

# Study of the Leadership Potential of Pharmacy Students

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## ABSTRACT

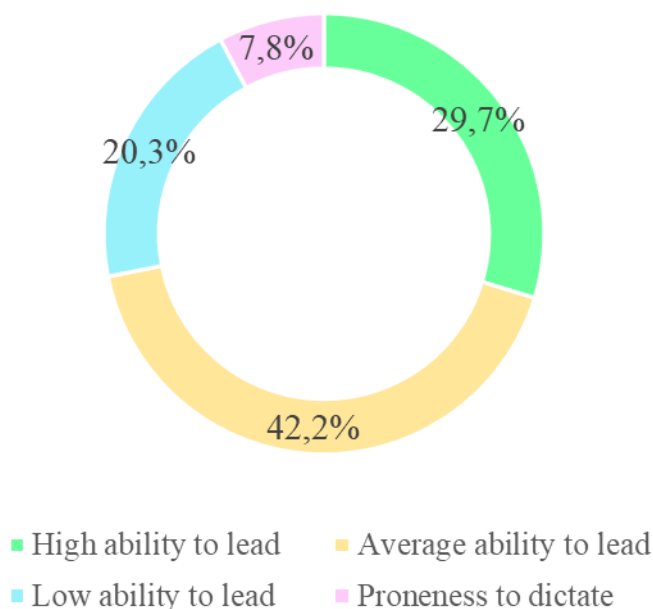
The article is devoted to studying the leadership potential indicators of pharmacy students as one of the key professional competencies. According to the results of psychological testing of respondents, the fundamental components of social and psychological factors that characterize their leadership potential have been analyzed, the subjective characteristics and style of their leadership were determined. It was found that the level of leadership abilities of the subjects directly affects the nature and degree of manifestation of indicators that characterize leadership. It was found that a high level of key characteristics of transformational and transactional leadership influence is most inherent in respondents with high and medium leadership abilities.

## Introduction.

Professional activity with a social orientation referring to the type of "person-to-person" in psychology, requires a high professional level of the specialists, but also demands specific personal qualities, among which leadership skills are of major

importance.

An example of the above type of profession is the activity of modern pharmacy professionals who must feel like leaders and demonstrate leadership skills, which would allow them to serve as an example for other health care providers and effectively manage both themselves



**Figure 1.** Indicators of respondents' ability to lead

and others. Leadership skills act as the essential competence in the activities of modern pharmacists, which contributes to the development of a high level of self-awareness, self-control, and social sensitivity in them and determines their ability to effectively manage interpersonal relations, which ultimately influences the effectiveness of the organization's activities<sup>1,2</sup>.

The essence of modern leadership lies in the direct and natural ability of the leader to create a friendly atmosphere within the team, fruitful adjustment of the emotional part of the team functioning, as well as the ability to effectively manage the negative moods of the team members.

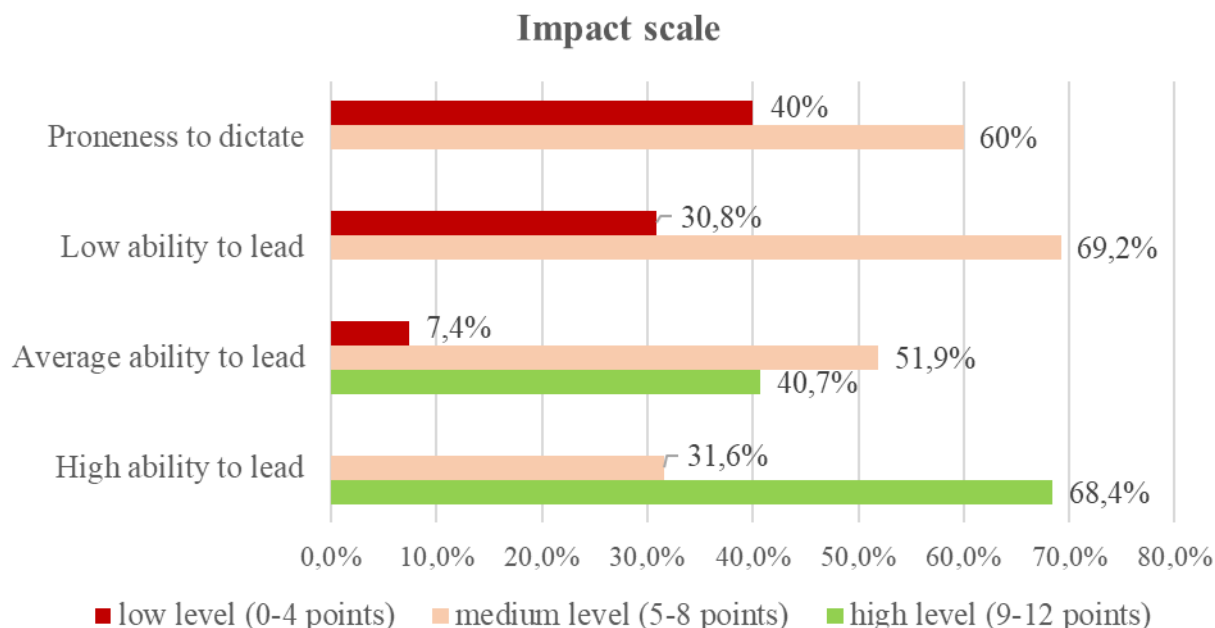
Thus, modern leadership is an important socio-personal competence, since it contains both a component of social influence and a personal resource that allows a person to take on the role of a leader.

