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Student's confidence in mental health practice before and after psychiatry rotation: a follow up study

Autoconfiança dos alunos para a prática em saúde mental antes e depois do internato em psiquiatria: um estudo de seguimento

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ABSTRACT

Objectives: The primary objective was to measure the effect of psychiatry rotation in students self-confidence (SC) for managing mental health (MH) issues. **Methods:** An eighteen questions version of "Preparation for Hospital Practice Questionnaire" (PHPQ) adapted for MH was applied before, after and six months later the psychiatry rotation. Sociodemographic and experience with mental illness was measured as confounding factors. **Results:** Hundred and ten students were recruited and four factors were identified: "Diagnosis elaboration and basic care" (F1), "Crisis management and prevention" (F2), "External sickness determinants" (F3) and "Personal distress with clinics" (F4). Cronbach Alpha ranged from 0.71 to 0.90. Previous MH training were not frequent (9.09%), and associated with better SC in F2 (after $p < 0.05$, 6m $p = 0.03$). Previous mental disorder was frequent (42.16%), and associated with more SC on F2 ($p < 0.01$) and F3 ($p = 0.03$) before course, but only on F3 after ($p < 0.01$) and not 6 months later. Male gender had more SC in F4 ($p < 0.01$) before course, but after course and 6m later female gender became more SC in F1 (after $p = 0.02$, 6m $p = 0.01$) and equivalent in F4. All factors had higher scores after and 6 months later ($p < 0.001$). The class considered that an interview script is very important for their SC, and improves assistance (mean > 9.0/10.0). **Conclusion:** Obligatory rotation in MH improved SC in students. Previous training and gender were related with long lasting effects in SC.

KEYWORDS

Medical students, community psychiatry, self-confidence, boarding school, tutoring.

RESUMO

Objetivos: Avaliar os efeitos de empoderamento do internato em saúde mental (SM) na autoconfiança (AC) dos alunos de Medicina. **Métodos:** Uma versão adaptada para a saúde mental do "Questionário de Preparação para Prática Hospitalar" foi aplicada antes, depois e seis meses após o internato. **Resultados:** Cento e dez alunos participaram e quatro fatores foram extraídos: "Elaboração diagnóstica e cuidados básicos" (F1), "Gestão e prevenção de crise" (F2), "Determinantes externos de adoecimento" (F3) e "Sofrimento pessoal com a clínica" (F4). Treinamento prévio em SM é incomum (9,09%), mas foi associado com pontuações mais altas em F2 ($p = 0,05$ e 6m $p = 0,03$). Tratamento prévio em SM (42,16% dos alunos) foi associado a valores mais altos em F2 ($p < 0,01$) e F3 ($p = 0,03$) antes, mas apenas em F3 ($p < 0,01$) após o curso. O gênero masculino apresentou valores mais positivos que o feminino em F4 ($p < 0,01$) antes, mas não após o curso, quando apresentaram valores mais baixos em F1 (após $p = 0,02$, 6m $p = 0,01$). Todos os fatores apresentaram valores mais altos após o curso ($p < 0,001$). Os alunos consideraram o uso de uma entrevista estruturada muito importante para sua autoconfiança e qualidade da assistência (média > 9,0/10,0). **Conclusão:** O internato em SM aumentou a AC nos alunos. Treinamento prévio e gênero estiveram associados com efeitos duradouros na AC.

PALAVRAS-CHAVE

Alunos de Medicina, psiquiatria comunitária, autoconfiança, internato, preceptoria.

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INTRODUCTION

Community health systems are proposed by WHO as the most affordable and effective way to provide mental health (MH) care for large populations[1]. Specialists doctors and health workers are expensive, difficult to train and require harder technologies to work. They should be reserved for complex cases and to offer support for the generalists that are the spearhead of care. After diagnostic and therapeutic strategy elaboration, even a complex patient should return to their family doctor, the one responsible for their care management[1].

