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Communication study

How does a physician's accurate understanding of a cancer patient's unmet needs contribute to patient perception of physician empathy?

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ABSTRACT

Objective: Unmet supportive care needs of patients decrease patient perception of physician empathy (PE). We explored whether the accurate physician understanding of a given patient's unmet needs (AU), could buffer the adverse effect of these unmet needs on PE.
Methods: In a cross-sectional design, 28 physicians and 201 metastatic cancer patients independently assessed the unmet supportive care needs of patients. AU was calculated as the sum of items for which physicians correctly rated the level of patient needs. PE and covariates were assessed using self-reported questionnaires. Multilevel analyses were carried out.
Results: AU did not directly affect PE but acted as a moderator. When patients were highly expressive and when physicians perceived poor rapport with the patient, a high AU moderated the adverse effect of patient unmet needs on PE.
Conclusion: Physician AU has the power to protect the doctor–patient relationship in spite of high patient unmet needs, but only in certain conditions.
Practice implications: Physicians should be encouraged toward AU but warned that high rapport and patient low emotional expression may impede an accurate reading of patients. In this latter case, they should request a formal assessment of their patients' needs.

1. Introduction

Patient perception of physician empathy (PE) is an important factor in cancer care, often associated with positive patient outcomes [1], such as a better quality of life [2] or adherence to treatment [3]. In spite of its various definitions [4], empathy in a medical setting is often defined as the clinician's cognitive ability to understand accurately their patient's needs and concerns [5], which we will refer to as accurate understanding (AU) in this article[1]. Strikingly, few empirical studies have tested whether AU really matters for PE. In fact, the sparse data available in oncology do not reveal any link between physician AU and concepts close to PE, such as patient trust in the physician [6] or satisfaction with the consultation [7].

Thus, on one hand, it could be that the physician's accurate perception of patients is not so important for PE. A good bedside manner without an accurate perception of the patient, but with

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[1] In the present study, we will use 'accurate understanding' (AU) to describe the accuracy with which a physician perceives the needs and concerns of a specific patient.

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active listening and warmth [8,9], as well as sufficient time devoted to the patient [10–14], seems sufficient for patient satisfaction. Consistent with this idea, in a vignette study responded to by analogue patients, Blanch-Hartigan found that 'patients' were satisfied with 'physicians' who were able to detect the occurrence of patient emotions, even if they were wrong at determining the *nature* of the detected emotions [15]. Thus, as some authors argue, accuracy may not be as functionally important as might *a priori* be thought [16].

On the other hand, an accurate perception of patient needs should be necessary for clinicians to address these needs and thus be perceived as empathic. Findings that patients' unmet information needs are strongly related to low PE [17–19] support this line of reasoning.

We reasoned that previous studies have failed to demonstrate the association of AU with PE [6,7] because of the two following methodological drawbacks.

First, rather than influencing PE directly, AU could moderate the link between patient unmet needs and PE. As previously stated, there is a strong link between patient unmet needs and low PE [17–19]. However, somewhat surprisingly, PE depends on elements that go beyond the action scope of physicians, such as the hospital's organization of care [20–22]. Dysfunctional hospital organization could create patient unmet supportive care needs, for which physicians are not responsible, but which do still impact PE. However, it could be expected that, although physicians are not responsible for and perhaps unable to meet these patient needs, their accurate awareness of these concerns could at least lessen the strong negative impact of unmet needs on PE. We thus expected a moderating effect of AU on the link between patient unmet needs and PE. Although there is no empirical study to date to support this hypothesis, from a theoretical point of view, it is conceivable that AU, as an acknowledgement of patient suffering, could buffer the negative impact of unmet needs on PE. Nevertheless, as developed in the following two paragraphs, the moderating effect could be possible only under certain conditions.

