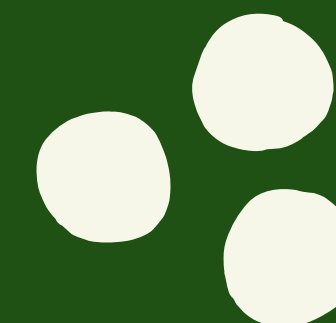
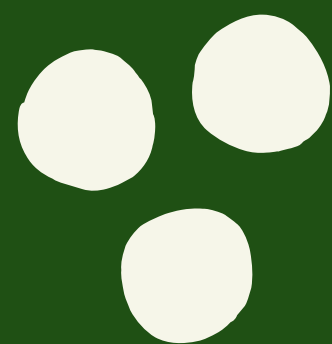




EXPOSURE ACROSS LANGUAGES AND ESTONIAN COMPETENCE IN ESTONIAN-NORWEGIAN BILINGUAL CHILDREN

Adele Vaks

University of Tartu

adele.vaks@ut.ee

ERÜ/EAAL annual conference

April 18-19 2024



Language exposure

- = the language the child hears (and reads)
- both quality and quantity matter to all language acquisition
 - how much talk?
 - what kind of talk?
- dynamic and nuanced relationship between exposure and language outcomes (Andersen et al. 2021)



Language exposure

- = the language the child hears (and reads)
 - both quality and quantity matter to all language acquisition
 - how much talk?
 - what kind of talk?
- } Must be asked about **both** languages for bilingual acquisition!
- dynamic and nuanced relationship between exposure and language outcomes (Andersen et al. 2021)



Estonians in Norway

- 5000-6000 people of Estonian descent
- “New diaspora” - III wave of emigration
 - left Estonia in the last 20 years
 - voluntary emigration
 - access to Estonian media & culture
 - possibility of return
 - spread out across the country
- **In my sample:** young families with children born in Norway or moved there before preschool



Research questions

- What is the relationship between exposure **quantity** and **quality**...
 - language-internally?
 - across languages?
- What is the relationship between **language exposure** and **Estonian competence**...
 - language-internally?
 - across languages?



METHOD: Language competence measures

Sentence Repetition Task (SRT)

- Taps into language processing and grammatical knowledge
- Estonian version by Vihman, Padrik & Hallap, Norwegian version by Bome & Vangen

Cross-Linguistic Lexical Tasks (CLT)

- Noun and verb comprehension and production
- Estonian by Vaks, Vihman & Padrik, Norwegian by Simonsen, Hansen & Łuniewska

METHOD:

Language exposure measures



Customisable online questionnaire for parents (De Cat jt 2022)

Data on:

- who speaks what language to the child
- how much time the child spends with whom
- how often the child reads, does extracurricular activities, plays with friends etc. in different languages

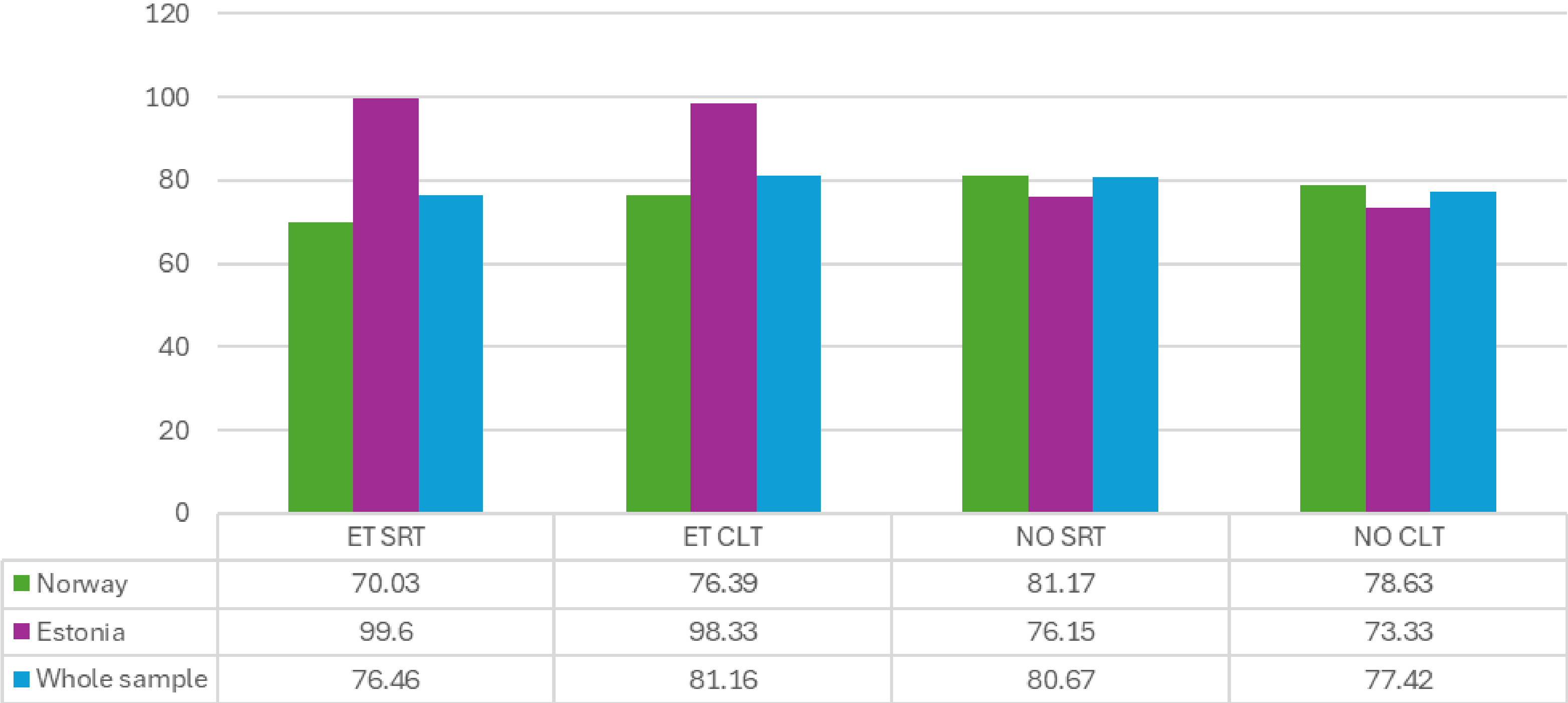
Output:

- current language exposure (hours per past year)
- cumulative language exposure (months per lifetime)
- richness score (index of the diversity of language exposure)

SAMPLE

	Entire sample	Norwegian residents	Estonian residents
N	23	18	5
average age (y;m)	6;6	6;5	6;9
f + m	13 + 10	10 + 8	3 + 2

Language competence measures



Norway Estonia Whole sample

CURRENT EXPOSURE (%)

