



Research Article

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## ***Interaction Positions among Medical Students and Students Trained as Educators and Psychologists***

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### **ABSTRACT**

*Introduction: The study was done to identify the importance of psychological factors that influence people in adopting certain positions in interaction: coercion, manipulation, non-violence, or non-involvement. Goal: The aim was to study the structure of interaction positions among medical students and future educators and psychologists. Materials and methods: Theoretical methods (analysis, comparison, specification, generalization); empirical methods and materials (a set of questionnaires that help reveal interaction strategies, and also factors that determine their acceptance; methods of mathematical statistics –  $\phi^*$  criterion: Fisher angular transformation); and correlation analysis using a Pearson linear product-moment correlation coefficient were used. Results: In the course of the study, 16 types of interaction among students were identified and described. The optimal type was where the dominant position was occupied by the position of non-violence. Positive and negative connections of positions of interaction with various factors were revealed. Discussion of results and conclusion: As a result, various models of students' behaviour in situations of interaction with other people were described; the main directions of work on the purposeful formation of students' position of nonviolence were highlighted. The obtained results can be used in the process of professional training of students - future physicians and future teachers - psychologists, as well as in the development of special programs for the formation of students' ability to interact non-violently.*

**Keywords:** *Position of Coercion; Position of Non-Violence; Irritability to People; Social and Pedagogical Stereotypes; Egocentricity; Sensitivity to Threats*

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### **INTRODUCTION**

Throughout our life, we communicate with many people. The modes of such communications are various: business or personal, joint problem-solving in certain tasks, or even conflicts. In the process of interaction, a person adopts a certain position, and implements the appropriate strategy of influence: imperative, manipulative or developing [1]. The position of the interaction has been defined as the integration of a person's position in his/her social environment or in a communicative process, and his/her relations to the other communicants. These positions are numerous. Traditionally, psychology speaks about positions *above*, *below*, and *nearby*. To use E. Berne's terms [2], they are: Parent, Child, and Adult. In a study done by [3], depending on the person's adoption of such values as coercion or non-violence, four positions have been singled out: coercion, manipulation, non-violence, and non-involvement.

One adopts a position of coercion if she/he solves problems by imposing his/her will upon others, and overcoming their resistance and objections. The means used can be pressure application, orders and demands, compelling and aggressive threats, whereas a manipulator uses "softer" means. In manipulation, personal goals are not shown explicitly but disguised to look as good intentions. The corresponding forms are deception, graft,

bullying and promises. A position of non-violence is based on the person's ability to solve his problems without resorting to coercion, open or implied, with the maximum consideration of the counterpart's interests and the forms that include co-operation and avoidance of harm. Typical non-violent actions include co-operation, persuasion, help, love, adaption, forgiveness, etc. A position of humility as a part of the non-involvement strategy is connected with lower activity, avoidance, tolerance and submission to circumstances.

In the course of our lives and interaction with others, we can accept all of the above positions. Yet, some people prefer rigid forms of interaction, others tend to manipulation, while others are still undecided. We believe Accepting a position of non-violence is believed to be the optimal strategy. This will create pre-requisites for the implementation of a developing strategy of influence, presupposing dialogue and maximum openness of communicants. Of course, there will be many of those who cannot decide against coercion and manipulation; yet, practically every person can minimize such patterns in their behaviour.

The ability of a person to maintain non-violent interaction is of great significance in professions that require interaction with others, especially in health care and education. When a doctor, instead of using persuasion, forces patients to follow prescriptions and manipulates them, so as to extort money, or if a doctor is callous and insensitive, he cannot be a good doctor. When an educator constantly applies pressure to children, threatens them and makes them observe his requirements without explaining their values, or manipulates so as to achieve his goals, he cannot be a good educator. People have always expected "humanitarian" professionals to be kind, friendly, open and tolerant, to like people and accept them; certainly, there is room for firmness of demands and adherence to principles. It is a special art to combine strictness with kindness, fairness and love of people; and we cannot say that medical specialists and educators meet such expectations. The process of constructing a professional identity and selecting a life-long medical specialty among medical students and junior physicians is multifactorial [4]. Hence, the logical conclusion is that in professional training of medical specialists, teachers and psychologists, it is necessary to develop in would-be doctors, educators and psychologists more than mere fulfilment of their professional functions; hence, the ability to form positive relations with all interacting parties should be developed in them. In turn, this would provide prerequisites that are necessary for developing a position of non-violence.

From all mentioned above, a number of important questions arise. Firstly, which positions do students (trained for work in education, medical care, and psychology) embrace in their interaction with others? Secondly, which factors lead to accepting this or that position? Thirdly, which of those factors should draw special attention in order to create favourable conditions for accepting a personal position of non-violence, as this is essential to such humanitarian professions as a doctor, educator, psychologist, etc.?

*The goal* of the present paper was to study the structure of interaction strategies among medical students and among students trained to be educators and psychologists, and also the factors defining their acceptance of a personal strategy.

