and their desire for continuous work, so he suffers from a

Table 2 : (Loading matrix) Moral factors and common quantities of all the factors produced by the main compound method after rotation for all students (male and female)

Variable	First factor	Second factor	Third factor	Forth factor	Fifth factor	Sixth factor	Seventh factor	Eighth factor	Ninth factor	Dispersion
X1	0.551	−0.09	0.113	−0.06	0.538	−0.15	−0.2	−0.171	0.08	0.714
X2	0.57	−0.252	−0.06	0.04	0.119	0.281	−0.14	−0.137	0.424	0.706
X3	0.102	0.204	0.122	0.193	0.005	0.045	0.759	0.051	−0.07	0.69
X4	0.081	0.413	0.057	0.067	0.583	0.168	0.145	0.232	−0.11	0.639
X5	0.045	0.131	0.759	−0.17	0.183	0.138	0.03	0.243	0.085	0.745
X6	−0.018	0.626	0.375	0.113	0.181	−0.06	0.135	−0.117	0.049	0.616
X7	0.511	0.42	0.359	0.254	0.415	0.139	−0.079	0.057	−0.14	0.612
X8	0.099	0.845	−0.02	−0.09	−0.03	0.108	−0.015	0.015	0.105	0.755
X9	−0.101	0.221	0.143	−0.02	0.023	0.015	−0.023	0.038	0.811	0.74
X10	0.074	−0.034	−0.12	0.691	0.153	−0.04	0.215	−0.049	−0.17	0.599
X11	0.422	0.225	0.265	0.188	−0.01	0.154	−0.433	0.145	−0.3	0.657
X12	0.07	0.001	0.164	0.805	−0	−0.16	−0.073	0.14	0.121	0.744
X13	0.113	0.269	0.328	0.027	−0.05	0.721	0.034	−0.149	−0.07	0.745
X14	0.387	−0.043	0.333	−0.35	0.346	−0	0.461	0.053	−0.03	0.724
X15	−0.103	0.055	0.085	0.072	0.713	0.055	0.039	0.017	0.064	0.543
X16	0.241	0.003	0.639	0.364	0.067	−0.05	0.201	−0.065	0.155	0.676
X17	0.614	0.179	0.117	0.152	0.042	0.026	0.257	−0.082	−0.01	0.539
X18	−0.036	−0.04	0.002	−0.24	0.056	0.713	−0.078	−0.105	0.033	0.589
X19	−0.049	−0.107	−0.32	0.052	0.288	0.556	0.219	0.263	0.108	0.641
X20	0.485	0.132	−0.05	0.196	−0.18	−0.06	0.183	0.439	0.299	0.644
X21	0.696	0.137	0.21	−0.1	−0.07	−0.07	−0.028	0.054	−0.06	0.573
X22	0.674	0.048	−0.16	0.169	0.002	0.049	0.088	0.234	−0.22	0.625
X23	−0.052	0.109	−0.13	−0.03	−0.11	0.119	0.016	−0.867	0.024	0.812
X24	0.099	0.859	−0	−0.03	0.083	−0.04	0.09	−0.053	0.081	0.775
%Variance Ratio Factor	17.9	9.67	7.861	6.481	5.745	5.276	4.987	4.748	4.433	

psychological condition that is directly make him/her unstable in his time and presence.

Fifth Factor

This factor comes in fifth place in terms of importance, it explains (5.745%) of the total variance and saturated this factor by amount of 0.713, 0.583 and the value of communality is 0.639, 0.543 of the variables Various personal and family problems X15 and students work during or after university X4. This factor can be called (Social) factor. Many personal and family problems add to the sense of increasing the burden of work, which enables them to maintain their commitment to sustainability. On the other hand, the poor economic situation of the student reflected its effects, especially to the potential of the students and the extent of their commitment to full time, some of them to work despite being a student to improve economic level.

Sixth Factor

This factor comes in sixth place in terms of importance, it explains 5.745% of the total variance. This factor is saturated with a significant saturation of the following variables and in sequence: A number of students were preoccupied with relationships with others X13 by amount of 0.721 and the value of communality is 0.745. There are also two variables poor follow-up by the administration to students' absences X18 and strong friendship bonds among students X19 by amount of 0.713, 0.756 and the value of communality is 0.589, 0641. Respectively and sequentially, this factor may be referred to the (first administrative) or the motivational. The weak follow-up of the administration of the students' absences affects the motivation of the students negatively and their desire for continue as well as the existence of a range of psychological and social needs are not saturated students,

some of them are personal needs and their interests and need any affiliation to others, so their motivation is an important issue in terms of students to stay away from the study, because they do not agree and their needs and tendencies which leads to their departure from permanence.

