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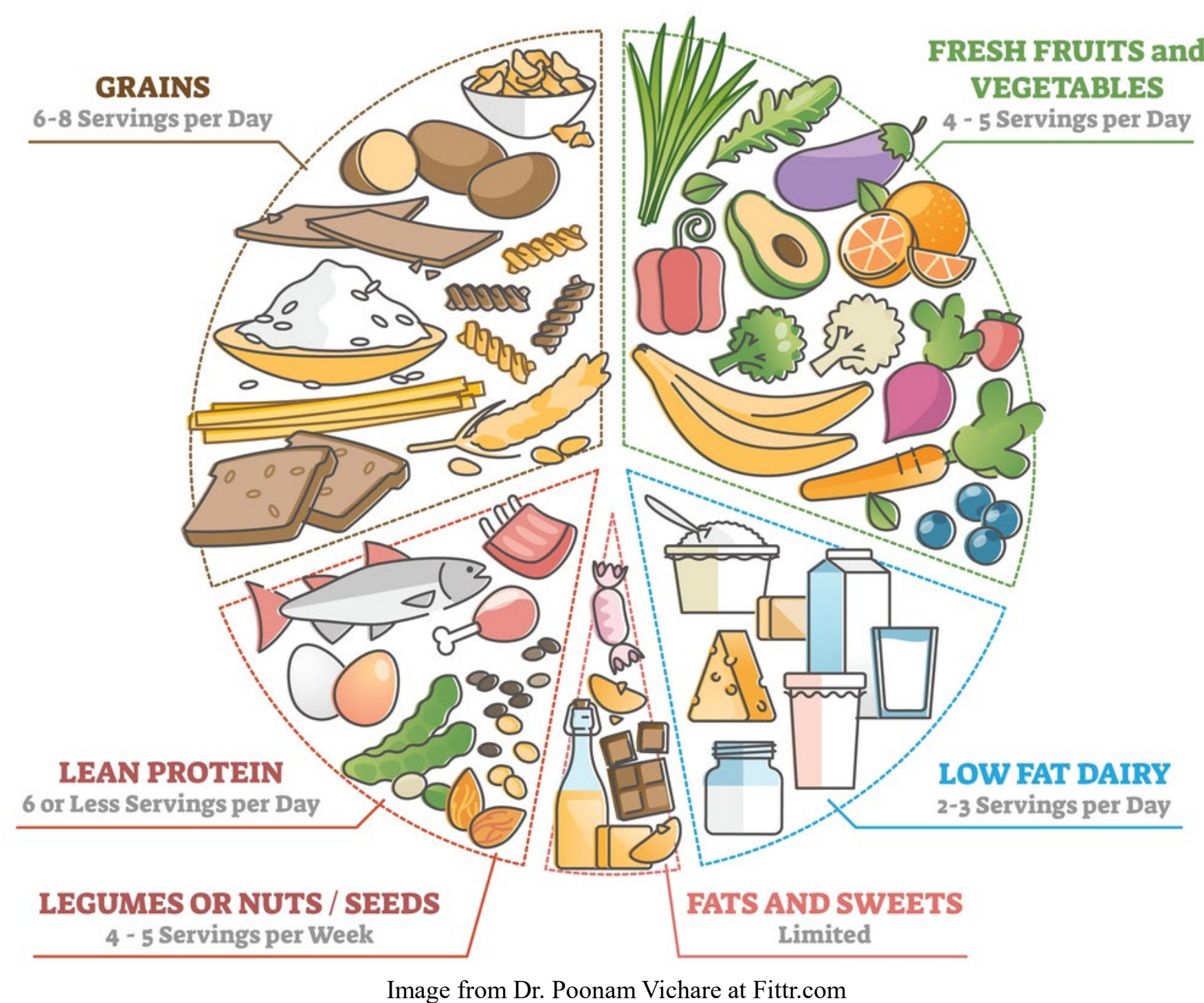
Changes to protein food intake can improve diet quality and reduce environmental impacts

Previous Research

Greater adherence to the Dietary Approaches to Stop Hypertension is associated with lower greenhouse gases and land use from protein foods.

