

## Letters to the Editor

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Editor, Letters to the Editor Section

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### In Response

#### Epistemology and Values Are Interrelated

##### To the Editor:

A number of articles in *Family Medicine* have stressed the importance of epistemology and values both as universals and particulars for the family physician.

The article "Epistemology and Uncertainty in Primary Care" by Evans and Trotter<sup>1</sup> limits itself to primary care; we would assert that "uncertainty" is an issue that confronts professionals who are required to address particulars. Thus, this applies to all professionals, eg, general principles of mechanics have to address the particular characteristics of the terrain and materials required for building this particular bridge, so not only primary care but all caring relationships.

Complementary to these general issues Grad pointedly and succinctly asks a question to all family physicians, "What's Your Epistemology?"<sup>2</sup> Further, he asserts that all family physicians should think about their epistemological assumptions. Especially since thinking about one's own epistemological assumptions was not addressed in his medical education, Grad specifies that epistemology focuses on questions such as "How is knowledge acquired?" "What do

people know?" and "How do we know what we know?"

Two articles address the general issues in the domain of values and ethics. Manson<sup>3</sup> focuses on the application of values in medical education, stating that "Professional and accreditation organizations have endorsed medical ethics as a fundamental component of education for family medicine trainees." We would argue that this should not be limited to trainees; it should be required of all clinicians as part of their recertification.

Complementary to these general issues in the domain of values is the article by Smith<sup>4</sup> that claims that "Helping Ourselves by Empowering Others" is not enough because "It's Not Enough to Do No Harm."

Our claim is that there is a reciprocal relationship between epistemology and values.

The reciprocal relationship is such that epistemological issues as universals imply particular values and conversely. That is, value orientations imply epistemological assumptions. However, this reciprocity between epistemology and values is not assumed to exist for any particular person, including family physicians.

This is the case because most individuals are not systematic or consistent with respect to their own particular epistemic assumptions or their value orientations.

Examples from breast cancer: Contrast the epidemiological orientation of breast cancer researchers who focus on group differences between large groups of individuals, ie, the RCG ideal for the epidemiologist in arriving at a universal. This approach allows an epidemiologist to dismiss rare cases or oddities. In sharp contrast, clinicians are concerned with a particular person, a person who often has a history of other diseases, illnesses, and concerns (Welch et al).<sup>5</sup> The decision to suggest a mammogram should ideally take into account both the normative evidence of the epidemiologist and the history of this particular patient.

Importantly, the relationship between the clinician and her/his patient should address the epistemological and value orientations that inhere implicitly or explicitly (eg, advance directives) in their relationship generally and at that particular time.

This is a general issue because we assume that the same clinician should be flexible with respect to their own epistemic assumptions and value orientations.

Flexibility on the part of the physician does not imply that it permits the clinician to violate their own value orientations. We conclude that in addition to Smith's injunction that "It's not enough to do no harm" or Manson's proposals for medical education in ethics

for residents in family medicine a focus on the dyadic doctor-patient relationship should respect the physician's own integrity regarding their professional commitments, both intellectually and ethically.

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## Personal Epistemology and Uncertainty

### To the Editor:

This letter is in response to the interesting paper "Epistemology and Uncertainty in Primary Care: An Exploratory Study."<sup>1</sup> Epistemology, epistemological beliefs, and uncertainty are three concepts that are ubiquitous in all human activity, even more in clinical activities that involve the use of diverse types of knowledge. Because some of these concepts have different kinds of referents (concrete elements [real] and theoretical elements), the clarity and the precision used in the elaboration of the constructs that define them are of vital importance.

Epistemology as a theoretical construct is a branch of philosophy and an interdependent discipline whose referent is the scientific knowledge. Some of the epistemological problems are gnoseological questions: What do we know? How do we know? What is truth? But also they are methodological questions: What are problems, methods,

approaches, hypotheses, theories, and rules? What is testability: confirmability, refutability, or either?<sup>2</sup> In contrast, epistemological beliefs (personal epistemology) are constructs that represent a set of informal individual beliefs, which are explicit and implicit; the referents of these constructs are mental processes.<sup>3</sup> Epistemological beliefs are not conditions of knowledge since we do not always know what we believe. A study carried out in Lima, Peru suggests that physicians do not know what epistemological beliefs they assume, although of course they are not unconscious.<sup>4</sup> Personal epistemology has been deeply studied by cognitive sciences; cognitive studies have contributed to the elaboration of the theoretical model in their description and exploration of their relationships with many other aspects of the learning processes (as academic success, reading comprehension, etc).<sup>3</sup> It is remarkable that the construct used by Evans and Trotter is not the one proposed by cognitive sciences, particularly because several instruments have been developed, and cognitive sciences have been able to categorize epistemological beliefs into subjectivist, relativistic, realistic, naive, and sophisticated. The instrument used by Evans and Trotter does not describe this construct; it just describes a set of beliefs regarding two social approaches to medicine. In the case that the authors claim that their questionnaire measures not only physicians' beliefs about social aspects of patient care but also physicians' epistemological beliefs, factor analysis should be included to confirm the multidimensionality of the construct.

The referents of uncertainty are concrete things, mental processes. Uncertainty is a mental state, as it represents a state of doubt between two choices and is expressed by anxiety. Therefore, that which lacks a mind cannot be uncertain. In medicine, uncertainty can restrain physicians' therapeutic actions and

at the same time stimulate diagnostic actions, such as requesting auxiliary tests. This occurs because uncertainty derives from a lack of knowledge. Because uncertainty is a reactive mental state to a specific, actual situation, it is difficult to study it using a retrospective questionnaire; by doing this, we can only study the physicians' past reactions, attitudes, and beliefs toward uncertainty but not their experiences of uncertainty. It can be better studied by presenting simulated or real problems to the physicians. I suggest that by using a questionnaire survey, the authors have found a relationship between beliefs but not between uncertainty and epistemology.

Nevertheless, raising the issue of whether there is a relationship between epistemological beliefs and uncertainty is a great merit of this paper, as it represents a heuristic question that should not be ignored and that biomedical research must study in the future.

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### Authors' Reply:

We thank Drs Bibace and Watzlawik and Dr Peña for their interest in our article on epistemology and uncertainty in primary care and welcome the opportunity to respond to their comments.