In Brazil, the government's MH system called *Sistema Único de Saúde* (SUS), follows the WHO orientation. However, only recently it's been implemented[2] that in SUS, generalists should manage common health's demand, including MH. For that objective, clinicians should use their knowledge and receive support from Núcleos *Ampliados de Saúde da Família e Atenção Básica* – NASF-AB (Family Health and Basic Attention Amplified Nucleus), composed by specialist and other professionals[3]. New directives for the medical curriculum propose that all doctors should be prepared to work as generalists[4], but only in 2014, an MH internship became obligatory in medical courses[5].

Although the government provided theoretical support for previously graduated doctors, reports about resistance in MH practice can be found[6]. Such resistance might be related to low self-confidence in managing MH issues by generalists[7]. We hypothesized that psychiatry rotation may improve doctor's self-confidence in dealing with the mentally ill patient (MIP), but it has not been previously answered. To answer this question, we measured the student's confidence before and after the MH internship.

METHODS

Our sample was composed of medical students from *Faculdade de Ciências Médicas de Santos* (FCMS), Lusíada University. Since 2016 FCMS included an MH obligatory rotation during the sixth and last year of the medical course. The rotation lasts for four weeks (75 hours), with practice and theory classes. The MH practical activities are carried on a Psychosocial Center (CAPS – ZN) in Santos – SP aimed to care for severely MIP, offer rehabilitation and crisis management.

All students that were taking part of the class for the first time were invited to participate, and this was the only criteria for inclusion, as refusing to participate the only exclusion criteria. The class was composed of 120 students, divided into groups from 10 or 12 students. A self-applied questionnaire, composed of eighteen questions about confidence in clinical practice and MH issues was given to the students on the first and the last day of the course. The subjects were again accessed 6 months later, using the same instrument.

There were no instrument aiming self-confidence validated for Brazilian Portuguese when this study was proposed and, as far as we know, it was the first time that it was evaluated in a Brazilian sample. The nearer option was the Brazilian version[8] of the Preparation for Hospital Practice Questionnaire (PHPQ), already translated and validated for Brazilian Portuguese, but not aimed to self-confidence. PHPQ is a tool developed to measure students progression and developed competences in constructivist teaching scenarios. In its full format, it is composed by a self-evaluation questionnaire, to be answered by the students, about they felt preparedness for hospital general clinical practice[9].

Brazilian PHPQ is composed by 31 questions ranging from 1 to 4, being 1 minimum felt competence and 4 maximum felt competence. Their answers are distributed int o 8 subscales about self-competence: Interpersonal skills, confidence and cooperation, collaboration (bond amongst group members in order to care of patients), relationship with patients and practical skills, scientific knowledge (about illness and its therapies), health prevention and promotion, comprehensive concern (seeing the patient as a whole), and self-directed study (evaluation of their own performance and identification of learning)[9]. The psychometric characteristics of Brazilian version were not reported, but the original have high alpha coefficients in all the 8 domains (at least 0.78).

As an alternative, we adapted the Brazilian PHPQ version[8,9], for our objective to measure self-confidence. Eighteen questions from the original were selected since their content was identified as an equivalent for self-confidence. Then the questions were modified to evaluate MH and self-confidence issues, instead of general medicine competences.

The course was carried on a problem-based program aiming for case investigation and treatment. The practice was conducted with three students interviewing a patient under supervision. Each student was asked to compose a full report with a solid history of illness, mental status exam, diagnosis's hypothesis and treatment's suggestion, based on a literature review.

Previous experience has shown that our students usually did not felt comfortable to carry on an evaluation. They recurrently referred that they did not feel prepared and did not know how to investigate mental illnesses. A standard script to history taking was then elaborated and provided to support the students. This standard script is a semi-structured interview, and could be expanded by the students if they desired so. To analyze the student's opinion about it, 2 more questions were added in the second time of questionnaire's application.

A sociocultural questionnaire was included to evaluate age, gender, previous academic and professional training, personal history of MH treatment, and the rotation month.

We considered any education (theory or practice) in mental health as previous training, and students were asked if they have already been under treatment for any mental condition in a yes/no pattern, but were not accessed about diagnostic issues.