Second, according to some authors' point of view [16,23], perspective-taking (i.e. adopting another's perspective) could be one way, among others, to achieve AU. Therefore, it might be that previous studies did not assess the AU stemming from physician perspective-taking [24,25], which recalls the *distinctive* accuracy of social psychology [26,27], but rather a *normative* or *stereotype* accuracy resulting from physician heuristics to obtain an idea of the patient's situation rapidly and effortlessly. These heuristics are typically stereotypes (e.g. 'All advanced cancer patients must have a lot of unmet needs') or egocentric perspectives (e.g. 'If, as a physician, I have done all that can be done for a patient, (s)he should not have unmet needs') [16,23,25]. If, for example, a physician then assumes that cancer patients always have numerous unmet needs, (s)he will be accurate with all patients that do have many unmet needs. However, although this *stereotype* AU can be high, since it is not based on a sound knowledge of a specific patient by taking his/her perspective, it should not be related to PE. We therefore propose that AU could have the speculated moderating effect (i.e. AU moderating the negative impact of unmet needs on PE) but only for a *distinctive* AU.

Because of physician external constraints [8], such as lack of time, and since perspective-taking is an energy-consuming and demanding task, it can be assumed that, by default, physicians do not take patient perspectives but use heuristics instead. A distinctive AU ought to occur if physicians have a good reason to engage actively in the interaction with patients and take their perspectives [28]. Among other motivations, perspective-taking is triggered in difficult situations to cope with relationship threats [29] or lack of personal control [30]. This may explain why medical students elicit more patient perspectives in the case of an unclear diagnosis, which can be challenging for the doctor–patient relationship, compared to a clear diagnosis [31]. Therefore, although it may not seem intuitive, we assumed that distinctive AU would be more likely with patients for whom physicians perceive *poor* rapport rather than with 'easy' patients. Moreover, distinctive AU can only occur with patients who disclose information/cues on which physicians can draw in order to understand them accurately [32–34]. Without clear available information, physicians have no other choice but to use heuristics.

To summarize, our primary goal was to investigate the unresolved issue of how AU could contribute to PE. Clarifying this issue is vital to demonstrate the importance of AU in the doctor–patient relationship. Based on a theoretical reasoning, we hypothesized that AU would buffer the negative impact of unmet patient needs on PE, but only for an assumed *distinctive* AU, which, in this study, is either with expressive patients providing diagnostic information about their needs or when physicians have poor rapport with a patient. High patient expressiveness and poor rapport will be used as 'proxies' for an assumed distinctive AU, as our study does not allow distinctive AU to be empirically disentangled from stereotype AU.

A subsidiary goal was to explore whether classical covariates of PE, i.e. physician self-reported empathy [14,35,36], length of consultations [10,11,22,37], and physician experience in oncology in a reverse sense [35,38,39], would also correlate with PE in the context of advanced cancer care.

Advanced metastatic cancer patients were chosen to reach those likely to report unmet supportive care needs and because the doctor–patient relationship was deemed particularly important in this phase of the disease trajectory.

2. Methods

Full details of the study may be found in another report [32] so only the main information is given here.

2.1. Procedure

Eligible physicians from four French hospitals were invited to participate in the study. Upon acceptance, they completed a questionnaire assessing their self-reported empathy and providing their socio-professional characteristics. They then had to include 10 consecutive patients meeting the inclusion criteria. At the end of a consultation with the physician, patients were given a detailed written study description, a written consent form and the questionnaires to fill in. Within one day of each inclusion, physicians had to fill in a short questionnaire assessing their understanding of the patient's unmet supportive care needs (i.e. the AU task, see Section 2.3).

2.2. Participants

The sample was composed of 28 clinicians, mostly medical oncologists with 19 years of experience in oncology on average (SD = 8.4), and 201 adult advanced metastatic cancer patients. Most patients were female and lived with someone, their mean age was 62 years and the primary cancer sites were breast, colorectal and lung cancers. In all cases, patients had already consulted the physician at least 3 times before joining the study so that they already had a minimal knowledge of each other.

