Planetary health nutrition – using the influence of social media to change narratives

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Background and Goals

Planetary Health Nutrition, or the Planetary Health Diet (PHD), is a dietary approach that aims to protect both human health and the planet's sustainability now and in the future. The EAT-Lancet Commission's 2019 report outlines this necessary societal dietary transformation (Willett et al., 2019). The core elements include shifting dietary habits toward more vegetarian and vegan options, which are more climate-friendly, improving food production practices, and reducing food waste. For the general population in Germany, this would mean significantly increasing the consumption of fruits, vegetables, and legumes while reducing the intake of meat, other animal products, and highly processed foods (Deutsche Gesellschaft für Ernährung e.V., 2020; Willett et al., 2019). Dietary change is considered a "wicked problem" (Freidberg, 2016) because there is no simple societal solution to align current eating habits with the ideal planetary diet. This complexity arises from deeply ingrained dietary habits influenced by factors such as prenatal imprinting, nutritional education, cultural practices, available budget, health status, interest in nutrition, time investment, and indirect factors like exposure to advertising and food system policies. All these factors play a role in translating scientific research into practical applications.

The project aimed to test new communication strategies and potential solutions to introduce the concept of planetary nutrition to the public through influencers on Instagram. Influencers are defined as online communicators on platforms like YouTube, Instagram, and TikTok, who build relationships with their followers through the content they produce and their regular interactions (Enke & Borchers, 2019). Influencers' ability to influence stems from their perceived expertise, authenticity, and their relationship with followers (Hudders et al., 2022). Given the large audience reach, influencers can act as opinion leaders (Enke & Borchers, 2019), traditionally seen as well-connected individuals or experts capable of influencing those around them (Katz & Lazarsfeld, 2017). Influencers resemble traditional opinion leaders as they are well-connected and can reach an audience beyond their immediate circle (Casaló et al., 2020). Hence, they can serve as effective multipliers and pioneers of transformative change, and as potential role models for sustainability and healthy eating (Chung et al., 2021; De Jans et al., 2021).

SciComm Format and Evaluation

The project aimed to develop a concept to communicate scientifically backed planetary nutrition in a participatory approach with influencers from various sectors such as nutrition, health, sports, sustainability, fashion, and beauty design through their platforms and communication styles. The specific content and formats depended on the influencers' focus areas and their previous engagement with planetary nutrition. This approach aimed to allow influencers and their followers to engage with the topic easily, providing thought-provoking content and encouraging concrete dietary changes (Schneidewind et al., 2016).

The project hypothesis posits that influencers from non-specialist areas (in sustainable action or consumption) can reach a broad audience that is not yet aware of planetary health nutrition, creating new awareness. The extent to which this also contributes to a change in the dietary behavior of followers can only be partially assessed within this project's scope.

The recruitment of micro-influencers for this project was based on private channels and cold acquisition via social media platforms. In the initial contact phase, 21 influencers were approached via email. Seven declined due to time constraints, disinterest, or financial reasons, seven did not respond despite follow-ups, which led to a participation of seven influencers from the fields of nutrition, travel, sustainability, and mindfulness.
The evaluation was conducted in three areas using various parameters: engagement and reach of influencers, opinion analysis after a participatory workshop with influencers, and the effectiveness of content shared on social media platforms. During the initial contact phase, the number of influencers contacted directly or through agencies and the number of responses received were recorded and analyzed. A Zoom workshop was conducted with the recruited influencers to introduce the basics of planetary health nutrition and collaboratively develop strategies for effectively presenting this content on their channels. Quantitative surveys were administered to the influencers before, immediately after, and post-posting to assess changes in their knowledge and attitudes. Qualitative one-on-one interviews were conducted to explore the perceived relevance of planetary health nutrition for their followers, how influencers could integrate the topic into their feeds, the information they needed, and how scientists should prepare content for influencer feeds. The frequency of posting planetary health content was also discussed. The reception of planetary health nutrition topics among followers was evaluated by analyzing reactions and comments on social media posts.