Background:

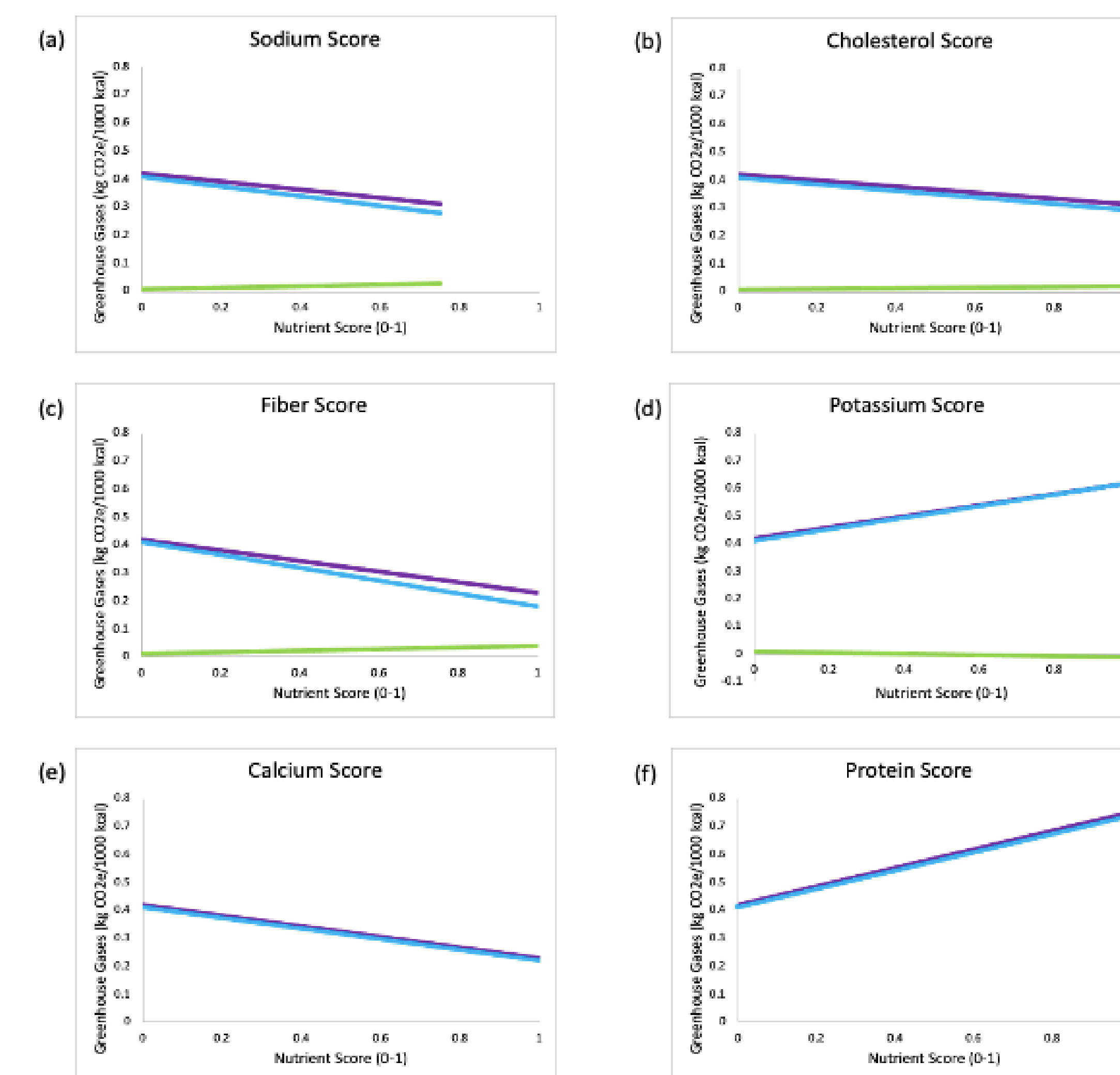
- Production of red meat requires greater inputs of land and water and yields greater amounts of greenhouse gases compared to other animal protein foods and plant protein foods (Clune et al., 2017; Sabaté et al., 2015).
- Overconsumption of red and processed meats increases one's risk for chronic diseases such as cardiovascular disease (Rohrmann et al., 2013).
- The Dietary Approaches to Stop Hypertension (DASH Diet) is clinically proven to reduce blood pressure (Appel et al., 1997) and limits red and processed meats.



