

## Supplementary file:

Table S1 Basic information and results of conceptualization of health literacy

Author (year)	Target population & restriction of health literacy	Methodology	Results of conceptualization of health literacy
Soellner, R., et al (2017) <sup>23</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: health experts;</li> <li>• Data collection: brainstorming;</li> <li>• Data analysis: concept mapping approach;</li> </ul>	<ol style="list-style-type: none"> <li>1. Basic literacy and numeracy skills;</li> <li>2. Basic health related knowledge;</li> <li>3. Self-perception;</li> <li>4. Proactive approach to health;</li> <li>5. Self-regulation;</li> <li>6. Self-control;</li> <li>7. Communication and cooperation;</li> <li>8. Dealing with health information.</li> </ol>
Yuen E.Y.N., et al (2016) <sup>49</sup>	Health literacy in cancer caregivers	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: patients with cancers, cancer caregivers, healthcare providers and policymakers;</li> <li>• Data collection: workshops;</li> <li>• Data analysis: concept mapping approach;</li> </ul>	<ol style="list-style-type: none"> <li>1. Access to information;</li> <li>2. Understanding of information;</li> <li>3. Relationship with the care recipient;</li> <li>4. Relationship with healthcare providers;</li> <li>5. Managing challenges of caregiving;</li> <li>6. Support systems</li> </ol>
Parisod. H., et al (2016) <sup>41</sup>	Tobacco related health literacy in early adolescents	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: early adolescents;</li> <li>• Data collection: focus groups;</li> <li>• Data analysis: theoretical thematic analysis.</li> </ul>	<ol style="list-style-type: none"> <li>1. Functional health literacy;</li> <li>2. Interactive health literacy;</li> <li>3. Critical health literacy;</li> </ol>
Liao L. L., et al (2016) <sup>42</sup>	Health literacy in children (younger than 12-year-old)	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: children, caregivers and tutors;</li> <li>• Data collection: interview &amp; focus group;</li> <li>• Data analysis: data-driven thematic analysis;</li> </ul>	<ol style="list-style-type: none"> <li>1. Functional health literacy:</li> <li>2. Interactive health literacy:</li> <li>3. Critical health literacy:</li> </ol>
Rowlands G., et al (2015) <sup>24</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: people living in the most deprived decile regions in England;</li> <li>• Data collection: semi-structured interviews &amp; focus</li> </ul>	<ol style="list-style-type: none"> <li>1. Acquiring knowledge for health;</li> <li>2. Understanding knowledge for health;</li> <li>3. Evaluating knowledge for health</li> </ol>

		groups; • Data analysis: thematic analysis;	
Harrington, K. F. & Valerio, M. A. (2014) <sup>35</sup>	Verbal exchange health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: qualitative research</li> <li>• Participants: healthcare providers and patients;</li> <li>• Data collection: literature review, in-depth interview &amp; focus group;</li> <li>• Data analysis: thematic analysis &amp; grounded theory approach.</li> </ul>	<ol style="list-style-type: none"> <li>1. Listening;</li> <li>2. Speaking;</li> </ol>
Gilbert M, et al (2014) <sup>48</sup>	Sexual health literacy in gay men	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: researchers, healthcare providers, policy-makers and knowledge users;</li> <li>• Data collection: literature from conference, mini-interview &amp; focus group;</li> <li>• Data analysis: Thematic analysis</li> </ul>	<ol style="list-style-type: none"> <li>1. Information and message;</li> <li>2. Capacity to health information;</li> </ol>
Sykes S., et al (2013) <sup>36</sup>	Critical health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: policy makers &amp; practitioners;</li> <li>• Data collection: literature review &amp; interview;</li> <li>• Data analysis: theoretical and colloquial evolutionary concept analysis;</li> </ul>	<ol style="list-style-type: none"> <li>1. Advanced personal skills;</li> <li>2. Health knowledge;</li> <li>3. Information skills;</li> <li>4. Effective interaction between service providers and users;</li> <li>5. Informed decision making;</li> <li>6. Empowerment including political action</li> </ol>
Shreffler-Grant J., et al (2013) <sup>37</sup>	Complementary and alternative medicine health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: qualitative research</li> <li>• Participants: health experts</li> <li>• Data collection: literature review, authors' prior experiences &amp; written feedback and teleconferences from health experts;</li> <li>• Data analysis: inductive approach;</li> </ul>	<ol style="list-style-type: none"> <li>1. Knowledge of dose of medicines;</li> <li>2. Knowledge of effect of medicines;</li> <li>3. Knowledge of safety of medicines;</li> <li>4. Knowledge of availability of medicines;</li> </ol>
Yip, M. P. (2012) <sup>50</sup>	Health literacy in limited English proficiency populations	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> <li>• Participants: NA;</li> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	<ol style="list-style-type: none"> <li>1. Speaking;</li> <li>2. Reading;</li> <li>3. Writing;</li> <li>4. Listening;</li> <li>5. Numeracy</li> </ol>
Squiers L., et al (2012) <sup>19</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: NA;</li> </ul>	<ol style="list-style-type: none"> <li>1. Print literacy</li> <li>2. Communication;</li> </ol>