■ Estonian ■ Norwegian

ESTONIA

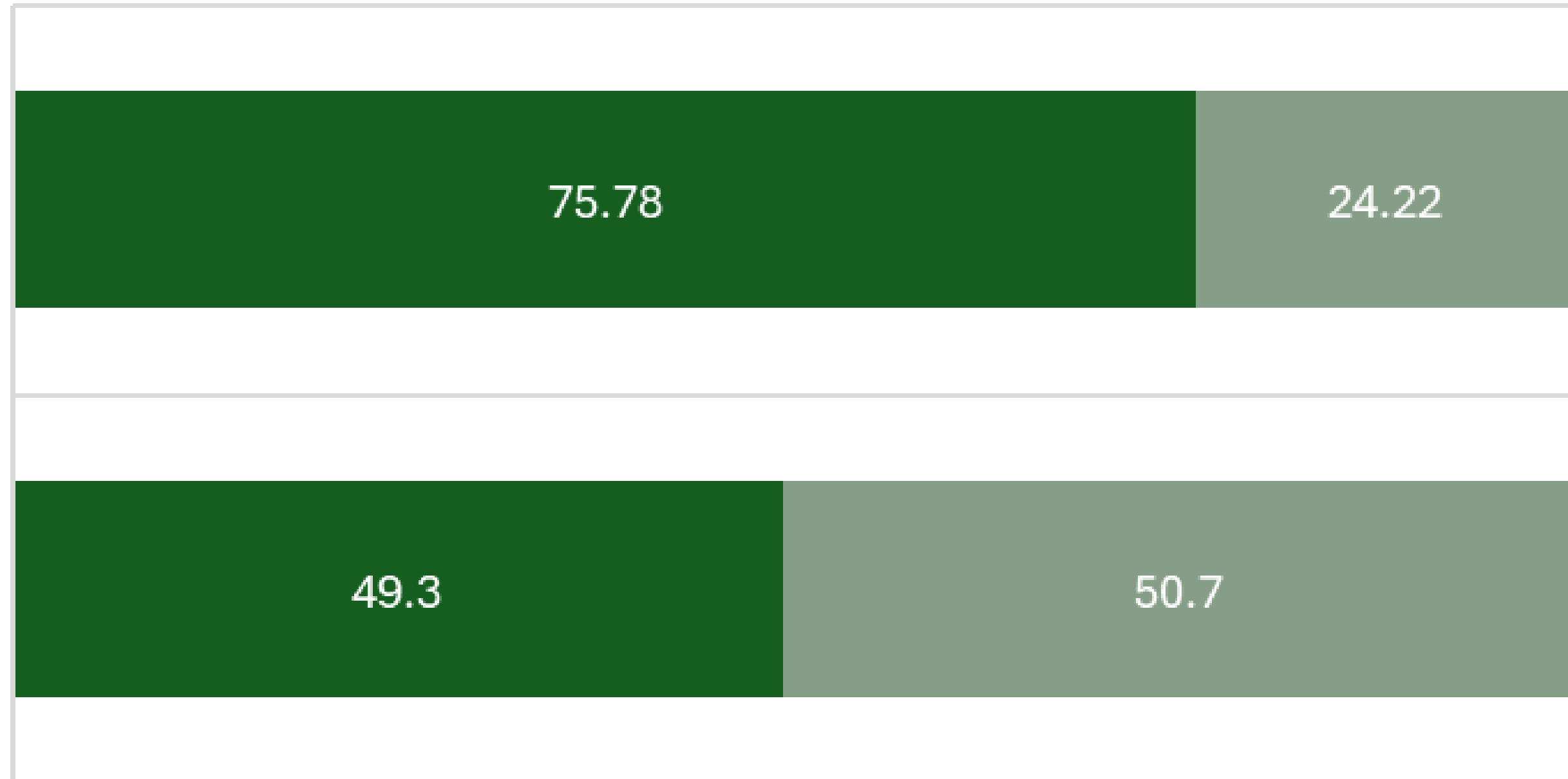
75.78

24.22

NORWAY

49.3

50.7



CUMULATIVE EXPOSURE (%)