The other questions were answered on a Likert scale from 1 to 10. Students provided their means of identification, blinded from the lecturers. After 6 months, the students were accessed again to evaluate time influence on observed changes. Students were stimulated to answer the questions alone and without discussing its content, as a way to avoid desirability bias, and identification anonymity was considered enough to deal with embarrassment with lecturers.

As a convenience sample, no estimates were made before the study about the needed sample size, but it was expected to include a representative sample from all students inscribed for the discipline (110). The answers from before, after and six months later were analyzed by paired t-tests. ANOVA was used to measure the influence of sociodemographic data. Pearson correlation test was used to check the month correlation with confidence answers. Questions related to the standard script of history taking were analyzed by a descriptive resume and comparison between the second and third applications by paired t-tests.

Subjects with missed entries (not answered or incomprehensible) were excluded from the analysis where that question was needed. This research was analyzed by Lusíada Ethical Committee for Human Research, which approved the methodology and supervised the project under the CAAE 21222319.6.0000.5436.

RESULTS

From 110 invited students, 105 filled and retrieved the first and the second confidence questionnaire. Dropouts were due to absenteeism and no one refused to participate. The third application had 39 completed questionnaires retrieved, since it was applied on an opportunity basis and the class became inaccessible due to graduation.

The final sample was composed of 105 subjects, 69 females (65.7%), with a mean age of 24.6 years (range 21 to 31, sd = 1.6). Nine of them (9.9%) received previous MH training, and 43 (42.2%) have been under personal MH treatment. Questionnaire filling mistakes, like no completion or blank answers were observed in 22 (0,5%) of all possible entries (4,410), combined first and second application. A dropout was considered when it was not possible to pair up the first and the second questionnaire, and all three questionnaires were discarded. Filling mistakes were dealt with by taking out the subject of that specific measurement. These results can be found in Table 1.

A dimensional analysis by principal component analysis was run, identifying possible solutions with 3 or 4 factors. Then an exploratory factor analysis (EFA) was carried, showing the adequacy of the four component solutions ($p < .000$). An item was selected for each factor based on its higher load on latent content. Figure 1 brings the load distribution from the principal component analysis, and Table 2 shows EFA results and factor variables. Adequacy for the present sample to parametric tests was shown in all four factors before the course. After the course and six months later, however, factors 3 and 4 became asymptotic due to the right deviance (towards very high answers, $p = .002$ for both).

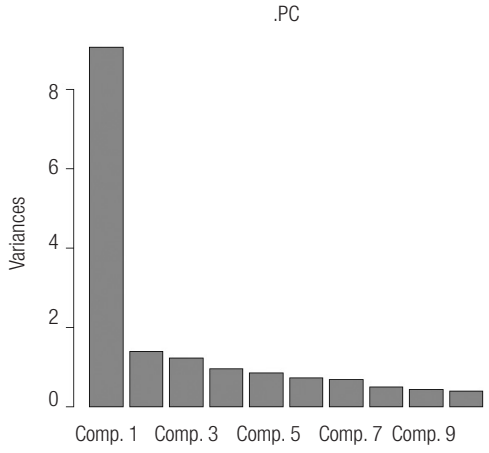

Figure 1. Main component analysis.

Table 1. Demographic characteristics of 105 medical students participants in psychiatry rotation of Lusíada Medical Faculty, 2019

	Male	Female	Total
Gender	36 (34.29%)	69 (65.71%)	105
	Mean	Sd	Range
Age	24.59 years	1.63 years	21-31 years
	Yes	No	Total
Previous mental health treatment	43 (42.16%)	59 (57.84%)	102
Previous mental health training	9 (9.09%)	90 (90.91%)	99

Factor one was called "Diagnosis elaboration and basic care", composed of questions 10, 11, 12, 13, 16, 17 and 18. Factor two, "Prevention and dealing with crisis", was composed of questions 3, 4, 6, 7, 8, 9 and 14. Factor three was named "External influences on illness", built of questions 1 and 2. Questions 5 and 15 composed factor 4, "Personal distress with clinics". Cronbach alpha was measured for internal consistency returning 0.88 for factor 1, 0.9 for factor 2, 0.9 for factor 3 and 0.71 for factor 4. That can be found in Table 2.