2.3. Measures

Patient perception of physician empathy (PE) was measured using the Consultation And Relational Empathy measure (CARE), a 10-item 5-point Likert scale providing an overall score of PE [40,41],

with a higher score meaning a higher PE. Items of the scale deal with patient perception of physician listening, respect, clear explanations and information provision, whether the physician (from the patient point of view) fully understands his/her concerns, and shows care and compassion. Cronbach's alpha (α) was 0.97 in our sample.

Physician self-reported empathy was measured using the Jefferson Scale of Physician Empathy (JSPE), a 20-item 7-point Likert response scale [42] with good psychometric properties [42,43]. In these validation articles, the scale provides scores for 3 dimensions: perspective-taking (e.g. 'I try to understand what is going on in my patients' minds by paying attention to their nonverbal cues and body language' or 'I try to think like my patients in order to render better care'), compassionate care (e.g. 'I believe that emotion has no place in the treatment of medical illness', reversed item) and in the patients' shoes (e.g. 'It is difficult for me to view things from my patients' perspectives', reversed). Higher scores indicate higher self-reported empathy. In our sample, α was 0.64, 0.57 and 0.85, respectively, for the three dimensions.

Patient expressive suppression was assessed with the 4-item 7-point Likert expressive suppression scale from the Emotion Regulation Questionnaire (ERQ) [44]. Expressive suppression describes to what extent people generally inhibit ongoing emotion-expressive behavior (e.g. 'When I am feeling negative emotions, I make sure I don't express them'). The expressive suppression score ranges from 4 to 28. In our sample, α was 0.83.

Rapport was evaluated by a single question assessing the physician-perceived quality of the relationship with a given patient on a 7-point Likert scale: 'What is the quality of your relationship with this patient?' from 1 'very difficult relationship' to 7 'very easy relationship'.

Patient unmet supportive care needs were assessed using an ad-hoc adaptation of the Supportive Care Needs Survey-Short Form 34 (SCNS-SF34) [45,46]. This contains 34 items grouped into five domains of needs: physical, psychological, sexual, informational, and care/support. Because physicians should also fill in this questionnaire taking the patient perspective (see below), it was deemed too long for this purpose. So, we shortened the scale further, keeping from the 5 original dimensions the 13 items that patients had rated as the most important in a previous study [47]. For each item, patients were asked to rate, on a 7-point Likert scale, the extent to which they had needed some help over the last month, from 1 'no need at all' to 7 'a total need of help'. Due to frequent missing data, the retained item about unmet sexual needs was discarded. With the exception of one cross-loaded item (about pain), thus also discarded, an exploratory factor analysis (principal components, varimax rotation, and scree test) extracted two clear factors labeled 'psychological' and 'staff-related' dimensions with α of 0.87 and 0.91, respectively (see Table 1 for details of items).

Accurate Understanding (AU) of patient unmet needs. Independently of the patient, the physician had to rate the patient's unmet needs on the abridged SCNS-SF34. Physicians were clearly instructed to take the patient's perspective and not indicate their own view of the situation. For each item, the physician was considered accurate if (s)he gave the same rating as the patient to within one point. This choice was made to find a balance between a too stringent and a too permissive criterion, from both a probabilistic and a clinical point of view. Then, a physician AU score was generated by summing the physician's accurate items for each of the two dimensions: psychological (possible range from 0 to 5) and staff-related needs (possible range from 0 to 6).

2.4. Statistical analyses

To respect the two-level hierarchical structure of patients (level 1) nested within doctors (level 2), multilevel analyses were performed [48,49] with MLwiN software 2.30 [50,51].

We started from the empty model (M0), which contains only the intercept and residuals for both patient or situational (σ^2_e) and physician (σ^2_{phy}) levels. This model enabled the intraclass correlation (ICC) to be calculated, which here is the variance in PE due to physicians, i.e. $\sigma^2_{phy}/(\sigma^2_{phy} + \sigma^2_e)$.

Next, the associations of the potential covariates with PE were tested one by one in bivariate analyses. Those significantly associated with PE entered Model 1. Then, our hypothesis was specified in two different models (2a and 2b) according to the

Table 1
Patient unmet needs as rated by patients and physicians.