While setting up the present research, the following *assumptions* were proceeded:

- interacting with ordinary people and students can embrace various positions: coercion, manipulation, non-violence, and non-involvement; these positions may combine and overlap forming specific structures;
- the prevalence of this or that interaction position can be defined by a number of factors, the most important ones are being irritable to individuals; adherence to social stereotypes; degree of egocentricity; sensitivity to an individual; attitude to danger and such related factors as motivational achievement, motivation to avoid failure, readiness for risk; self-acceptance and self-confidence;
- It has been believed that a high degree of irritability to individuals, adherence to social stereotypes, high egocentricity, low sensitivity to an individual, inclination to unreasonable risk and ignoring hazards may prompt one to accept a position of coercion or manipulation. On the other hand, low irritability, absence of social stereotypes, ability to decentralize, high sensitivity to a person or to threats, adequate reaction in hazardous situations, and self-confidence would create favourable conditions for accepting a position of non-violence.

## Literature Review

Interaction among people is a process of their reciprocal influence upon each other, resulting in establishment of certain relations, achievement or non-achievement of certain goals.

Among the variety of positions that one can accept, there is a special group of interpersonal interaction. As was stated in the introduction above, depending on the adopted values of coercion or non-violence, a person can accept positions of coercion, manipulation, non-violence or non-involvement.

Psychology describes coercion as a special form of influence on another person (other persons) that disregards interests of the counterparts, suppresses their resistance, and imposes one's view and desires upon them. There exists a number of theoretical substantiations of coercion. Thus, [5] discussed coercion as a moralized judgement. According to [6], various forms of antisocial behaviours stemming from violent or aggressive inclinations are based on coercive influence by parents towards children. In psychology, a position of coercion has been most frequently studied in a context of aggressive behaviour. The human behavior can be predicted to a large extent by knowing the factors which increase or decrease motivation [7]. Researchers have pointed to the coexistence of two motivational tendencies: one towards the aggression and the other, to the suppression of it [8].

Manipulation is a form of "softer" coercion. Its essence is that the subject of influence strives to achieve his/her goals without exerting direct coercion, and resorts to various ploys, concealing his/her true intentions and motives. The means can include flattery, deception, misinformation, etc. Shostrom was among the first researchers to describe the position of manipulation [9], singling out eight types of manipulators, including: *Dictator*, *Weakling*, *Calculator*, *Clinging Vine*, *Nice Guy*, *Judge*, and *Protector*. Modern psychology actively studies both technologies of manipulation and means of protection against manipulators. A research on personal character traits of students who are inclined to manipulation has been of a special interest. In particular, [10] proved that psychology students who have such inclinations display such personal traits as autonomy, dominance and aggressiveness combined with impulsiveness, impatience, low self-control and inability to complete a job.

The behaviour pattern of non-violence has been extensively analysed as a universal human value. Non-violence has been considered as the man's ability to choose, at any moment of life, options that involve least coercion. In this respect, philosophic and ethical opinions expressed by Leo Tolstoy, Nicholas Roerich, M. Gandhi, J. Sémelin, M.L. King and A. Schweitzer can be mentioned. Mahatma Gandhi formulated the code of rules to be practiced by a person who accepts non-violence [11]. This code listed such rules as self-confidence, ability to sustain initiative, avoidance of static situations, refusal to strike back or to insult people, to prevent violence, ability to respect the opponent's trust, etc. Non-violent behaviour is adopted, primarily due to altruistic motives, such as willingness to help.

A position of non-involvement is essentially an invariant of the position of humility, the latter being one of the more complex implementations of man's relation to the world. This can be deeply rooted in religious or secular morals. Two subtypes have been typically singled out: "slavish humility" and "ascetic humility" [12]. The basis for a position of non-involvement is a desire not to interfere with the flow of events. Such a person displays submission to circumstances and willingness to "drift with the flow." Such a person will not do any harm to others, and he will do no good, either. The motivation of non-involvement is a desire to stand apart, cowardice, procrastination, laziness, and flight from one's problems.

According to the hypothesis, a number of factors may contribute to the adoption of this or that interaction position. Further, their brief characteristics have been given.

*Irritability to persons.* This irritability has been understood as a negative emotional state arising in response to an imbalance found between external stimuli (events, scenarios or behaviour) of people and their expectations from an individual that shows either in his/her passiveness or in affective or aggressive response. If such a state persists and repeats, it transforms into *irritability* as a personal trait. More than one approach can be singled out to the study of this phenomenon: irritability as aggression [13], as a distemper [14] and [15], or as a person's attitude to work [16]. Within the current framework, more attention has been paid to study of irritability as a mode of relating to persons. Thus, there have been studies revealing specifics of doctors' irritability to certain groups of patients [17], and also senior managers directing their irritation at subordinate employees [18]. It has been found that the positions of coercion are more frequently adopted by students irritated by counterparts who are: (1) unsociable, closed, unwilling to make contacts; (2) slow, or dull of apprehension; and (3) persons who are hyperactive and display over-initiative [19].