■ Estonian ■ Norwegian

ESTONIA

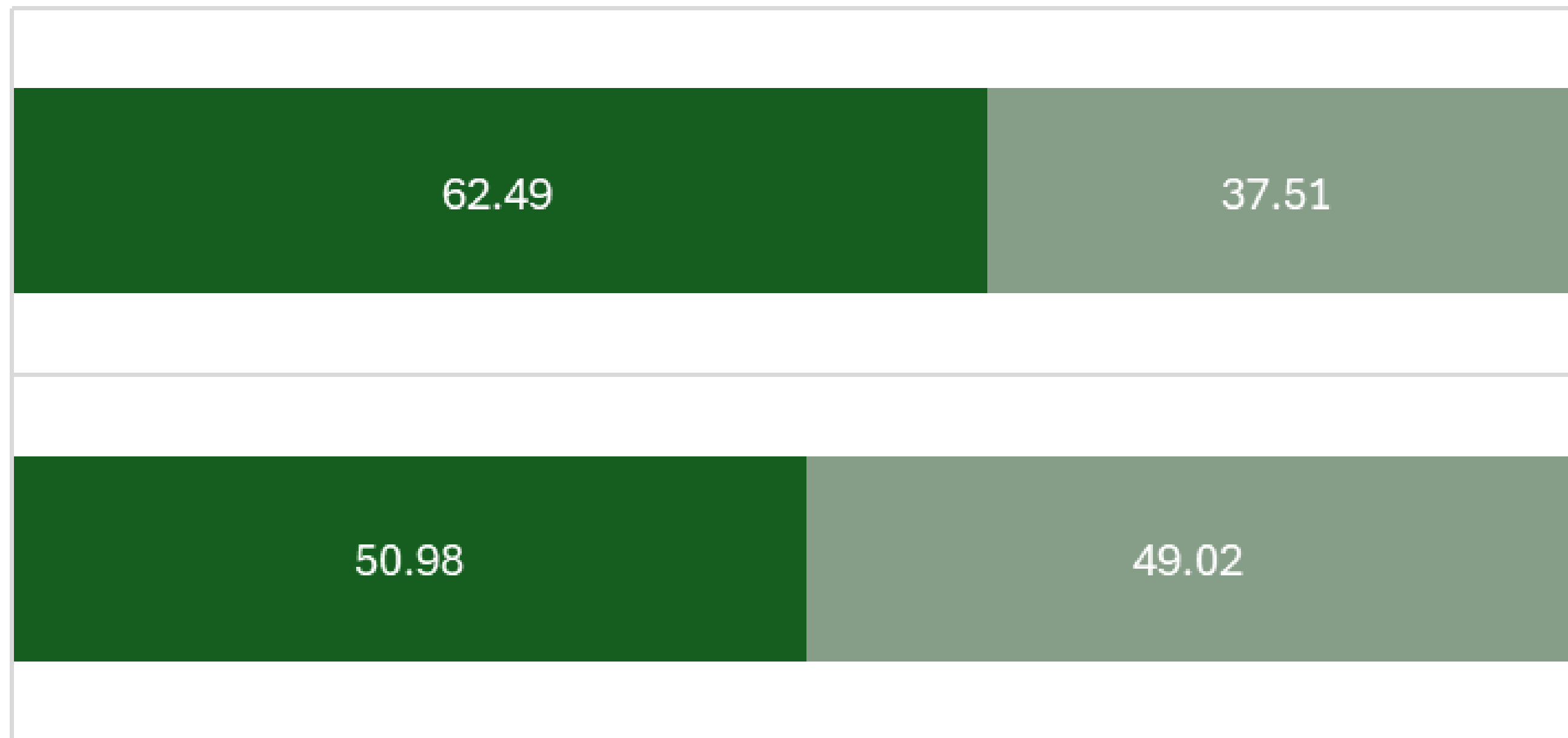
62.49

37.51

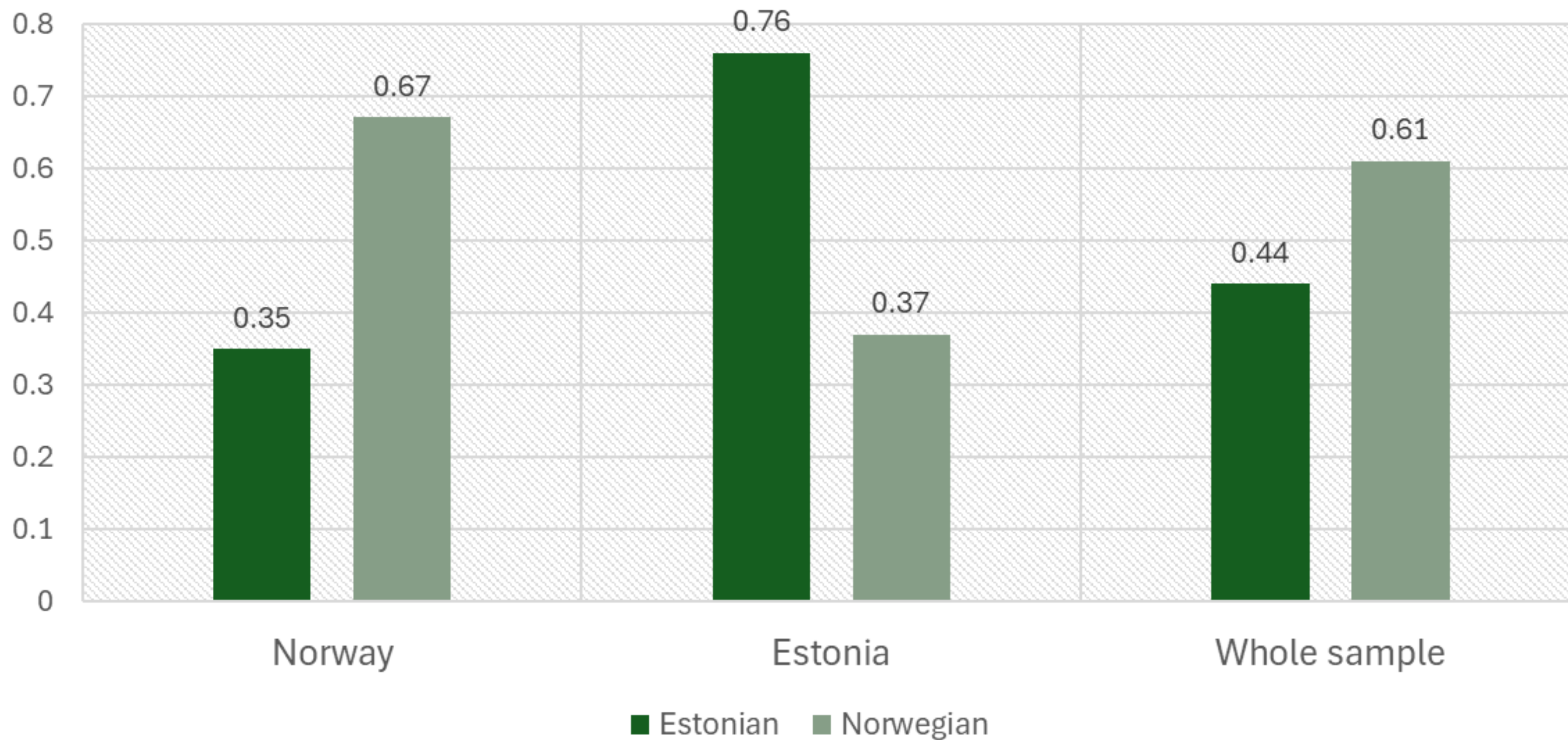
NORWAY

50.98

49.02



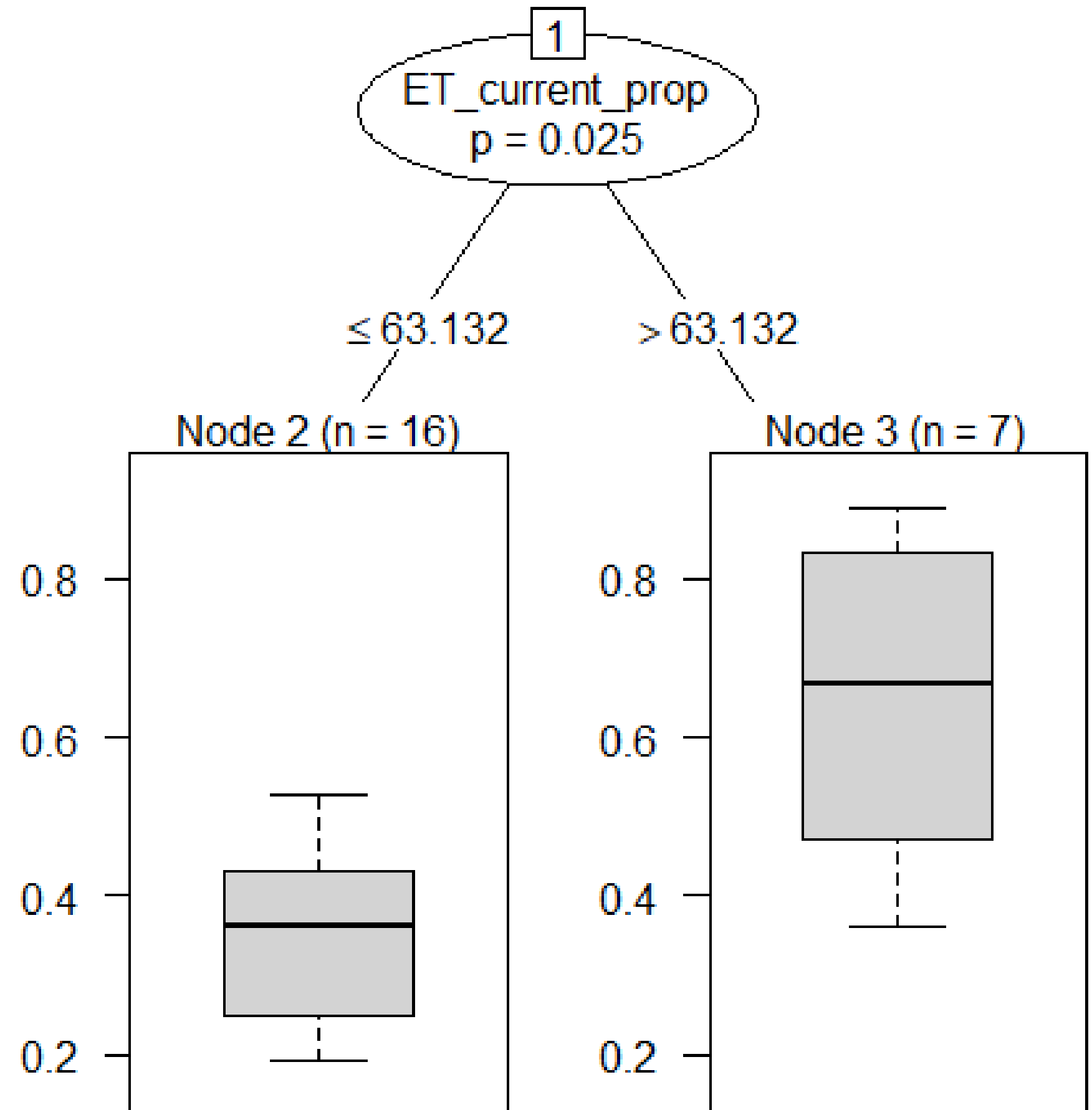
Richness scores