	Patient's rating		Physician's rating		Difference[†]	AU[‡]	ICC
	Mean	SD	Mean	SD			
Dimension/item							
Psychological dimension							
Lack of energy, tiredness	3.32	1.92	4.09	1.73	0.77***	49	0.37***
Uncertainty about the future	3.64	2.11	4.11	1.78	0.48**	43	0.25*
Keeping a positive outlook	3.11	2.05	3.91	1.66	0.79***	43	0.36***
Feelings about death and dying	3.08	2.17	3.89	1.68	0.81***	42	0.34***
Being informed about things you can do to help yourself to get well	3.83	2.24	3.42	1.55	−0.41*	41	0.17
Dimension score	3.40	1.69	3.89	1.39	0.49***	2.17 (1.47)	0.29***
Staff-related dimension							
Being given explanations of those tests for which you would like explanations	3.05	2.05	3.03	1.50	−0.02	43	0.01
Being informed about your test results as soon as feasible	3.44	2.27	3.31	1.67	−0.13	43	0.24*
Hospital staff attending promptly to your physical needs	2.43	1.85	3.25	1.61	0.82***	51	0.36***
Reassurance by medical staff that the way you feel is normal	3.02	2.08	3.68	1.66	0.66***	48	0.30**
Being treated like a person not just another case	2.60	2.07	2.44	1.41	−0.16	57	0.20*
Being adequately informed about the benefits and side effects of treatments before you choose to have them	3.38	2.24	3.19	1.59	−0.19	42	0.17
Dimension score	2.99	1.73	3.15	1.27	0.16	2.83 (1.85)	0.24***

For each item, AU is the percentage of physicians who were accurate on this item (i.e. same rating as the patient to within one point). For each dimension, **AU** is the mean score of accurate items per physician, with standard deviation in brackets; ICC = Intra Class Correlation Coefficient.

*** $p < .001$.

** $p < .01$.

* $p < .05$.

† Difference was tested using paired t tests.

‡ AU = accurate understanding of patient's unmet needs.

dimension of needs, and using a three-way interaction: 2a) patient unmet staff-related needs × AU × rapport; and 2b) patient unmet psychological needs × AU × patient expressive suppression. In fact, patient expressive suppression was deemed particularly relevant for physician *distinctive* AU on psychological needs, while rapport was thought more relevant for staff-related needs. Indeed, as expressive suppression is really about the expression of emotions, it seemed more relevant for psychological needs, which are precisely about emotions. Moreover, as a poor rapport probably reflects the patient's dissatisfaction with information and staff care, it seemed more relevant for staff-related needs, which tap precisely these issues rather than emotions.

The test of a three-way interaction requires the introduction of the three terms plus the three two-way interactions in the model before entering the final interaction [52]. Models 2a and 2b therefore contain seven new parameters.

Finally, model fit was evaluated with the −2 Log Likelihood (−2LL). The smaller the −2LL is, the better the model is. The difference in −2LL between two models was tested using a chi square test. Lastly, although multilevel analyses do not provide an R^2 for the explained variance, a pseudo R^2 can be computed as the reduction in variance between two models, for example: $(\sigma^2_{\text{Model 1}} - \sigma^2_{\text{Model 2}})/\sigma^2_{\text{Model 1}}$.

3. Results

3.1. Descriptive results

The mean for PE was rather high: 38.4 (SD = 8.9; possible and sample range: 10–50). Consultations lasted on average 26 min (SD = 14; range: 5–90). Physician self-reported empathy was 48.9 (SD = 6.5; possible range: 10–70) on the 'perspective-taking' factor, 41.2 (SD = 5.4; possible range: 8–56) on the 'compassionate care' factor, and 7.7 (SD = 3.3; possible range: 2–14) for the 'in the patients' shoes' factor. Mean rapport with patients was high, 5.7 (SD = 1.1, possible range: 1–7, sample range: 2–7), and patient expressive suppression was moderate: 15.0 (SD = 6.4; possible and sample range: 4–28).