Statistical significant differences were observed on all factors, as it can be seen in Table 3. T-tests carried with the six months later sample have shown no significant statistical differences between the second and third applications.

Previous training in MH had no significant statistical influence on factors' means before course. After the course, students with previous training were statistically more confident on factor 2. After 6 months, previously trained students had still higher scores on factor 2. Female students have a statistically higher score on factor 1 after the course and 6 months later. Male students had statistically higher scores on factor 4 before the course but not after. These results are shown in Table 4.

Being submitted to previous MH treatment was related to higher scores on factors 2 and 3 before the course. It disappeared after the course on factor 2 but was identified again on factor 3. Differences between treated and non treated students disappeared 6 months later. These results are shown in Table 4.

A χ^2 test was carried looking for differences in previous training along previously treated students, and no statistical difference was found. Age did not influence the factors by Pearson correlation nor by ANOVA in both tests.

Question 19 "How much do you believe the history script improved your confidence to perform the clinical exam?" It retrieved a mean of 9.22 (sd = 1.11), and no statistical difference was found among students' answers. Not first nor six months later (p = 0.79). Question 20 "How much do you believe the standard script for history taking improved your clinical practice?" It had a mean of 9.05 (sd = 1.30), and no statistical difference was identified after 6 months.

Table 2. Questions, factor loads and Cronbach alpha of exploratory factor analysis ran in the adapted for mental health PHQS responded by medical students of Lusíada Medical Faculty, 2019

Factors	Questions	Factor 1	Factor 2	Factor 3	Factor 4	Cronbach alpha
1. Diagnosis elaboration and basic care	10. Comprehend disease relation with the social condition?	0.599				0.88
	11. Cherish ethnic/cultural relevance in the patient background?	0.640				
	12. Encourage life habits behavior improvement?	0.431				
	13. Performing qualified listening, therapeutically?	0.548				
	16. Prescribing medicines based on their risks, costs and benefits?	0.668				
	17. Perform a clinic history taking?	0.476				
	18. Offering knowledge and orientation related about mental disorder and its management, for patients and familiars?	0.834				
2. Crisis management and prevention	3. Discussing, with patients and familiars, hazardous attitudes related to mental disorder?		0.718			0.9
	4. Managing suicide ideation?		0.655			
	6. Managing agitated patients?		0.604			
	7. Discussing, with patients and familiars, prevention strategies in mental health?		0.672			
	8. Assuming your responsibility about learning mental health?		0.404			
	9. Justify the use of medicine based on its action mechanism and clinical indication?		0.518			
	14. Perform Mental Status Examination minimally?		0.701			
3. External sickness determinants	1. Consider the impact of familiar stress (conflicts, relationship, ex.) in mental health?			0.693		0.9
	2. Evaluate stress and labor effects in patient mental health?			0.892		
4. Personal distress with clinics	5.Dealing with your emotions during anguish clinic situation?				0.788	0.71
	15. Keeping yourself at bay facing intense patient/family distress?				0.712	

Test of the hypothesis that 4 factors are sufficient. The chi square statistic is 139.4 on 87 degrees of freedom. The p-value is 0.00031.

Table 3. Comparison of self-confidence factors before, after and six months later a Psychiatry rotation, through paired T-test, measured by an adapted for mental health PHQS, in 105 medical students of Lusíada Medical Faculty, 2019

