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Designing a Model for Empowering Agriculture Students to Reduce Academic Burnout

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Abstract

The purpose of this study was to design a model for student empowerment to reduce academic burnout in the agricultural higher education system in Iran. The statistical population was composed of 10 higher education experts in the qualitative phase. In the quantitative phase, 200 students were selected by the Krejci-Morgan table. The sampling method was purposive in the qualitative phase and random in the quantitative phase. The experts (participants) mentioned seven indices as the main factors for model evaluation. Furthermore, the relative coefficient value of each index was determined by the Analytic Hierarchy Process (AHP). Model fitting results showed that RMSEA was equal to 0.096, and as this value was less than 0.1, it indicated that the mean squared error of the model was applicable and the initial model was acceptable. Likewise, FIGFI, CFI, and NFI were more than 0.9, indicating that the measurement model of the indices was propitious. The model evaluation and the assessment of the difference between the means of indices illustrated that empowering students would have a significant impact on reducing academic burnout in the agricultural higher education system in Iran. The significance level was estimated at less than 0.01. The impact was $B=0.46$ for future orientation, $B=0.51$ for the level of access to information, $B=0.52$ for emotional exhaustion, and $B=0.57$ for depersonalization.

Keywords:

Educational burnout, educational empowerment, educational motivation, educational success

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INTRODUCTION

Nowadays, human resources are one of the most important determinants of development in all countries, and likewise, efficient human force is a major factor in the superiority of organizations. Therefore, capable human resources will significantly increase the performance of organizations and assist in achieving individual goals at the same time (Fazel, 2017). Additionally, the growth and development of societies depend on their educational systems. Accordingly, countries spend a considerable amount of their incomes on education. Universities, as the highest level of educational institutions, also play a crucial role in empowering human resources. Hence, these educational institutions require capable human resources to ensure both the cooperative production and sharing of knowledge. In other words, universities and higher education institutions are required to initiate foundations of economic growth by producing knowledge, training the human resources needed in societies, and broadening innovation and creativity. Therefore, achieving development and preventing retrogression need deciding on higher education policies that aim at increasing expertise and skills (Shiri & Noorollahi, 2012). Iran's educational system has gone through many ups and downs during its long history; fluctuations that have been rooted in social, cultural, economic, and political changes, which have altered different structures of the social system (Veiskarami & Khalili, 2018).

In recent years, promoting mental health at universities has been considered one of the most important aspects of human resource development and improvement. Numerous research has shown that studying at university is so stressful that at some point students report high levels of anxiousness (Ahern & Norris, 2011). In other words, learners in educational environments face a lot of challenges and obstacles in achieving their educational goals, and when these challenges are considered to be destructive, they will have a detrimental effect on their motivation

and academic performances, as well as psychological conditions.

One of these challenges is academic burnout (Azimi et al., 2014). Attending university would be a pleasant experience for many students, but for some other students, academic activities such as exams, submitting articles, and giving presentations will lead to academic burnout. Burnout was initially seen as a work-related issue, but schools are also where learners are treated as employees in a way that they come to class at certain times and do homework to pass tests and get grades (Modin et al., 2011). Research on burnout has primarily focused on individuals in diverse occupational groups, e.g., human resources, teachers, nurses, and psychologists. Although several burnout studies have dealt with local faculty deputies, little research has been conducted on students' burnout in general. In fact, burnout as an issue for academic research has received little attention in earlier days of research (Brouwers & Tomic, 2012).

However, research on burnout in non-occupational areas, such as educational systems (academic burnout), is expanding (Noh et al., 2013). According to these studies, burnout is experienced and reported at both lower and higher education levels. In addition, according to Hosseini Largani (2019), 59 percent of the students at universities and public higher education institutions suffer from burnout. Furthermore, other studies have revealed that academic burnout affects the lives of many students and is required to be more considered. Since burnout has a lot of negative impacts on students' mental, psychological, and physical conditions, it increasingly becomes more important to study it (Behrozi et al., 2012). Additionally, academic burnout is a psychological characteristic that affects academic performance (Hosseinpour et al., 2016). On the other hand, research on burnout is important since it affects both students and the education system and may inflict additional costs and consequently, the loss of human resources. It also helps to un-

derstand the reasons for students' poor academic performance and lack of desire to study (Pouratashi & Zamani, 2018). At the same time, presenting their views on academic burnout, researchers have been seeking experimental evidence on the factors affecting academic performance in different cultures and educational systems (Restage et al., 2013).