Patient unmet needs and AU are reported in Table 1. With the exception of the item about 'things patients could do to help themselves to get well', for which physicians underestimated their patients' needs, physicians either overestimated or equivalently rated their patients' needs. On average, physicians were accurate for 2.17 out of the 5 items of the psychological dimension, and for 2.83 out of the 6 items of the staff-related dimension.

3.2. Physician effects and covariates

The ICC computed from the empty model (M0, Table 2) was 18%. This means that PE was significantly different between physicians.

In bivariate analyses, physician 'compassionate care' and 'in the patients' shoes' empathy were not related to PE ($\beta = 0.21$, standard error (SE) = 0.17, $p = 0.22$, and $\beta = -0.10$, SE = 0.28, $p = 0.72$, respectively), whereas 'perspective-taking' empathy was positively related ($\beta = 0.32$, SE = 0.13, $p = 0.01$). Length of consultations positively correlated with PE ($\beta = 0.18$, SE = 0.05, $p < 0.001$), while physician experience in oncology negatively correlated with PE ($\beta = -0.23$, SE = 0.10, $p = 0.02$). The three latter variables entered Model 1, which was significantly better than the empty model (Δ−2LL = 17.5, $p < .001$, see Table 2). In particular, the covariates enabled a reduction of 39.8% in physician variance (from 14.06 to 8.47). When the covariates were together in the model, only the length of consultation remained significantly and positively linked to PE.

3.3. Moderating effect of AU on the relationship between unmet 'staff-related' needs and PE

In the final model (Table 2), as expected, patient unmet 'staff-related' needs were strongly negatively related to PE ($p < 0.001$) whereas AU on those needs did not directly affect PE. However, AU significantly predicted PE in the three-way interaction including both unmet needs and rapport ($p < 0.05$). The interaction was plotted for theoretical values of low (rapport = 3; Fig. 1a) and high rapport (rapport = 5; Fig. 1b). Because of the negative skewed distribution of this variable, we preferred to plot the interaction with theoretical values of 3 and 5 rather than using the classical criteria of percentiles 20 and 80. When rapport was low (Fig. 1a), AU had a strong effect on the needs-PE link. When AU was low, unmet needs correlated strongly and negatively with PE, whereas when AU was high, unmet needs correlated positively with PE. In

Table 2
Multilevel models for the prediction of PE by AU on patient unmet 'staff-related' needs.

Models	M0: Empty model	Model 1	Model 2a
Parameters			
Fixed effects			
Intercept	38.70*** (0.94)	38.45*** (0.81)	37.72*** (0.80)
Length of consultation		0.14** (0.05)	0.19** (0.04)
Experience in oncology		−0.13 (0.09)	−0.11 (0.09)
Physician perspective-taking (JSPE)		0.16 (0.13)	0.15 (0.12)
Patient unmet 'staff-related' needs			−2.26***(0.35)
AU of unmet 'staff-related' needs			−0.46 (0.31)
Rapport			1.17** (0.56)
Rapport × AU			−0.22 (0.29)
Rapport × unmet 'staff-related' needs			−0.73* (0.30)
AU × unmet 'staff-related' needs			−0.28 (0.20)
Unmet 'staff-related' needs × AU × rapport			−0.40* (0.18)
Random effects			
Physician variance σ^2_{phy}	14.06 (6.42)	8.47 (4.71)	8.91(4.21)
Patient or situational variance σ^2_e	64.42 (6.89)	61.01 (6.51)	44.46(4.75)
Model fit: −2 Log Likelihood (−2LL)	1432.83	1415.30	1356.92
Difference in −2LL between 2 models (df)		17.5*** (3 df with M0)	58.38*** (7 df with M1)

Effect significance = estimate/standard error (in brackets). For each model, the random slope model, which allows the slopes to vary across physicians, was tested. No random slope models were significantly better than the model without random slope effects; these models were therefore discarded (data not shown).

* $p < .05$.
** $p < .01$.
*** $p < .001$.