Factors	t	p	Mean of differences	95% confidence interval	df	Cohen - d	Mean before (sd)	Mean after (sd)
Factor 1	-14.10	<0.001	-1.89	-2.15 – -1.62	104	1.54	6.00 (1.49)	7.89 (0.90)
Factor 2	-17.40	<0.001	-2.63	-2.94 – -2.33	104	1.89	4.66 (1.69)	7.30 (1.03)
Factor 3	-13.90	<0.001	-2.33	-2.66 – -2.00	104	1.57	5.84 (1.88)	8.17 (0.94)
Factor 4	-8.69	<0.001	-1.33	-1.64 – -1.03	104	0.86	6.28 (1.84)	7.61 (1.19)
After rotation and 6 months later comparison								
Factor 1	-0.30	0.76	-0.03	-0.24 – 0.18	38	0.05	7.98 (0.89)	8.01 (0.99)
Factor 2	1.01	0.32	0.13	-0.13 – 0.40	38	0.17	7.46 (0.97)	7.32 (1.03)
Factor 3	-0.70	0.49	-0.09	-0.35 – 0.17	38	0.11	8.28 (0.95)	8.37 (0.88)
Factor 4	1.00	0.32	-0.17	-0.17 – 0.50	38	0.12	7.83 (1.15)	7.67 (1.25)

Table 4. Demographic characteristics influence in self-confidence factors through ANOVA, measured in 105 medical students of Lusíada Medical Faculty, 2019

		Before rotation							
Factors		**Factor 1**		**Factor 2**		**Factor 3**		**Factor 4**	
		Mean	**p (η^2)**	**Mean**	**p (η^2)**	**Mean**	**p (η^2)**	**Mean**	**p (η^2)**
Previous Training	Yes	6.33	0.43	5.48	0.09	6.56	0.20	6.28	0.94
	No	5.92		4.50		5.71		6.23	
Gender	Female	5.89	0.32	4.56	0.37	5.80	0.73	5.92	<0.01 (.07)
	Male	6.20		4.87		5.93		6.97	
Previous Experience	Yes	6.30	0.10	5.23	<0.01 (0.07)	6.35	0.03 (0.04)	6.16	0.55
	No	5.81		4.36		5.53		6.38	
After rotation									
Previous Training	Yes	8.33	0.08	7.87	0.05 (0.04)	8.67	0.08[a]	7.50	0.96[a]
	No	7.79		7.19		8.08		7.56	
Gender	Male	7.61	0.02 (0.05)	7.17	0.34	7.94	0.08[a]	7.85	0.22[a]
	Female	8.03		7.37		8.29		7.50	
Previous Experience	Yes	8.00	0.29	7.52	0.08	8.50	<0.01[a]	7.53	0.85[a]
	No	7.81		7.16		7.97		7.68	
6 months later									
Previous Training	Yes	8.71	0.09	8.25	0.03 (0.13)	9.00	0.49[a]	8.50	0.36[a]
	No	7.84		7.10		8.50		7.75	
Gender	Male	7.58	0.01 (0.15)	7.15	0.35	8.5	0.61[a]	8.0	0.25[a]
	Female	8.34		7.46		8.5		8.5	
Previous Experience	Yes	8.09	0.79	7.39	0.83	8.5	0.61	7.5	0.33[a]
	No	8.01		7,31		8.5		8.0	

[a]Kruskal-Wallis instead of ANOVA due to normality rupture.

DISCUSSION

Our sample was composed mainly by female students, with an average age of 24.6 years (range from 21 to 31), with no previous contact with MH training, nor previous psychiatric treatment. Regarding student's demographic composition, this sample is equivalent to other studies with medical students in Brazil[10,11], and with official estimates related to gender and age[12].

Students that have been or are under MH care were more frequent (42.9%) in comparison with data from an international review about depression in medicine schools[13] and with a sample from the same college[11] but it was equivalent to the frequency in United States[14]. It was not surprising that this study had a small amount of students with some previous academic or professional contact with MH since psychiatry rotations became obligatory only in

2015 and this class was represented by students admitted previously to the curriculum change[5].

As self-confidence is directly related to experience, it was expected from older students and those who started later in the period, to feel more confident about diagnosing[15]. However, no direct correlation was found related with age or period in the course. Our questionnaire asked specifically to students answer based on how confident they felt to perform a list of 18 daily activities in MH. These questions were retrieved from the PHPQ[9], and adapted for aiming at MH.

