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Exploring pharmacists' orientation towards patients in Portuguese community pharmacies

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ABSTRACT

Background: Patient-centered care has been associated with improved patient outcomes and healthcare satisfaction. The present study aimed to explore pharmacy practitioners' orientation to patients in daily work, as well as job satisfaction as a possible associated factor.

Methods: A cross-sectional survey of a sample of Portuguese community pharmacists was used for gathering participants' demographics, professional and work-related data, self-perceived level of technical and relational competences, and the importance ascribed to these skills. The Portuguese version of the Patient-Practitioner Orientation Scale (PPOS) and a Portuguese reduced version of a Healthcare Job Satisfaction Scale completed the on-line questionnaire.

Results: A sample of 274 respondents comprised 81.1% females, with a mean age of 37.2 years, 11.6 years of work experience on average, and subject to a work intensity of 5.36 clients per hour, mainly for counter dispensing (73.0%). Overall, technical competences were significantly more important than relational ones, but practitioners with fewer experience self-perceived as weaker in communication competences. Females scored higher in relational competences importance as well as in PPOS ($p < 0.05$). No significant difference in PPOS was found between pharmacists with more and less direct interaction with patients, but higher when performing consultation services ($p < 0.05$).

Conclusions: The existing orientation to patients seems to be under the desired levels and independent of community pharmacists' work intensity, nevertheless linked with work experience and differentiated patient services. Although professionals might recognize the importance of relational competencies to provide patient-centered care and achieve better outcomes, it is essential to promote clinical training amongst community pharmacists.

KEYWORDS
Community pharmacists; patient-centeredness; communication competencies; pharmacy services; Portugal

Introduction

It is widely recognized that community pharmacists and pharmacy technicians are responsible for assisting patients through the dispensing of medicines and other health products, the counseling for their effective and safe use, as well as assuring the best patient health-related outcomes. As such, international and national pharmacy organizations have emphasized the importance of pharmacists' orientation towards the patients' needs and expectations [1,2].

Pharmacists' standard relationship with patients is based on medication-related knowledge and uses patient counseling as a major approach; for instance, stressing medication adherence as a patient's goal [3]. Adequate relationships between healthcare practitioners and patients should value each patient medication experience, as defined by Shoemaker [4], and along the lines proposed by Horn and colleagues [5]. In fact, the relationship between medical practitioners and patients was shown to be significantly associated with patients' health outcomes [6]. Similarly, for nursing practitioners, it is well documented how patient-centered communication is associated with improved patient outcomes such as satisfaction, adherence and health status [7].

Patient-centered professionalism involves three important elements: patients' and professionals' safety, professionals' characteristics, and the relationships between both [8]. Earlier studies have found that encounters between the pharmacy staff and patients are described mainly as an information provision activity, generally delivering practical indications, without necessarily discussing the patients' experiences, perceptions and preferences regarding medication [9,10]. Previous research found the perceived image of the pharmacist to be associated with patients' courtesy expectations whilst providing expanded professional services [11]. On the other hand, advanced levels of interaction and communication have generated higher professional expectations and positive reactions from patients [11]. Actually, common issues related to less effective pharmacist-patient communication have been found in diverse practice settings, such as in Sweden and

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Portugal [12,13]. The findings suggest low levels of patient-centeredness (i.e. orientation to patients), especially when compared to medical practitioners [14], as a generalized profession's concern. Additionally, medication counseling has been related to low levels of satisfaction by both patients and pharmacists [15].

Yet, patient-centered care is recognized and accepted by all healthcare professions, including different pharmaceutical organizations and pharmacy practitioners, as a core element of practice [16,17]. In the case of community pharmacy practice, it is known the usual influx of customers and associated time pressures, which has been described as affecting the professional interaction and the quality of the clinical encounter [18,19]. The relationships between patient and practitioner, patients' satisfaction and adherence, as well as associated practitioners' job satisfaction, have been established [20–23]. A greater orientation to patients and their wellbeing should, ultimately, promote pharmacists' satisfaction with their jobs and clinical roles [24].

