



RESEARCH ARTICLE

ROLE MODELS FOR MEDICAL STUDENTS AT MEDICAL UNIVERSITY- SOFIA

*Elia Georgieva

Department of Social Medicine, Faculty of Public Health, Medical University, Sofia, Bulgaria

ARTICLE INFO

Article History:

Received 19th December, 2016
Received in revised form
20th January, 2017
Accepted 04th February, 2017
Published online 31st March, 2017

Key words:

Role Model,
Medical Faculty-Sofia,
Medical Student,
Abuse.

ABSTRACT

Objectives: To analyse the prevalence of role modelling among third and sixth course medical students at Medical faculty - Sofia.

Methods: Cross-sectional web-based study was carried out in 2015 at the Department of Social medicine, Faculty of Public Health- Sofia. In the study took part 123 medical students in third course and 134 students in sixth course. Relation between variables was assessed with chi-square test with a significance level of $p < 0.05$.

Results: Almost half of the medical students (48.2%) declared not having a role model. From the respondents 49.8% said that negative role models are more common during their medical education. The most valued qualities in the role models were, excellent clinical ability and skilful work with patients". The study found an association between abuse of medical students and negative role modelling.

Conclusion: Medical teachers in Medical faculty - Sofia do not always serve as good role models for the students. Positive role modelling should be stimulated through policies against abuse in medical universities and a proper training of the medical educators. Strategies to improve role modelling should be an integral part of the politic of the medical universities for the training of the medical educators (Cruss *et al.*, 2008).

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Citation: Elia Georgieva, 2017. "Role models for medical students at Medical university-Sofia", *International Journal of Current Research*, 9, (03), 47454-47456.

INTRODUCTION

One of the desired roles of the good medical teacher is that of an inspiring role model. The excellent role model has a positive influence on the professional development of the medical students and encourages their wish to study. Role models are defined as a "people who are admired for the way they act and for their professionalism, and whose behavior is considered as a standard of excellence to aspire to"(Cote and Leclere, 2000). Students learn through constant observation of the way their medical teachers cope with difficult situations, how they act with patients and how they address ethical problems (Paice *et al.*, 2002; Wright *et al.*, 1997; Wright *et al.*, 1998). Usually when we talk about role models, we presume they are positive ones. Mistreatment of medical students is part of the hidden curriculum in the medical education and presents an example of a negative role modelling (Haidet and Stein, 2006). Poor role modelling by medical educators is related to increased cynicism in students and with anxiety and depression (Hafferty and Franks, 1994; Wear, 1998; Frank *et al.*, 2006; Rautio *et al.*, 2005).

*Corresponding author: Elia Georgieva,
Department of Social Medicine, Faculty of Public Health, Medical University, Sofia, Bulgaria.

The aim of this study was to get insight about the attitude of medical students towards role models. As far as we know, this is the first study of its kind at Medical University-Sofia.

MATERIALS AND METHODS

Study design and participants

A cross-sectional web- based questionnaire survey was conducted in the Department of Social Medicine, Faculty of public health of Medical University-Sofia. The study was carried out for a 3 month period in 2015 (between 15 September and 15 November). In the study took part 257 medical students from Medical Faculty- Sofia (123 in third course and 134 in sixth course). The response rate was 65 % for third course medical students and 76 % for sixth course. The study was anonymous and voluntary. It was ethically approved by the Institutional Ethical Committee at the Department of Social Medicine of the Faculty of Public Health of Medical University-Sofia. The information for the study was gathered through a specially designed anonymous questionnaire. The questionnaire was posted online on the web-page of a big Bulgarian medical site (<http://medicalnews.bg>). To check understanding and interpretation of items, the questionnaire was validated in a pilot study on 30 medical students.

The students were regularly invited and reminded to take part in the study during their practical exercises in Social Medicine for third course students and during their governmental practice lectures for sixth year students. Students were sent invitations by email to take part in the study too.

Study instrument

The first part of the questionnaire included 6 items about student's characteristics like sex, age, year of education, a wish to quit studying medicine, lack of a parent physician and feeling of sadness. The second part of the study instrument included 6 questions about attitudes of the medical students towards role models. In order to get insight into the association between role modelling and abuse, we included 32 questions about mistreatment. Students were asked whether they have been abused or witnessed abuse, how often they have been abused, who was the main source of abuse (assistant professors, other students, professors, administrative staff and lecturers) and how the abuse affected their health. The different types of abusive behaviors were taken from the literature (Frank *et al.*, 2006; Ahmer *et al.*, 2008; Stebbing *et al.*, 2004).

RESULTS

The sample included 61.9% of women and 38.1% of men. In third course were 47.9% of the respondents and in sixth course 52.1%. Median age of the medical students was 23 years (for third course students 20.8 years and for sixth course 24.9 years). From the studied population 76.3% were without a parent physician. From the researched students, 44% (113) declared thoughts to quit studying medicine. We asked medical students "Do you have a role model in your medical education?" From the respondents 51.8% answered "yes" to this question. There was no statistically significant difference in this answer for third and sixth course students ($p = 0.93$). Most of the students said that their role model is among assistant professors, followed by professors and fellow students in upper course of education (Table 1).