		<ul style="list-style-type: none"> <li>• Data collection: literature review;</li> <li>• Data analysis: thematic analysis based on an author developed framework;</li> </ul>	3. Information seeking & eHealth;
Sørensen K., et al (2012) <sup>5</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: NA;</li> <li>• Data collection: literature review;</li> <li>• Data analysis: thematic analysis based on an author developed framework;</li> </ul>	<ol style="list-style-type: none"> <li>1. Access;</li> <li>2. Understand;</li> <li>3. Appraise;</li> <li>4. Apply.</li> </ol>
Schulz, P. J. & Nakamoto, K. (2012) <sup>25</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> <li>• Participants: NA;</li> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	<ol style="list-style-type: none"> <li>1. Basic literacy;</li> <li>2. Declarative knowledge;</li> <li>3. Procedural knowledge;</li> <li>4. Judgement skills</li> </ol>
Paakkari Leena, et al (2012) <sup>38</sup>	Health literacy in students (basic education or upper secondary school)	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> <li>• Participants: NA;</li> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	<ol style="list-style-type: none"> <li>1. Theoretical knowledge;</li> <li>2. Practical knowledge;</li> <li>3. Critical thinking;</li> <li>4. Self-awareness;</li> <li>5. Citizenship.</li> </ol>
Massey P. M., et al (2012) <sup>39</sup>	Health literacy in adolescents	<ul style="list-style-type: none"> <li>• Overview: qualitative research</li> <li>• Participants: adolescents, pediatricians &amp; physicians;</li> <li>• Data collection: focus group &amp; interview;</li> <li>• Data analysis: grounded theory approach;</li> </ul>	<ol style="list-style-type: none"> <li>1. Navigating the health care system:</li> <li>2. Rights and responsibilities:</li> <li>3. Preventive care:</li> <li>4. Information-seeking:</li> <li>5. Patient-provider relationships:</li> </ol>
Edwards, M., et al (2012) <sup>44</sup>	Health literacy in people with long-term health conditions	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: patients with at least one long-term health condition;</li> <li>• Data collection: semi-structured interview;</li> <li>• Data analysis: framework approach;</li> </ul>	<ol style="list-style-type: none"> <li>1. Knowledge;</li> <li>2. Self-management skills;</li> <li>3. Information seeking and use;</li> <li>4. Communication with health professionals;</li> <li>5. Active involvement in consultations.</li> </ol>
Al Sayah, F. & Williams, B. (2012) <sup>45</sup>	Health literacy in patients with diabetes	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> <li>• Participants: NA;</li> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	<ol style="list-style-type: none"> <li>1. Functional health literacy;</li> <li>2. Interactive health literacy;</li> <li>3. Critical health literacy.</li> </ol>
Chinn, D. (2011) <sup>34</sup>	Critical health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> <li>• Participants: NA;</li> </ul>	<ol style="list-style-type: none"> <li>1. Critical analysis of information:</li> <li>2. Understanding of the social determinants of health:</li> </ol>

