



Letter in response to *Biomedical services fit amongst people with relational worldviews*

To the Editor

Dr Harries' article proposing a "middle road" between indigenous healing systems and biomedical services from the West helpfully articulates both the economic barriers to acceptance of "modern medicine" and the importance of understanding the "felt needs" of those who are ill or suffering.¹ However, the contention that "the medical means of proving that something actually works . . . are beyond implementation or even comprehension by many people indigenous to Africa" deserves further exploration.

While it is true that understanding the details of the randomized controlled trials (RCTs) and meta-analyses that undergird contemporary evidence-based medicine (EBM) is a challenge for both patients and clinicians, fundamentally clinical research is simply about studying what happens when two similar groups of people do something different. That simple concept (reducible even further to "do something and see what happens") can easily be related in a story, and providentially, we have the very first clinical trial in recorded history as part of the Christian story.

At least two published histories of clinical research^{2,3} identify the story of comparative diets in Daniel 1:3-19 as the first clinical trial in recorded history:

Daniel then said to the guard whom the chief official had appointed over Daniel, Hananiah, Mishael and Azariah, 'Please test your servants for ten days: Give us nothing but vegetables to eat and water to drink. Then compare our appearance with that of the young men who eat the royal food, and treat your servants in accordance with what you see.' So he agreed to this and tested them for ten days [Daniel 1:11-14, NIV]

The population was small, the study groups were not randomized, and the follow-up was short. Nevertheless, King Nebuchadnezzar was impressed with the results, and those of us interested in EBM should be impressed that the original concept of a clinical trial is at least over 2300 years old (depending on assessments of authorship and dating for Daniel).

Not only does the story of "Daniel and the diet" illustrate that a quest for verifiable clinical certainty is providentially part of the Christian story, it also provides a model for sharing the fundamental concepts of clinical research in an easily-understood story based in a real-life setting, and it provides a means for sharing both the Christian story and a model for demonstrating the basics of EBM at the same time.

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References

1. Harries J. Biomedical services' fit amongst people with relational worldviews, and a 'middle road.. Christ J Global Health.2022;9(2):28-31. <https://doi.org/10.15566/cjgh.v9i2.671>
2. Bhatt A. Evolution of clinical research: a history before and beyond James Lind. *Perspect Clin Res.* 2010 Jan;1(1):6-10. PMID: 21829774; PMCID: PMC3149409. <https://pubmed.ncbi.nlm.nih.gov/21829774/>
3. Collier R. Legumes, lemons and streptomycin: a short history of the clinical trial. *CMAJ.* 2009 Jan 6;180(1):23-4. PMID: 19124783; PMCID: PMC2612069. <https://doi.org/10.1503/cmaj.081879>.

In Reply

Cayley's interpretation of Daniel seems to follow a convention unfamiliar to many in Africa. His reader might wonder whether he credits the biochemical properties of the food for the

difference in final appearance between the two parties? This stance by Cayley is not surprising when one considers that ‘God did it’ or ‘God made the difference’ are unacceptable statements in mainstream scholarship today.

Could the difference in appearance of the two groups who ate different diets, be due to God’s divine intervention? Christians might accept that God works through biochemistry and should take credit for biochemically-sourced changes. Many contemporary Westerners however consider the fact that changes can be predicted using biochemical understanding gives reason to not believe in God. Such questioning of whether God necessarily stands behind biochemistry may be reason for Cayley to prefer to consider the outcome of Daniel’s predicament a historical antecedent to today’s system of clinical trials, rather than an instance of “divine intervention.” i.e., he is responding to sceptical Westerners who have bought into a positivistic mechanical-world philosophy, by telling them “look, what we do now, is a product of faith in God by previous generations.” This approach validates the Bible on account of its foundational formative role in enabling the creation of today’s modernity, an approach taken by Scrivener.⁴

Cayley tells us: “That simple concept (reducible even further to ‘do something and see what happens’) can easily be related in a story, and providentially, we have the very first clinical trial in recorded history as part of the Christian story.” Does he perceive that his taking the Bible as a simple way of justifying contemporary medical research might be less than complimentary of people who do not link those two things? Yet, frankly, at least from a traditional African point of view, Daniel’s experience could be understood very differently.