Accordingly, the issue of leadership skills of modern pharmacy professionals is one of the priority areas of research, which will improve both the training quality of the professionals themselves and significantly increase the effectiveness of the aid provided

by them. The relevance of socio-psychological research on leadership issues is related to the insufficient level of development of this topic on one hand, and on the other hand to the increasing demands of practice for a thorough analysis of problems and prospects of this issue<sup>5,6</sup>. At the same time, the problem of pharmacy specialists' leadership qualities has not been considered separately. The common goals and objectives of the medical and pharmaceutical communities increases the need to study leadership in the pharmaceutical industry, whose specialists, together with doctors, should now be ready to take on a leader's mission to ensure the well-being of a patient and society as a whole.

Leadership research is particularly urgent for future pharmaceutical professionals who are in the process of preparing to embark on professional duties, as the expression of their leadership qualities will influence the success of their future careers.

The purpose of the present study was to establish the leadership potential of pharmaceutical education applicants in Ukraine by establishing indicators of their leadership potential and subjective leadership characteristics.



**Figure 2.** Ratings of respondents with different LA on the "Impact" scale

### Materials and Methods.

The study performed testing of pharmacy students according to psychological methods that determine leadership abilities and subjective indicators of leadership. In the course of the study, analytical, structural and logical approaches, methods of statistical processing of the obtained data, structural indicators, grouping of the data obtained and comparison analysis were used.

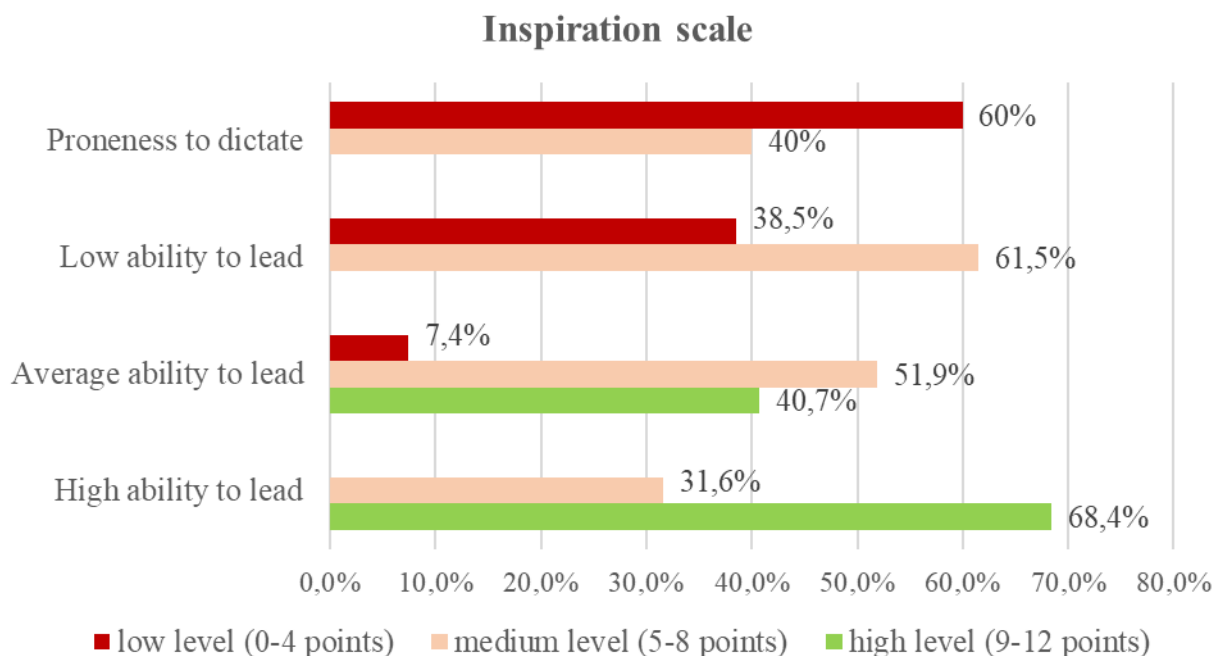
### Results and Discussion.