		<ul style="list-style-type: none"> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	3. Engagement in collective action.
Buchbinder R., et al (2011) <sup>20</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: patients with rheumatic conditions &amp; healthcare professionals and researchers;</li> <li>• Data collection: nominal group process</li> <li>• Data analysis: semi-grammatical approach;</li> </ul>	<ol style="list-style-type: none"> <li>1. Knowledge</li> <li>2. Attitude</li> <li>3. Attribute</li> <li>4. Relationship;</li> <li>5. Skills</li> <li>6. Action</li> <li>7. Context</li> </ol>
Oldfield, S. R. & Dreher, H. M. (2010) <sup>43</sup>	Health literacy in the elderly	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: NA;</li> <li>• Data collection: literature review;</li> <li>• Data analysis: concept analysis;</li> </ul>	<ol style="list-style-type: none"> <li>1. Reading skills;</li> <li>2. Numeracy skills;</li> <li>2. Comprehension;</li> <li>3. Decision making</li> </ol>
Jordan J. E., et al (2010) <sup>26</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: patients with chronic disease, general population &amp; patients attending to emergency department;</li> <li>• Data collection: in-depth interview;</li> <li>• Data analysis: grounded theory approach;</li> </ul>	<ol style="list-style-type: none"> <li>1. Knowing when to seek health information;</li> <li>2. Knowing where to find health information;</li> <li>3. Verbal communication skills;</li> <li>4. Assertiveness;</li> <li>5. Literacy skills;</li> <li>6. Capacity to process and retain information;</li> <li>7. Application skills</li> </ol>
von Wagner C., et al (2009) <sup>27</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> <li>• Participants: NA;</li> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	1. Ability to rely on literacy and numeracy skills when they are required to solve problems in the health domain.
Freedman Darcy A., et al (2009) <sup>22</sup>	Public health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> <li>• Participants: NA;</li> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	<ol style="list-style-type: none"> <li>1. Conceptual Foundations:</li> <li>2. Critical Skills:</li> <li>3. Civic Orientation:</li> </ol>
Devraj, R. & Gordon, E. J (2009) <sup>46</sup>	Health literacy in patients with chronic kidney diseases	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> <li>• Participants: NA;</li> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	<ol style="list-style-type: none"> <li>1. The ability to read information within the health care context;</li> <li>2. The capacity to understand information within the health care context;</li> <li>3. The capacity to apply information within the health care context.</li> </ol>
Manganello, J.	Health literacy in	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> </ul>	1. Functional health literacy;

A. (2008) <sup>40</sup>	adolescents	<ul style="list-style-type: none"> <li>• Participants: NA;</li> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	<ol style="list-style-type: none"> <li>2. Interactive health literacy;</li> <li>3. Critical health literacy;</li> <li>4. Media literacy.</li> </ol>
Mancuso, J. M. (2008) <sup>28</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: NA;</li> <li>• Data collection: literature review;</li> <li>• Data analysis: concept analysis;</li> </ul>	<ol style="list-style-type: none"> <li>1. Capacity;</li> <li>2. Comprehension;</li> <li>3. Communication.</li> </ol>
Paasche-Orlow, M. K. & Wolf, M. S. (2007) <sup>29</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> <li>• Participants: NA;</li> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	<ol style="list-style-type: none"> <li>1. A person's ability for making health-related decisions,</li> <li>2. The complexity of the tasks at hand;</li> </ol>
Baker, David W. (2006) <sup>30</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> <li>• Participants: NA;</li> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	<ol style="list-style-type: none"> <li>1. Health-related print literacy;</li> <li>2. Health-related oral literacy;</li> </ol>
Zarcadoolas C. et al (2005) <sup>31</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> <li>• Participants: NA;</li> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	<ol style="list-style-type: none"> <li>1. Fundamental literacy:</li> <li>2. Science literacy:</li> <li>3. Civic literacy:</li> <li>4. Cultural literacy:</li> </ol>
Speros, C. (2005) <sup>32</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: NA;</li> <li>• Data collection: literature review;</li> <li>• Data analysis: concept analysis;</li> </ul>	<ol style="list-style-type: none"> <li>1. Reading skills;</li> <li>2. Numeracy skills;</li> <li>3. Comprehension;</li> <li>4. Capacity to use health information in decision-making;</li> <li>5. Successful functioning in the patient role.</li> </ol>
Nielsen-Bohlman L., et al (2004) <sup>4</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: qualitative research;</li> <li>• Participants: carefully selected experts from a wide range of academic disciplines and backgrounds related to health literacy</li> <li>• Data collection: Not specific;</li> <li>• Data analysis: expert consultation with committee on health literacy;</li> </ul>	<ol style="list-style-type: none"> <li>1. Cultural and conceptual knowledge</li> <li>2. Print health literacy:</li> <li>3. Oral health literacy:</li> <li>4. Numeracy.</li> </ol>
Lee, S. Y., et al (2004) <sup>33</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> <li>• Participants: NA;</li> </ul>	<ol style="list-style-type: none"> <li>1. The capacity to obtain;</li> <li>2. The capacity to process;</li> </ol>