*Social and educational stereotypes.* Social stereotypes have received much attention in modern psychological research, due to their obvious role in apprehension and estimation of social realities, in choosing forms of

response to various situations, when simplified models of behaviour come to be used. Social stereotypes in education, training and pedagogy in general function as educational stereotypes. These have been defined as emotionally coloured persistent views of education, students, parents and educators. Traditional pedagogy looks at the teachers' stereotypes of 'good' and 'bad' students. Thus, in Pivovarova's work [20], the image of a 'good' student shows the child as neat, accurate and well-behaved, whereas the 'bad' student is spontaneous, disorderly, restless, aggressive and disobedient.

A number of research works revealed educators' stereotypes in students who are trained to be educators. [21] revealed such stereotypes in would-be teachers, as far as their image of a teacher's personality was concerned. These authors demonstrated that the students have little understanding of the teacher's autonomy in professional work, and of his/her social mission of the active transforming of work that he/she is to perform. It has been demonstrated that educational stereotypes direct students toward adopting the discipline-based model of interaction [22].

*Role of egocentricity.* Egocentricity has been generally understood as man's ability to comprehend the world through the prism of his own personality. Psychologists have always focused on issues of egocentricity. This phenomenon gained in importance after Piaget's publications [23], where egocentricity has been featured as a stage in intellectual development. Further research strived to describe both positive and negative facets of this phenomenon. Thus, [24] suggested that social factors contribute to adolescent egocentricity. In his opinion, teenagers' social competence outstrips their cognitive development, and this makes the youngsters' thinking egocentric.

The university educational environment, acting as a specially organized pedagogical condition of the development of the individuals, must correlate the existing knowledge, norms and values with the needs of the students' development [25]. As for the age group of university students, much research has been performed to reveal both positive and negative influence of egocentricity on a person's attitude to various life realities. Thus, [26] declared that a high level of cognitive egocentricity combined with underdeveloped abilities of intellectual operations would result in too subjective evaluation of others, and of the results of one's own performance. This would bring out the necessity of adjustment in egocentricity, and forming the ability of decentralization in a person.

*Sensitivity to persons.* Inclination to coercive or to non-violent behaviour has been largely defined by the level of sensitivity to a person. Sensitivity to a person has been defined as the ability of an individual to single out other people as significant subjects of interaction, and to make them objects of attention without experiencing antipathy or indifference. Modern psychology has studied various kinds of sensitivity to persons. Thus, [27] singled out the phenomenon of ethical (moral) sensitivity to a person. [28] discussed the social sensitivity as enhanced sensitivity to social phenomena. According to [29], sensitivity can be displayed as acuteness of perception of a person.

Sensitivity to a person has a structure of its own, including interest in the person, empathy, understanding and helpfulness. Interest in a person most frequently presupposes a positively coloured axiological treatment of a person; selection of a personal direction at a person; and a cognitive need directed at a person [30]. Empathy has been displayed as an ability to 'tune in' to another person, to feel emotionally, to pity, and render assistance to the person [31] and [32]. The ability of a person to understand another person can be manifested in the ability of the former to penetrate the latter's inner world and adequately interpret his behaviour [33]. Any such assistance is an activity that arises from sensitivity to the person, implemented in specific actions that 'send' the individual back to the initial state, or to an improved state.

*Attitude to hazard and related factors.* Horney (2007) was among the first researchers to draw attention to man's need of safety, and to point out the contradiction existing between this need and other motivational attitudes of a person [34]. According to [35], safety needs exist as needs of stability, security and freedom from fear, anxiety and chaos, as needs of structure, order, law and restrictions, and need of dependence. In previous studies, [36] specified four kinds of needs that relate to danger/security: need to experience a feeling of danger; need to experience a feeling of safety; need of strong sensations; and need to feel secure.

On the basis of man's need of danger/security, a person develops a certain type of attitude to dangers (as a person's ability to timely identify signals of danger – sensitivity to threat, and to choose adequate or inadequate means of responding to the danger). An adequate reaction shows that the person is able to find an optimal way of behaviour in hazardous situations; an alarmed reaction is the one when the hazard is exaggerated, and

ignoring a hazard means underestimating its severity. The type of a person's attitude to a danger has been largely defined by the expressed level of motivation to succeed, and to avoid failure, and also by individual inclination to take risks. It has been proved that a high level of motivation to avoid failure and a low level of readiness for risk determine a person's proneness to exaggerate the significance of threats, whereas a high proneness to leads to ignoring the dangers [37].

*Influence of self-confidence.* A theoretical analysis of how various factors influence students' choices of this or that position in interaction would be incomplete without taking into account the person's specific features of attitude to himself /herself, and the way it is manifested at the level of self-acceptance and self-confidence. Self-acceptance implies the right to accept positive as well as negative features of one's personality. [38] pointed to the values of self-acceptance, interpreting it as a person's turn to his own essential "self" away from the social environment (which imposes its forms and patterns of behaviour and a certain view of self). Self-acceptance is closely related to self-confidence. Modern literature in psychology has defined self-confidence as an ability to rely on oneself in solving important tasks in life [39]. A high level of self-confidence provides force and confidence that one will be able to solve the tasks posed and achieve the desired results.

