Symptom Bias: Definition, Identification and Avoidance
Commentary

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1. Introduction: A 'Common Criticism' and Defining Symptom Bias

A common criticism of medicine is that there is too much focus on treating *symptoms* instead of *patients*. This criticism and its sentiment – among other factors – have motivated many 'humanistic,' 'holistic,' and 'non-reductionist'[1] approaches to medicine including the biopsychosocial model, patient-centered medicine, 'gentle'[2] medicine, and others. Much has been said detailing and defending these approaches. My aim here is not to further defend one or any of these. Rather, my aim is to better understand what is at the heart of the 'common criticism,' i.e., that treating symptoms – not patients – is bad. What does this mean? Are symptoms not something patients have? By treating symptoms, do clinicians not necessarily treat the patients that have them?

I think it is clear that this is not what is intended by the common criticism. Instead, I contend that this criticism is best understood as a criticism of a specific bias I here introduce and explicate: *symptom bias*. Symptom bias occurs in the process of decision-making when treating symptoms is the *ends* of an intervention instead of the *means* by which some other larger goal like 'health' or 'well-being' is foreseeably achieved. I contend this erroneous means-ends reasoning is the target of the common criticism. And though there is a tacit aversion to symptom bias in the non-reductionist approaches, without an explicit understanding of this bias it is ambiguous how to respond to the criticism. Moreover, without an explicit understanding it is possible that even non-reductionist approaches may perpetuate symptom bias. Even a holistic or biopsychosocial approach to medicine may still perpetuate symptom bias if decisions about treatments are made when treating symptoms are the ends, not the means of some intervention.

Explicating symptom bias and a brief discussion on avoiding it follows. I will show that avoiding symptom bias is possible by considering cases of decision-making where treatment may be deemed inappropriate or not in the patient's best interests, e.g., 'rational polypharmacy'[3] and maintaining 'equilibrium'[4] in the polypharmaceutical context. Avoiding symptom bias more generally means applying these lessons from the polypharmaceutical context to all intervention deliberations.

2. Discussion

Without a clear understanding of symptom bias, non-reductionist approaches can still succumb to it. For example, consider something central to patient-centered care: shared decision-making.[5] Shared decision-making occurs when clinicians explain treatment options and risks, patients express preferences, values, and goals, and a decision on a course of action is made through agreement. This ideally entails that the decision made is one where the patient exercised autonomy, was informed, and consented to a preferred procedure licensed by their clinician. However, symptom bias can still occur here insofar as clinician suggestions may focus on treating symptoms rather than positively contributing to something like well-being or another broad health goal. Imagine an arthritic patient presents with neuropathy. A clinician may suggest various treatments, e.g., NSAIDs, anticonvulsants, physical therapy, etc. After the patient expresses preferences, goals, and values, ideally some agreed upon course of action is taken and is similarly modified if needed. If symptom bias is present, what may occur is that the range of treatments offered by the clinician may be truncated. If the patient's main complaint with their neuropathy is that they have a hard time reaching for objects on high shelves or getting dressed, a clinician with symptom bias might offer some of those treatment options and not others. Anticonvulsants might immediately alleviate the symptom, where physical therapy might not immediately alleviate the symptom though could possibly entail more long-lasting pain-free mobility; symptom bias may entail the recommendation of the former without mentioning the latter. This is not to say there is some great harm happening here, rather, it is just that the quality of care in such a case does not adhere with best practices.

Approaches to medicine that tacitly arose in reaction to symptom bias might still commit it when adhering to something like a 'treat-first' commitment. Even if it is better to recommend physical therapy in some cases of neuropathy, or lifestyle changes for pre-hypertension in lieu of ACE inhibitors, or if we acknowledge that the causes of disease are biopsychosocial, this does not preclude that when presented with a symptom, clinicians first and foremost must treat it via whatever is appropriate according to some non-reductionist approach. Imagine a clinician has a patient with recent minor sciatica. Instead of prescribing pain relievers or steroids, say the clinician recommends swimming therapy. Perhaps the patient is tentative, but our clinician is adamant – the sciatica needs to be managed, now. We can imagine the patient coming away from that interaction echoing the common criticism. This treat-first commitment is part and parcel of symptom bias. There are some instances we can imagine that when a clinician is presented with some symptoms, it may be best to do nothing at all. This does not mean that avoiding symptom bias entails that when presented with symptoms one ought do nothing, rather, it just means that there must be a conceptual space where there is room for considering *why* one might intervene on a symptom when presented. A rough outline of the decision-making process with symptom-bias in mind may look as follows: (1) A patient presents with symptoms (2) a clinician considers treatment, and if there is symptom bias, then (3) those treatment considerations are then acted on. Avoiding symptom bias just means adding a step between (2) and (3) – a consideration of if treating those symptoms is actually in line with

the patient's health or well-being. Adding that step entails that intervening on those symptoms is not the ends, but rather the means of some intervention.

Consider patients with comorbidities taking multiple medications, i.e., polypharmacy. In polypharmacy, medications might contraindicate, and this might motivate additional treatment. This is when symptom bias can be at its most nefarious. In such cases, treating symptoms might make patients worse off than before. If instead of 'treating symptoms' being the ends of intervening, we had something else like 'well-being' as the ends, we see how this might be avoided. The concept of equilibrium[4] is useful here, i.e., that we set a baseline of some functions or activities that may still include symptoms of illness and not intervene unless the baseline changes. Treating symptoms, if done at all, is secondary or the means to this end. Polypharmacy ought to only occur when it is rational,[3] i.e., when it is necessary, evidence-based regarding the interaction of the drugs, and there is close monitoring to make sure the patients ends are being met through these means. In polypharmacy, new symptoms might arise, but if those symptoms do not change equilibrium, it may be best to do nothing at all other than stay vigilant and communicative. There is conceptual space where there is consideration for the aims or ends of intervening. Mitigating or avoiding symptom bias more generally just means taking this lesson of means-ends reasoning to all interventions, not just those of polypharmacy.

Finally, one might ask if there are cases where symptom bias is good or unproblematic. Say a type-1 diabetic patient arrives at the ER unconscious and unresponsive with Kussmaul breathing. Blood tests confirm diabetes-related ketoacidosis, and it becomes clear the patient is in a diabetic coma. Does avoiding symptom bias, i.e., a avoiding a 'treat-first' methodology, entail not immediately mitigating the symptoms? No. Notice that in the acute context, what is likely already implicit is that treating these symptoms is in the patient's best interests, i.e., health or well-being. One might respond that ER clinicians are not concerned about anything else than fixing the symptoms directly in front of them, but I suspect this is done for and in the aims of helping *people*. What would committing symptom bias in this instance look like? Perhaps something along the lines of curing the coma by 'whatever means necessary,' without regard for the patient who, hopefully, will eventually wake up. Even if the symptom-bias-avoidant ER attending does the same things as the symptom-bias-committing ER attending in this case, it is not hard to imagine that such practices will not be beneficial long-term. In short, no, there are no cases where symptom bias is unproblematic.

3. Conclusion

My aim here was to explicate symptom bias as the heart of a 'common criticism' that there is too much focus on treating *symptoms*, not *patients*. Without this understanding of symptom bias, it may be perpetuated even in non-reductionist approaches. While this might not always entail explicit harms, it can cause a failure to adhere with best practices. To avoid symptom bias is just to avoid an erroneous means-ends reasoning where treating

symptoms is the ends of interventions. Instead treating symptoms ought to be the means towards patients' ends. Without identifying this bias and its scope, it is ambiguous how to clearly avoid it and teach avoidance of it. Making this bias explicit and giving it a name helps in this latter aim as well.

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