The main goal of the present study was to explore pharmacy practitioners' orientation to patients' needs and expectations, as well as assessing their job satisfaction as a possible associated factor. Secondary objectives included an exploration of how pharmacy services and workload might relate with orientation to patients, as well as with the pharmacists' perceived relational skills and attribution of the importance of these skills to practice.

Materials and methods

This study followed an exploratory, cross-sectional and descriptive design, based on a structured survey administered through the Qualtrics® software.

Sample and sampling procedures

The study population comprised of active Portuguese community pharmacists. The current Portuguese community pharmacy practice involves medical and other health products dispensing, combined with patient information and patient counseling for lifestyle and chronic diseases [25]. In the last decade, Portuguese community pharmacies developed patient-oriented services, regulated by governmental legislation (*Portaria N. ° 97/2018*, April 9th). These comprise individualized medication preparation and administration (e.g. vaccines), measurement of biological and biochemical parameters, pharmaceutical care programs, medication review consultations, home care support, amongst several others [26]. All these services contribute to a higher frequency and varying contents for patient interaction, favoring patient-pharmacist relationships and, hopefully, professionals' orientation to patients.

The study sample was recruited through the cooperation of the Portuguese Pharmaceutical Society (Study Protocol Ref. 1764/2018 EXT). All pharmacists registered as practicing at the community level received an institutional email with an invitation and a survey link. A second email reminder was sent after 15 days. Due to the exploratory nature of the study, no statistical representation was aimed, and no sample power was estimated. The study was conducted in May 2018.

Survey tool

The survey comprised three parts. The first one covered participants' demographics (e.g. age and gender) and professional data (e.g. years of practice, see Table 2), including items related to the workplace (e.g. work intensity i.e. the average number of customers served per hour of daily work). Pharmacists were classified as having high or low work intensity if serving more or less than the mean number of sample customers per hour (i.e. 5.36, see results). According to the Portuguese law, community pharmacies may provide several different frontline services (e.g. individual pillbox preparation, vaccines administration, point-of-test or screening of biological parameters, etc.). These services, as well as the usual counter-based work (e.g. medication dispensing and information), involve direct contact with patients. On the contrary, other back-office tasks (e.g. stock management and pharmacy administration) are professional activities indirectly related to patients. From all the previous tasks, respondents were asked to choose the three key daily ones, ordered by decreasing frequency. The total frequency for each task was calculated to determine the percentage of direct and indirect patient contact, the earlier supposed to be tied with patient orientation. This first part comprised two additional questions to assess the pharmacists' perceived interpersonal skills [27], as well as the importance attributed to communicational tasks. Respondents answered these last two questions on a six-point Likert scale (1 not competent or important to 6 fully competent or important), as previously used by Cleland et al. [27] to assess self-perceived communicational competence in medical students.

The second part of the survey comprised the Patient-Practitioner Orientation Scale (PPOS), proposed initially by Krupat et al. [20,21]. PPOS was identified and recognized as an adequate instrument to assess pharmacists' orientation to patients [28]. It has been used to survey attitudes towards professional-patient relationships of medical students and practitioners of different geographical locations and medical specialties [29–32]. It was also used to measure patient-centered attitudes in culturally diverse populations [33] and to explore practitioners'

attitudes towards special groups of patients [28,34]. It was also applied within non-medical practitioners [35–37]. Although PPOS presents 2 subscales, the sharing and caring dimensions, this study used the whole scale, has done by Krupat [28] and Portuguese authors [38].

The European Portuguese PPOS version, adapted for Portuguese medical students [39], and also used with nurses and nursing students [35], was employed in the present study (overall Cronbach alpha of 0.65). The 18 items were adjusted by the introduction of the word 'pharmacist', where appropriate. The PPOS was initially tested for internal consistency, obtaining an overall alpha value of 0.640. Duo to initial poor consistency, 4 items were removed, increasing the internal consistency value to $\alpha = 0.682$ for the PPOSp (PPOS pharmacists' version).