To sum up this brief review of literature, the existing interest of psychology in the issues of interaction strategies, and of factors that define the choice of such strategies can be confirmed. Yet, there is obvious lack of specific research focusing on the systematic analysis of the issue that has been stated, and it is exactly this consideration that served as an additional stimulus in organizing and conducting a series of specific investigations into the problem; the results have been generalized in the present publication.

## MATERIALS AND METHODS

During the research process, the following methods: theoretical – analysis; comparison; concretization; and generalization; empirical – questionnaires developed to reveal students' interaction strategies and their irritability to persons, adherence to social and pedagogical stereotypes; sensitivity to a person; need of danger/security; sensitivity to threat; choice of response in hazardous circumstances were used. The authors also made use of testing for egocentricity [40]; T. Ehlers' methods of motivation for success and avoidance of failure; the Schubert test (personal readiness for risk); Astanina's method of evaluating a person's trust to oneself [41]. Also, methods of mathematical statistics:  $\phi^*$  criterion – Fisher's angular transformation, correlational analysis with Pearson's linear correlation quotient were used.

A questionnaire revealing levels of expression of interaction strategies was used [42]. It consisted of 40 tasks formed as statements, and 10 items for each position including: coercion, manipulation, non-violence, and non-involvement. The testees were given statements and, for each of them, four answer options (single answer) were determined. The overall result was represented by the sum of points scored by each testee in each scale. For better interpretation, the points scored in each scale were transferred into sten scores.

A questionnaire was used to check the irritability to persons [43], where the students were asked to evaluate their own level of irritability to persons using a five-point scale. Further, they were given a list of 22 personal characteristics: communicative, non-communicative, accurate, industrious, lazy, etc. An integrated index of irritability was calculated as the percentage of the number of scored points to the maximum score.

Interaction between teacher and students affects the learning process [44]. Therefore, a questionnaire was used to diagnose the level of intensity of socio-educational stereotypes. For diagnosing the level of intensity of socio-educational stereotypes, a modified variant of the questionnaire, developed for school teachers was used [40]. It consisted of 30 tasks formed as statements; and each task was adapted to higher school environment. For example, the following statements were used as typical, "The teacher is the main figure in higher school, and the success and efficiency of academic work depend on him", "I believe that creativity in teacher-student relationships is just words; in real life their intercourse is prescribed by standards and curricula from beginning to end," etc. The agreement or disagreement was assessed against a five-grade scale. For each testee, their total index was calculated as a percentage of the total score to the maximum score.

A questionnaire was used to diagnose the level of sensitivity to persons [45]. It consisted of 20 tasks in the forms of statements, 5 items for each structural component of sensitivity to persons: interest in persons, empathy, understanding, and help. In this research, only the overall index of sensitivity as a total score was estimated.

A test was used to identify egocentric associations [40]. In this test, the students were to finish such sentences as "In this situation ...," "The easiest thing is ...," "In spite of the fact that...," within a limited period of time. The

total number of sentences was 40. The egocentricity index was estimated by finding and counting sentences that contained information pointing at the subject, that is, to the testee himself. This information was expressed by the personal pronoun “I” or related language forms, such as “me”, “my”, or others.

*A questionnaire was used to diagnose the need for danger and safety* [46]. It included 15 statements. Five of these aimed at diagnosing the need to experience a sense of danger, other five, at diagnosing the need to experience the sense of safety; and five more, at the need for ensuring safety. The overall index of each kind of needs was calculated as a sum of scores in five tasks diagnosing this or that need. The raw points were transferred into sten scores.

A questionnaire was used to identify the sensitivity to threats [47]. It consisted of 12 tasks that reflected typical real-life situations. Each task in the questionnaire included a certain statement and four answer options. The points scored in all tasks were summed up. As a result, an overall score that characterized the level of the person’s sensitivity to threat was obtained. Also, a scale that transformed “raw” points into stens was developed.

*A questionnaire was used to determine the ways of responding to the hazardous circumstances* [48]. It consisted of 17 tasks formed as statements that reflected behaviour in typical real situations that might present a threat. Each task had 4 answer options that corresponded to 4 types of personal behaviour: adequate, overestimating hazards, ignoring hazards, and uncertain. In each type of the response, a total score was found, and then the “raw” points were transferred into stens, as previously.

*The Ehlers test was applied to diagnose the motivation for success* [49]. The questionnaire included 41 “yes-no” questions. The results were estimated as a sum of scores according to a given key. The higher the score, the more pronounced the personal tendency to achieve success was observed.

*The Ehlers test was used to diagnose the motivation for the avoidance of failure* [49]. The testees were given a list of 30 words grouped in 3. In each line, they were to choose only one word that characterized the individual person most precisely. The results were processed according to a key. The greater the score was, the higher it was estimated the intensity of motivation to avoid failure.

*G. Schubert’s test was used to diagnose the readiness for risk (PSK test)* [48]. It consisted of 25 statements; and the agreement with these was estimated from -2 to + 2 points. The total score of readiness for risk was calculated by summing up the scores in all responses.

*The procedure to diagnose the level of self-confidence* [41]: The procedure was developed in the line of the semantic differential method. Each point was represented by two contrary statements, where the participants were instructed to choose one of the statements that correlated better with their life, and then to assess their confidence choosing within a three grade scale or a “zero”, if they often faced contrary situations in their life. The total number of items was 15. For each choice, according to the key, they were given a certain number of score points (1 to 7). The overall result of self-confidence was calculated as the sum of these scores.