Based on generalized results of theoretical and empirical studies of outstanding domestic and foreign scientists devoted to the study of the leadership phenomenon, we outlined the key criteria for selecting the diagnostic tools for assessing the leadership qualities of the subjects, in particular:

- the suitability of psychological questionnaires for diagnosing the leadership potential of specialists in the "person-to-person" labor system, which directly includes future pharmaceutical specialists;

- compliance with the existing psychometric criteria and optimal parameters concerning the procedure for researching leadership potential and selecting relevant diagnostic tools;
- compliance with the basic principles and rules of psychological measurement and systematic interpretation of the data obtained;
- the possibility of algorithmization of methodological tools for further transfer to the automated survey and processing mode;
- promptness of the diagnostic procedure;
- the possibility of using both direct and remote psychological survey.

Based on the results of the analysis of literary sources devoted to the study of the problems of key aspects of leadership, we concluded that the manifestation of leadership qualities largely depends on the leadership abilities (LA), that a person develops from childhood in the case of effective socialization. That is why at the determinative stage of the experimental study, we used the Ie. Zharikov and Ie. Krushelnysky psychological method of interviewing respondents, enabling measuring and evaluating their leadership abilities<sup>7</sup>.



**Figure 3.** Ratings of respondents with different LA on the Inspiration scale

In the course of testing according to this psychological technique, respondents answered 50 statements of the questionnaire. The interpretation of the obtained values was carried out according to the “key” of the methodology.

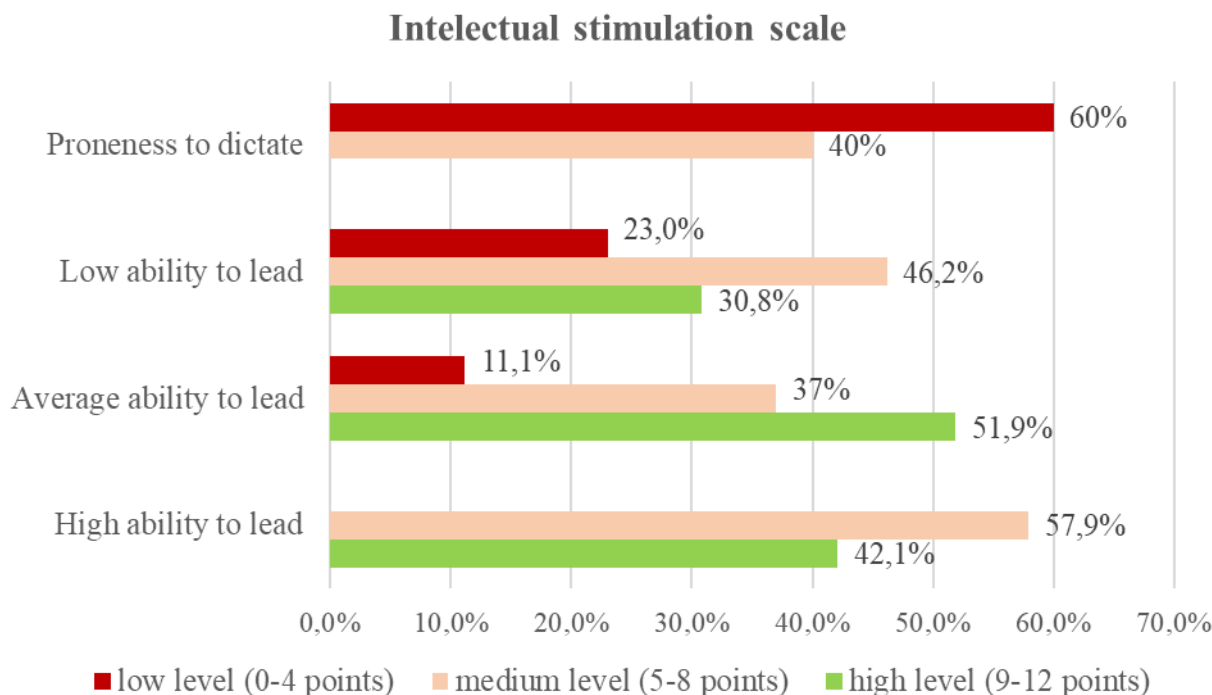
According to the authors of the above methodology, the ability of a person to be a leader is largely due to the development of one’s organizational and communicative skills. Such signs are the following key subjective manifestations of a person: optimism; determination, that is the ability to make independent and timely decisions in critical situations; initiative; perseverance; ability to take reasonable risks; patience; readiness for long-term performance of daily and monotonous tasks; independence, which is manifested in the willingness and ability to work without excessive care; mental stability; high adaptability; ability to self-criticism, which allows assessing both own successes and failures adequately; pickiness not only to others but also to oneself; criticality, which enables to see weaknesses in attractive proposals; reliability; endurance, which allows efficient work even in conditions of overload; readiness