		<ul style="list-style-type: none"> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	3. The capacity to understand;
Schillinger, Dean (2001) <sup>47</sup>	Functional health literacy in patients with chronic diseases	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> <li>• Participants: NA;</li> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	<ol style="list-style-type: none"> <li>1. Literacy;</li> <li>2. Numeracy.</li> </ol>
Nutbeam, Don (2000) <sup>3</sup>	Health literacy in general population	<ul style="list-style-type: none"> <li>• Overview: theoretical analysis;</li> <li>• Participants: NA;</li> <li>• Data collection: NA;</li> <li>• Data analysis: NA;</li> </ul>	<ol style="list-style-type: none"> <li>1. Functional health literacy;</li> <li>2. Interactive health literacy;</li> <li>3. Critical health literacy.</li> </ol>

**Table S2 The key themes and sub-themes of health literacy based on the qualitative synthesis**

<b>Key themes</b>	<b>Sub-themes</b>	<b>Contents</b>	<b>Quotes (Examples)</b>
<b>Knowledge of health, health care and health systems</b>	/	<ol style="list-style-type: none"> <li>1. Knowledge of medicine</li> <li>2. Knowledge of health</li> <li>3. Knowledge of healthcare system</li> <li>4. Knowledge of science</li> </ol>	<ul style="list-style-type: none"> <li>• The construct (health literacy) includes cultural and conceptual knowledge that could include an understanding of health and illness and a conceptualization of risks and benefits;<sup>3</sup></li> <li>• (Information appraising involved) knowledge about health relevant behaviours and healthy lifestyle and basic knowledge about physical and mental health and illness;<sup>23</sup></li> <li>• (Health care system knowledge and acting included) knowledge of rights and chances within the health care system; knowledge of who authorizes medical drugs and under which conditions these are authorized; proficiency on basic structures of the health care system;<sup>23</sup></li> <li>• Science literacy refers to levels of competence with science and technology, including some awareness of the process of science.<sup>31</sup></li> </ul>
<b>To what extent people can process and use information in various formats in relation to health and health care</b>	<b>Ability to process and use information to guide health actions</b>	<ol style="list-style-type: none"> <li>1. Basic skills</li> <li>2. Information obtaining</li> <li>3. Information understanding</li> <li>4. Information appraising</li> <li>5. Information communicating</li> <li>6. Information synthesising</li> <li>7. Information applying</li> </ol>	<ul style="list-style-type: none"> <li>• Health literacy, as defined in this report, includes a variety of components beyond reading and writing, including numeracy, listening, speaking, and relies on cultural and conceptual knowledge;<sup>4</sup></li> <li>• A critical ability was knowing when to seek health information to determine if a health issue required immediate attention or could be self-managed;<sup>26</sup></li> <li>• Communicative/interactive literacy—more advanced cognitive and literacy skills which, together with social skills, can be used to extract information and derive meaning from different forms of communication.<sup>3</sup></li> <li>• Functional health literacy abilities included: 1) understanding basic health concepts; 2) comprehending the relationship between health behaviors and health outcomes;<sup>42</sup></li> <li>• (Information appraising contains) ability to consider context information when considering opinions given by experts, ability to reflect chances and limitations of medical science and health science; ability to assess the content of a study, ability to evaluate the importance of health promotion activities;<sup>23</sup></li> </ul>