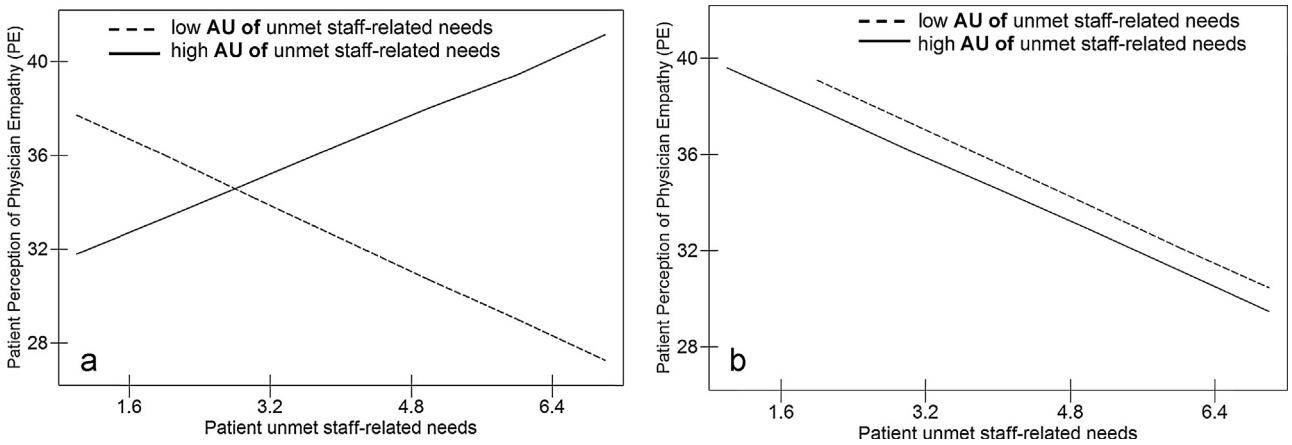

Fig. 1. (a) Interaction plot between patient unmet staff-related needs and PE for a low rapport with the patient (left figure); AU = accurate understanding of patient's needs. (b) Interaction plot between patient unmet staff-related needs and PE for a high rapport with the patient (right figure).

other words, when rapport was low, overlooked unmet 'staff-related' needs were negatively linked to PE, whereas accurately understood unmet 'staff-related' needs were positively linked to PE. In contrast, when rapport was high (Fig. 1b), AU no longer had any effect.

Model 2a also demonstrated that rapport positively correlated with PE ($p < 0.01$). Overall, this model was significantly better than Model 1 ($\Delta -2LL = 58.38$, $p < 0.001$, see Table 2). While it had almost no effect on physician variance, it reduced variance due to patient or situational factors from 61.01 to 44.46, i.e. by 27.1%.

3.4. Moderating effect of AU on the relationship between unmet psychological needs and PE

As predicted, patients' unmet psychological needs were strongly and negatively correlated with PE ($p < 0.001$) whereas AU of these needs did not directly affect PE (Table 3). However, AU significantly predicted PE in the three-way interaction including both unmet needs and patient expressive suppression ($p < 0.05$). The interaction was plotted for low (at percentile 20; Fig. 2a) and high patient expression suppression (at percentile 80; Fig. 2b). For low patient expressive suppression (i.e. patient is expressive; Fig. 2a), AU had an effect on the needs-PE link. When AU was low, unmet psychological needs were strongly negatively related to PE, whereas when AU was high, unmet needs almost did not affect PE. In other words, when patients were expressive and their unmet psychological needs overlooked, there was a negative relationship between unmet needs and PE, whereas when these needs were accurately understood by the physician (high AU), high unmet needs were not related to lower PE. In contrast, when patients were not expressive (Fig. 2b), AU no longer had any effect.

Overall, Model 2b was significantly better than Model 1 ($\Delta -2LL = 36.19$, $p < 0.001$, see Table 2). While it had almost no effect on physician variance, it reduced variance due to patient or situational factors from 61.01 to 50.76, i.e. by 16.8%.