The original questionnaire was composed of 41 questions and had 8 sub-scales (Interpersonal skills, confidence/coping skills, collaboration/teamwork, practical skills/patient management, understanding science/disease/therapeutics, prevention, holistic care, self-directed learning)[9]. The Brazilian version of PHPQ however is shorter, and the authors identified 4 dimensions (Social aspects of health, Medical Skills, Ethical Concepts, Learning techniques). As questions were retrieved aiming self-confidence, it was expected for the factors to be related with the subscale of the Brazilian PHPQ questionnaire aiming self-competence in medical Skills. However, a direct correlation between the four factors observed in our study was not possible with the Brazilian version of PHPQ, nor with the original.

Factors 1, 2 and 3 were anyhow related to direct mental health practice, and seems related with self-confidence. Factor 4 was not expected to be found though, since the original questionnaire was not aimed to measure personal suffering as a consequence of the medical practice, and its appearance may be a consequence of the adaptation process. The mean value of such a factor was not low before the course (6.28 in 10 Likert scale), but we found a statistically significant improvement, representing less suffering with mental health practice.

Students before psychiatry course are – logically – compared to doctors without MH training. Their insecurity to manage and prevent crisis (Factor 2), correctly diagnose and manage MIP (Factor 1), analyze and manage social/ambient causes for MH disorders may be correlated with their personal suffering. That would explain why some clinicians avoid dealing with MIP in basic care.

Gender differences for self-criticism and perfection are not usually relevant[16], and could not explain why females reported more suffering (factor 4) than male students before the course. Training reverted such difference, but also seems to improve their confidence in their felt abilities to manage and diagnose mental illness. A statistically significant with moderate size effect difference appeared between females and males in factor 1 after course, and was still present six months later, suggesting a long-lasting effect. Although other results were not statistically significant, it is noteworthy that women had lower results before the course in all factors when compared with males, but higher after course, except for personal suffering with practice.

Contrary to previous expectations, being exposed to professional training in MH was not related to any factor before the course. Being previously cared as an MH patient was not related to felt security in diagnosis and basic management, nor with personal suffering with mental practice. It was positively related to crisis management and external contributors for the disease before the course, however. After course, differences disappeared for factor 2 but increased for external influences ($p = .009$).

Knowing the influence of social and ambient contributors for mental illness on their perspective may explain why students that have been previously ill felt more confident analyzing it on patients. Such differences were not long-lasting though and disappeared after six months. It is noteworthy that the difference disappeared after the improvement of not treated student's confidence, not decreased in the previously treated ones.

For generalists, Factor 1 might be the most important aspect of self-confidence. The first measurement was not low (mean = 6.00), although clinically acting upon a 6 in 10 level of confidence might be uncomfortable. The course has a positive influence, which was expected in a practice related factor, and this result is equivalent to other studies measuring the influence of a practice rotation on self confidence[17-19].

Factor 2 might be particularly relevant for clinicians in emergency departments. It has been shown that generalists are not well versed in the management of the mental crisis in an emergency, and that MH training may lead to better results[20]. Managing a crisis is the clinical aspect that students felt less secure before course (mean = 4.66), and our results have shown that a rotation in an outpatient facility that deals with a crisis is effective in raising their confidence. As last year students are logically equivalent to generalists, such insecurity might contribute to observed negative attitudes towards MIP[10,11,21] or even with neglect of access for general health[22].

Students do not feel secure about evaluating and dealing with external causes of MH disease at first (mean = 5.84) but, after course, there were an increase in factor 3. Such improvement may be related to the experience of working with an integrated web of care and managing social conflicts. Although not having governance to deal with major social issues, students had the opportunity to observe and intervene in family management of conflicts. Also, many said that it was their first contact with the web of care composed by other governmental entities like financial aid, protected jobs, young and elder protection systems, which may explain these results.

It is revealing that the use of a confidence questionnaire related to MH practice shown a factor loading related to

"Personal distress with mental clinics". Psychiatry is not one of the preferred medical careers, and our result adds an explanation for avoiding MH practice[23,24]. Students may feel that it is hard to deal with their own emotions during struggling situations, and also lost when dealing with familiars and patient distress, especially when they are not very secure of how to cope (Factors 1, 2 and 3).