		<ul style="list-style-type: none"> <li>• Individuals need to articulate their health concerns and describe their symptoms accurately and ask pertinent questions; Social skills, the ability and confidence to express one's views clearly, are also necessary.<sup>28</sup></li> <li>• (Management skills contained) ability to make comparisons/weigh up options/make choices; (Skills regarding information contained) ability to synthesize information;<sup>20</sup></li> <li>• A person has an understanding of the determinants and the policy context of health, an understanding of opportunities to challenge these determinants and policy and motivation and actual action at a political and social level.<sup>36</sup></li> </ul>
<b>Self-efficacy in processing and using health information</b>	<ol style="list-style-type: none"> <li>1. Self-confidence</li> <li>2. Accountability</li> </ol>	<ul style="list-style-type: none"> <li>• Linked to effective communication was the need for assertiveness to facilitate understanding of information. This was a stronger theme to emerge from participants with a chronic disease. Participants described the importance of actively clarifying information so they are able to fully comprehend the nature of the health issue and make informed choices;<sup>26</sup></li> <li>• (Preventive care contained) attitude/perception of need to visit doctor during periods of wellness;<sup>39</sup></li> <li>• (Attitude towards disease contained) learn to accept and live with your disease and acceptance of condition; (Attitude towards patient approach contained) willingness to take personal responsibility and interest in own health;<sup>20</sup></li> </ul>
<b>Provision of information (active engagement in dissemination of consistent information in a language that is appropriate to consumers)</b>	<ol style="list-style-type: none"> <li>1. simplicity, consistency and accuracy of the presentation and dissemination of health information</li> </ol>	<ul style="list-style-type: none"> <li>• Health-related print and oral literacy depend upon an individual's health-related reading fluency, health-related vocabulary, familiarity with health concepts presented in materials or discussed, and the complexity and difficulty of the printed and spoken messages that a person encounters in the healthcare environment.<sup>30</sup></li> <li>• The uncertainties and inconsistencies of scientific evidence make it difficult for providers to communicate sexual health information, and leads to gay men getting different advice for the same topic.... Agencies are focused on and good at delivering "bad news" or disease, but focus less on "good news" or health (and are less experienced in doing so);<sup>48</sup></li> <li>• (The definition of information presented in quality is that) information presented in simple, clear language and in a variety of formats to enable greater access to, and understanding of, health information;<sup>49</sup></li> </ul>