The total number of research participants amounted to 619 students of both genders, with the average age of 19.5 years. This number included 344 students trained to be medical workers (general medicine department and department of paediatrics of Ivanovo State Medical Academy, Russia) and 275 more students trained to be educators and psychologists, from Moscow University for the Humanities, Russia, and Cherepovets State University (Russia).

The study was conducted at the end of 2017 and in the first half of 2018, comprising 4 stages. At the first stage, the theoretical analysis of the problem was conducted, and the appropriate instruments for diagnosis were selected and developed. At the second stage, the study on the structure of students’ interaction strategies was conducted. At the third stage, the influence of different factors on the acceptance of various interaction strategies by students was examined. And at the fourth stage, the data obtained was processed, and certain generalizations were made.

## RESULTS

Turning to the main results of the research, the followings were seen. First of all, the authors were interested in the structure of students’ interaction strategies. They analysed this by developing and distributing a questionnaire aimed at revealing students’ interaction strategies. There were 16 possible types of combinations of preferred positions that were taken by students in the course of interaction. The results have been shown in Table 1.

**Table 1:** Types of students' interaction strategies

##	Types of position	Overall		Medical students		Students of education and psychology		Statistical significance of difference between medical students and education/psychology students ( $\varphi$ criterion* – Fischer angular transformation)
		n	%	n	%	n	%	
1	Prevalence of coercion	40	6.46	17	4.94	23	8.37	$\varphi^*=1.76$ , where $p \leq 0.05$
2	Prevalence of coercion and manipulation	59	9.53	18	5.23	41	14.91	$\varphi^*= 4.12$ , where $p \leq 0.001$
3	Prevalence of manipulation	24	3.88	15	4.36	9	3.27	$\varphi^*=0.72$ (negligible)
4	Dominant position of non-violence	138	22.29	105	30.52	33	12.00	$\varphi^*=5.72$ , where $p \leq 0.001$
5	Dominant positions of coercion and non-violence	11	1.78	5	1.45	6	2.18	$\varphi^*=0.64$ (negligible)
6	Dominant positions of non-violence and manipulation	19	3.07	11	3.21	8	2.91	$\varphi^*=0.25$ (negligible)
7	Dominant positions of coercion, manipulation and non-violence	14	2.26	6	1.74	8	2.91	$\varphi^*=0.99$ (negligible)
8	Dominant positions of non-violence and non-involvement	49	7.92	32	9.30	17	6.18	$\varphi^*=1.45$ (negligible)
9	Dominant positions of coercion, non-violence and non-involvement	4	0.65	3	0.87	1	0.36	$\varphi^*=0.78$ (negligible)
10	Dominant positions of manipulation, non-violence and non-involvement	14	2.26	5	1.45	9	3.27	$\varphi^*=1.47$ (negligible)
11	All four positions equally dominant	13	2.10	7	2.04	6	2.18	$\varphi^*=0.17$ (negligible)
12	Dominant positions of non-involvement	56	9.05	30	8.72	26	9.46	$\varphi^*=0.35$ (negligible)
13	Dominant positions of coercion and non-involvement	17	2.75	11	3.21	6	2.18	$\varphi^*=0.77$ (negligible)
14	Dominant positions of manipulation and non-involvement	8	1.29	4	1.16	4	1.46	$\varphi^*=0.32$ (negligible)
15	Dominant positions of coercion, manipulation, and non-involvement	34	5.49	14	4.07	20	7,27	$\varphi^*=1.72$ , where $p \leq 0.05$
16	No single position is clearly expressed	119	19,22	61	17.73	58	21,09	$\varphi^*=1.07$ (negligible)
	Total:	619	100	344	100	275	100	

As demonstrated in Table 1, the research revealed 16 types of students: these types differed by the combination of positions they adopted in interaction. In the first place, the authors were interested in testees with the apparent prevalence of a single position: coercion, manipulation, non-violence, or non-involvement. 40 persons (6.46%) tended to use coercion in the course of interaction as the main means of achieving their aims, and this figure was a little higher in the educators and psychologists than in the medical students (the medical students – 17 persons (4.94%), the educators and psychologists – 23 persons (8.37%). The differences were statistically relevant ( $\varphi^*=1.76$ , at  $p \leq 0.05$ ). The position of the manipulation was favoured by a small number of students – 24 persons (3.88%). Coercion and manipulation were preferred by 59 persons (9.53%). The percentage was again somewhat higher in the education and psychology students (41 persons – 14.91%) than in the medical students (18 persons – 5.23%). The differences were statistically relevant ( $\varphi^*= 4.12$ , at  $p \leq 0.001$ ). The authors considered the prevalence of position of coercion, or manipulation, or combined coercion and manipulation to be the least instrumental for the professional growth of future doctors, teachers and psychologists.