Academic burnout can affect students' relationship with their university, as well as, their desire to continue their education. In fact, students endure much pressure to get a degree. They are exposed to a lot of work, time constraints, exams, and assignments, as well as important decisions on their future and career path. Eventually, when they tolerate too much stress, it might harm them (Mahmoudian et al., 2018). As such, understanding academic burnout helps to maintain an understanding of students' academic problems, such as academic failure, asking for changing their majors, dropouts, multiple probationary terms, asking for academic years, and so on (Rostami et al., 2012).

Students suffering from burnout have little motivation to participate in class activities and are likely to show some inconvenient behavioral characteristics, such as absenteeism, delay in class attendance, and early class leaving. In addition, they would not attend the lessons actively when they are in the class and will not participate in groups or class activities. Many research studies have reported that students often do not take the class rules and also the teacher seriously, and make excuses for their poor academic performances. Consequently, they will not take any sense of responsibility and accountability for their poor performances (Rudman, 2012).

Higher education can manage these challenges only when students, staff, and faculty are trained to be capable, educated, and aware of the higher education requirements in the third millennium, and this will not be achieved unless authorities make an effort to empower human resources in the higher education system to fulfill all requirements and

make rapid and challenging changes and then move toward progress and value creation.

In recent decades, empowerment has been seen as an approach that has led to many positive changes in the implementation of student work-related activities (Sabzikaran et al., 2011). In addition, despite the claim that the effectiveness of universities and colleges depends on their members, and despite the importance and necessity of empowering academic human resources and its potential benefits in higher education institutions, little research has been done on empowerment, especially in academic fields.

Razi University in Kermanshah is one of the great universities in various fields of agriculture at the undergraduate, graduate, and doctoral levels. Research has shown that student enrollment increased from the 2007 to 2015 academic years. The average grade point of agricultural students was above 16.60/20, indicating that the students had been competitive and aimed at achieving higher levels. But, not only was the number of applications for agricultural fields reduced from 2015 to 2020 but the average grade point of the enrolled students was also degraded to 15.2/20, indicating a significant decrease in the academic performances of agricultural students.

As mentioned earlier, academic burnout can be an important instrument for understanding students' educational behavior such as academic performance during their study years. By recognizing academic burnout causes, students' level of interest and enthusiasm, academic performance, relationship with colleges and universities, and negative attitudes toward agricultural fields, effective steps can be taken to make them more interested in agricultural majors and to create opportunities for job creation.

Academic burnout

Freudenberger (1974) who was the very first person to use the term burnout in its modern context described burnout as a state of extreme fatigue caused by hard, unmoti-

vated, and uninteresting work. He called this phenomenon "Syndrome of Physical and Emotional Exhaustion" and considers it a state of emotional and physical fatigue that arises from environmental conditions. The extended concept of Freudenberger's burnout in the educational context is called academic burnout.

People suffering from burnout often experience such symptoms as lack of interest in the curriculum, unwillingness to attend class regularly, lack of participation in class activities, frequent absences, and feelings of meaninglessness and inadequacy in learning the curriculum. Burnout refers to a feeling of tiredness due to academic demands and requirements, having a pessimistic attitude without interest in homework, and a feeling of inadequacy (Zang & Gan, 2007).

Recent research on burnout is expanding in areas that are not work-related, such as the educational environment, which is called academic burnout in particular. Various factors are involved in the occurrence of academic burnout, including physical, economic, personal, and other pressures. These pressures are often social issues related to the atmosphere between professors and students and are rooted in professional expectations and doubts about the usefulness of studying and future occupations. It also includes competition with classmates and the mismatch between resources and factors related to students' academic activities.

It is worth noting that academic burnout goes through three phases. In the first phase, the student feels emotionally exhausted and does not feel anything. In the second phase, he/she becomes more and more negligent and insensitive to personal duties and studies. Eventually, at phase three, the student concludes that he/she has nothing to do anymore and is academically unsuccessful. In fact, an anticipated course of study becomes a source of dissatisfaction over time and leads students to the road of academic burnout (Pouratashi & Zamani, 2018).