Table 3
Multilevel models for the prediction of PE by AU on patient unmet psychological needs.

Model	Model 2b
Parameters	
Fixed effects	
Intercept	38.39^{***} (0.75)
Length of consultation	0.16^{**} (0.05)
Experience in oncology	−0.17 (0.09)
Physician perspective-taking (JSPE)	0.17 (0.12)
Patient unmet psychological needs	-1.72^{***} (0.32)
AU of unmet psychological needs	0.28 (0.36)
Patient expressive suppression	0.03 (0.08)
Patient expressive suppression × AU	−0.07 (0.05)
Patient expressive suppression × unmet psychological needs	−0.05 (0.05)
AU × unmet psychological needs	0.31 (0.21)
Unmet psychological needs × AU × patient expressive suppression	-0.06^{*} (0.03)
Random effects	
Physician variance σ^2_{phy}	7.48 (4.03)
Patient or situational variance σ^2_e	50.76 (5.42)
Model fit: −2 Log Likelihood (−2LL)	1379.11
Difference in −2LL between 2 models (df)	36.19^{***} (7 df with M1)

$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$. See Table 2 for empty model (M0) and Model 1. Effect significance = estimate/standard error (in brackets). No random slope models were significantly better than fixed slope models, and were thus discarded.

4. Discussion and conclusion

Our goal was to test whether physician AU could buffer the adverse effect of patient unmet needs on PE, controlling for usual covariates of PE.

First, among the covariates, in agreement with the literature, the consultation duration had the strongest positive relationship with PE. Without time, PE is inevitably limited. This could explain why, although communication skills training improves empathic behavior, patient perception of, and satisfaction with, health care professionals is not better after these interventions [37,53].

Second, our result that in bivariate analyses physician self-reported perspective-taking but not compassionate care was positively related to PE echoes those studies where a personalized *medical* approach by physicians (i.e. physicians knew the unique elements of patients' cases and offered support about medical aspects), but not their focus on patient emotions or personal topics, was the core element of PE [54,55]. All these data highlight the importance of perspective-taking as a key component of patient satisfaction [56]. Third, still in bivariate analyses, physician experience in oncology was negatively related to PE. An experimental study has demonstrated that too much experience triggers a desensitization, which decreases perspective-taking abilities [57]. Perhaps after a certain time in oncology, physicians also experience a sort of desensitization, by which they protect themselves against compassion fatigue, but at the expense of showing an interest in patients. Finally, only 18% of the variance in PE was explained by differences in physicians. This confirms that PE is also sensitive to patient and situational variables [58–60].