to solve complex problems by original and atypical methods; psychological flexibility, which determines the ability of a person to change the style of behavior depending on a particular situation.

In addition, we also identified the subjective characteristics and style of leadership (transformational and transactional)<sup>8</sup> by testing respondents using the multidisciplinary leadership questionnaire by B. Bass and B. Avolio.

According to the authors of this psychological technique, leadership is an important socio-personal competence of a person, which determines the effectiveness of its implementation both in professional and public life, since it contains in its structure both a component of social influence and a personal resource that allows a person to take a leadership role.

In the course of the survey according to this methodology, respondents were asked 21 questions of this psychological questionnaire with the ability to choose the highest priority answer out of five proposed. The test results were evaluated according to the proposed key of the methodology, which allowed obtaining indicators of leadership manifestations of



**Figure 4.** Ratings of respondents with different LA on the Intellectual Stimulation scale

the subjects on the following scales: impact; ability to inspire; intellectual stimulation; individual approach; motivation; management; and granting independence.

It should be noted that this psychological questionnaire contains statements that belong to both the transformational and transactional characteristics of a leader's personality. At the same time, transformational leadership not only can influence the behavior of the leader himself but also can change the behavior of his followers by transforming their values, thoughts, and thinking, which in general leads to an understanding of the overall results and contributes to the formation of partnerships built on unconditional respect and authority<sup>9</sup>.

Thus, according to the transformational aspect of influence, the leader initiates a certain transformation that occurs both in the organization and in the personality structure of its individual representative. According to this questionnaire, such transformational qualities are a set of characteristics and concepts that are characterized by such method

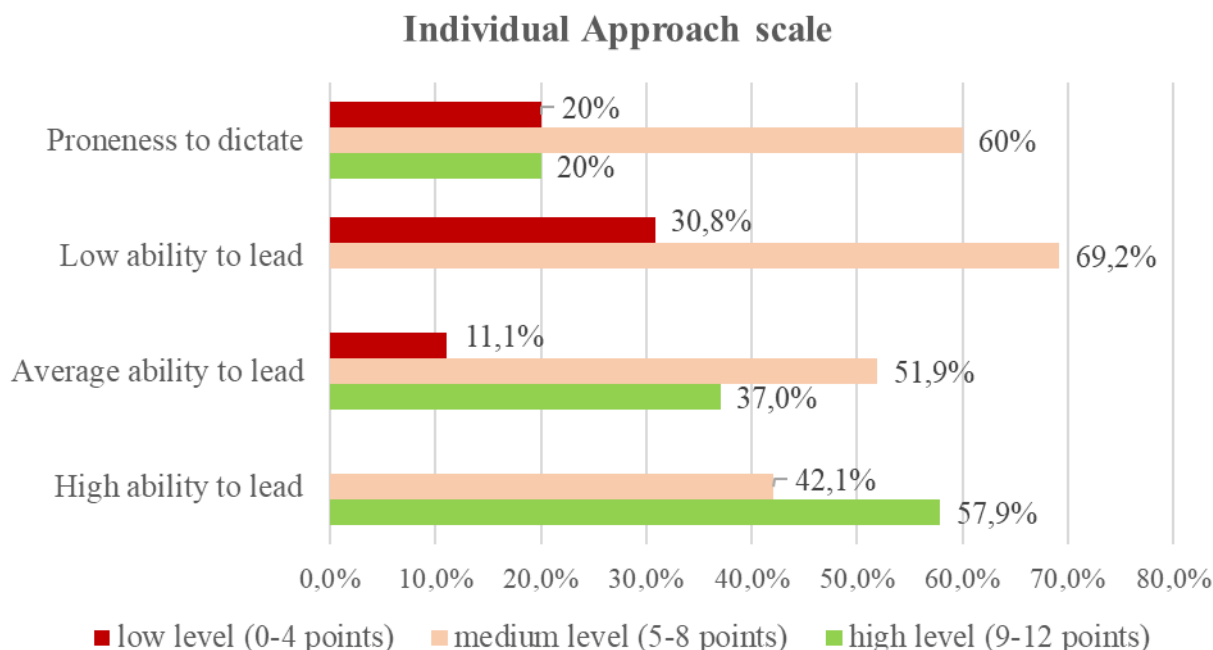
scales as: "Influence", "Ability to inspire", "Intellectual stimulation" and "Individual approach".