Causes of academic burnout

The most important reasons for academic burnout include negative aspects of students' educational environment and dissatisfaction with educational issues, high amount of homework despite obstacles in academic achievement and promotion roads, a small sense of being socially supported, enduring stress due to long-term study and lack of interest in their major, role ambiguity and role conflict, repetitive activities of their forthcoming occupation, lack of interest in job-related expectations and responsibilities, lack of challenges and incentives in a job, lack of human resources in an organization resulting in overwhelming responsibilities for staffs, and the pressures caused by efforts to study in spite of financial needs along with intense competition over getting a job (Bani Asadi & Pour Shafei, 2012).

Factors contributing to academic burnout are the followings:

Role conflict and ambiguity

Role Conflict: It is rare or completely impossible to accept one set of academic requirements when another set of academic requirements is already accepted.

Role Ambiguity: It is a certain educational situation in which some information for doing homework is undesirable, inadequate, or misleading, so the student does not know what is expected (Shahbakhsh, 2011).

Role overload and role burden

Role overload: If learners are unable to do something that is part of a specific task, they will become stressed.

Role burden: A situation in which a person's skills are not fully utilized. It includes unfavorable study conditions, financial problems, organizational problems, and other learners' behavioral problems, which cause psychological stress (Mohammadi et al, 2014). The expectations of parents, teachers, school officials, and classmates, along with interpretations of the inefficiency and ineffectiveness of their homework, may exacerbate students'

stress. Additionally, unfavorable study conditions due to the improper educational atmosphere, lack of balance between tuition costs and their income, issues with the education department, issues with school and management styles, problems of leadership in managers, and lack of useful and professional communication between learners lead to stress and subsequently academic burnout (Hayati et al., 2012).

Components of burnout

Academic burnout includes three components: emotional exhaustion, pessimism, and inefficiency. Emotional exhaustion is a feeling of suffering from pressure, especially chronic fatigue due to excessive educational activities, pessimism and indifference towards educational content, lack of interest in school-related activities, and regarding them as meaningless, which results in a feeling of inefficiency. This feeling leads to a low sense of competence, low achievement, and a lack of a sense of accomplishment in homework and school in general. The concept of burnout overlaps with such dilemmas as sleeping problems, anxiety, and rumination. It is worth mentioning that the distinguishing features of these concepts are the presence of stress, fatigue, anxiety, and depressive symptoms. However, one relative and specific situation in which academic burnout happens is measured only in schools and educational institutions (Ahola & Hakanen, 2015).

Emotional exhaustion

Emotional exhaustion is the main cause and the early symptom of burnout. Emotional exhaustion happens when a person feels a loss of emotional strength and is unable to establish emotional relationships with others (Mazlach & Jackson, 1981). Students who are emotionally exhausted feel that they are emotionally depleted and feel exhausted at the end of the day at school.

Depersonalization (pessimism)

Maru (2002, quoted by Aryani et al., 2014),

reviewing a number of research studies on burnout, argues that depersonalization usually occurs after emotional exhaustion and is, in fact, a direct response to stress. Students with academic pessimism (indifference) report that their interest, desire, and enthusiasm for studying have diminished since enrolling in universities, that they have become pessimistic about the potential usefulness of their studies, and that they doubt its importance (Breso et al., 2014).

Feeling of personal inefficiency (personal failure)

Personal success results in a feeling of adequacy and usually leads to successful progress in working with people (Mazlach & Jackson, 1981). People who show symptoms of low self-efficacy have negative perceptions about their professional endeavors, feel that they are not progressing in their jobs, and feel that they will not have positive results in their careers. Students with learning inefficiency believe that they cannot effectively solve the problems that arise during their studies, and they believe that they are not able to participate effectively in the classroom and consequently, do not consider themselves good students. They also believe that they have not learned anything interesting and useful during their academic years of study (Breso et al., 2014).

The importance of academic burnout

Newman (1990) suggests that learners' academic burnout is one of the important areas of research in school. The crucial reason is that academic burnout can be an important key to understanding learners' different behaviors, such as academic performances during school. The second reason is that burnout affects learners' relationship with their schools and the third reason is that burnout can affect learners' desires to continue their education. Therefore, monitoring and managing students' academic burnout is necessary to improve their academic achievement and motivation to learn (Brouwers & Tomic, 2012).

