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Readiness for sampling from the environment for One Health Research: Findings from a Population-based Cohort (MuSPAD) in 2024

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Introduction
Environmental sources can harbor zoonotic pathogens, and their sampling –central to the One Health approach –supports research at the human-animal-environment interface. This study aims to assess participants' readiness to collect environmental samples over a two-year period.
Methods
We analyzed data from a test-focused subcohort (PCR-4-ALL) of the Multilocal and Serial Prevalence Study of Antibodies against (Respiratory) Infectious Diseases in Germany (MuSPAD). Participants'readiness was assessed via an eResearch system.
Results
Overall, 585/1587 (37%) participants answered the questionnaire on readiness, of whom 445 (80%) were willing to sample their environment and 36 (7%) were uncertain. Readiness to collect water from any water source (e.g. puddles, seawater) was observed in 441 (92%) of the respondents, for any soil sample (e.g. garden, plantation) in 346 (72%), for any arthropods (e.g., fly, tick) in 217 (45%) and for leaf swabs in 307 (65%). Overall, collecting once a month consistently shows the highest proportion of readiness to sample.
Conclusion
Study findings suggest participants are willing to engage in research at the human-animal-environment interface, although arthropod collection may require additional education and support. Since this population is accustomed to regular self-testing, their readiness may be overestimated. Environmental DNA provides insights into local animal and microbial communities, complementing other data sources.

Keywords

cohort studies, self-collection, One Health, readiness, biosamples

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Professional Status of the Speaker

PhD Student

Junior Scientist Status

Yes, I am a Junior Scientist.

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