COVID19 risk perception monitoring system in Finland

Anna-Leena Lohiniva, Katja Sibenberg, Suvi Hyökki, Jussi Sane
Finnish Institute of Health and Welfare, Finland
COVID19 risk perception monitoring system in Finland
Anna-Leena Lohiniva, Katja Sibenberg, Suvi Hyökkö, Jussi Sane

Coordination, resourcing and strategies
- **A PRACTICAL MONITORING SYSTEM** of The Finnish Institute for Health and Welfare (THL) to analyze COVID-19 risk perceptions of the public in **REAL TIME**.
- **QUALITATIVE DATA ANALYSIS** based on **risk perception framework**
- **DATA SOURCES** are social media posts and emails from the public to the Finnish Institute of Health and Welfare
- **RISK COMMUNICATION RECOMMENDATIONS** are drafted **bi-weekly** based on the analysis
- **KNOWLEDGE CO-CREATION** is applied to discuss the recommendations and their application among public health and risk communication experts of THL.

Data retrieval system

**STEP 1:** Decide what are the most relevant data sources for public risk perception
- **Outcome:** Facebook, general and infectious disease doctors’ emails

**STEP 2:** Establish a solid data retrieval system that is practical and feasible in pandemic context
- **Outcome:** Focal points with access rights to THL general mailboxes are pointed who are tasked to forward all Coronavirus (COVID19) related email messages to data analysts (manual process).

Integrated measurement, research and data analysis
**STEP 3:** Analyze data following thematic analysis based on risk perception domains. Risk perception domains (Rohrman 2008)
- Catastrophic potential, probability of dying, health impairments, harm to assets, future impacts, eco-centric worldview, safety culture, controllability beliefs reasons to exposure, affective associations
  - A. Read narrative text and search for text that relates to risk perception domains.
  - B. Extract the relevant text into a chart and organize it based on risk domains.
  - C. Search for codes within the text in each risk domain.
  - D. Merge the codes to larger categories.
  - E. Make interpretation based on the categories leading to concepts that explain the data

Reporting and integration into decision-making
**STEP 5:** Apply knowledge co-creation to discuss and verify the risk communication recommendations to ensure that the recommendations are implementable and acceptable in the epidemiological and cultural context of Finland.
**STEP 6:** Disseminate the findings to relevant public health experts through internal mailing lists and as part of a national situation analysis package that is provided to assist the government pandemic decision-making

Evidence-based interventions and implementation research
**STEP 4:** Draft risk communication recommendations based on the evidence of behavioral sciences and best practices in risk communication.
<table>
<thead>
<tr>
<th>Data sources</th>
<th>Data analysis concept</th>
<th>Recommendations</th>
<th>Application / intervention</th>
<th>Dissemination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public perceptions</td>
<td>Lack of understanding how to apply risk communication messages in everyday life.</td>
<td>Provision of practical guidance how to prevent coronavirus infection in everyday life</td>
<td>Application of personal risk assessment methodology in everyday life situations</td>
<td>Capacity building of social media influencers through webinars Expected outcome; Improved abilities to evaluate and manage risks in everyday life</td>
</tr>
</tbody>
</table>

Need to increase risk perception
Lessons learned

- Risk monitoring system is practical and participatory way to develop risk communication approaches and messages during a pandemic in Finland.

- The strength of the system is that it produces context specific and culturally appropriate risk communication recommendations that are readily available during epidemics for those who communicate.

- Data sources are emotional with strong opinions, which is ideal for risk communication content development but they cannot be generalized to represent risk perception of the public. Therefore other data sources must be used to compliment the system.

- The system requires time and resources: expertise in qualitative research, behavioral sciences and risk communication. It is also labor intensive.
Future plans

- Developing automated data retrieval process to further improve the system.
- Considering to expand the system to capture data from other social media platforms to capture different types of sub-populations such as healthcare workers.
- Increasing data dissemination to reach more entities responsible in COVID19 risk communication.
- Developing monitoring system to capture usage of the system and lesson learned.
- Building capacity of other public health entities to conduct risk monitoring in Finland.