Daniel and his colleagues’ apparent better health could be hypothesised to be related to the presence of blood in the prescribed food, consumption of which was prohibited by Moses’ laws (in the case of wine, the Bible discourages drunkenness)⁵ Thinking that such prohibition itself anticipated mechanisms of causation that were physical / chemical, begs the question of my original article.⁶

An avenue of exploration more likely to prove fruitful, is consideration of the relationship between diet and what could be considered in English ‘wholistic wellbeing’, i.e., ‘emotional health,’ as a source of physical wellbeing.⁷ Following Mosaic laws would have rendered Daniel and his friends content that they were being true to those of their own people’s beliefs and traditions that represented “their God.” Such adhering to prescriptions of their own God would have rendered life purposeful and enlivened God’s promises with respect to their own personal situations. God’s concern for the poor and victims, such as themselves as captured slaves, expressed in opposition to sin (on the basis of an understanding that sin is that which victimizes the innocent), was then a foundational basis for their own personal hope that was not shared by their Babylonian colleagues.

The latter interpretation shows the route from the Bible to ‘science’ to be less direct than that proposed by Cayley. The Bible takes us to belief in one ‘rational’ God. That belief brings causation of other gods into question, including ‘spirits’, i.e., emotional binds between people that cause them to fear the envy, anger, frustration and so on of others.⁸ It was such bringing-into-question, I suggest, that could in due course have enabled modern people to reach the comprehension of material causation of the nature presupposed in Cayley’s assumptions regarding the ‘clinical trial’ nature of the scenario with Daniel and his friends.

The above high valuation of a community’s adhering to its ancestral prescriptions to bring wellbeing implies that biomedical interventions may be inappropriate even if verified as helpful by randomized controlled trials. An example would be social distancing that rent families and communities asunder in the height of the COVID-19 pandemic. This suggests that there is room for a ‘middle way’ of respecting beliefs of people that cannot be verified as evidence-based medicine.

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References

4. Scrivener G. *The Air We Breathe: how we all came to believe in freedom, kindness, progress, and equality*. Epsom, Surrey: The Good Book Company. 2022
5. Leviticus 17:10-12, Deuteronomy 21:20.
6. It simply raises the question as to whether eating blood is 'bad for your health' is to be understood in a 'modern' biochemical way.
7. Cowie H, Boardman C, Dawkins J, Dawn J, *Emotional health and well-being: a practical guide for schools*. London: Paul Chapman Publishing, 2004. p3.
8. My experience of observing spirit exorcisms in East Africa has me realise that there is often a close relationship between what we in English term 'spirits' with what we in English interpret as 'emotions.'

The Editors' Response

We appreciate Dr. Cayley's letter to the editor, and Dr. Harries' response, which creates some helpful reflection on the nature of science and observations in a relational world. In response to Harries' contention that the indigenous mind cannot implement or even comprehend evidence-based health studies, Cayley describes a simple comparison in the Old Testament between two dietary approaches to well-being and observations of the outcomes. There are no biochemical assumptions about the process. The comparison does not even rule out God's providential blessing of Daniel and his friends on the basis of their

obedience to Jewish dietary laws or their relationship to God and others. As the authors Dr. Cayley cites have described, this comparison is not fundamentally different from a modern clinical trial, given the qualifications that Cayley mentions.

Dr. Harries makes assumptions about both what Dr. Cayley might presuppose (the trial is all biochemical and not relational) and how indigenous Africans might think about the material world (all relational/spiritual and not material). A clinical trial might seek to *correlate* the blessings that result from right relationships with God, others and the material world - ie. avoiding certain prohibitions leads to better health outcomes, because that is what God directs and is pleased with, and it is the way the universe is designed (moral and rational; observable and controllable).

In this biblical narrative, we are not told what presumptions Daniel had about the dietary differences. That local meat might have had blood is one possible explanation, but so is the possibility that pork or other impermissible meats might have been served. The reasons for Daniel's reservations are a matter of speculation, as Harries rightly contends. But his reasons do not have anything to do with the trial he proposed. No presumptions are required for mechanisms of causation, and it could therefore be considered an ancient clinical trial. As Dr. Cayley points out, a "modern" approach to discovering the truth about something is actually an ancient and God-ordained way of discovering truth, and comprehensible across cultures.