The third part of the survey comprised the assessment of pharmacists' global job satisfaction, using a reduced version of the validated for Portuguese healthcare practitioners named '*Questionário de Satisfação com o Trabalho*' from Pais-Ribeiro & Maia [40]. The independent subscales chosen were explicitly related to professional satisfaction and with work recognition by others (management and colleagues). The first dimension (professional satisfaction) comprised six items (Cronbach alpha 0.86) and the second (coworkers' recognition) comprised five items (Cronbach alpha 0.76). An additional item concerning the recognition by pharmacy clients and patients was introduced for the present study, using the same 6-points Likert scale for response. The total number of items was 12, with a global alpha of 0.89.

Data analysis

All data entered an IBM SPSS v25 database and were submitted to descriptive statistics (frequencies, central tendency, and dispersion measures), including the Shapiro–Wilk normality test. The non-normal distribution for all variables was confirmed ($p < 0.05$). As such, nonparametric testing (Mann–Whitney U, Kruskal–Wallis H), other measures of association (Chi-Square test), and the Spearman rho for non-parametric bivariate correlations were used, all calculations with a confidence level of $p < 0.05$.

Ethical approval

All study steps followed the best research practices and were submitted to an institutional review board for ethical clearance (Faculty of Psychology, Lisbon University IRB Process #1.11, 6 March 2018). Participation was completely voluntary; no incentives were given, and respondents were fully anonymous to the research team.

Results

Demographics and work-related data

The number of respondents reached 274 pharmacists, 81.1% females, with a mean age of 37.2 years (SD = 9.5), and 11.6 (SD = 8) mean years of work experience at a community pharmacy. Respondents' workplaces served an average of 180 (SD = 118.9) customers per day; knowing the average staff able to provide all services comprised 4.21 (SD = 3.69) professionals, the work intensity for pharmacists involved in frontline tasks was on average of 5.36 patients per hour. The number of participants in high (49.4%) and low (50,6%) work intensity pharmacists was similar. This produced one patient interaction lasting a mean of 11 min. Table 1 shows the different professional tasks and services that respondents reported to be involved with, in their workplaces, as well as their preference for these activities.

Dispensing products at the pharmacy counter was the most frequent task overall, reported by 97.1% of the respondents, followed by stocking and merchandizing (80.2%) and pharmacy administration tasks (69.0%). While the back-office tasks (under B in Table 1) do not necessarily involve direct patient interaction, on the contrary, tasks from A and C require most times direct patient interaction. Tasks classified as consultation room services (i.e. pharmacists' services) were much less frequent in total. Measuring patients' parameters (i.e. point-of-care testing) is a task performed by 20.5% of the sample, but medication organization or medication reviews were rare in total and reported mostly as second-line tasks. When asked to choose the favorite professional task, 39% mentioned medication reviews and pharmaceutical care. Gender was not associated with tasks involving direct or indirect patient contact, but fewer years of practice (i.e. 0–5 years of experience) showed a significant statistical association ($Chi^2 = 17.332$, $p = 0.001$) with direct patient interaction. No significant associations were found between gender or years of practice regarding preferred tasks.

Respondents' importance attributed to technical and relational competences was high (median of 6 points), and significantly higher for females (p values of $U < 0.002$). Regarding technical and relational competence self-perception (median of 5 points), pharmacists with fewer years of practice showed a significantly lower value (U $p < 0.003$). No significant associations were found between these two dimensions (self-perceived competence and importance) and work intensity or tasks involving direct or indirect patient contact.

According to Figure 1, the importance attached to technical competences scored significantly higher than other dimensions, with technical features ahead of the relational ones. According to Figure 2 bellow, pharmacists up to 5 years of practice presented a significantly lower mean for perceived relational

Table 1. Pharmacists' tasks: performed and preferred ($n = 274$).