Medical students and physicians at all levels seems to be suffering from increasing levels of burnout[25]. Clinicians acting as generalists or family doctors are under special risk, since they may diagnose and act upon a large specter of diseases and illness without supervision[26,27].

"Personal distress with clinics" is probably a complex latent variable, related both to personal and to apprehended characteristics. It is very unlikely that a short rotation, with limited reflexive intervention, brings any result on personality characteristics, but it seems to improve the sensible apprehended condition's to direct practice experience. As clinic distress could be related to burnout in medical practice, continuous training and supervision should be encouraged for generalists in community health systems.

Nowadays there is no standard system for history taking in Brazil, especially when dealing with mental illness[28]. Students from previous years consistently argued that they did not feel prepared to collect a proper history of illness from a MIP. This year a script for history taking was given for the students in the practice course. Two questions in the second application asked "How much do you believe that a history script improved your confidence to perform the clinical exam?" and "How much do you believe that a standard script for history taking improve clinical practice?".

Most students considered the standard history taking script essential for their confidence in clinical exams. Most of them considered that a standard history taking script contributes to better clinical practice. Both means did not change six months after, suggesting a consistent opinion. However, it is not clear why history taking should be different from general clinics when compared with psychiatry. Somehow students seem to believe that MH has a different and specific semiology.

This study has many limitations that should be observed: First, the questionnaire is an adaptation from another tool and has not been validated or extensively tested before. Second, although following a known method for latent content extraction and factor building, such constructs always bring some interpretation bias and must be dealt cautiously. Third, this sample seems to be equivalent to other medical students along Brazil in what age, gender and wealth are concerned, but it is not possible to say that it is representative of all medical students. Brazil is a huge multicultural country, and students might have other backgrounds not related to gender and wealth with an impact on their self-confidence. Also, this sample has a high incidence of previously MH treatment when compared with other medicine classes, and all students were from a single medicine faculty and class, with unknown consequences for the generalization of this data.

Fourth, our practice was extensively based on diagnosing, with treatment restricted to hypothetical and theoretical classes. Students have little freedom for conducting any intervention in real-life patients, and the short time that they take part in CAPS does not allow the opportunity for direct observation of treatment, opening space for fantasies that may not be real in practice. Also, mental health internship has directives about its content, but not about how to be applied, and our model may not correspond to a reality in other faculties. Fifth, the course design leads to close contact between students and lecturers, which may raise self-confidence based on felt support and not personally felt self-competence. Sixth, there is concern on literature about applicability and validity of self-applied measurements, that seems to be poorly correlated with an external evaluator. However, as self-confidence is a subjective and private latent content, it still not possible to provide any measures that are not self-reported.

CONCLUSION

An obligatory rotation in psychiatry has a positive and long-lasting effect on student's confidence for MH practice. Such improvement reverted observed distress with practice, especially felt by female students before course, and also seems to potentiate self-confidence in diagnostic and basic management practice. Observed changes have a significant effect size, even when the small sample size is considered.

Our work also provides a theoretical basis for interventions that might improve the quality of care, prevent doctor's burnout and reduce defensive attitudes through stigma against the MIP. Courses and supervision, along with standardization for MH practice in basic health settings are some examples. This is probably especially significant in health systems that are manned by professionals where only recently MH became obligatory during medical training, as it is in Brazil.

INDIVIDUAL CONTRIBUTIONS

Helio Gomes da Rocha Neto – Developed the methodological design, data collection, statistical analysis and article elaboration.

Maria Tavares Cavalcanti – Took part in the methodological design, article elaboration and review.

Clara R. A. Alamberte – Took part in data collection and article elaboration.
Bianca Baptistella de Miranda – Took part in data collection and article elaboration.
Diogo Telles-Correia – Took part in the methodological design, article elaboration and review.
All authors agreed with the information herefore presented and publication of this manuscript.

CONFLICT OF INTERESTS

The authors report no declarations of interest.

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