The study of future pharmacy professionals' transactional leadership influence was carried out using the obtained values according to such scales of the methodology as "Motivation", "Management" and "Granting independence".

The survey involved 64 graduate students of the National University of Pharmacy (Kharkiv, Ukraine), most of whom were women (53 people – 82.8%), the remaining 11 were men (17.2%), the average age of participants in this group was 22 years.

The representativeness of our sample is confirmed by the Student's t-distribution. Considering that the total number of applicants for higher pharmaceutical education of graduate courses at the National University of Pharmacy is 120 people, respectively, the calculated level of significance " $\alpha$ " was- 0.05, which corresponds to the reliability level of 95%.

Test results according to Ie. Zharikov-Ye. Krushelnytskyi method allowed establishing that only 19 respondents (29.7%) have a high propensity for



**Figure 5.** Ratings of respondents with different LA on the scale "Individual approach"

leadership. Such future specialists can adequately analyze both their behavior and actions, and assess the actions of others. In the general context, this allows them developing an appropriate purposeful, and constructive model of their behavior, which facilitates the effective coordination of the directions and actions of others.

The average level of LA is inherent in 27 respondents (42.2%). Typically, the characteristic features of the leadership of such respondents are such key features as: sufficient mental resistance to adverse life situations, constructive self-criticism, fair personal autonomy and reliability. At the same time, it should be noted that the above indicators may change in some way in case of less favorable situations.

13 respondents (20.3%) have a low level of LA. As a rule, such respondents are characterized by difficult adaptation to new living and working conditions and a low level of self-criticism. In addition, they are characterized by a quick rejection of a certain goal in the event of significant obstacles in its implementation, as well as insufficient willpower. Instead, 5 applicants (7.8%) have a tendency to dictate, which

indicates ineffective ways of building constructive relationships in interpersonal communications.

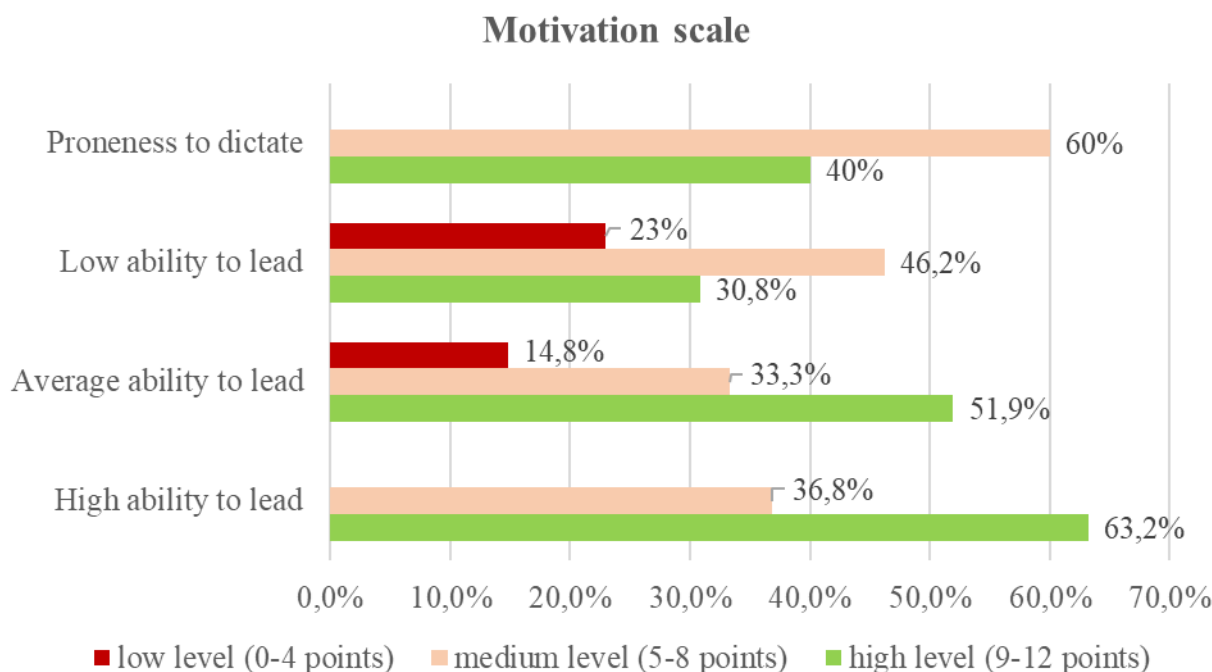
The results of the above-mentioned psychological testing are graphically presented in Figure 1.