Task performed	Most frequent (%)	Moderately frequent (%)	Less frequent (%)	Total frequency (%)	Task preferred (%)
A. At the counter services (products dispensing & patient information)	73.0	20.4	3.7	97.1	18.8
B. Back-office activities					
B.1 Products management: stocking and merchandizing	12.4	44.7	23.1	80.2	3.3
B.2 Pharmacy management: products, services, human resources, finances, etc.	10.9	20.0	38.1	69.0	10.3
B.3 Drugs compounding	0.4	3.5	6.7	10.6	8.5
B.4 Medication organizer/Pillboxes preparation	0.0	1.2	1.5	2.7	1.5
C. Consultation room services					
C.1 Screening of biological (e.g. weight) & biochemical (e.g. blood glucose) parameters	0.0	7.1	13.4	20.5	4.0
C.2 Vaccines administration and injections; other medicines administration (e.g. wound dressing, eye drops instilling, etc.)	0.0	1.2	8.2	9.4	1.5
C.3 Dermo-pharmaceutical/cosmetic counselling	0.4	0.8	1.5	2.7	10.7
C.4 Pharmaceutical care/Medication review consultations	0.4	1.2	2.2	3.8	39.0
D. Other tasks & activities (e.g. home medication delivery & review, internship tutoring, etc.)	0.0	1.5	0.0	1.5	2.6

Table 2. Pharmacists' PPOS median scores ($n = 274$).

	Gender			Years of practice				
	Male	Female	U p-value	0–5	6–10	11–20	>20	H p-value
PPOS	3.79	4.07	$p < 0.001$*	4.07	3.96	4.00	3.93	$p = 0.351$

competence, as well as technical competence, compared to more experienced colleagues.

Patient-practitioner orientation scale (PPOSp)

The median overall value of the PPOSp was 4 (IQR 3.71–4.36). Table 2 shows the PPOSp scores according to gender, as well as between pharmacists with different years of practice. Significantly higher PPOSp scores were obtained for females, compared to male respondents. No PPOSp difference was found for pharmacists with more or less direct patient interaction ($p = 0.072$) or in pharmacies with varying work intensity ($p = 0.143$).

PPOSp scores varied significantly according to the most frequent task (see Table 1) ($H = 15.882$, $p = 0.014$): pharmacists primarily involved in pharmaceutical care consultations scored significantly higher (4.93) when compared with all other most frequent tasks, such as working at the pharmacy counter (4.10) or with products stocking (3.80). No significant differences were found in PPOSp scores for any of the tasks when these were reported as mid or less frequent (3rd and 4th column in Table 1).

PPOSp scores were not correlated with self-perceived relational competencies, while the importance attributed to relational tasks was significantly, but weakly, associated with PPOSp (rho = 0.189, $p = 0.02$).

