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Science Council of Japan

“International Conference on Science and Technology for Sustainability”

Health literacy as a driving force of community resilience in crisis

Enhancing two arcs of health literacy



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Based on presentations at IAEA consultancy meetings in 2022 and ICRP 2021+1.

Concept Note: “Disaster and Health”

Sub-theme 1: “Preparedness of Public Health Resources and Strengthening Governance”

In order to minimize damage when a disaster strikes and to care for disaster victims and residents efficiently afterward, it is essential to have the right “**people**” in place and to deliver the necessary “**goods**” and “**information**” in a timely manner.

Health literacy initiative from Fukushima

Health literacy

Individual and organizational capacity



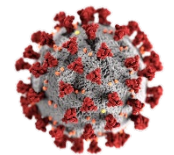
Professional capacity building

Health literacy workshop for health professionals

Community capacity building

“Creative Health” project for school children

New crisis



Developing health information with school teachers

Public health doctors and nurses in Japan

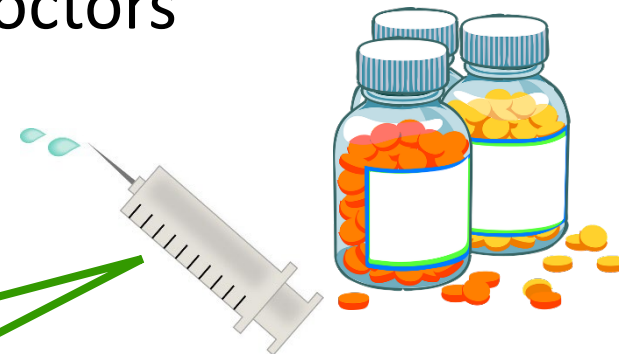
Community



Evidence

Public health nurses
and doctors

Health information as “medication”
Community resources



Health policy
Health promotion activities

Mothers' concern

Fukushima City Child health checkup data	% of mothers with depressive symptoms 2012, 18 Ms (N=274)
Concerned about differences in risk perception about radiation among family members	
No	8%
Yes	20%

p=0.02 (Chi-square test)

Two-item depression screen was used.



Journal of Communication in Healthcare 2014; 7: 106-116.

Public health nurses
attending workshops
to learn about health
effects of radiation



They voiced...

- ❖ Role as an **information channel** in the community
- ❖ Needed **communication skills development**;

“We must say what we think about what we have learned; not just what the government says.”

BMC Health Services Research. 2014; 14: 129.

Health literacy

“The cognitive and social skills which determine the motivation and ability of individuals to gain access to understand and use information in ways which promote and maintain good health”

WHO, 1998

**Health professionals’
skills**

**Community residents’
skills**



Health
Literacy

Rudd RE.



NEW

Organizational Health Literacy

“Organizational health literacy is the degree to which **organizations equitably enable** individuals to find, understand, and use information and services to inform health-related decisions and actions for themselves and others.” (Healthy People 2030)

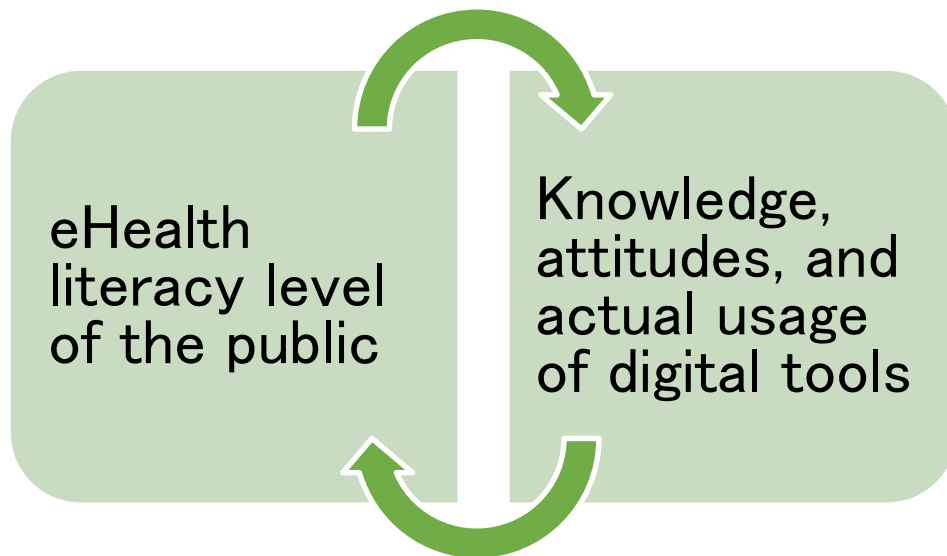


NEW

eHealth Literacy

“The ability to seek, find, understand, and appraise health information from **electronic sources** and apply the knowledge gained to addressing or solving a health problem.”

Norman, C.D.; Skinner, H.A. eHealth literacy. J Med Internet Res. 2006; 8: e9.



Yumiya Y, et al. User-guided design of a digital tool for health promotion and radiation protection. Int J Environ Res Public Health 2021; 18: 12007.