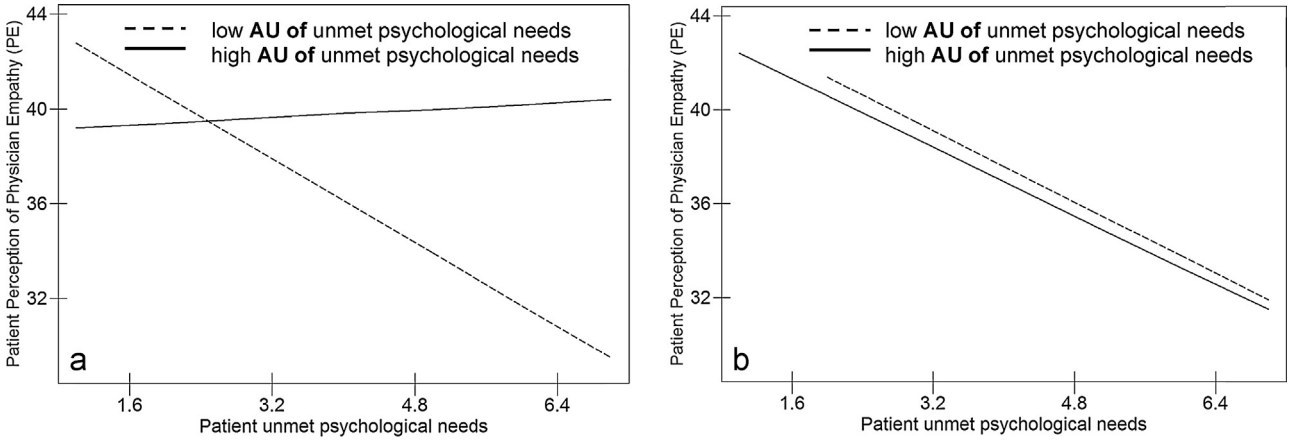

Fig. 2. (a) Interaction plot between patient unmet psychological needs and PE for a low patient expressive suppression (i.e. patient is expressive, left figure); AU = accurate understanding of patient's needs. (b) Interaction plot between patient unmet psychological needs and PE for a high patient expressive suppression (i.e. patient is not expressive, right figure).

As expected, patient unmet needs were strongly and negatively associated with low PE, and the quality of rapport was positively associated with PE. More importantly, the moderating effect of high AU was observed in the two conditions that were expected to prevent physicians from heuristics: poor rapport and high patient expressiveness. Informal feedback from physicians in the study added credence to our argument that distinctive AU is difficult to achieve in this context. In fact, in the debriefing interviews following the research, the physicians told us that the AU task was difficult and that they sometimes felt they had performed it randomly. Consistent with previous works [61], they reported that they rarely questioned themselves about their patients' care needs in their usual routine. Although this may seem surprising, it should be remembered that the heavy workload and compassion fatigue often faced by physicians are real barriers to the perspective-taking that underlies AU [8,62,63].

However, patient open emotional disclosure and low rapport allowed a different pattern to emerge. Two alternatives may explain how low rapport can facilitate distinctive AU and PE. Low rapport can come from either high patient disclosure of their unmet needs and discontent [64] or, conversely, from patient silence and disengagement in medical interactions [59]. In both cases, those physicians who overcome low rapport to try and understand their patients and achieve AU, whether by maintaining an interest in the patients in spite of their discontent or by eliciting concerns from silent patients, should logically be perceived as highly empathic. This is probably why we found high PE in spite of physician-perceived low rapport, but only when AU was high. This explanation is all the more likely since oncologists usually give little room for disclosure of patient implicit or ambiguous cues [65], so that those who make this effort should obtain both higher AU and, as a result, higher PE.

Before concluding, we address the limitations of this investigation. First, the physician sample was limited, the cross-sectional design rules out any causal direction, and measurement flaws should be acknowledged: a low Cronbach's alpha for the 'compassionate care' dimension of the JSPE and a single item to assess rapport. Second, although both the literature and our findings support the idea that AU can result from different processes, thus leading to different outcomes, our data do not formally demonstrate this. Third, we have no insight into physician empathic behavior such as paralinguistic expressions or verbal reassurance [66]. Therefore, it is still unknown whether AU alone or AU coupled with empathic behavior is the source of PE. Although it was necessary to investigate AU alone first [67], research into both AU and behaviors is now warranted.

5. Conclusion

To our knowledge, this study is the first to elucidate how AU contributes to PE in a naturalistic medical setting. It shows that, under conditions maximizing perspective-taking and thus distinctive AU, e.g. when physicians perceive a low rapport with the patient or when the patient is particularly expressive, AU buffers the adverse effect of patient unmet needs on PE.

5.1. Practice implications

Physicians should also be warned of the pitfalls of high perceived rapport and/or less expressive patients. Although these types of patient and rapport might appear comfortable for physicians, they do not enable distinctive AU, and thus its beneficial effect on PE. This is why an assessment of unmet needs should be systematically offered to all cancer patients, including those for whom nothing special came up in consultations. In parallel, patients should be encouraged or even trained to communicate openly and effectively with doctors so as to facilitate physician AU and hence improve their own quality of life [68]. Ultimately, continuing education about empathy would benefit from informing physicians of the minimal logistic conditions, such as consultation duration, which seem vital for PE, so that they can organize themselves accordingly and/or advocate a modified organization of the healthcare system.

Conflict of interest statement

No conflict of interest.

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