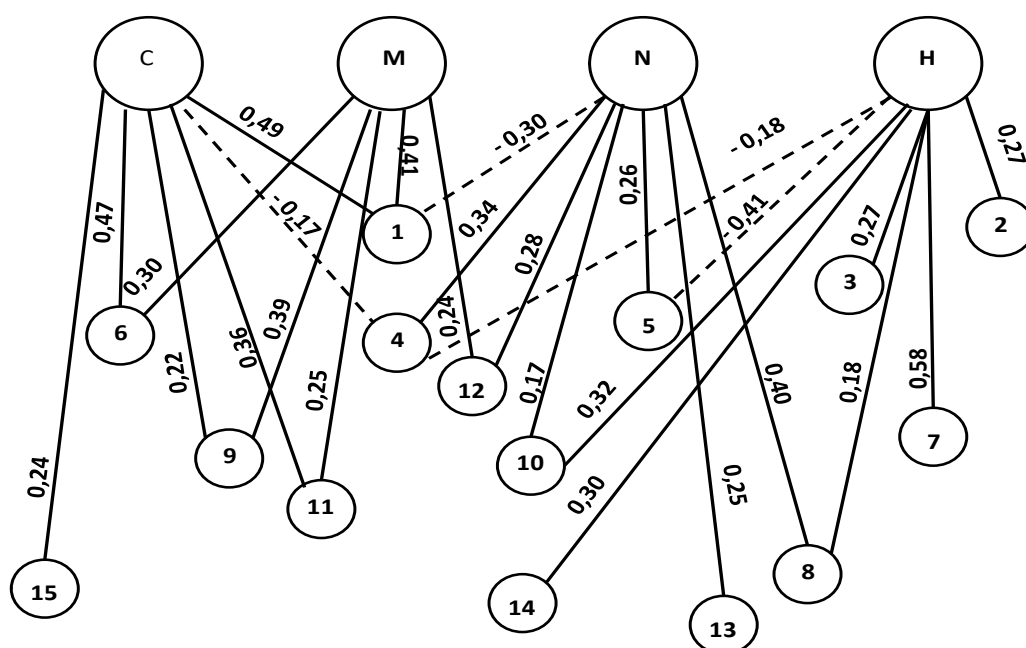
A position of non-violence in the process of interaction was preferred by 138 persons (22.29%). It was more often adopted by the medical students (105 persons – 30.52%) than by the education/psychology students (33 persons – 12%). The differences were statistically relevant ( $\varphi^*=5.72$ , at  $p \leq 0.001$ ). The position of non-involvement was chosen by 56 persons (9.05%). No differences between the medical students and educators/psychologists were detected.

A considerable percentage of testees demonstrated a mixed combination of positions. The most frequent was the combination of positions of non-violence and non-involvement (49 persons – 7.92%), positions of coercion, manipulation and non-involvement (34 persons – 5.49%). The authors even recorded the combination of all four positions (13 – persons – 2.1%). The combination of the conflicting interaction strategies was determined by the fact that the person differentiates clearly the persons he or she communicates with. Thus, in some cases, where one considers oneself as “strong,” coercion or manipulation is used, in other cases, for example, with their dear and near ones, non-violence is used, and when the circumstances are presumably not to be overcome, one prefers not to interfere.

There was also quite a number of students (119 persons – 19.22%), who preferred none of the given positions. One can suppose that they have not formed their individual style of communication and interaction with other people.

When it was attempted to evaluate the results obtained, it could be said that they were neither very good, nor very bad. Nevertheless, the fact that almost 20% of testees demonstrated the prevalence of either coercion or manipulation, or both, to say nothing of mixed cases, caused some concern. These facts confirmed the opinion that it was necessary to introduce special training programmes aimed at forming abilities of non-violent interaction. The existing courses on ethics and humanistic pedagogy/psychology were not sufficient. It was necessary to organize special case studies and training courses that would enable the researchers if not to solve the problem in full, then at least, to form an favourable background for its solution.

Considering the second part of the empirical research, which consisted of revealing correlation between the interaction strategies and various factors. Here, the first object of the interest was not in the differences among medical students, educators and psychologists, but rather in more general patterns. Thus, the medical students and education/psychology students were put together in one group, so as to raise the level of statistical relevance of the results. The study was conducted by means of the correlation analysis using a Pearson linear product-moment correlation coefficient. The results have been shown in Fig. 1.



**Figure 1.** Correlation of interaction strategies with the motivational and personal factors



*\*Note.* In Fig.1, the following symbols have been adopted: C – a position of coercion; M – a manipulative position; N – a position of non-violence; H – a position of non-involvement; 1 – irritability to persons; 2 – adherence to socio-educational stereotypes; 3 – egocentricity; 4 – sensitivity to persons; 5 – self-confidence; 6 – the need for danger; 7 – the need for safety; 8 – the need for ensuring safety; 9 – motivation for success; 10 – motivation for avoiding failure; 11 – readiness for risk; 12 – sensitivity to threat; 13 –adequate response in hazardous circumstances; 14 – overestimating hazards; 15 – ignoring hazards; — - positive connection; and - - - - - negative connection.

The results of correlation analysis, shown in Fig. 1, made it possible to evaluate the density of negative and positive connections of interaction strategies with different factors.