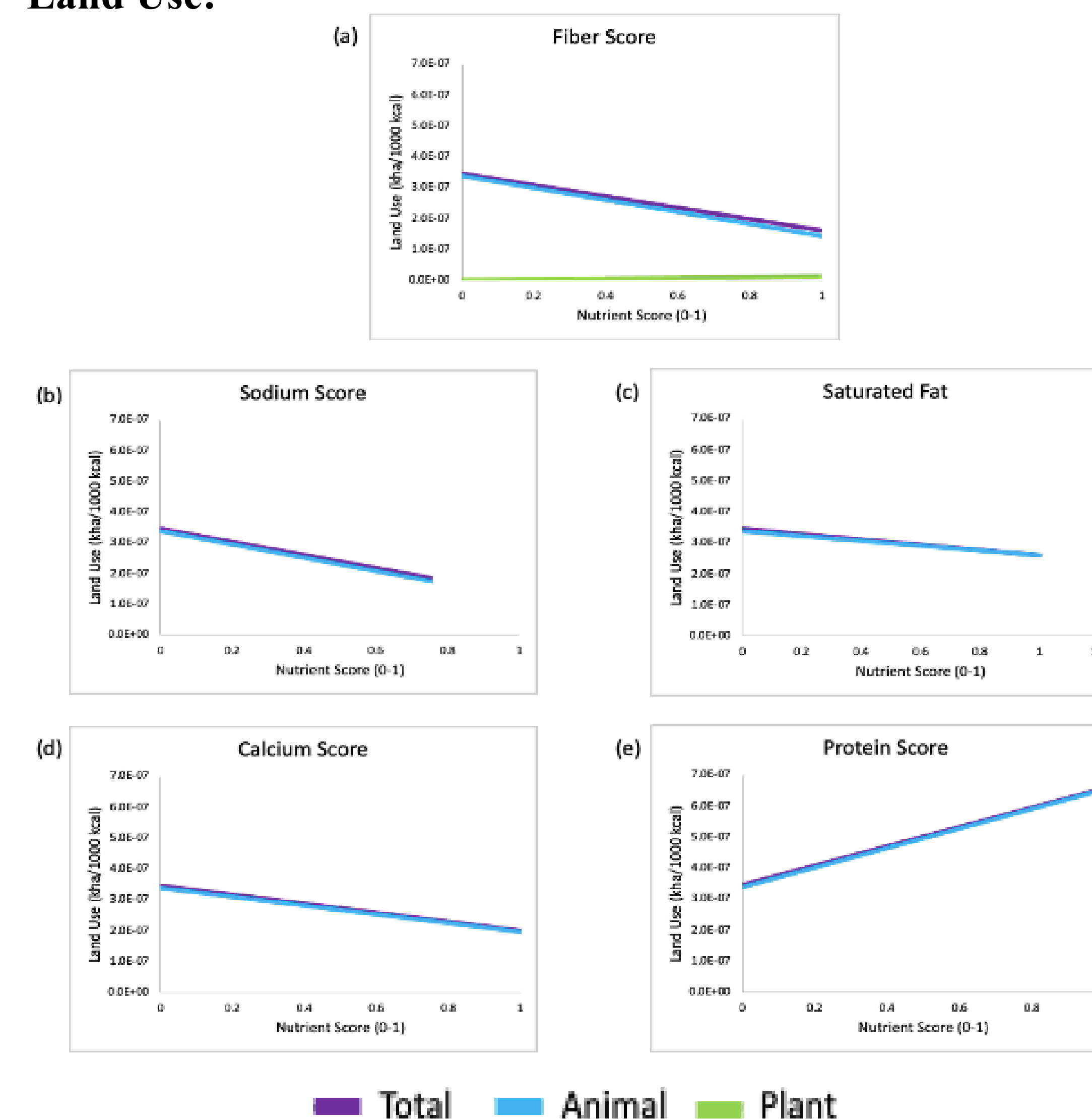
Methods:

- Over the course of a year, 36 dietary recalls were collected from over 400 Midwesterners aged 35 to 70 years-old, as part of an exercise intervention. Only 380 participants were included in the final analyses.
- The 2002 Purchaser Model (farm-gate to retail) from Carnegie Mellon University's Economic Input-Output Life Cycle Assessment was utilized to assess greenhouse gases, land use, and water withdrawals.
- DASH diet adherence was evaluated using a nutrient-based DASH score (Mellen et al., 2008).

Greenhouse Gases:



Land Use:



Future Research

Explore strategies to promote the adoption of healthy and environmentally sustainable dietary choices in middle schoolers.

Background:

- Swapping beef with poultry or plant-based proteins can reduce dietary greenhouse gases by 9-40% depending on type and degree of substitution (Willits-Smith et al., 2020).
- Promotion and education of sustainable behaviors may be more effective during primary education as children have less strong opinions and attitudes about climate change (Chawla, 1999).

Food Labels:

- Consumers don't consider reducing meat consumption as an important climate change mitigation strategy and want concrete evidence before changing dietary patterns (Austgulen et al., 2020).
- Limited research has been conducted on youth populations.



Cooking School:

- Attitudes towards climate change and confidence in cooking plant-based meals predict a person's attitude towards meat-free meals (Austgulen et al., 2020).
- Student-driven climate change education may lead to sustainable diet behaviors, such as reduced food waste (Prescott et al., 2019).
- School-based cooking schools positively affect youth's vegetable preferences (Cunningham-Sabo and Lohse, 2013).