Thus, this psychological testing allowed us to analyze the subjects' susceptibility to leadership behavior and the degree of expression of this indicator.

The results of further testing of respondents on the B. Bass-B. Avolio multidisciplinary leadership questionnaire made it possible to determine the subjective signs of leadership of respondents with various levels of leadership abilities and their leadership style.

The results obtained showed that only respondents with a high level of LA – 13 people (68.4%) and average values of LA– 11 respondents (40.7%) have high values on the Influence scale. On the part of others, these respondents are able to build trust in themselves, which contributes to the formation of high authority and further helps them to convey their ideas and be an appropriate example of a person to whom they listen and look up.

Average values on the scale are characteristic of



**Figure 6.** Ratings of respondents with different LA on the Motivation scale

more than a third of respondents with high LA – 6 respondents (31.6%), 14 respondents with medium LA (51.9%), 9 respondents with low LA (69.2%), as well as 3 respondents who are somewhat prone to dictate (60%).

Low values on the “Impact” scale among the subjects are inherent in the following groups of subjects: 2 respondents with an average level of LA (7.4%), 4 subjects with low levels of LA (30.8%), as well as 2 subjects who are prone to dictation (40%) – Figure 2.

Indicators on the “Inspiration” scale allow us to assess the ability of respondents to broadcast relevant symbols and images of stimulation to others to help the latter independently take appropriate steps to overcome obstacles to achieving the goal.

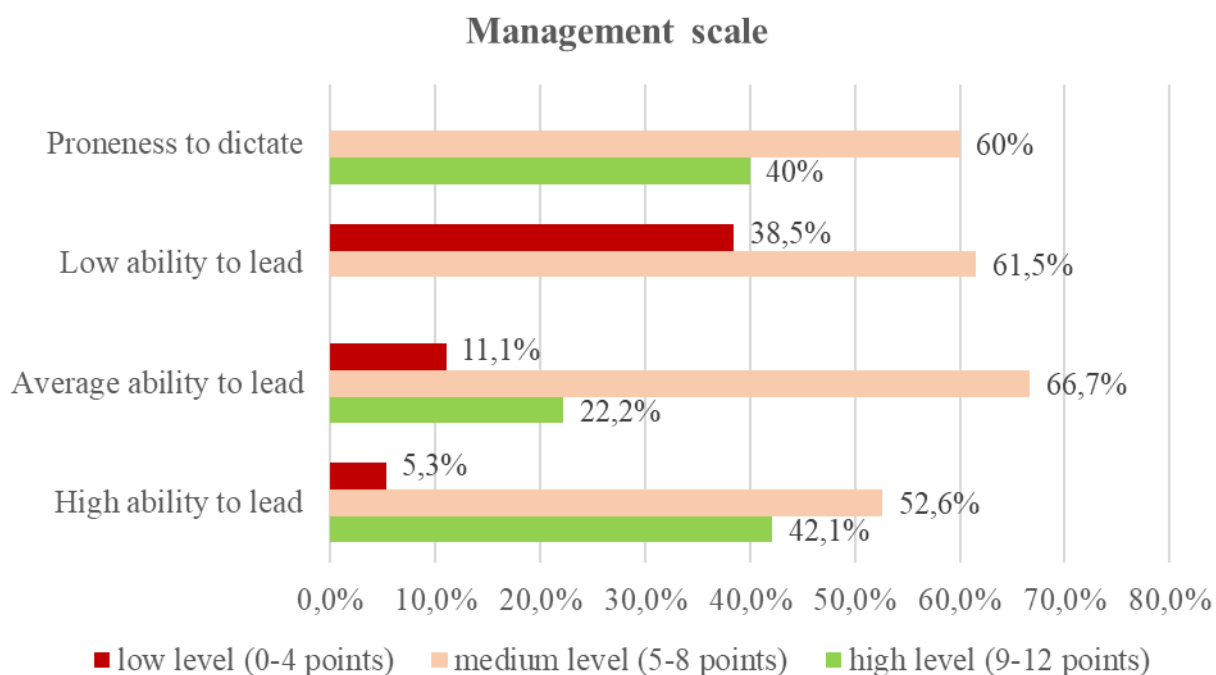
The analysis of the obtained indicators on this scale found that the majority of respondents with a high level of LA have a greater ability to inspire – 13 respondents (68.4%). In addition, 11 respondents with medium LA (40.7%) have high scores on the Inspiration scale. At the same time, there were no high values on this scale among respondents with low LA