**Health professionals'
skills**

**Community residents'
skills**



Rudd RE.

Health literacy training

Rudd RE. Assessing health materials: Eliminating barriers – increasing access. 2010.
<http://www.hsph.harvard.edu/healthliteracy/>

Assessment skills

Revision skills

Field practice

Top
Tips

❖ Sentences

Avoid jargon, grade 5-8 level, etc.

❖ Graphs



Pictograms, infographics

❖ Communication

Marker method




= Ask readers to mark difficult words and phrases.



Japan Medical Association Journal. 2015; 58: 1-9. Journal of Health Communication. 2018; 2: 200-206.

Training evaluation

- From 2011 to 2019, about 25% of public health nurses in Fukushima had been **trained**.
 - Over half of the attendants had **used** learned skills in practice at the one-year follow-up.
 - They showed more positive attitudes toward **feedback** from the community residents.
 - Their self-evaluation of risk **communication competencies** improved.
 - Older residents and those not seeing doctors regularly were more likely to **notice improvements** in health information from the trained nurses.
- 

Japan Medical Association Journal. 2015; 58: 1-9. Journal of Seizon and Life Sciences. 2016; 27: 191-207.
Health Communication. 2020; 35: 1274-1282. Annals of ICRP. 2021; 50: 167-173.
International Journal of Disaster Risk Reduction. 2022; 67: 102694.

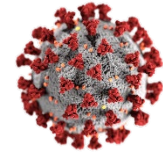
New target groups of the health literacy training

- Professionals: Nutritionists, school administrators, disaster prevention officers, radiation consultants, etc.
- Students: Medical and nursing schools
- Professionals from overseas: International students, JICA trainees, etc.



Fukushima Medical Journal. 2019; 69: 77-83.

Online health literacy training for public health nurses outside Fukushima



- Prefectural office organized training
- December 2021
- 42 participants (Public health nurses, administrators, etc.)
- Over 80% answered that learned skills could be applied immediately at work.

“(Learned skills) could be applied in supporting COVID-19 patients. I will share (learned skills) with my colleagues.”

“I was reassured of the importance of conducting public health activities from residents’ points of view.”

**Health professionals'
skills**

**Community residents'
skills**

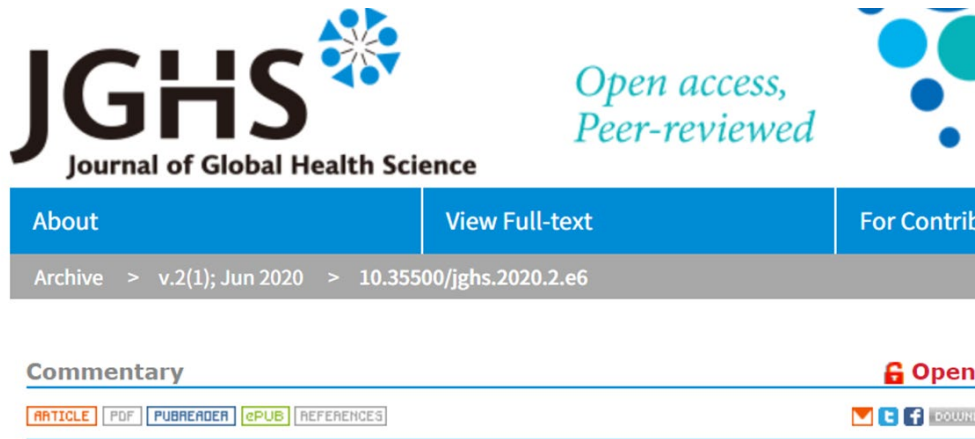


“By improving people’s access to health information, and their capacity to use it effectively, health literacy is critical to **empowerment**.”

Health Promotion Glossary, 1998.

<https://www.who.int/activities/improving-health-literacy>

Children at elementary schools



LESSON 1: Use plain language to explain complex concepts

LESSON 2: Be attentive to numeracy complexity

LESSON 3: Collaborate with the intended audience

J Glob Health Sci. 2020 Jun;2(1):e6. English.

Published online May 14, 2020. <https://doi.org/10.35500/jghs.2020.2.e6>

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Communicating health information with the public: lessons learned post disaster

Aya Goto 

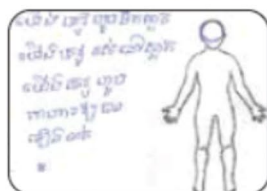


The project team is eager to learn about your experience and ideas about health. During the project you will take part in up to three workshops:



Body

where you will learn about
how blood works
in the body



Food

where you will think about
the food you cook
and eat



ACT

where you will show
and tell us about
where you live



"Creative Health"



International Journal of Environmental Research and Public Health. 2022; 19: 3417.

Activity aims

Facilitate students' scientific and creative thinking, working in teams, presenting, and expressing their opinions.

Project evaluation

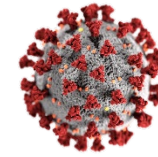
At two model schools in Fukushima...