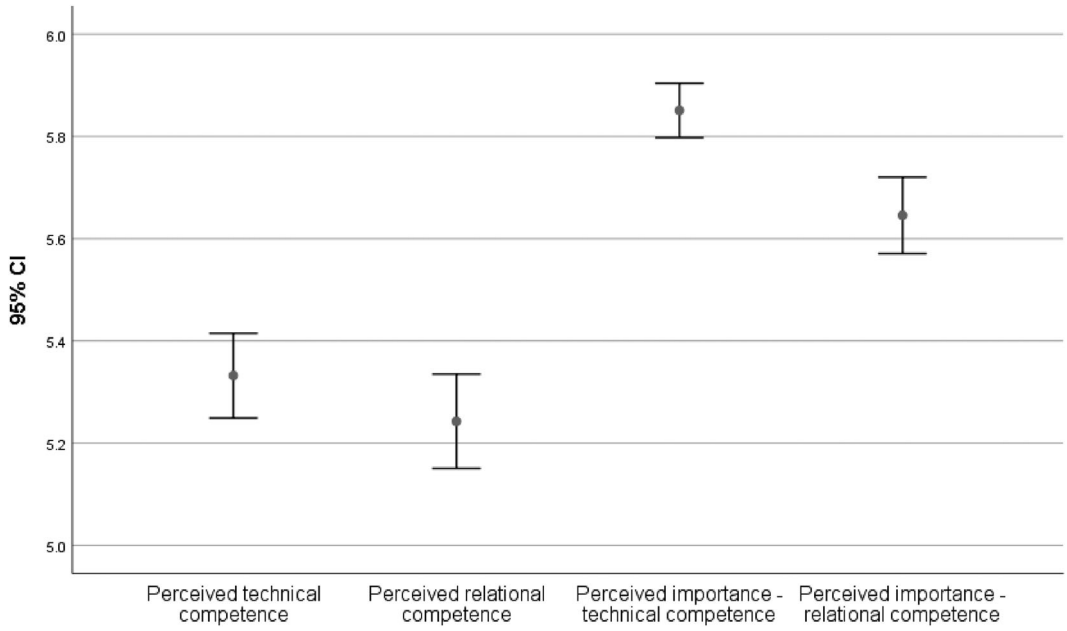

Figure 1. Differences in the mean values of self-perceived competences and their importance ($n = 268$).

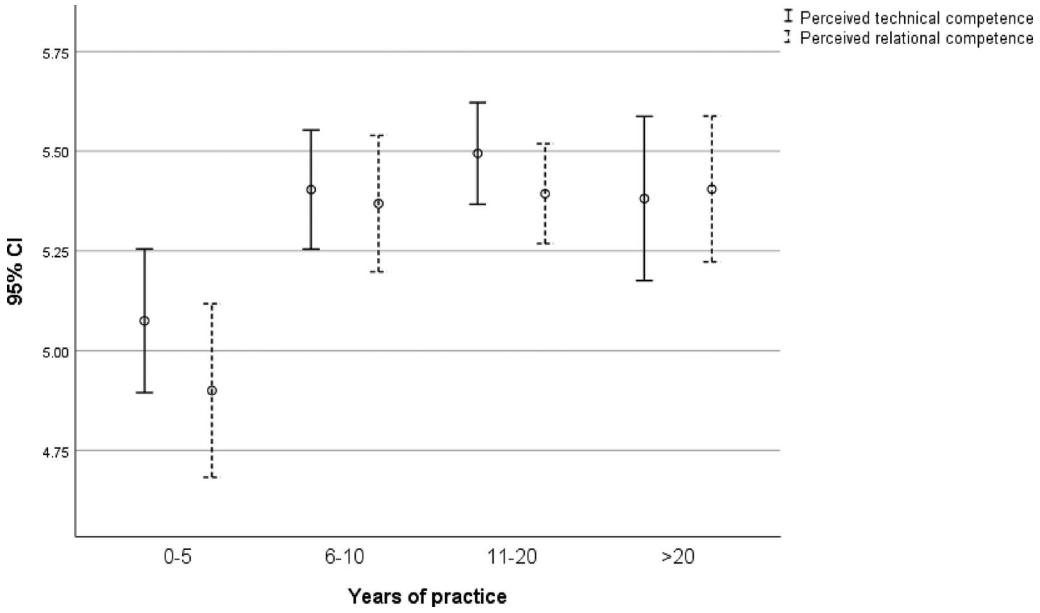

Figure 2. Differences in the mean values of the perceived competences according to years of practice ($n = 268$).