Empowerment

Empowerment is considered a multi-component structure that includes mechanisms through which individuals and groups manage their lives and environment and reduce stress and psychological distress (Speer et al., 2019). There are diverse opinions and interpretations of the concept of empowerment that are often based on differences in techniques or the level at which empowerment is used. In Oxford Dictionary, empowerment means being strong, authorizing, giving power, and being capable. Kanter (1979) defines empowerment as giving power to people at the lower levels of the organization.

Another comprehension is that empowerment is rather a personal belief that is improved by the skills and knowledge of individuals and individuals act on it. In fact, empowerment means more responsibility and accountability for students to improve organizational performances (Greasley, 2008). However, despite the fact that empowerment is an important factor to improve and rebuild educational institutions, it is less addressed in higher education research and studies (Sullivan, 1995).

Review of literature

In a study on the relationship between motivation and academic failure, Mansournia and Karimi (2020) assessed the relationship between achievement motivation and academic self-debilitating, considering the impact of academic burnout of Islamic Azad University students of Naghadeh Branch in the 2017 academic year. The results showed that there was no significant relationship between achievement motivation and academic self-debilitating. However, there was a direct and significant relationship between academic burnout and academic self-debilitating. Additionally, there was a significant negative relationship between academic burnout and achievement motivation. In other words, there was no relationship between achievement motivation and academic self-debilitating due to the mediating effect

of academic burnout.

Hajihassani (2018) attempted to predict burnout in female medical students of Shahrekord University of Medical Sciences based on totalitarianism and family emotional atmosphere in the 2016-2017 academic year. The results showed that burnout was an important concept related to poor academic performance. The results of the Pearson correlation illustrated that the relationship between totalitarianism and academic burnout ($r=0.218, p<0.001$) and the relationship between the family emotional atmosphere and academic burnout ($r=0.289, p<0.001$) were significant. Multiple linear regression also showed that totalitarianism ($B=0.193, p=0.005$) and family emotional atmosphere ($B=-0.403, p=0.001$) could predict academic burnout and 14.2 percent of variance explained students' burnout.

Similarly, Pouratashi and Zamani (2018) investigated the effect of educational factors on agricultural engineering students' academic burnout. The results of the correlation coefficient showed a negative significant relationship between educational factors and academic burnout, demonstrating that increasing students' satisfaction with each of the educational factors resulted in decreasing the rate of burnout among students. In addition, the results of regression coefficients revealed that the learning content had the greatest impact on academic exhaustion and indifference, and the teaching method had the greatest impact on academic inefficiency. Likewise, Seif (2017) claimed that orienting academic achievement through academic participation and academic self-efficacy had an indirect effect on academic burnout.

In a study on the experience of academic burnout by medical students at the Tabriz University of Medical Sciences, Iran, Adib et al. (2017) sampled the studies using the purposeful chain method in the 2014-2015 academic year. The findings showed that experiences of academic burnout were summarized in three main themes including "poor planning", "problem of motivation", and

“problem of adaptation”, and eight subthemes included “laws in targeting”, “postponing”, “repeating programming mistakes”, “disinterest”, “external motivation”, “feeling of fatigue and impatience”, “external locus of control”, and “efficiency expectations”.

In “Empowering Students in Leading their Education and Practice: The Design Workbook”, [Sleiman et al. \(2019\)](#) implemented an educational project in three phases. In the first phase, activities in five chapters were established, aiming at building students’ self-confidence and creative sensitivity. In the second phase, online content was provided on a website, and in the third phase, the content was refined and new methods were identified for conducting the course. The results showed that some factors such as visualization of ideas, participatory experiences, activities in workshops, and design of thinking workshops induced empowerment exercising in the participators.

[Lyndon et al. \(2019\)](#) examined academic burnout, quality of life, and motivation for academic achievements among medical students. The sample consisted of 670 medical students at the University of Auckland, and the results showed that there were three groups of students. The first group consisted of students with low burnout and average quality of life, the second group had high burnout and low quality of life, and the third group had low burnout and high quality of life. After controlling gender and entry year, they reported that high academic burnout and low quality of life were associated with high scores on the anxiety test, low achievement motivation, low self-efficacy, and low academic achievement test scores.