Exposure quality and quantity

Estonian richness ~
Estonian cumulative exposure +
Estonian current exposure

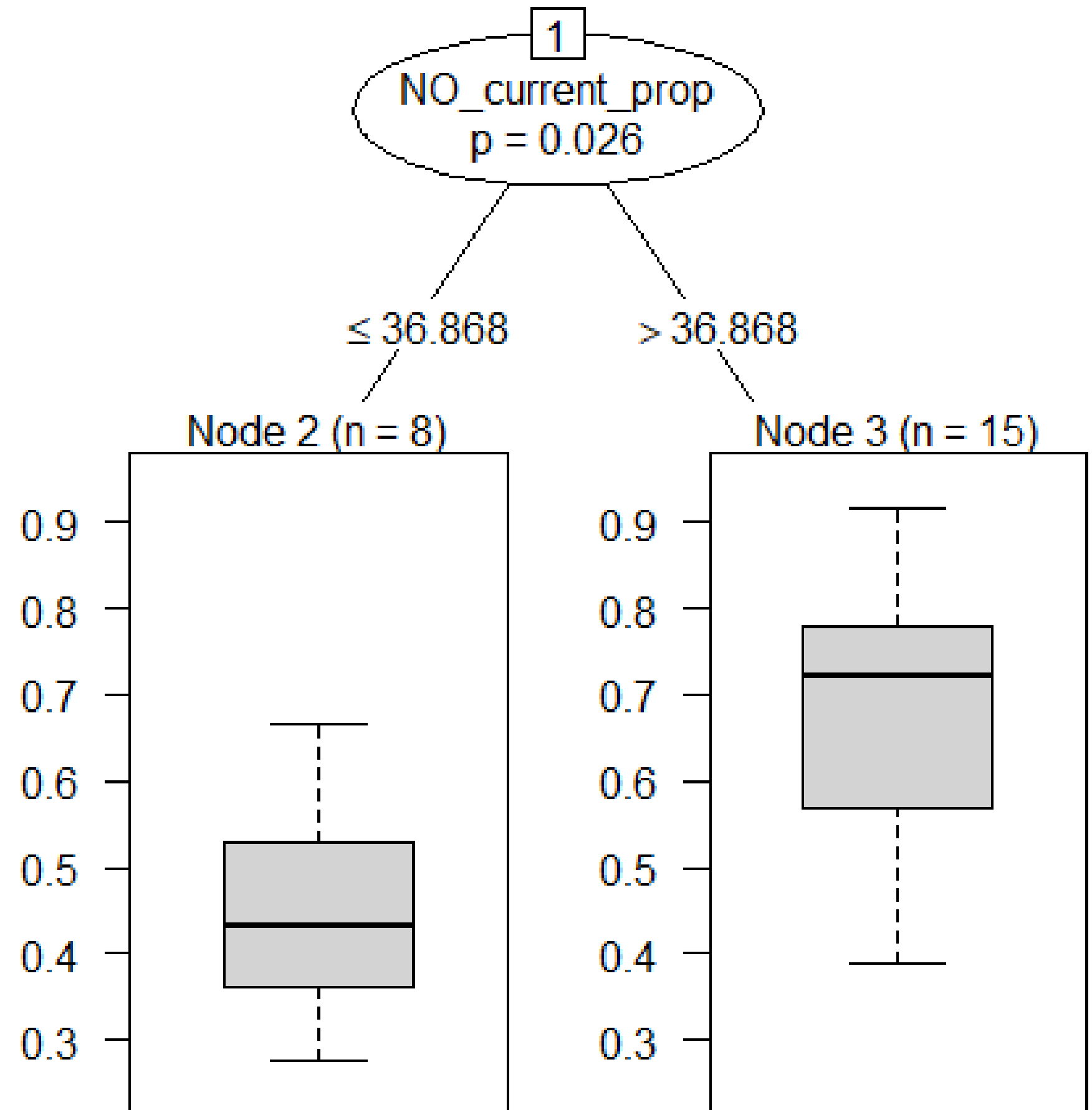
Current exposure over 63% is
associated with a higher
richness score in Estonian