Job satisfaction

The median values for the global satisfaction were 3.68 (IQR 3.02–4.25), 4.50 (IQR 3.83–5.17) for work recognition by coworkers, and 2.83 (IQR 2.17–3.83) for satisfaction with the profession. The satisfaction with clients' recognition presented the highest mean value of 5.10 (IQR 5.00–6.00). There were no significant differences in any job satisfaction measure comparing males with females. The satisfaction values obtained by years of practice (H = 18.160, H = 13.933, H = 15.367, respectively), showed the younger group scoring significantly higher than all other groups, followed by the two older practicing groups, except for the satisfaction with work recognition by coworkers and clients (Table 3). Pharmacists with indirect patient interaction reported significantly higher mean values in all three scales compared to those having direct patient interaction (U = 2750.5, U = 2997.0, U = 2779.5, respectively). No significant associations were found between job satisfaction and work intensity.

The importance of relational tasks revealed weak correlations with work recognition by coworkers (rho = 0.163, $p < 0.01$). Additionally, PPOSp correlations with global job satisfaction presented a value of rho = 0.150 ($p = 0.025$), as well as a rho of 0.171 ($p = 0.01$) with work recognition by coworkers. Finally, the clients' recognition item correlated significantly with work recognition by coworkers (rho = 0.262, $p < 0.01$), but not with PPOSp.

Discussion

The present findings offer an opportunity to explore how Portuguese community pharmacists are oriented to patients in the context of their daily work. The patient orientation construct was studied considering current tasks, along with professionals' job satisfaction. Although some communication studies [13,18,41] have been conducted in Portugal with community pharmacists, no previous studies were found regarding these professionals' orientation to patients' needs and expectations.

A very high percentage of the respondents performed pharmacy counter duties and stocking activities, as described previously [19], especially younger practitioners, contrasting with the predominant backline duties for more experienced ones. More than 5 customers were served per hour by each pharmacist on average, which is close to previous findings for counter work (5.1/h) in Portugal [18]. This means pharmacists have real opportunities in daily work for direct patient interaction, such as those related to product dispensing and information giving. The counterwork is intertwined with patient services, usually provided in a consultation room [42], for approximately 40% of the sample. According to the literature, frequent contact with patients, particularly in a consultation room, may strengthen pharmacists' clinical role and orientation to patients [43,44]. Nevertheless, services strongly oriented to patients, such as medication

Table 3. Pharmacists' job satisfaction median scores ($n = 274$).

	Years of practice					Patient interaction		
	0–5	6–10	11–20	>20	H *p*-value	Direct	Indirect	U *p*-value
Sat. Global	3.75	3.36	3.67	3.68	$p < 0.001$	3.50	3.96	$p = 0.002$
Sat. Recognition	4.33	4.33	4.50	4.50	$p = 0.003$	4.33	4.75	$p = 0.011$
Sat. Profession	3.00	2.42	2.83	2.84	$p = 0.002$	2.67	3.67	$p = 0.002$

reviews and pharmaceutical care [45,46], were clearly underreported. This may suggest potential issues concerning orientation to patients. Moreover, a wide proportion of pharmacists, especially the younger ones, were not performing their preferred professional activities, such as medication management and other tasks with direct patient contact. Nevertheless, the preference for these tasks is a good sign for future increase in orientation to patients, thus responding to what has been envisioned as an enhanced healthcare provision [47].

Previous research from Krupat and colleagues [20,21] suggest professionals' orientation to patients when PPOS scores are above 5 on average. Further PPOS validation from the same author [28], also with physicians, has placed the cut-off value on 4.8 [28], while a sample of pediatricians reached a mean value of 4.55 [48]. Studies with non-medical professionals, in the case, audiologists, have shown a mean value of 4.46 [49]. The overall PPOSp value obtained for this sample was 4 (IQR 3.71–4.36), higher for females than males, an orientation to patients already described for other healthcare professions [50]. Comparing with previous studies, this value is below a threshold that would clearly indicate an acceptable level of orientation to patients.