[Won You \(2016\)](#) in an article titled “The relationship among College Students’ Psychological Capital, Learning Empowerment, and Engagement” showed that learning empowerment is the connection between psychological capital and interaction. Psychological capital refers to positive psychological resources, including self-efficacy, hope, optimism, and resilience and is known as an

important source of organizational effectiveness, highlighting that empowering learning plays an important role in students’ academic performances.

Therefore, according to what was stated above, one of the most important ways of reducing students’ burnout is empowering them. In this regard, we tried to pursue the following objectives in order to facilitate the empowerment of agricultural students to reduce educational burnout among them so that they could improve their educational performances. The objectives of the research were:

Identifying the components of empowerment among agricultural students to reduce educational burnout

Prioritizing and weighting each identified component for empowering agricultural students

Approving the empowerment model of agricultural students

METHODOLOGY

In this research, the components of empowerment among agricultural students were identified by some experts in this field. The participants in the qualitative section included the faculty members of agriculture, educational management, psychology, and social sciences. Using the theoretical saturation criterion, ten people were interviewed as the research sample in the qualitative section. Semi-structured interviews were conducted to collect qualitative data and to identify the key components of empowerment among agricultural students to reduce academic burnout. To analyze the data gathered from semi-structured interviews, the content analysis method with systematic coding was done in six phases using Maxqda (version 12) software. The phases included (1) data review, (2) compiling coding guide, (3) organizing data, (4) data classification, (5) open coding, and (6) axial coding. To assess the adequacy of the research and to ensure the quality of the data and interpretations made in the qualitative part,

a combination of the strategies were applied such as providing a summary of the interviews at the end of each interview to ensure the accuracy of the statements, reviewing the research findings by members participating in research and also research colleagues, collecting data from different people and using skilled sources, describing the conditions of the research accurately, reviewing the content in two phases (during and at the end of the research), and documenting the data obtained from the interviews.

In the quantitative section, the statistical population included agricultural students at Razi University, Kermanshah, Iran. The sample size was determined to be 200 students by the Krejci-Morgan table. In this part, a questionnaire designed based on the qualita-

tive section was used to collect the data. To evaluate the validity, the AVE criterion and expert opinions were used. Cronbach's alpha and combined reliability (CR) were also used to evaluate the reliability. Finally, to reach objectives 2 and 3, Analytic Hierarchy Process (AHP) was applied using expert choice software, and also structural equation modeling was carried out by AMOS software.

RESULTS

As a result of qualitative content analysis of the data obtained from interviews with experts, seven main components and 111 codes with sub-components were identified. Then, using AHP, they were prioritized as described in [Tables 1 to 7](#).

Table 1

Determining the Relative Weight of the Level of Employment and Prioritizing its Components Using AHP Method

Components	Relative weight
Teamwork with students from different agricultural fields can provide enough experience for me.	0.328
I don't have the necessary motivation and skills to succeed in agricultural fields of study.	0.342
Learning contents are mostly theoretical, not practical.	0.317
There is not enough space to start agricultural work at the university.	0.319
Unless we get acquainted with agricultural work in a practical environment, we cannot have the opportunity to practice what we have learned.	0.322
We have little contact with other organizations such as the Ministry of Agriculture Jihad and the Department of Natural Resources.	0.312
The university and other organizations do not provide financial support for initiating successful projects.	0.368
Most of our learning is focused and theoretical.	0.325
Due to lack of experience, they don't trust us with practical work.	0.362
The government does not pay attention to practical agriculture in academic institutions.	0.354
I'm not skillful enough to run a farm independently.	0.302
Agriculture development, compared to other fields, will not be satisfactory in the future.	0.319
Creating job opportunities by the Ministry of Agriculture Jihad creates the necessary motivation.	0.312
The distrust among my seniors (students) reduces my motivation to keep working successfully.	0.289
There are few ways to get facilities from agricultural institutions.	0.287
We do not know the work environment enough.	0.315
Agricultural fields have become less important in society maybe because people do not know them.	0.317
Students will learn a lot about agriculture if they are taken to practical places like farms.	0.324

Determining Indices, Empowerment Components

Table 2

Determining the Relative Weight of the Information Access Level Index and Prioritizing its Components Using AHP Method