- Children appreciated presenting, measuring, learning connections between nutrition and health, and working collaboratively with peers.
- They perceived their health and the foods in their community more positively after participating.



Creative health online training for facilitators

Expanded to Indonesia, Cambodia, and Rwanda



Students

"The activities were fun. We learned about drama and how to make food."

Parents

"My kid was very happy when telling me about this activity in school."

Teachers

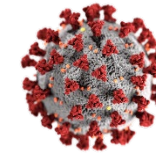
"Learn to accept various opinions that students will convey."

"Children can know their ability."



Igaku no Ayumi. 2022; 282: 1159-1162.

Developing information with school teachers



みんなでコロナをやっつけろ!

ウイルスを
ながす
手を洗う

ウイルスを
つけない
家にいる

つばを
とばさない
マスクする
せき・くしゃみは
ひじでカバー!

心配だよね
この新しい病気はわからないことだらけ。
みんな不安です。
でも「あの人セキしてるからコロナ?」、
「あそこでコロナでたみたい」とか、
うわさを作らないように。
変なうわさを気にしないように。
心配つくらないで、みんなでやっつけよう!

参考: 日本赤十字社「新型コロナウイルスのまづけを知ろう!」

ご家族へ
ぜひおさんと一緒に読んでみてください。
「みんなでコロナウイルスをやっつけろ!」
作戦についてわかります。

藤田医科大学感染症科
「コロナウイルスってなんだろう?」
<http://www.fujita-hu.ac.jp/~microb/>

学校の先生へ
日本心理学会
「新型コロナウイルス」
<http://www.gakushuin.ac.jp/~microb/>

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COVID-19 VOICI COMMENT VOUS PROTÉGER ET PROTÉGER LES AUTRES

1 Toussiez et éternuez dans le creux du coude

2 Gardez la distance avec les autres

3 Portez régulièrement un masque

4 Lavez-vous les mains avec de l'eau et du savon bien et souvent

Ou désinfectez-vous les mains avec une solution hydroalcoolique

5 Ne serrez pas la main

6 Évitez les déplacements inutiles

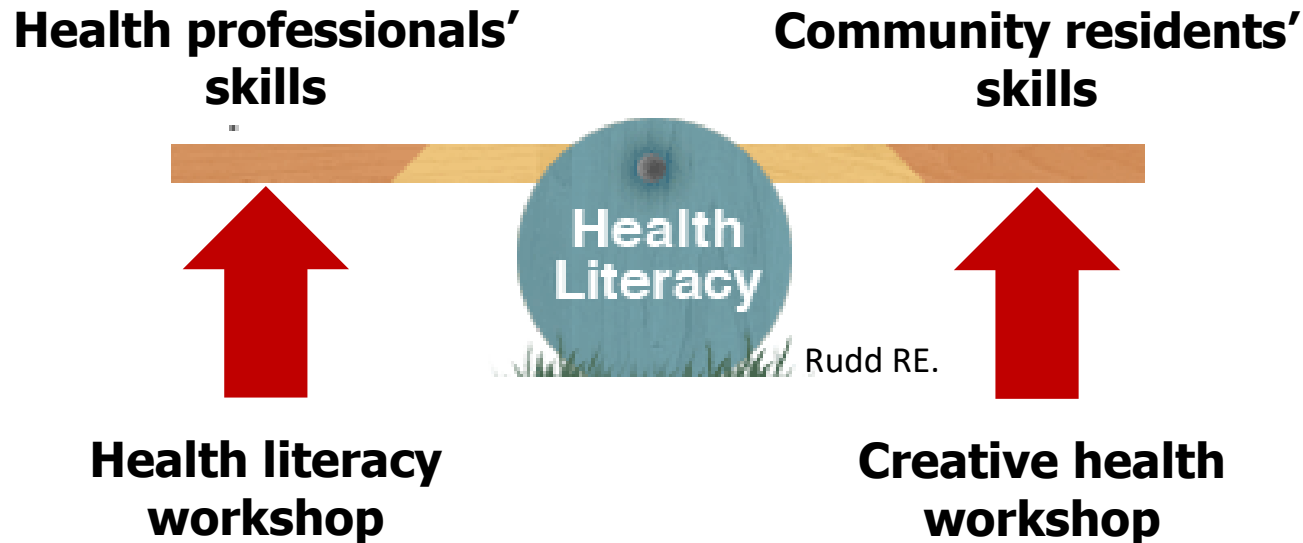
7 Ne crachez pas par terre

EN CAS DE FIÈVRE ET/OU TOUX, OU DE DIFFICULTÉS À RESPIRER, APPELEZ LE NUMÉRO 3535 OU 01608989 ET SUIVEZ LES INSTRUCTIONS DONNÉES

1. Focus on culturally-adapted and visually-appealing materials
2. Deliver communication products quickly
3. Use existing relationships of collaboration and trust

Benski C, Goto A, Reich MR. Frontiers in Communication. 2020; 5: 603656.

SUMMARY



The evolution of our health literacy initiatives covers two arcs of health literacy, is crossing borders, and prepares us to face a new crisis through existing trust relationships and by utilizing digital tools.