



Abstract

Food Biodiversity and Diet Quality in Dutch Adults [†]

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[†] Presented at the 14th European Nutrition Conference FENS 2023, Belgrade, Serbia, 14–17 November 2023.

Abstract: Biodiversity is essential for human and environmental health, yet our food system is one of the primary drivers of biodiversity loss. Food biodiversity, defined as the variety of consumed plants, animals and other organisms, can be measured by Dietary Species Richness (DSR). A higher DSR is associated with a lower mortality risk in European populations; however, less is known about DSR and diet quality in Dutch populations. We assessed the associations between fruit DSR and diet quality in a representative sample of 2078 Dutch participants aged from 19 to 79 years. Data were retrieved from the Dutch National Food Consumption Survey (DNFCS) between 2012 and 2016 by two non-consecutive 24 h diet recalls. Fruit DSR was calculated based on the absolute count of unique fruit species consumed over two measurement days, regardless of the total amount (grams) of consumed fruits. The Dutch Healthy Diet index 2015 (DHD15-index) consisting of 14 components was used to measure diet quality. Per component, participants could score between 0 and 10, with a total score between 0 and 140. Linear regression analyses were performed to investigate the association between fruit DSR and DHD15-index. Analyses were stratified by age and sex and corrected for total energy intake. In total, 45 (DSR fruit: median 2 [IQR 1–3]) different fruit species were consumed by 2078 participants in this sample. On average, participants consumed 260 g of fruit (SD265) over two days. *Malus domestica* (apple) was the most frequently consumed species (23.9%), and 462 participants (22.2%) did not consume any fruits. Overall, moderate scores for diet quality were found (DHD15-index: M59; SD18; min–max11–115) and females seem to have healthier diets than males. For every additional fruit species consumed, the DHD15-index score increased by 4.17 points (95%CI 3.79–4.54). The strongest associations between DSR fruit and DHD15-index were found in Dutch adults between 19 and 30 years (β 4.7 [95%CI 3.9–5.5]). Fruit DSR was associated with diet quality. Every additional consumed fruit species led to a higher DHD15-index score. This is in line with previous studies, but further research in this sample is needed to explore if these associations also exist between overall DSR and diet quality. This research is ongoing.



Citation: Bakker, R.; Booi, V.; Nicolaou, M.; van Dooren, C.; Brouwer, I.; Olthof, M. Food Biodiversity and Diet Quality in Dutch Adults. *Proceedings* **2023**, *91*, 210. <https://doi.org/10.3390/proceedings2023091210>

Academic Editors: Sladjana Sobajic and Philip Calder

Published: 4 February 2024



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Keywords: Food biodiversity; dietary species richness; fruit consumption; diet quality

Author Contributions: Conceptualization, M.O., I.B., and C.v.D.; methodology, M.O., I.B., C.v.D., M.N., V.B., and R.B.; statistical analysis, V.B., and R.B.; writing—original draft preparation, R.B.; writing—review and editing, M.O., I.B., C.v.D., M.N., V.B., and R.B.; supervision, M.O., I.B., C.v.D., and M.N. All authors have read and agreed to the published version of the manuscript.

Funding: This Research was funded by WWF-NL and the HBCD project grant from Amsterdam Public Health (APH). The Dutch National Food Consumption Survey 2012–2016 was funded by the Dutch Ministry of Health, Welfare and Sport.

Institutional Review Board Statement: Ethical review and approval were waived for the DNFCs study because The Utrecht University Medical Ethical Review Committee evaluated that the DNFCs study was not subject to the Medical Research Involving Human Subjects Act (WMO) of The Netherlands (reference number 12–359/C).

Informed Consent Statement: Informed consent was previously obtained in the original DNFCs study from all study subjects.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. DNFCs data are available for research. More information can be found on the DNFCs website: <https://www.wateetnederland.nl/>.

Conflicts of Interest: The authors declare no conflict of interest.

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