Components	Relative weight
Holding extra learning sessions to get to know more about the field of study and its future gives me hope that I would make more efforts.	0.362
Having reliable Internet can be a good platform to help me access information.	0.347
Access to agricultural production statistics by the Ministry of Agriculture Jihad can provide new information for my research	0.326
Collaborating with faculty members on various agricultural projects can have a huge impact on my learning.	0.371
Group discussion can be a spark for me to seek more information about agriculture.	0.363
University's providing financial support for scientific studies can create a favorable environment for my scientific achievements.	0.298
Having a well-equipped library with rich books, dissertations, and journals can enrich my scientific knowledge.	0.327
Access to agricultural tutorial videos in various fields can increase my knowledge.	0.319
Access to worldwide updated information on my field of study can help my academic skills.	0.320
Holding conferences in various fields of agriculture introduces me to new topics and is very useful to me.	0.325
Creating contact with successful farmers can provide an opportunity for me to ask my questions.	0.318
Holding class conferences can enhance my learning and knowledge.	0.301
Holding scientific debates on various fields of agriculture can increase my knowledge.	0.308
If the professors introduce books and pamphlets, it can enhance my scientific knowledge.	0.324
Studying various courses in agriculture, I know that there is a lot of scientific potential in the field.	0.370

Table 3

Determining the Relative Weight of Job Attraction Index and Prioritizing its Constituent Components Using AHP Method

Components	Relative weight
There is a lot of diversity in my job which increases my motivation.	0.324
I want to be accountable for the job responsibilities assigned to me.	0.342
I will do my best to achieve my goal. I do not care about others' negative comments.	0.368
Farming as a job and its future productions are enjoyable for me.	0.372
I think I have a lot of ability to produce different products in the field of agriculture in the future.	0.356
The knowledge I gain along with my strength and attitude can help me in my future career.	0.334
I will use all my focus to succeed in my future job.	0.328
I have a lot of passion for big projects, especially in my field of study.	0.315
I will use all my energy to get a better social position.	0.327
I can apply new innovations in my career.	0.308
Hard work is a hobby for me.	0.314
I am capable to endure problems.	0.308

Table 4

Determining the Relative Weight of Psychological Traits Index and Prioritizing its Constituent Components Using AHP Method

Components	Relative weight
Regarding my field of study, I can meet the social need of the community in the future.	0.388
My family admires my hard work, and it makes me more motivated to study and work.	0.365
My expertise can help me to be a successful person.	0.345
I am capable of learning skills.	0.342
I do not see any restrictions on my occupation, allowing me to keep working without any problems.	0.336
I am proficient in my field of study.	0.382
I have enough fondness and desire to make me successful in my field of study and future job.	0.347
I believe faculty members can help to improve my ability to learn and inspire me to do so.	0.328
I think I have a great talent and capability to utilize for my improvement.	0.370
I would like to be a superior person in my field to serve society in the future.	0.325
I think my mental and physical condition is suitable for this field of study.	0.253
I tend to take my study as seriously as I can.	0.312

Table 5

Determining the Relative Weight of the Future Orientation Index and Prioritizing its Constituent Components Using the AHP Method

Components	Relative weight
I consider myself responsible and committed to my future job.	0.357
Studying my major help me to have better working conditions.	0.342
The information obtained in my field of study helps me to choose my future job.	0.374
I have enough talent and capacity to continue studying in this field.	0.339
In order to be successful in my future career, I participate in student associations and organizations.	0.312
My major helps me to find a well-paid job.	0.325
Studying this field helps me to get my favorite future job.	0.345
I will have a better career by continuing my studies at higher levels of education.	0.317
To make a better future, I will participate in my field-related scientific club.	0.318
This field is in line with my academic motivations.	0.326
The future job market for my field of study is vast.	0.321
I don't have a proper plan for my future education	0.301

Determining the indices and components of academic burnout

Table 6

Determining the Relative Weight of the Emotional Exhaustion Index and Prioritizing its Constituent Components Using AHP Method

Components	Relative weight
At the end of an academic day, I feel emotionally and physically tired.	0.362
I do not feel enthusiastic about achieving the anticipated goals in my field of study.	0.321
Participating in the class is stressful and it is because of my lack of interest in my field of study.	0.376
I am pessimistic about my study and this is due to my lack of motivation.	0.327
I am not a successful student and this makes me too tired to keep up studying.	0.347
I have been constantly criticized by friends and family since I enrolled in this field.	0.328
Consulting with classmates and seniors makes me less motivated.	0.337
In my opinion, my field of study does not have a bright future.	0.323
I am constantly comparing my field of study with other fields.	0.301
I doubt the importance of my field of study.	0.317
I feel that studying is emotionally exhausting	0.329
Studying or attending class is really stressful for me.	0.305
I have no desire to participate and be effective in the classroom.	0.312
I feel that I am not interested in studying agriculture.	0.321
I do not have the ability to solve assignments effectively.	0.324