<p><b>Access to resources and support for processing and using information</b></p>	<ol style="list-style-type: none"> <li>1. Access to health information and infrastructure</li> <li>2. Information support from healthcare providers</li> <li>3. Information support from social networks</li> <li>4. External resources</li> </ol>	<ul style="list-style-type: none"> <li>• (Context of access to information included) access to information; physical access to information services; adaptive equipment to access computer/library; access to medical dictionary; (Finances contained) access to a healthcare plan; (Context of health system covered) access to public health/free healthcare;<sup>20</sup></li> <li>• This level of effective interaction is not only dependent on the skills of the individual but also on the skills of the professional who must be able to explain things clearly and provide information that is appropriate for patients. This was a theme that was only touched upon within the academic literature but which was central to the colloquial sample who stressed that critical health literacy would only exist if there was a commitment from health practitioners to provide accessible information and to engage in shared decision making.<sup>36</sup></li> <li>• (The definition of social support is) family, friends and/or broader community groups who provide informal emotional, social, and/or informational support;<sup>49</sup></li> <li>• (Definition of finances and legal support is that) availability of financial and legal support for caregivers from the government and/or community to assist in their caregiving role.<sup>49</sup></li> </ul>
<p><b>Ability to maintain health through self-management and working in partnerships with health providers</b></p>	<ol style="list-style-type: none"> <li>1. Self-regulation ability</li> <li>2. Goal achieving</li> <li>3. Interpersonal skills</li> </ol>	<ul style="list-style-type: none"> <li>• The ability (self-reflection) covers being able to become conscious of one's own feelings, needs, motives, values, attitudes, and experiences, plus their relation to one's own ways of behaving in a health-enhancing way.<sup>38</sup></li> <li>• (Self-regulation involved) the ability to self-regulate oneself and the adequate strategies at one's command; ability to deal with stressful and frustrating experiences; ability to protect oneself; discipline and self-control; ability to control needs and impulses; and capacity for delayed gratification;<sup>23</sup></li> <li>• Metacognitive knowledge (self-awareness of health literacy) enables people to set meaningful and manageable goals, to create and initiate purposeful strategies for attaining the goals, to evaluate and monitor their progress, to reconstruct their physical and social surroundings to meet the needs of the goals, to manage the time needed, to attribute causation, and to adopt future strategies.<sup>38</sup></li> </ul>

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- (Interactive health literacy means children) can understand and respect self and others' body autonomy in interpersonal interactions; can maintain and respect harmonious friendships in interpersonal interactions; can express appreciation and encouragement to other people in their life; can understand and respond to other people in interpersonal interactions;<sup>42</sup>
  - (Communication and cooperation contained) ability and willingness to maintain relationships, networking with and for others; interpersonal skills to talk to others about oneself and one's health concerns; ability to achieve the satisfaction of personal needs in a social acceptable way; ability to listen to others; ability to adjust to others, empathy and sensitivity; ability to cultivate confining partnerships; teamwork and constructive dealing with conflicts.<sup>23</sup>
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**Table S3: Search strategies of all included datasets**

<b>Datasets</b>	<b>Search strategy</b>	<b>Restrictions</b>	<b>Records retrieved</b>	<b>Search date</b>
Cochrane Library	("health literacy") AND (Definition OR concept OR framework OR conceptual framework OR theory OR dimension OR model)	Publication in Cochrane Reviews (Reviews and Protocols), Other Reviews, Trials, Methods Studies and Economic Evaluations	176	2017.3.15
Pubmed	("health literacy") AND (Definition OR concept OR framework OR conceptual framework OR theory OR dimension OR model)	Limited to 2010 to current	972	2017.3.15
Medline	("health literacy".mp. or exp *Health Literacy/) AND (Definition or concept or framework or conceptual framework or theory or dimension or model).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	Limited to 2010 to current	1021	2017.3.15
Embase	("health literacy".mp. or exp *Health Literacy/) AND (Definition or concept or framework or conceptual framework or theory or dimension or model).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]	Limited to 2010 to current	1796	2017.3.15
PsycARTICLES	("health literacy" AND pd(20100101-20171231)) AND (Definition OR concept OR framework OR conceptual framework OR theory OR dimension OR model)	Limited to 2010 to current	212	2017.3.15
Web of Science	Theme: (Definition OR concept OR framework OR conceptual framework OR theory OR dimension OR model) Index=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI, CCR-EXPANDED, IC time=2010-2017 AND Theme: ("health literacy")	Limited to 2010 to current	1308	2017.3.15

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Index=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI, CCR-  
EXPANDED, IC time=2010-2017

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Scopus	TITLE-ABS-KEY ( "health literacy" ) AND TITLE-ABS-KEY ( definition OR concept OR framework OR conceptual AND framework OR theory OR dimension OR model ) AND PUBYEAR > 2009	Limited to 2010 to current	544	2017.3.15
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**Table S4: Data collection chart**

Bibliographic information							Results of conceptualization		Others	
Order	Author (Year)	Objective/Aim	Restriction of health literacy	Data/Participants	Data collection	Data analysis	Components of health literacy	Interpretation	Reviewer's Comments	Others