

## Research Article

# Can a Multi-modal Communication Program Enhance Empathy and Doctor-Patient Social Interactions?; Results of a Pilot Training Study of Russian Medical Students

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**Abstract:** Communication is a vital element of basic professional competency within medicine. However, some medical schools may not typically offer structured developmental skills training to medical students. A multi-modal doctor communications enhancement-training program was therefore organized at a medical university in Russia. A total of 83 students ages 18-19 participated. Pre-course communication ability levels were measured at 21.7% low, 69.8% medium, and 7% high level. Post course outcome measurements demonstrated 1.2% low, 51.8% medium, and 47% high communication levels.

**Outcome:** It was concluded in this pilot study that a formalized multi-modal communications development program in conjunction with performance feedback, could significantly enhance essential patient communication skills in Russian medical students.

**Keywords:** Communication skills training, medical students, doctor-patient interactions

### Introduction

Communication is an art requiring practice and cultivation to master. It is a vital component of professional competency in medicine, and vital to effective patient-doctor interactions [Kosilo EE 2003]. Barriers to satisfactory communication may be multi-dimensional, and include patient and doctor preconceptions, and erroneous beliefs. Patients may also harbor non-forthright, secondary concerns, agendas, and cultural or personal biases, and sub-conscious motivations for which doctors may be completely unaware. It is however incumbent upon doctors to develop the necessary the multi-modal social and communication interaction skills to overcome discourse obstacles, develop rapport, project empathy, gain a patient's trust, and address a patient's fears and unrealistic expectations. Some objectives of enhanced communication skills prevent misunderstanding or dissatisfaction with care. While medical school curriculums traditionally focus on producing scientifically competent doctors, the importance of developing doctor-patient interaction skills may be unrecognized. Research has demonstrated that communication is integral to preparing future doctors to become effective practitioners. [Zakharova E.A 2014, Zhukov YM 2003]. The aim of this pilot study was to sample the level of communication competence in Russian undergraduate medial training, and measure communication skills outcomes after implementing a formal communication-training program.

### Methods

The Social Skills Inventory [Riggio et al 2003] was translated into Russian. This inventory was used as a model to evaluate before and after training data in student communication skills.

The multi-modal training program itself was styled on a social skills training platform developed by British Argyle and colleagues, which included academic lectures, modeling of reactions, positive feedback critique, and taught methods of managing variable emotional states and reactions. The Argyle patterned training also involved organizing assertive behavior strategies (proving your position, solving conflict situations, avoiding being manipulated), interpreting non-verbal cues and micro-expressions, and communicative tolerance. [Argyle et al 1976]

The study also measured 3 general communication parameters using Ryakhovsky questionnaires to measure participant communication affinity, skills, and social inventory. [Karilen 2007], with a total of 83 students aged 18-19 completed pre & post practicum "Assessment of the level of communication" (table 1).

**Table 1 "Assessment of the level of communication"**

Before the Practicum			After the Practicum		
Low level	Middle level	High level	Low level	Middle level	High level
18	58	7	1	43	39
21.7%	69.9%	8.4%	1.2%	51.8%	47%

### Results

85 students completed the Russian translation of the Riggio Inventory. The Social Skills Inventory (SSI) assesses basic social skills that underlie social-communicative competence. It evaluates verbal and nonverbal communication skills, emotional expressivity, emotional sensitivity, emotional control, social expressivity, social sensitivity, and social

control. (Table 2) Ronald Riggio developed 2 empathy indexes from SSI subscales. A measure of emotional empathy consisted of the sum of the Emotional Sensitivity (ES) and Emotional Expressivity (EE) scales of Social Scale Indexes. Thus, a measure of cognitive | social empathy can be constructed by summing the Emotional Sensitivity (ES), Emotional Expressivity (EE) and Social Control Scales of the SSI.

