



Examining Energy Information Literacy with an Adaptation of the Everyday Health Information Literacy Screening Tool

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INTRODUCTION (1)

Energy:



- Quantity characterizing the ability of a system to do work (ISO 772:1996)
- Derived from different resources to provide light and heat, and to work machines in households, traffic, and industry

INTRODUCTION (2)

Energy information literacy:

- Information literacy in an energy context
- Abilities needed to
 - recognize an energy-related information need;
 - identify likely information sources and use them to retrieve relevant information;
 - assess the quality of the information and its applicability to a specific situation; and
 - analyze, understand, and use the information to make good decisions in terms of energy.

INTRODUCTION (3)

In the context of health, Niemelä, Ek, Eriksson-Backa and Huotari designed an everyday health information literacy (EHIL) screening tool based on the Medical Library Association's definition of health information literacy.

The screening tool was meant to detect individuals or groups with problems related to their interest and motivation, finding, understanding, evaluating, or using health information.

- The tool consist of ten statements (EHIL1–EHIL10)
- 1 (strongly disagree) to 5 (strongly agree)
- A multifaceted structure with three factors: motivation to seek information, confidence in finding information, and perceived abilities to evaluate information.

To explore the applicability of the EHIL screening tool in an energy context by examining its factorial structure in a comparative manner:

- Q1: What is the factorial structure of the everyday energy information literacy (EEIL) screening tool?
- Q2: Do mean factor scores vary across respondents' background variables?

METHOD (1)

Assessment of energy information literacy with a modified version of the EHIL screening tool:

- Online survey (January 2017)
- Sent to all students present for the academic year 2016–2017 at the University of Oulu, Finland (n=11,381)
- Response rate 12.2% (n=1,390)

METHOD (2)

The original EHIL screening tool was modified to an everyday energy information literacy (EEIL) screening tool by adjusting its ten statements to an energy context:

+ demographic and background characteristics

- EEIL1. It is important to be informed about energy issues.
- EEIL2. I know where to seek energy information.
- EEIL3. I like to get energy information from a variety of sources.
- EEIL4. It is difficult to find energy information from printed sources (magazines and books).
- EEIL5. It is difficult to find energy information from the Internet.
- EEIL6. It is easy to assess the reliability of energy information in printed sources (magazines and books).
- EEIL7. It is easy to assess the reliability of energy information on the Internet.
- EEIL8. Energy related terminology and statements are often difficult to understand.
- EEIL9. I apply energy related information to my own life and/or that of people close to me.
- EEIL10. It is difficult to know who to believe in energy issues.

METHOD (3)

Statistical analyses:

- Exploratory factor analysis (principal component analysis)
- Calculation of mean factor scores (regression method)
- ANOVA's and t-tests to examine variation of mean factor scores across demographic variables and respondents' field of study

RESULTS (1)

Respondents' characteristics:

- Full-time students (n=923, 66.5%)
- Lived in a rental apartment (n=1,078, 77.6%)
- Studied Natural Sciences, Humanities, Educational Sciences, Medicine, or Engineering
- Mean age 28.1 years
- 57.0% (n=785) female

RESULTS (2)

Factorial structure:

- The screening tool's factorial structure was found to be multifaceted:
 - 1) confidence in finding and understanding information ('confidence')
 - 2) motivation to do so ('motivation'), and
 - 3) perceived ability to evaluate information ('evaluation')

RESULTS (3)

The factor scores were found to vary by gender, age, and field of study:

- Male students' scores were higher in 'confidence' and lower in 'motivation' when compared to female students.
- Older students (≥ 25 years) had higher scores in 'motivation' but lower scores in 'evaluation' when compared to younger students (< 25 years).
- The engineering students and students whose studies related to energy industry or electricity market had high mean factor scores for all three factors.

DISCUSSION (1)

Key findings:

- The factor scores were found to vary by gender, age, and field of study.
- The screening tool's factorial structure was found to resemble that of the original EHIL tool.
- The study contributes to further modification of the EHIL screening tool to other contexts.

DISCUSSION (2)

Energy information literacy results are indicative:

- New approach
- Low response rate (12,2%)
- Should be replicated in other populations
- Should be studied also in connection to:
 - energy consumption and production actions
 - attitudes

CONCLUSIONS

Contribution:

- The findings indicate that this short, practical screening tool may be applicable in the context of energy and possibly transferable to other contexts as well.
- The tool can be used to detect individuals or groups who lack motivation or have difficulties in finding or evaluating information on a topic.
- Based on the responses to the tool's statements, information or counselling may be tailored to better match people's needs.



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Acknowledgement:

The study is funded by the Strategic Research Council, Finland,
Project n:o 292854.

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