Table 7

Determining the Relative Weight of Inefficiency and Prioritizing its Components Using the AHP Method

Components	Relative weight
Competition for high performance in lessons is not important to me.	0.361
My goal is just to pass the lessons. Getting good grades is not interesting to me.	0.322
Visits to farming areas do not change my attitude.	0.364
I don't have the ability to be useful in my field in the future.	0.312
My ability and productivity are less than before. Maybe it is because of knowing more about the field of study.	0.318
The diversity of materials presented by the professors is not enough to motivate me.	0.335
I don't fit in the agriculture field of study and this weakens my sense of competitiveness.	0.324
I am not able to succeed in my education; it also depends on future conditions.	0.311
Knowing myself, I believe that I do not have the necessary capacity to pass the practical and theoretical agriculture courses.	0.302
I do not involve myself in academic matters at all.	0.314
I feel it is better to pursue activities other than studying.	0.312
Consulting with professors cannot change my attitude.	0.317
I do not find it appealing to participate in group work with other classmates.	0.328
I am not able to do scientific research in my field of study.	0.332

Table 8

Determining the Relative Weight of Depersonalization and Prioritizing its Constituent Components Using the AHP Method

Components	Relative weight
Mental struggles prevent me from attending school regularly.	0.364
I do not feel like doing homework outside the educational environment.	0.372
Participating in the classroom for solving problems is not important to me.	0.328
My ability to learn has got so limited that I am not able to learn simple things.	0.354
Grades and achievements have become less important to me.	0.322
I cannot communicate well with my other classmate to guide me.	0.318
In social situations, I feel like a useless presenter of my field of study.	0.326
I am not able to do my assignments if I do not attend classes.	0.314
I am not able to compete with other students.	0.308
I am not able to work independently (individually).	0.312
I am indifferent to the curriculum.	0.321
In my opinion, academic activity has become meaningless.	0.320

Table 9

Matrix of Paired Scales and Weight of Indices Affecting Students' Empowerment to Reduce Academic Burnout in Iran's Agricultural Higher Education System

Index	Job attractions	Future orientation	Level of access to information
	0.1578	0.5641	2.6573
Index	Level of employment	Psychological traits	Inefficiency
Indices weight	2.9402	0.4852	0.3521
Index		Depersonalization	Emotional Exhaustion
Indices weight		0.4218	0.3325
CR		0.0982	

Since the level of significance for all research variables is greater than the error value (0.5), these variables have a normal distribution. As a result, the distribution of all variables is normal, so parametric tests can be used for the data of this statistical sample.

Structural equation model

To determine the relationship between indices and how they affect the path, an analysis method by AMOS software was utilized.

Model fitting results revealed that the value of RMSEA was equal to 0.096, which is less than 0.1, indicating that the mean squared error of the model is applicable and the initial model is acceptable. Likewise, FIGFI, CFI, and

NFI were more than 0.9, indicating that the measurement model of indices is propitious.

The results in Table 12 reveal that there is a significant difference between the mean of indices and the differences between the mean of indices which affect empowerment of students to reduce academic burnout in the Iranian agricultural higher education system. Also, the critical ratio was out of range (1.96 and -1.96) and the significance level is less than 0.01 and was confirmed at the confidence level of 0.99.

Regarding the first objective of the research, which was identifying the components of empowerment among agricultural students, seven main components and 111 sub-compo-

Table 10

Kolmogorov-Smirnov Test Analysis to Determine Whether the Data Are Normal or Abnormal

Indices	p-value	Error rate	Theory validation	Results
Level of access to information	0.139	0.05	H ₀	Normal
Future orientation	0.125	0.05	H ₀	Normal
Job attraction	0.120	0.05	H ₀	Normal
Inefficiency	0.115	0.05	H ₀	Normal
Psychological traits	0.124	0.05	H ₀	Normal
Level of Employment	0.121	0.05	H ₀	Normal
Emotional Exhaustion	0.123	0.05	H ₀	Normal
Depersonalization	0.130	0.05	H ₀	Normal