**Table 2 Social Skill Indexes**

Social Skill Index	Emotional rating score	Social rating score
Emotional empathy	0.15	0.13*
Social empathy	0.9	0.11
Total	0.14	0.20**

\*p<0.10, \*\*p<0.05

The content of Table 2 demonstrates some correlation between the emotional factor (empathy) and ability to recognize and decode the underlying emotions of the essays and relationship between social/cognitive empathy skills and sensitivity to the essay social content. The definitions of the variables used in this research survey are extracted from the SSI Manual. The SSI evaluates the emotional and societal intelligence competences by subdividing emotional and societal intelligence competences into two bunches and three bomber competences for each bunch. The two bunches are emotional intelligence competences which are termed as Non-Verbal communicating and societal intelligence competences termed as Verbal communicating In research and in workshops, the self-report Social Skills Inventory allows a rudimentary assessment on each of the six skill dimensions in comparison to norms (Riggio et al 2003)

The majority of students didn't demonstrate high level of verbal and nonverbal skills, at the same time the equilibrium index scores demonstrated an imbalance in the social skill profile for a majority (61.2%) of participants. Second year students were positively related to social expressivity ( $r = 0.28, P < 0.01$ ) and social control ( $r = 0.19, P < .01$ ) skills. Some students who showed to be in one social skill could be negatively related to another.

### Discussion

Our findings correlated to another study, which reported that High school students might not take the study seriously, and results may therefore be inaccurate. [Pardo et al 2010]

Communication is a vital component of professional competency within medicine. [Kosilo 2003] Moreover, good communication skills are intergral components of clinical effectiveness, colleague interaction, adjustment to medical training, an a doctor's own psychological well-being. [Zakharova 2014, Zimnayaya 2005, Gresham et al 2006] Good communication skills have also been linked to satisfactory conflicts resolution outcomes. [Karandyshev 2008]. Other authors have concluded that training programs

designed to improve situational awareness, and resource awareness also facilitate student doctor-patient interactions. [Zimnyaya 2005] Effective communication skills also enhance group dynamics processes and problem solving. [Zhukov 2003].

Non-verbal communication (body language) and empathy play an important role in determining the quality of patient-physician encounters. The relative importance of gestures, facial expressions, posture, and other forms of interaction communication may indeed be surprisingly under-appreciated, as it has been estimated that between 60-65% of interpersonal communication is reliant upon non-verbal behavior. [Burgoon et al 2009] Empathy display is a significant predictor of patient satisfaction, with studies demonstrating a higher positive rating for female doctors. One Indian medical school study demonstrated significantly better female performance, as their scoring was higher in empathy traits than their male colleagues. [Chattergee et al 2017]

Meta-analysis has shown that male doctors typically have higher annual outputs. However, this may be counterbalanced by other medico-legal data, which suggests that female doctors are subject to statistically less litigation and disciplinary actions. [Roter et al 2002]

Female physicians appear to favor an affinitive communication approach in contrast to the dominant-active communication styles of the their male medical colleagues. The affinitive style appears to reduce patient anxiety, promote disclosure and openness, while the dominant-active communication style has been associated with reprimanding and condescending features, which in turn results in a reduction of patient disclosure and compliance with medical advice. [Buller et al 1987, Kiesler et al 2003] It has also been shown that female medical students tended to interrupt sooner but displayed a greater mastery of non-verbal communication skills under simulated interactions. [Vogel et al 2018]

The high correlation between doctor communication and a patient's satisfaction, is also predictive of treatment compliance and improved recovery from acute illness. [Little et al 2001]

Good doctor communication skills encourage patient compliance with medical advice, and help to lessen anxiety and depression. [Silverman et al 1998, Rotor et al 1995, Parle et al 1996, Ramirez et al 1995]

A 2008 Japanese study concurred with Russian studies linking poor doctor communication to an increased the risk of medical litigation. [Hamasaki et al 2008]

### Conclusion

This Russian medical school communication program adopted a structured framework of academic training, combined with interactive, goal-orientated group workshop skills development and performance feedback from mock patient encounters. Student doctors reported post course, a boost self-confidence and a trend of perceived improvement in their practical communication abilities. Improved self-confidence and decreased anxiety were also reported.

Post-program student consultations were also noted to be more productive, efficient, and trainee doctors become more adept at identifying patient concerns, beliefs, and interpreting non-verbal cues. Our study also paralleled the findings of other similar doctor communication training program, which demonstrated the relationship between communication skills and diagnostic acumen. [Maquire et al 1986]

### Study Limitation

As this study relied on mock doctor patient encounters, communication performance rating would have been potentially influenced by subjective observer-rater bias. Randomized controlled trials would help negate observer partiality. Doctor-patient relationships may be long-term and evolve over the span of time, potentially limiting the predictive accuracy of one-off outcome assessments.

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