Seventh Factor

This factor comes in seventh place in terms of importance, it explains %4.987 of the total variance and this factor is saturated with a significant saturation of the following variables and in sequence: Poor organization of the study schedule X3 by amount of 0.759 and the value of communality is 0.690, Explanation of the subject by the teacher in a language far from the language of the student X14 and frequent daily examinations by a number of teachers X11 by amounts of 0.461, 0.433 and the value of communality is 0.657, 0.724. The weakness of the moral imprints of this factor in both genders are called the second administrative and scientific factor. These three variables are called the second administrative and scientific factor.

Eighth Factor

This factor comes in seventh place in terms of importance, it explains 4.748% of the total variance and this factor is saturated with a significant saturation of the following variables and in sequence: The health situation of the students X23 by amount of 0.867 and the value of communality is 0.812. Only within the moral parameters of this factor can be called (health) factor. Since the absence of a number of students is always attributed to the suffering of health, as the infection of some diseases, especially cold diseases and the associated drugs, due to the siege leads to the student's immaturity to physical and psychological rest and avoid it from work so can be counted among the reasons for the student's absence.

Ninth Factor

This factor is ranked ninth and most important in terms of importance. It explains 4.433% of the total variance, and this factor satisfies a significant saturation of the variant of long distance from the university X9 by amount of 0.811, and the value of communality is 0.740. The ninth factor can be called (accommodation)

CONCLUSIONS

After addressing the applicable aspects of the study, and obtaining the results of the implementation of the principal of components method, the researcher came with the following conclusions:
1. During the work on the factor analysis for all students, the researcher found that there are nine main moral factors that allow us to determine the main effective reasons (variables) that lead to student's absence for both genders and each of them individually
2. The study revealed that the explained ratio of total variance is the nine factors in cases (all students, only females, only males) equal (67.009%, 74.014%, and 72.585%), respectively, this means that the explained ratio of total variance analysis that been done separately

for each gender has increased comparing to the explained ratio in the analysis of both genders, and that assures our assumptions of importance of doing analysis of each gender individually, to get a better result
3. The study shows that the most important variables that have moral effects on students' absence are curriculum and organizational climate, transportation and recreation, administrative procedures, and psychological and economic issues. Administrative and motivational factors including: personal organization and adaptations with performance to health and second housing. For females, living and economy, personal adaptation to the course and curriculum, admission and graduation regulations, psychological, health and administrative, transport and recreation, acceptance procedures, organizational and physiological climate, motivation, for males, curriculum climate and human relations, housing, economics, administrative management, admission controls and administrative procedures, motivation, recreation, personal adjustments, and permanence and health
4. Differential results of the factor analysis among both genders means that the order or sequence of the important variables that effect the female absence are different from the order or sequence of male's absence variable. Thus, that assure our assumptions of doing the analysis of each gender individually, the purpose is to determine the reasons that lead to absence of gender individually
5. Not giving the real reasons of absence by students may prevent the desired results from being obtained.

RECOMMENDATIONS

The following recommendations can be made in light of the study conclusion:
1. The study assists the determination of main factors that affect students' absence (and for each gender individually); hence, the study recommends the importance of doing researches and studies on the same topic, and take other variables (reasons) in consideration, and for greater number of students to come up with a valid recommendations and that's for spotting the important reasons to reduce the phenomenon of absence at the university
2. The importance of taking the principles of humanitarian relationships into account for interrelationship between teachers with students
3. Use interesting and affective teaching methods, in a way that enriches class environment with fruitful communications among teachers, and students on the other hand. Furthermore, encouraging students to study and find other academic resources to overcome the difficulties related to certain subjects
4. Accommodate students for their necessities, especially providing transportation, provide suitable job opportunities for students, particularly those in need, weather inside the university or in coordination with organizations, as well as providing financial support to facilitate their affairs
5. The need to apply instructions and guidelines, especially in regard to students' absence by assigning part of the passing grade according to attendance
6. Minimize the routine procedures regarding registration of

students in the university and taking in consideration the importance of students desires to do that

7. Care for the cleanliness of student's accommodation and the provision of health condition to avoid the possibility students to be infected by diseases.

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