A position of coercion (C) was positively connected with five factors and negatively, with one. Positive connection was shown with irritability to persons (1) ( $r=0.49$ , at  $p \leq 0.01$ ), need for danger (6) ( $r=0.47$ , at  $p \leq 0.01$ ), readiness for risk (11) ( $r=0.36$ , at  $p \leq 0.01$ ), ignoring hazards (15) ( $r=0.24$ , at  $p \leq 0.01$ ) and motivation for success ( $r=0.22$ , at  $p \leq 0.01$ ). Negative connection was shown with sensitivity to persons (4) ( $r = - 0.17$ , at  $p \leq 0.05$ ).

A manipulative position (M), as well as the position of coercion, correlated positively with the irritability to persons (1) ( $r=0.41$ , at  $p \leq 0.01$ ), need for danger (6) ( $r=0.30$ , at  $p \leq 0.01$ ), readiness for risk (11) ( $r=0.25$ , at  $p \leq 0.01$ ), motivation for success (9) ( $r=0.3$ , at  $p \leq 0.01$ ). The difference was shown concerning only one factor. The students inclined to manipulation were sensitive to threat (12) ( $r=0.24$ , at  $p \leq 0.01$ ).

A position of non-violence (N) proved to be connected positively with six factors and negatively, with one. The positive correlation was shown with sensitivity to persons ( $r=0.34$ , at  $p \leq 0.01$ ), sensitivity to threat (12) ( $r=0.28$ , at  $p \leq 0.01$ ), motivation for avoidance of failure (10) ( $r=0.17$ , at  $p \leq 0.05$ ), self-confidence (5) ( $r=0.26$ , at  $p \leq 0.01$ ), adequate response in hazardous circumstances (13) ( $r=0.25$ , at  $p \leq 0.01$ ) and the need to ensure safety (8) ( $r=0.4$ , at  $p \leq 0.01$ ). The negative connection was shown with irritability to persons (1) ( $r = - 0.30$ , at  $p \leq 0.01$ ).

Of special interest were also factors determining the acceptance by students of the position of non-involvement (H). As can be seen in Fig.1, it correlated positively with 6 factors and negatively, with two. The positive connection was shown with the motivation of avoiding failures (10) ( $r=0.32$ , at  $p \leq 0.01$ ), overestimating hazards (14) ( $r=0.3$ , at  $p \leq 0.01$ ), egocentricity (3) ( $r=0.27$ , at  $p \leq 0.01$ ), the need for safety (7) ( $r=0.58$ , at  $p \leq 0.001$ ), the need for ensuring safety (8) ( $r=0.18$ , at  $p \leq 0.05$ ), the adherence to socio-educational stereotypes (2) ( $r=0.27$ , at  $p \leq 0.01$ ). Negative connection was shown with self-confidence (5) ( $r = - 0.41$ , at  $p \leq 0.01$ ) and with sensitivity to persons (4) ( $r = - 0.18$ , at  $p \leq 0.05$ ).

There were two notable factors that correlated simultaneously either positively or negatively with a number of positions. These were irritability to persons and sensitivity to persons. The irritability to persons correlated positively with the position of coercion ( $r=0.49$ , at  $p \leq 0.01$ ) and the position of manipulation ( $r=0.41$ , at  $p \leq 0.01$ ), negatively with the position of non-violence ( $r = - 0.30$ , at  $p \leq 0.01$ ). The sensitivity to persons correlated positively with the position of non-violence ( $r=0.34$ , at  $p \leq 0.01$ ), negatively with the position of coercion ( $r = - 0.17$ , at  $p \leq 0.05$ ) and the position of non-involvement ( $r = - 0.18$ , at  $p \leq 0.05$ ). In all likelihood, these two factors had a differential impact on the adoption of a position of an interaction. Therefore, these factors required special attention in the process of forming the students' ability to accept the position of non-violence.

## DISCUSSION OF RESULTS AND CONCLUSION

The given results enabled the authors to characterize different models of students' behaviour while interacting with other people.

If an individual demonstrated a pronounced desire to achieve his aim (high motivation for success) together with low sensitivity to persons and high irritability to them, in addition to an inclination for risk and ignoring hazards, based on the need for experiencing the sense of danger, he would prefer the position of coercion.

In cases where the aforementioned factors were coupled with high sensitivity to threat, the individual would be inclined to the position of manipulation. Thus, the manipulator would prefer a "milder" form of pressure on the counterpart, not due to the lack of wish for a quick result, but for the fear of counter reaction, as s/he foresees the possible negative results of such behaviour. On account of that, he would show resourcefulness and look for less direct means that would make the opposing party obey.

The structure on the basis of non-violent position has been absolutely different. If an individual clearly demonstrates sensitivity to persons, that is expressed through his interest in the person, empathy, understanding and help, coupled with low irritability to persons, inclination to avoid unpleasant situations in addition to complete self-confidence and ability to see danger and react to it adequately, based on the need for ensuring safety, he will accept the position of non-violence.