and respondents prone to dictatorial manifestations.

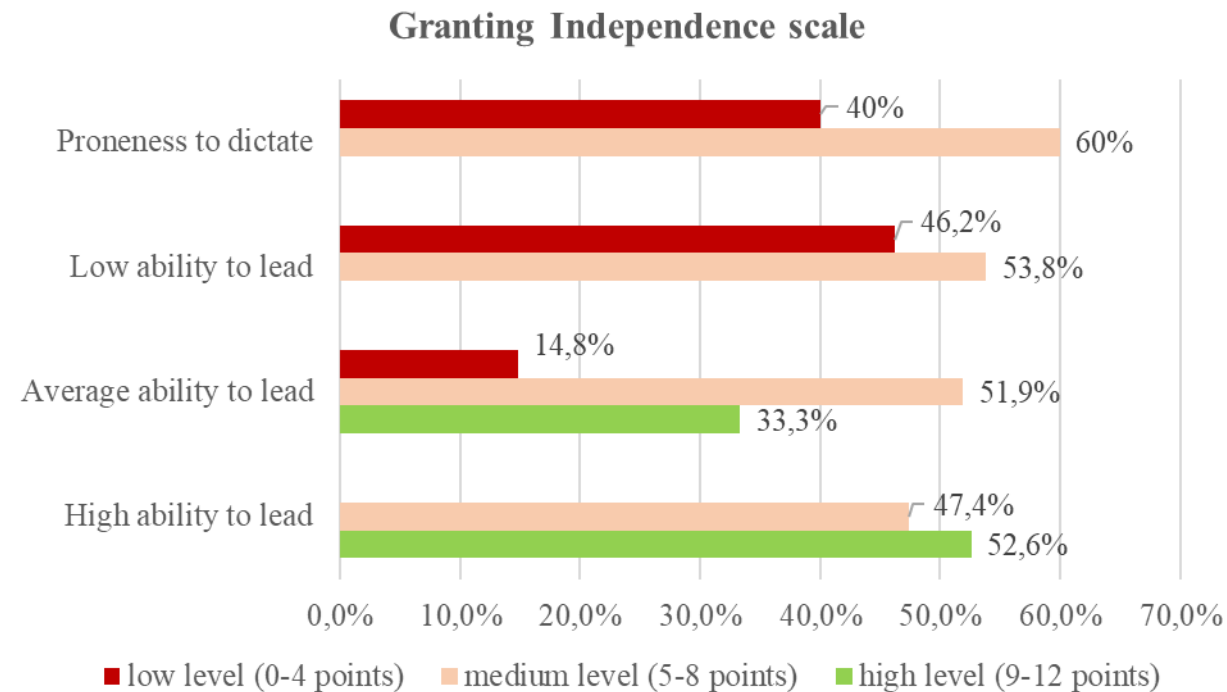
The low level of the ability to inspire is more characteristic of the respondents with a tendency to dictate – 3 respondents (60%), more than a third of the respondents with low LA– 5 respondents (38.5%) and 2 respondents with average leadership abilities. All other subjects have average values on this scale (Figure 3).