Exposure quality and quantity

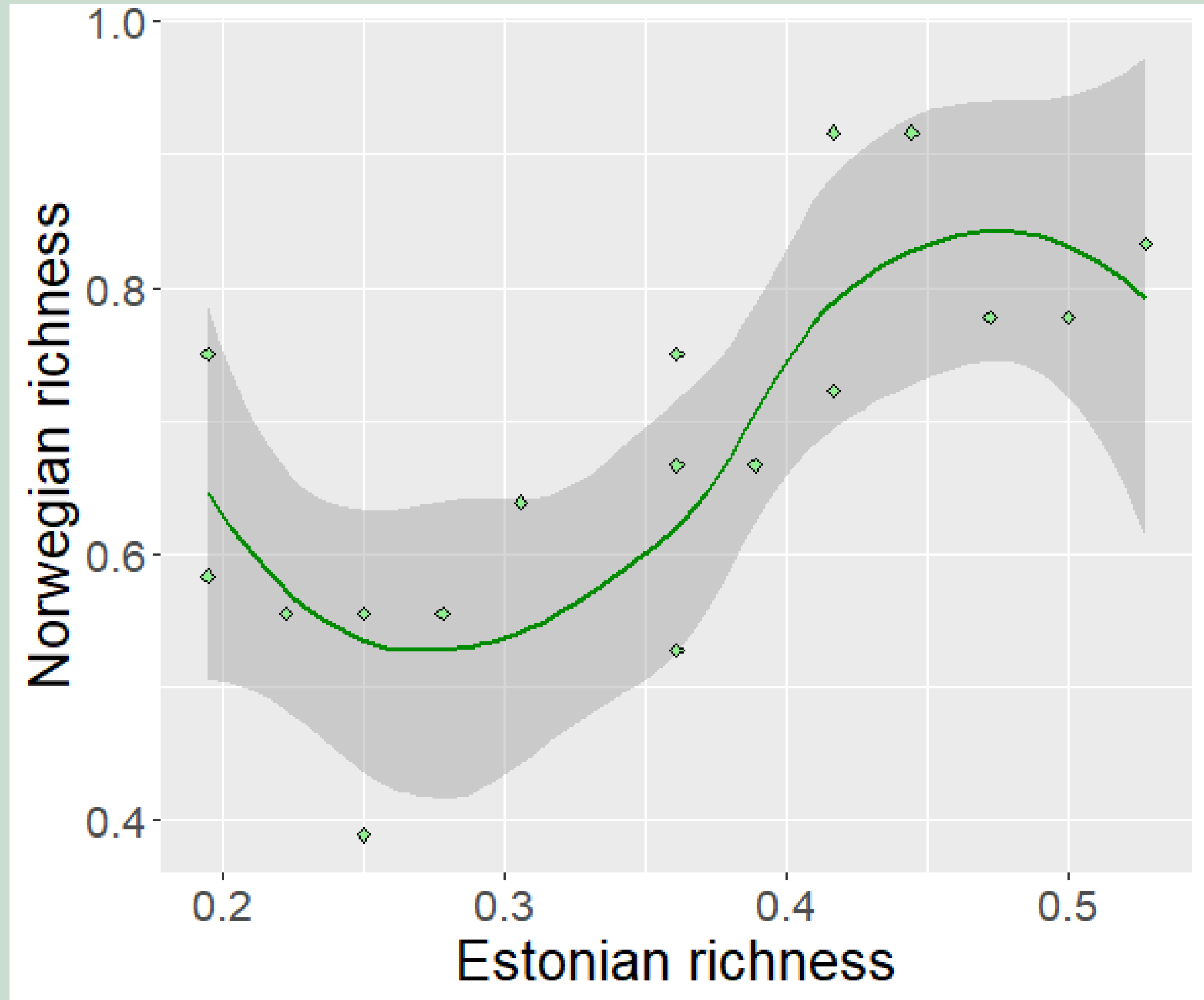
Norwegian richness ~
Norwegian cumulative exposure
+ Norwegian current exposure

Current exposure over 37% is
associated with a higher
richness score in Norwegian



Quality across languages

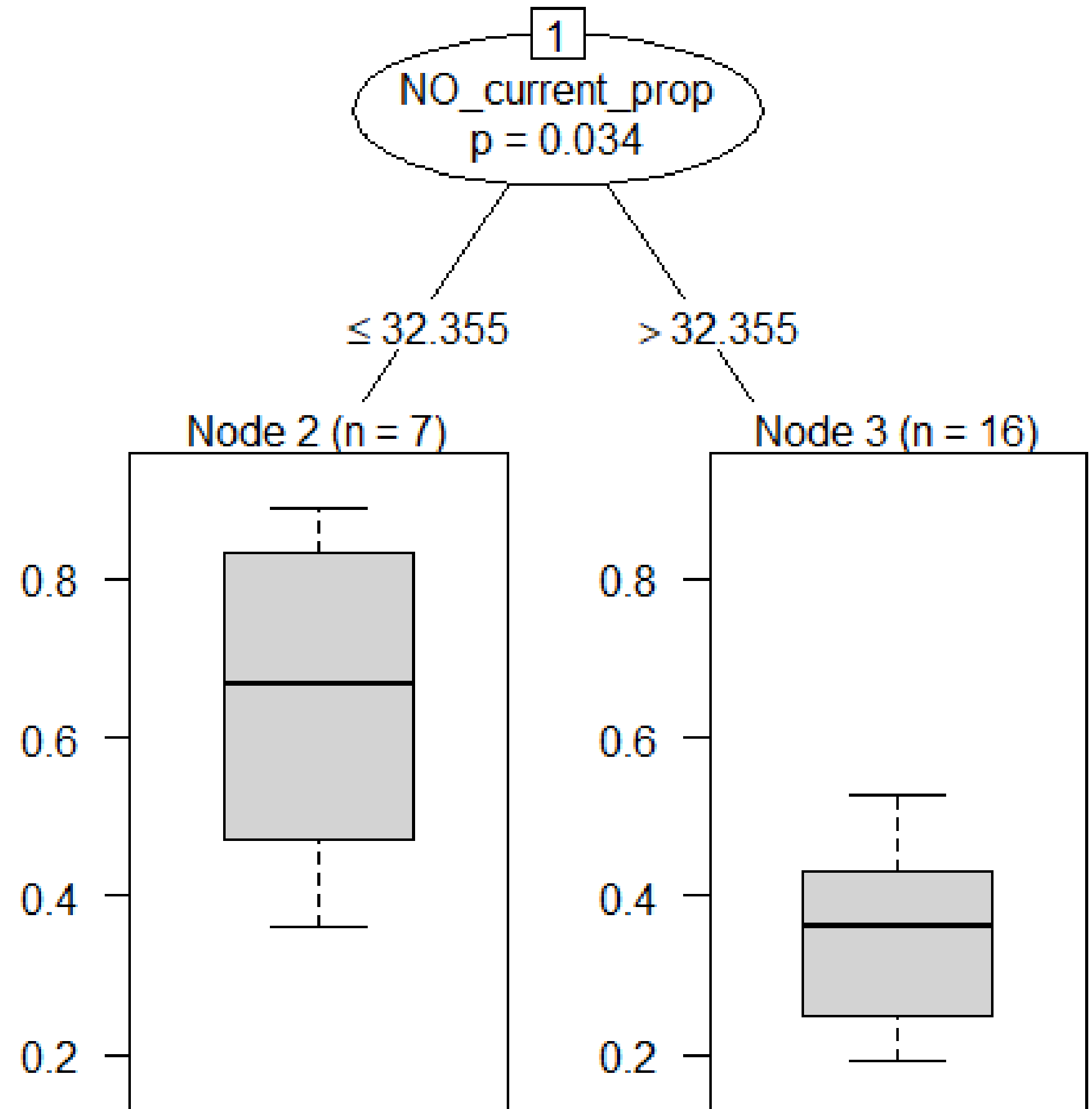
- Norwegian has overall higher scores
- Loose clusters