If an individual demonstrates a high level of egocentricity and rigidity in accepting social factors with the lack of sensitivity to persons, showing a low level of self-confidence at the same time, in addition to the pronounced need for the feeling of safety that might be coupled with the need for ensuring safety and the inclination to avoid failure, which would determine the propensity to overestimate hazards, then such a person would be inclined to the position of non-involvement.

The described models of the students' behaviour during the interaction can explain the behaviour of "unmixed/pure" types with the predominance of one of the given positions. However, as can be seen in Fig.1, there have been other types with the prevalence of combinations of very different positions, for example, a position of non-violence might go together either with a position of coercion or with a position of non-involvement. The existence of such types might be explained by an individual combination of factors which have been already described, as well as by a different attitude that students might have to different situations of interaction. For example, an individual characterised by the prevalent high sensitivity to persons, and yet possessing a pronounced desire to achieve success, with readiness for risk and inclination to ignore hazards would treat different people differently. He might behave in a non-violent way towards people constituting his closest environment, but towards others (strangers) he would use coercion or manipulation. Or everything might be just the other way round; it depended on the person, his or her character, principles, culture, on the specific situation, and on the way a person estimated his or her position (whether dominant or subordinate).

There is another point to note, and that is the role and significance of a position of non-involvement. There are people for whom non-involvement becomes their credo. And there are also quite a few individuals for whom non-involvement is a transitory state, when changing life circumstances would lead to a change in the prevalent position. A position of non-involvement contains a potential for a position of coercion as well as for a position of non-violence, thus it may develop in time either in one way or in the other. At the same time, it can be declared that with a great degree of probability of a change in social status (when a medical student becomes a doctor, or a student-educator becomes a teacher), a person would tend to accept a position of coercion rather than of non-violence. This opinion was supported, on the one hand, by the presence of a high level of social egocentricity and rigidity of social stereotypes, and on the other hand, by the low sensitivity to people. As the data of this study showed [50], the educators inclined to a disciplinary mode of interaction with children, which was based on socio-educational stereotypes, much more often resorted to coercion and manipulation than educators who favoured a personal model of interaction.

Thus, it can be pointed that the present study made it evident that the problem of forming a position of non-violence within the process of professional training of future medical specialists, educators and psychologists has never been more urgent and significant. On the basis of the data obtained, the following focus areas can be singled out:

- developing an ability of self-acceptance and self-confidence, as the basic characteristic that determines the attitude toward other people;
- developing sensitivity to persons, that is developing an interest to persons, an ability to empathise and understand other people, an ability to help when necessary, which is the most important condition for acceptance of other persons; overcoming social stereotypes connected with the future profession, egocentricity and irritability, all of which lead to an acceptance of a position of coercion; according to the results below, it is necessary to lay a special stress on developing sensitivity to persons and on reducing the level of irritability to persons.
- developing a need for ensuring safety, sensitivity to threat, ability to respond adequately to hazardous circumstances, motivation for achievements and readiness for a reasonable risk;
- teaching students special skills of non-violent influence and non-violent resistance in situations connected with professional communication.

In this prospective research, it was intended to work out specialised psychological and educational methods, in order to solve the designated problems in the relevant focus areas.

Summarizing the above, the following conclusions were achieved:

Depending on the acceptance of values of coercion or non-violence, four interaction strategies are possible: coercion, manipulation, non-violence, and non-involvement.

These positions might combine differently within an individual. The study, conducted within a group of medical students and students trained to be educators and psychologists, singled out and described 16 types of students' interaction strategies. A position of coercion prevailed with 4.46% students (medical students – 4.94%, educators and psychologists – 8.37%), a manipulative position – with 3.88% students (medical students – 4.36%, educators and psychologists – 8.37%), a position of non-violence – with 22.29% students (medical students – 30.52%, educators and psychologists – 12.08%), a position of non-involvement – with 9.05% (medical students – 8.72%, educators and psychologists – 9.46%). On the whole, from the point of view of the presence of the ability to non-violent interaction, the medical students showed more hopeful results than the education and psychology students.

On the basis of the correlation analysis, a number of factors was revealed and described, determining the acceptance of this or that position of interaction. A position of coercion correlated positively with the irritability towards persons, need for danger, readiness for risk, ignoring hazards, motivation for success; and negatively, with the sensitivity to persons. A manipulative position correlated with the same factors, except ignoring hazards and sensitivity to threat, which determined the difference. A position of non-violence was positively connected with sensitivity to persons, sensitivity to threats, motivation for avoidance of failure, self-confidence, adequate response to hazardous circumstances, need for ensuring safety; and negatively, with irritability to persons. A position of non-involvement correlated positively with motivation for avoidance of failure, overestimating importance of hazards, egocentricity, need for safety, need to ensure safety, adherence to socio-educational stereotypes; and negatively, with self-confidence and sensitivity to persons.

To sum it up, the hypotheses of the research were on the whole confirmed, except the hypothesis of the presence of correlation of egocentricity and adherence to socio-educational stereotypes with the positions of coercion and manipulation. These factors were more closely related to the position of non-involvement.

The results obtained can be used in professional training of students – future medical workers, educators and psychologists, and also in the process of developing special programmes aimed at helping students to gain ability to non-violent interaction.

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