Table 1. Who is your role model?

	Third course	Sixth course	Total	Third course	Sixth course	Total
	Number	Number	Number	%	%	%
I do not have a role model	58	57	115	47.2%	42.5%	44.7%
Assistant professors	22	42	64	17.9%	31.3%	24.9%
Professors	17	16	33	13.8%	11.9%	12.8%
Students in upper course	16	5	21	13.0%	3.7%	8.2%
Associate professors	7	8	15	5.7%	6.0%	5.8%
Lecturers	3	6	9	2.4%	4.5%	3.5%

We defined two types of role models in our study: positive ones and negative ones (with a bad influence on the students). Positive role models were defined as 'people we can identify with, who have qualities we would like to have, and are in positions we would like to reach' (Paice *et al.*, 2002). Negative role models were defined as people who behave unethically, abuse of students and influence medical students in a poor way. We asked medical students which of these two types is more common in their medical education. From the whole study population, 49.8% said that negative role models are more common (Figure 1). On this question we found a statistically significant difference between 3-rd and 6-th course students ($p = 0.000$). In third course only 36% of students have met a negative role model; in sixth course 62.3% of students have faced negative role modelling.

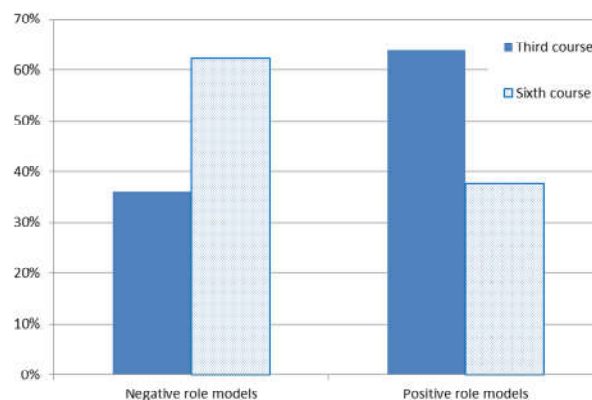


Figure 1. What kind of role models do you meet in your medical education?

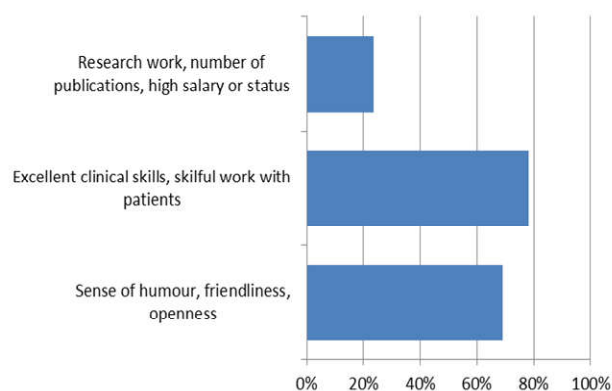


Fig. 2. Which qualities you mostly value in your role model?

Students were asked "Which qualities do you value mostly in your role models". Most of the students in our study or 78.2% said these qualities were, excellent clinical skills and skilful work with patients". Qualities such as "good sense of humour, a friendly attitude towards students, openness" were preferred by 69.2% of the medical students. Just 23.7% of the students valued "research work, number of publications, high salary, status or a title" (Fig 2).

We asked the students an open-ended question about the most valued qualities in their role models. Most students said these are qualities such as professionalism, friendly attitude towards the students, enthusiasm, intelligence, knowledge, decisiveness, honesty, calmness, optimism, goodness, curiosity and persistence.

DISCUSSION

Role models are important for the professional development of the medical students. More than half of the medical students (51.8%) in this study identified one or more role models. A great deal of the medical students (49.8%) said that negative role models are more common in their medical education. According to the medical students the most important

attributed of the positive role models were not related to academic titles, number of publications, salary and status. Such a result is found in other studies of role modelling (Wright SM *et al.*, 1998; Elzubeir and Rizk, 2001; Joubert *et al.*, 2006). Students gave preference to the personal qualities of the medical educators, excellent clinical skills and skilful work with patients. In a study of Feudtner and Christakis (Feudtner *et al.*, 1994) 61% of the medical students had witnessed unethical behavior by medical team members at least once. In this study mistreatment was declared by 66% of the medical students. The association between poor role modelling and abuse implies a necessity for change in the medical teacher's behavior. Mistreatment of medical students is not professional and ethical and could create a wish to quit studying medicine. The abuse can put off students from medical teachers and is not a proper example for coping (Goldie, 2012; Oser *et al.*, 2014; Lukas *et al.*, 2014). The sample in this study was restricted only to students in third and sixth course from one medical university in Bulgaria. So we can't generalize the results to all medical universities in our country. As an advantage the study was the first of its kind at Medical University-Sofia.

Conclusions

Students studying at Medical University- Sofia lack enough examples of proper role models. It's important to educate medical teachers about the importance of role modelling in medical education. The choice of medical teachers should be based not only on academic criteria and knowledge, but also on personal characteristics and an ability to inspire students. Poor role modelling and abuse of educators should be prevented at all cost.

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