Quality across languages

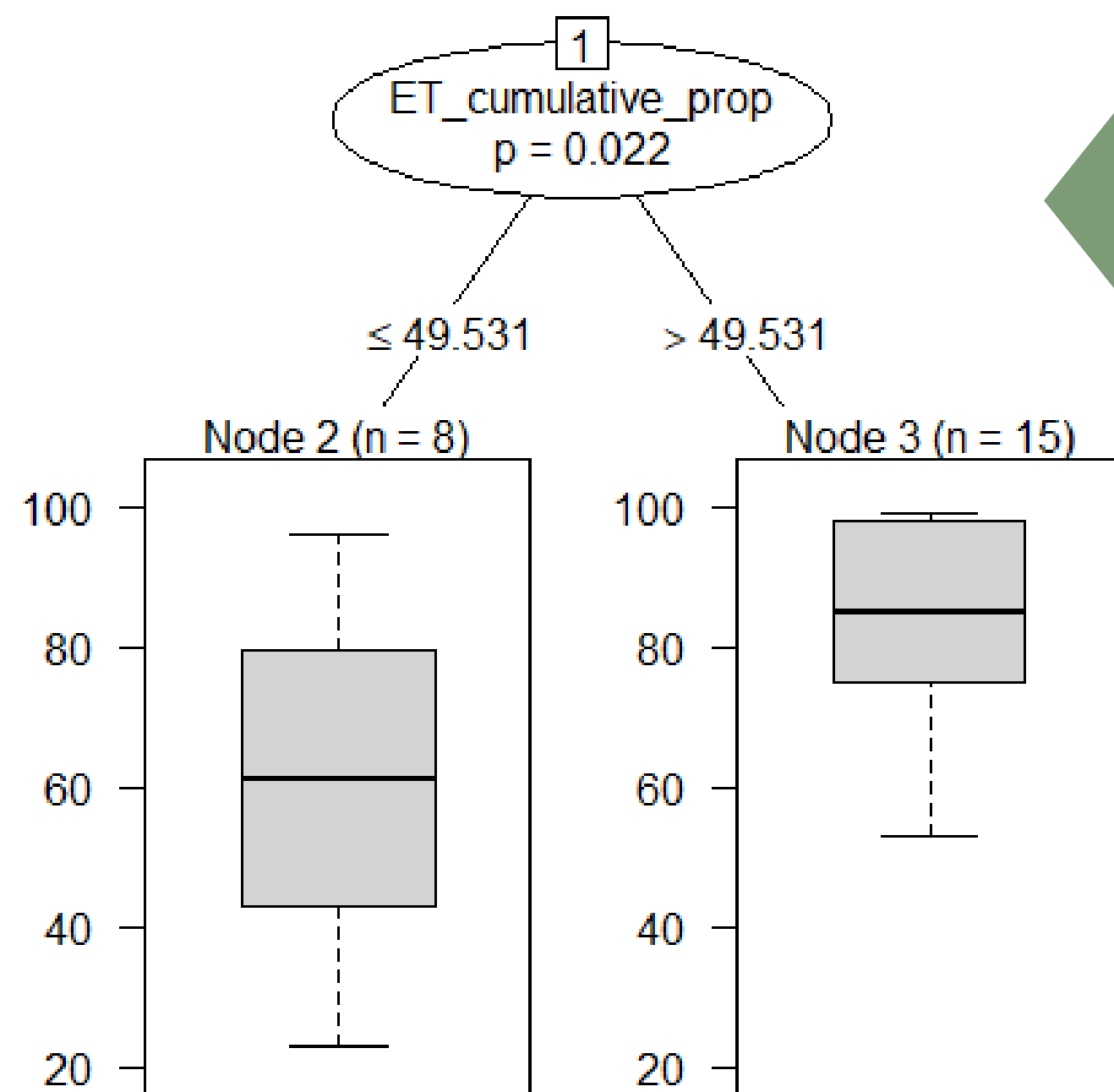
Estonian richness ~
Norwegian richness +
Norwegian cumulative +
Norwegian current
exposure