The existing orientation to patients seems to be independent of community pharmacists' experience and workload, though it is expected that fewer time pressures would favor tasks with higher patient orientation [18]. This seems to be the case: a significantly higher patient orientation was obtained for professionals mentioning pharmaceutical care to be his/her first professional duty. However, pharmacists' medication reviews and pharmaceutical care are seldom performed and mostly as second-line activities. In addition, they did not prove to be significantly associated with PPOSp higher scores. The single case of a pharmacist who had pharmaceutical care as the main task, plus the lack of differences in patient orientation considering all tasks, does not support a greater orientation to patients for consultation duties, even recognizing personalized communication for adequate pharmaceutical care and medication reviews [51]. Other services, such as vaccines administration, a practice introduced from 2008 to 2009 and requiring competence certification [52], were not significantly associated with a higher orientation to patients, suggesting a lower customization of this service.

Findings indicated that professionals recognize the importance of relational competencies to provide patient-centered care. Actually, Portuguese community pharmacists have reported being involved in pharmaceutical care activities [53,54], comprising direct patient care and consultation. However, findings also support a low level of service tailored to individual patients. Additionally, pharmacists have assumed enough relational (and technical) abilities, which might impinge on the recognition or acceptance to engage in further interpersonal communication training.

Previous studies within the Portuguese community pharmacies staff found moderate job satisfaction, not significantly influenced by the professional category or other social variables [19,55]. The present study global job satisfaction shows a median value just above the neutrality point, with younger pharmacists being less satisfied than those with more years of practice. Lau et al. [56] also found lower job satisfaction in younger pharmacists, who were spending time at the counter performing traditional product dispensing roles [56]. More importantly, the whole sample was less satisfied with the profession, suggesting that professionals would increase their satisfaction if they were more involved with clinical services and direct patient contact. In fact, performing more demanding tasks on clinical and relational competencies were associated with greater job satisfaction [57], while the predominance of product-focused roles might explain the modest levels of orientation to patients in this sample. As with previous studies with nurses, there were no high correlation values between PPOSp scores and job satisfaction [58,59]. Global satisfaction, as well as profession and recognition satisfaction, are significantly higher for tasks that do not involve direct patient contact, which might work as an explanatory factor for the low PPOSp scores.

Study limitations

Besides exerting caution when extrapolating results to a wider community pharmacists' population, the present findings may have suffered from undue influences and bias. There was a possible social desirability bias, knowing the study was conducted by an academic research team under the auspices of the Pharmaceutical Society, an organization that regulates the profession.

The instrument for assessing orientation to patients (PPOSp) did not undergo any kind of prior validation for the present study population and presented a reliability value below the usual 0.7 threshold [60]. Some items may have not reasoned amongst pharmacists; for instance, item 9 'Patients should be treated as if they were partners with the pharmacist, equal in power and status', undermined the scale reliability, indicating the concept may have not been adequate for the sampled population, independently from the level of agreement/disagreement. According to previous studies, familiarity and trust between pharmacists and patients manifested in ways not necessarily based on constructs and measures common to other healthcare professions [46,61]. This suggests that at least an initial qualitative validation phase is needed to adjust

the instrument for pharmacy practice. Moreover, knowing PPOS was used with success for other healthcare professionals, it is also relevant to further investigate why the PPOS underlying dimensions of caring and sharing are apparently absent from the pharmacists' population.

Conclusions

Portuguese community pharmacists work is mainly based on product dispensing and counter work, tasks that are fully compatible and benefit from higher levels of orientation to patients. However, this professional attitude was not confirmed in this study, nor related to pharmacists' work intensity or to the provision of clinical services.

To improve patient-orientated behavior, it is essential to address relation-based abilities in undergraduate and continuous education, introducing courses and training such as those based on medical humanities. Pharmacists less experienced seem to be more motivated to improve their patient-centered attitudes and communication skills. In practice, greater involvement with patient services, such as individualized preparation and administration of medication, which require careful communication, would be beneficial to trigger awareness for a greater orientation to the patient and an effective clinical role.

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Disclosure statement

No potential conflict of interest was reported by the author(s).

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