Values on the Intellectual Stimulation scale allow highlighting the ability of respondents to encourage others to use a creative approach when achieving the goal. A person with high scores on this scale is able to create the most optimal collective environment that will allow its members to show their best abilities and carry out effective self-realization. In the vast majority, this ability is mainly inherent in the subjects with high and medium LA values – 8 respondents (42.1%) and 14 respondents (51.9%), respectively. Also, 4 respondents (30.8%) with low LA (33.3%) have somewhat high values on this scale.

Low values on this scale are characteristic of 3 subjects with average LA indicators (11.1%), 3 respondents with an average LA (23%), as well as 3



**Figure 7.** Ratings of respondents with different LA on the "Management" scale



**Figure 8.** Ratings of respondents with different leadership abilities on the scale "Granting independence"



subjects with dictatorial manifestations (60%).

All other respondents have average scores on this scale (Figure 4).

The results on the Individual Approach scale highlight the ability of respondents to broadcast a subjective approach to others. To a greater extent, this ability is inherent in respondents with high and medium values of leadership potential – 11 applicants with high LA (57.9%) and 10 with medium LA (37%).

Low scores on this scale are inherent to some extent to respondents with average values of LA (11.1%) – 3 representatives and low LA – 4 subjects (30.8%), as well as 1 respondent (20%) with dictatorial directions of his leadership.

Other representatives of all study groups have average values for an individual approach to others (Figure 5).

Transactional leadership influence is based on the use of a number of rewards and punishments for others.

Thus, it was found that high scores on the “Motivation” scale are characteristic of all respondents, without exception, to varying degrees, namely 12 respondents (63.2%) with high LA, 14 respondents (51.9%) with medium LA, almost a third of the respondents with low LA indices – 4 respondents (30.8%) and 40% of the respondents with a tendency to dictate – 2 respondents. They are able to clearly outline the tasks set and specify the expected results.

A small number of respondents with medium and low values of LA have low ratings on the Motivation scale – 4 and 3 respondents, respectively (14.8% and 23% ).

All other respondents with different LA values have average values on this scale (Figure 6).

The values obtained on the “Management” scale allow us to assess the degree of influence of the respondents’ personalities concerning their management of processes in the course of achieving a goal. It was found that this ability is more characteristic of the subjects with high rates of LA– 8 applicants (42.1%), 6 respondents with medium LA (22.2% of the total number of such subjects), as well as 2 respondents (40%) who are prone to dictation.

A small number of respondents is characterized by an insufficient degree of control of processes and phenomena along the way – to a greater extent these are respondents with low LA, namely, 5 such respondents (38.5%), 3 respondents with medium LA (11.1%), as well as 1 respondent with high LA (5.3% of the total number of such specialists). At the same time, the average values on the scale are inherent in the majority of subjects - Figure 7.

Ultimately, the Granting Independence scores measure the ability of respondents to effectively organize teamwork to achieve a jointly defined goal.

Thus, the results obtained on the scale indicate that, first of all, future specialists with high and medium LA indices can do this – 10 and 9 respondents, respectively (52.6% and 33.3%).

At the same time, low capacity for independence and delegation of authority is inherent in 4 respondents with medium LA (14.8%), almost half of the group of respondents with low levels of LA – 6 representatives (46.2%), as well as 2 respondents with dictate abilities (40% of such representatives).

All other respondents are characterized by average values on the scale (Figure 8).

The above leadership qualities require high professional and emotional competence of specialists, which helps them manage themselves, provide emotional support to others, and improves the quality of interpersonal communications in general.

Thus, the results of the above psychological testing allow us to demonstrate the direct impact of the respondents’ leadership abilities on the nature and degree of manifestation of indicators that generally characterize leadership. At the same time, respondents with high leadership abilities have a significantly higher capacity for both transformational and transactional leadership.

## Conclusions.

According to the results of psychological testing, the level of leadership abilities of applicants for pharmaceutical education was established. It was found that high indicators that characterize transformational and transactional leadership influence are

more characteristic of respondents with high and medium leadership abilities.

It was found that most respondents with medium and low leadership abilities are highly desirable to improve their leadership competencies and characteristics.

Respondents whose leadership style tends to dictatorship should rethink and transform their leader-

ship potential, which, undoubtedly, is very high, but at the same time, not always effective in achieving their goals. Such respondents need to learn to trust others more and give them more independence. They should also understand that only teamwork, grounded on mutual respect, trust and partnership, is the key to the rapid and constructive achievement of the goals.

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