Current exposure over 32%
is associated with a lower
richness score in Estonian



Estonian competence & Estonian exposure

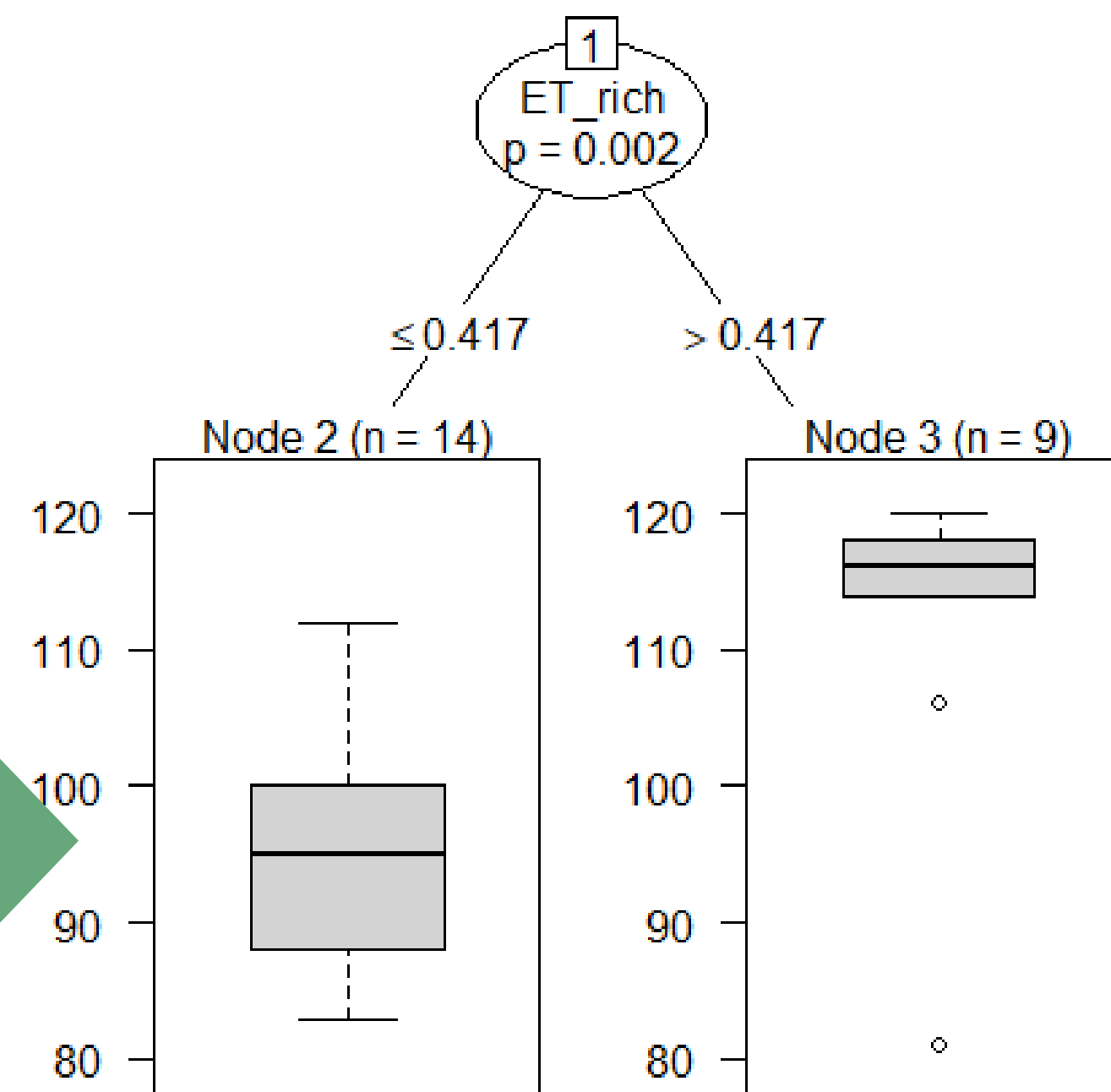
Sentence Repetition



**Cumulative
Estonian exposure
over 50% tied to
higher SRT score**

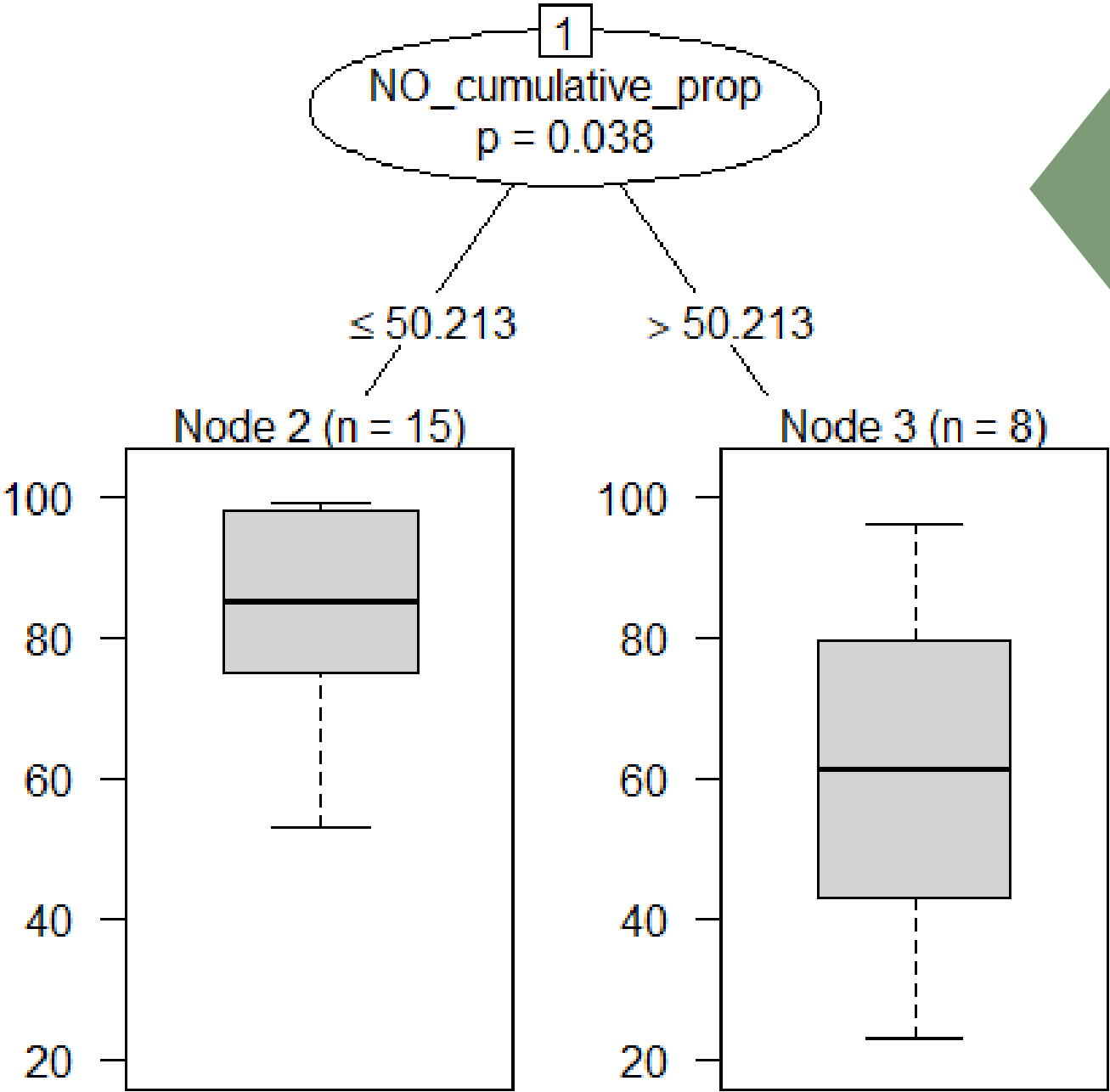
**Estonian richness
score over 0.417
tied to higher CLT
score**