Results and Discussion
The seven participating influencers had follower counts ranging from 3,800 to 38,700, averaging 17,033 followers. This initial reach highlighted the potential network for promoting the planetary health diet (PHD). The project included a workshop and surveys at three stages: before (T1), after the workshop (T2), and after posting (T3). Surveys gathered demographic data, emotional responses to climate change, awareness and interest in PHD, and perceived follower interest. Most influencers were aged 24-28, and all were female. Emotions such as helplessness, disappointment, anger, and sadness decreased from T1 to T3, while confidence, doubt, guilt, determination, fatigue, and empathy increased. For instance, mean confidence rose from 2 at T1 to 5 at T3. Awareness of PHD improved significantly after the workshop, with all participants indicating a basic understanding by T3. Initially, only two influencers had heard of PHD, while five had no prior exposure. Interest in PHD was consistently high, peaking at six influencers rating it "Very High" at T2, before dropping to four at T3. The project positively impacted influencers' dietary habits (see figure 1). Before the workshop, only two adhered to PHD principles, which increased to six post-workshop. All participants expressed a growing willingness to continue posting about planetary health nutrition from T1 to T3.
Interviews revealed varied motivations for participation, including personal interest in nutrition and appreciation for the structured project approach. Influencers valued the clear communication and organizational support. Content for Instagram posts varied, with some focusing on relevance to their followers and others providing a general PHD introduction (see figure 2). Posts generated significant engagement, with one influencer gaining new followers and another noting that their post received the most saves among their content. Social media statistics showed that the seven influencers reached a total of 70,676 people with their PHD posts, receiving 3,329 likes, 153 comments, and 585 saves, demonstrating substantial audience engagement.
This experiment aimed to test new communication strategies and solutions to bring the topic of planetary health nutrition to the public via Instagram influencers.
Influencers, perceived as opinion leaders, have the potential to promote transformative behavior changes. The project successfully engaged seven influencers with an average follower base of 17,033, eliciting positive responses and high engagement from their followers.

Interviews provided insights into motivations, organizational factors, and content strategies. The project demonstrated that a multi-platform strategy, including TikTok, YouTube, blogs, and Pinterest, could enhance broader and more sustainable engagement. Barriers to effective science communication via social media include costs and the need for long-term contracts to ensure consistent information dissemination. Further research is necessary to develop valid tools for assessing the effectiveness of communication campaigns, particularly for short-lived content like Instagram Stories or TikTok videos. Despite influencers reporting changes in their behavior, obtaining detailed data on the actual behavioral changes of both influencers and their followers proved challenging.

Figure 1: Influencers nutritional habits before (T1), after the workshop (T2), and after posting (T3).

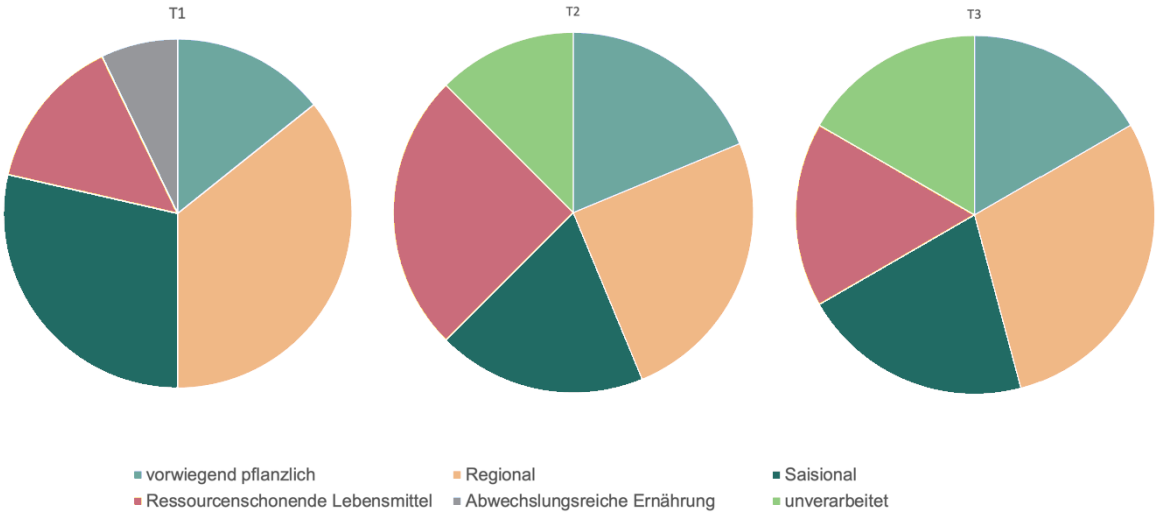

Figure 2: Exemplary Instagram posts from Influencers concerning the planetary health diet.

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