Table 11

Indices Related to the Fitting of the Research Model

Test Name	Obtained Values	Valid Values	Explanation
	2.102	3>	Relative chi-square
RMSEA	0.05	0.1>	The root of mean square error of approximation
RMR	0.95	0.1>	Root of mean square of residuals
GFI	0.943	0.9<	Modified fitting index
NFI	0.956	0.9<	Soft fitting index
CFI	0.925	0.9<	Comparative fitting index

Table 12

Significant Differences of Indices Influencing the Empowerment of Students to Reduce Academic Burnout in the Iranian Agricultural Higher Education System

Indices	(B)	(CR)	t	Degree of freedom	Means	Means difference	p-value
Level of access to information	51.0	62.2	6.3**	200	12.3	39.0	0.000
Future orientation	46.0	82.2	9.3**	200	25.3	46.0	0.000
Job attractions	77.0	68.2	2.4**	200	45.3	67.0	0.000
Inefficiency	87.0	54.2	1.4**	200	35.4	86.0	0.000
Psychological traits	72.0	79.2	2.5**	200	36.4	83.0	0.000
Level of employment	54.0	52.2	0.62**	200	12.3	72.0	0.000
Emotional exhaustion	52.0	33.2	4.6**	200	12.4	76.0	0.000
Depersonalization	57.0	27.2	3.6**	200	23.4	79.0	0.000

nents were identified, including access to information, future orientation, job attraction, inefficiency, psychological behaviors, level of employment, and emotional exhaustion.

To reach the second objective, AHP was applied. The results of the AHP method showed that the components of empowerment among agricultural students for reducing educational burnout were level of Employment, level of access to information, future orientation, psychological traits, depersonalization, emotional exhaustion, and job attractions.

The results of model fitting illustrated that the value of RMSEA was 0.096, which is less than 0.1 and indicates that the mean squared error of the model is applicable and the initial model is acceptable. Likewise, FIGFI, CFI, and NFI indices were more than 0.9, indicating that measuring the indices of the model is propitious.

DISCUSSION

The model's evaluation and assessing the difference between the mean indices show that empowering students has a significant impact on reducing academic burnout in the Iranian agricultural higher education system. The significance level is estimated at less than 0.01 for which the confidence level is equal to 0.99. The impact is $B=0.46$ for future orientation, $B=0.51$ for level of access to information, $B=0.52$ for emotional exhaustion, and $B=0.57$ for de-depersonalization.

Based on previous studies that have concluded that academic burnout can affect academic performance, it is crucial to identify the factors affecting burnout reduction. One of these factors is empowerment. Therefore, accurate identification of empowerment components for each field of study is very important to reduce educational burnout. In this research, seven main components for empowerment were identified, some of which were in line with previous studies like [Chin et al. \(2016\)](#), [Naseri and Kareshki \(2017\)](#), and [Sepehri Nezhad & Hatamian \(2018\)](#).

Furthermore, occupation is one of the biggest concerns of young people, especially agricultural students whose future careers depend on their field of study. On the other hand, agricultural fields of education are one

of the most challenging disciplines regarding students' futures or occupations. Annually, almost 270,000 university students are supposed to enter the job market, which cannot grant enough places for all of them. As a result, agricultural students' concerns and frustrations about their educational and occupational future cause negative attitudes toward agricultural fields in general, and despite all the efforts to solve the crisis of agricultural graduates' unemployment, it is still overwhelming.

On the other hand, psychological empowerment is one of the approaches that has led to a considerable amount of openness to change in the performance of students' work-related activities in recent decades. Accordingly, the results of this study have shown that empowering students has a significant effect on reducing academic burnout, and assessing the relationship between empowerment and the level of employment of agriculture students highlights the importance of employment, which is an unknown concept, especially in developing countries. Additionally, this assessment leads higher education institutions to be more focused on examining the employment level of university fields and developing opportunities to increase it.

CONCLUSION

Academic burnout can be an important tool for understanding students' educational behaviors such as academic performance during their study years. By recognizing academic burnout causes, students' level of interest and enthusiasm, students' academic performance and their relationship with colleges and universities, and students' negative attitudes toward agricultural branches, effective steps can be taken to make students become more interested in agricultural majors and to create opportunities for job creation.

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