Vocabulary



Estonian competence & Norwegian exposure

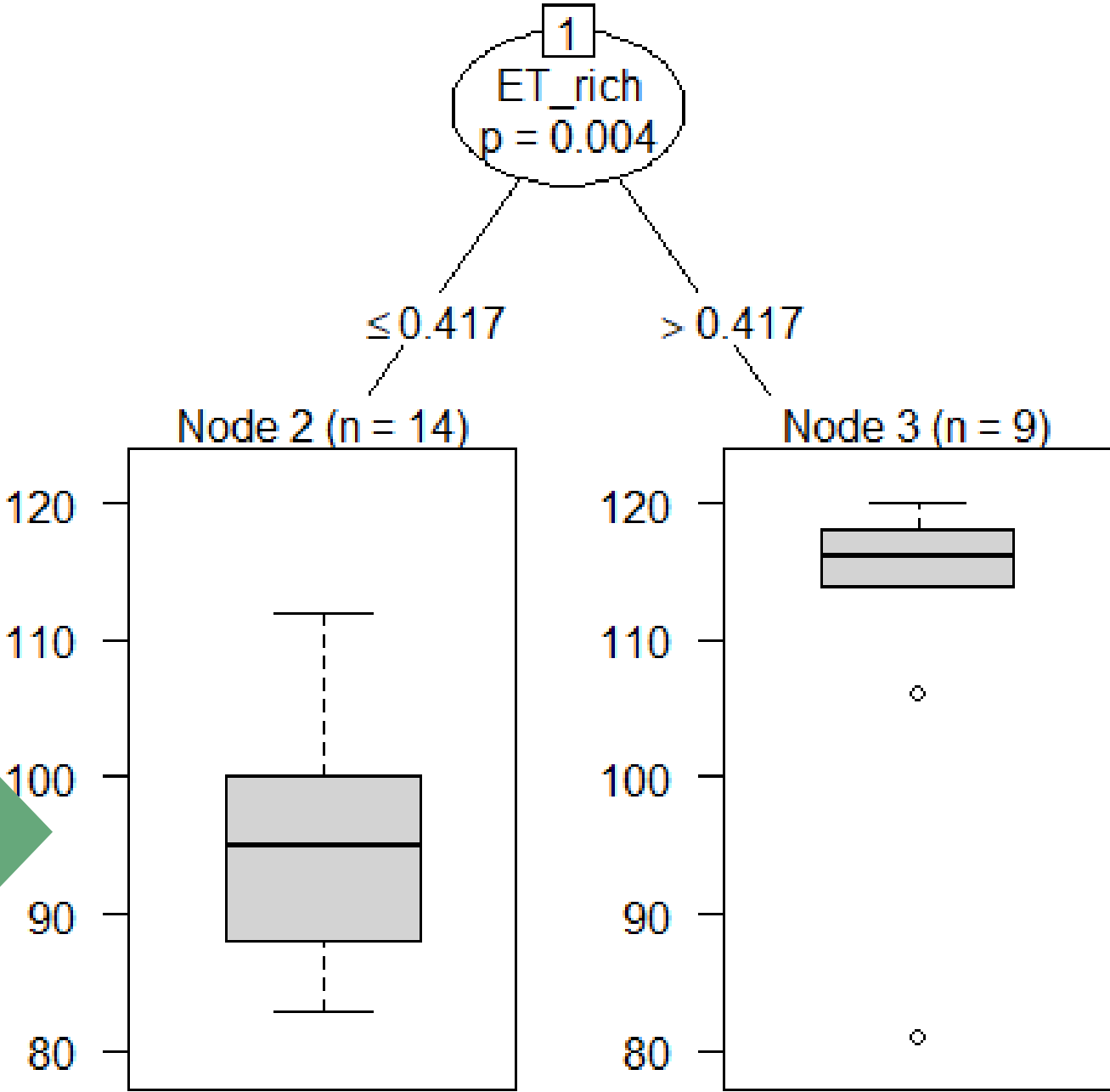
Sentence Repetition



Cumulative exposure still most strongly associated with SRT

Estonian richness still most strongly associated with CLT

Vocabulary



CONCLUSION



- Amount of current exposure in both languages seems to be associated with richness scores
- Vocabulary scores are more strongly associated with exposure richness than quantity
- Sentence repetition scores are more strongly associated with exposure quantity than richness

CONCLUSION

- Heritage Estonian exposure in Norway is equal in quantity to Norwegian
- More diverse input in one language is **not** associated with less diverse input in the other
- Exposure quality and quantity seem to be driving different language competences
- Diverse heritage language exposure is both **necessary** and **possible!**



Acknowledgements

Funding

**Kadri, Nikolai and Gerda
Rõuk research fund**



UNIVERSITY OF TARTU

Institute of Estonian
and General Linguistics

**Dora Pluss mobility
grant**



Data collection & coding



**Eline Clausdatter
Kleppenes**

Chris Franz Langøen

Ulrik Vikestad Thorsen

Elisabet Kirch

**Participating
families**



Literature

- Anderson, N.J. et al. (2021) 'Linking Quality and Quantity of Parental Linguistic Input to Child Language Skills: A Meta-Analysis', Child Development, 92(2), 484–501. <https://doi.org/10.1111/cdev.13508>.
- Bome, C. and Vargen, I.K. (2017) The development and pilot of a Norwegian adaptation of the LITMUS Sentence Repetition task. Magistritöö. Bergeni Ülikool.
- De Cat, C., Kaščelan, D., Prévost, P., Serratrice, L., Tuller, L., & Unsworth, S. (2022). Quantifying Bilingual EXperience (Q-BEx): questionnaire manual and documentation. [DOI 10.17605/OSF.IO/V7EC8](https://doi.org/10.17605/OSF.IO/V7EC8)
- Haman, E., Łuniewska, M. ja Pomiechowska, B. (2015) 'Designing Cross-Linguistic Lexical Tasks (CLTs) for Bilingual Preschool Children', in Assessing Multilingual Children: Disentangling Bilingualism from Language Impairment. Bristol, Buffalo, Toronto: Multilingual Matters (Communication disorders across languages), 196–240.
- Hothorn T, Hornik K, Zeileis A (2006). Unbiased Recursive Partitioning: A Conditional Inference Framework. Journal of Computational and Graphical Statistics, 15(3), 651--674.
- Hothorn T, Zeileis A (2015). partykit: A Modular Toolkit for Recursive Partytioning in R. Journal of Machine Learning Research, 16, 3905--3909.
- Integratsiooni Sihtasutus (2022) Global Estonians: stats & numbers, Global Estonian. Kättesaadav aadressil: <https://globalestonian.com/et/global-estonians-in-numbers> (Kasutatud 11.06.23).
- Padrik, M., Vihman, V.-A. ja Fil, O. (2022) 'Keelepuude märkamine kakskeelsetel lastel: eestikeelse lausete järelekordamise testi prooviuuring', Eesti Haridusteaduste Ajakiri. Estonian Journal of Education, 10(2), pp. 305–333. <https://doi.org/10.12697/eha.2022.10.2.11>.

THANK YOU!

AITÄH!

TAKK!



Think about a typical week in the current year.

At home, how often does **lkjkj** use each language when speaking to the child?



Think about **a typical week day (not the weekend, and not the school/day care holidays)**. Who does the child spend time with? Leave unmarked the time periods when the child is sleeping or when he/she is on his/her own.

Time	At home		At school/day care	In the local community
	lkjkj	kjhkjh	Friends & teachers	Friends & adults
06:00–07:00	☐	☐	☐	☐
07:00–08:00	☐	☐	☐	☐
08:00–09:00	☐	☐	☐	☐
09:00–10:00	☐	☐	☐	☐
10:00–11:00	☐	☐	☐	☐
11:00–12:00	☐	☐	☐	☐
12:00–13:00	☐	☐	☐	☐
13:00–14:00	☐	☐	☐	☐
14:00–15:00	☐	☐	☐	☐
15:00–16:00	☐	☐	☐	☐
16:00–17:00	☐	☐	☐	☐



