

Appendix 1. Summary of included studies.

First author, year	Country	Number of participants	Characteristics of adolescents			Perceptions about health-related Internet use (HRIU)	Evidence (key findings)	Ever use Internet for health (>50%)	Associated factors
			Age (years or graders)	Demographics	Medical conditions				
Manganello et al, 2016 [1]	United States	48	14-17 years	Mostly female (70%), 7th-9th grade (30%) and 10-12th grade (70%), African American adolescents living in an urban location	None	Negative	<ul style="list-style-type: none"> <li>65% low health literacy group (compared with 35% having adequate health literacy group)</li> <li>Low health literacy group reported greater problems with understanding information they found on the Internet, requiring assistance (33% low vs 8% high) and more likely to rate health information online as accurate (28% low vs 14% high), suggesting there may be a lack of skills for evaluating credibility</li> <li>Associated factor: youth with low health literacy less likely to</li> </ul>	-	Health literacy level

							prefer general Internet use and more likely to need help understating health information obtained on their own		
Johnson et al, 2015 [2]	United States	134	14-19 years	Mostly female (83,6%), Caucasian (81.3%), living with two parents in an urban location	Juvenile arthritis	Positive	<ul style="list-style-type: none"> <li>Youth with low psychosocial quality of life (PSQL) report more frequent use of SNSs than their peers with high PSQL; more frequent searching for information about sensitive health topics; and high interest in using additional online tools to address unmet needs and to connect with other teens with juvenile arthritis</li> <li>74.5% prefer online support group than in-person support groups</li> <li>91% interested in using a website that is just for teens with arthritis</li> </ul>	Yes	PSQL
Wetterlin et al, 2014 [3]	Canada	521	17-24 years	Mostly female (76.6%), East or Southeast Asian (44%) or European or Caucasian (35.5%), living in British Columbia	None	Positive	<ul style="list-style-type: none"> <li>Likelihood of visiting Web-based mental health resources during a difficult time in life: 82.9% information-based website with mainly text, 76.8% social media websites</li> </ul>	-	-

				(86%) and currently in school (87.3%)			<ul style="list-style-type: none"> <li>Likelihood of contacting a human within a Web-based mental health resource: 83.9% online professional (eg, therapist or coach)</li> </ul>		
Fergie et al, 2013 [4]	United Kingdom	34	14-18 years	Mostly female (70.6%), school pupils or university students, living in an urban area	None	Not applicable (N/A) (qualitative)	<ul style="list-style-type: none"> <li>Perceived disadvantages and advantages of health content online are identified</li> </ul>		
Henderson et al, 2013 [5]	United Kingdom	105	11-18 years	Male (58%) and female (42%), most had experienced some form of pain in the last 3 months (80%), living in an urban area	None	Negative	<ul style="list-style-type: none"> <li>13.3%=HRIU related to pain management</li> <li>Although majority (82%) indicate between 1 to 4 hours/day of Internet use, seeking information online about their pain coping, information, and management is not primary strategy of a healthy adolescent population in pain</li> </ul>	No	Gender
Nordfeldt et al, 2013 [6]	Sweden	24	10-17 years	Male (54%) and female (46%), living in catchment area of a county hospital in the South-East of Sweden, either in compulsory or	Type 1 diabetes mellitus	N/A (qualitative)	<ul style="list-style-type: none"> <li>Primary source for information is parents or significant others</li> </ul>	-	-

				secondary school, all had Internet access at home					
Neumark et al, 2013 [7]	Israel	6728	7th-12th grades	Male (48.9%) and female (51.1%), Jewish (71.8%) and Arab (28.2%) students	None	Neutral	<ul style="list-style-type: none"> <li>• 52.1% reported having sought online health information in the past year</li> <li>• Trust in online health information: high 15%, moderate 68.2%, low 16.8%</li> <li>• Perceived Internet skill levels: high 37%, moderate 36.9%, low 26.1%</li> <li>• Likelihood of HRIU: Arab students (63%), Jews (48%)</li> <li>• Reasons for not seeking online health information: preference to receive information from a health professional, lack of interest, lack of trust, insufficient English proficiency, lack of time and privacy, limited access, expense, insufficient Internet skills</li> </ul>	Yes	Age, frequency of Internet use, level of trust, Internet skills, medical condition, school performance
Stephens et al, 2013 [8]	United Kingdom	15 (interview) + 50 (survey)	10-16 years	Majority use social networking sites (SNSs) (76%)	Undergoing orthodontic treatment	Negative	<ul style="list-style-type: none"> <li>• 8% = use Internet for orthodontic-related information</li> <li>• Preferred source of information: health care providers (84%),</li> </ul>	No	-

							peers (66%), parents (60%), leaflets (64%), Internet (8%)		
Gaskin et al, 2012 [9]	United States	79	13-18 years	Mostly male (84%), Hispanic (70%), youth detained in a juvenile detention facility, predominantly underserved, minority communities, high level of access to Internet	None	Positive	<ul style="list-style-type: none"> <li>90% believe access to health information on website is useful</li> <li>85% have no concerns about the privacy of their health information online on password-protected sites</li> </ul>	-	-
Magee et al, 2012 [10]	United States	32	16-24 years	Male (53%), female (37.5%), and transgender (9.4%); African American (40.6%), Hispanic or Latino (25%), Caucasian (21.8%), Asian (3%), and multiracial (9%); lesbian, gay, bisexual, and transgender youth	None	Positive	<ul style="list-style-type: none"> <li>75% online searches for sexual health information as common activity</li> <li>Overall, seek facts and statistics about sexually transmitted infections (STIs) and human immunodeficiency virus (HIV) online (&gt;70%) but few on the broader aspects of sexual health (&lt;25%)</li> </ul>	Yes	Fear of acquiring sexually transmitted disease
Ghaddar et al, 2012 [11]	United States	261	14-20 years	Mostly female (60%), Hispanic (84%), high school students; economically disadvantaged (58%)	None	Positive	<ul style="list-style-type: none"> <li>81% had checked health information online</li> <li>71% very likely to search the Internet for information on health</li> </ul>	Yes	Health literacy

							<ul style="list-style-type: none"> <li>59% sought health information for family's health online</li> </ul>		
Selkie et al, 2011 [12]	United States	29	14-19 years	Mostly female (65.5%); heterosexual (61%); sexual experience (58.6%)	None	N/A (HRIU-qualitative)	<ul style="list-style-type: none"> <li>Common themes to the resources for sexual health information online are identified: accessibility, trustworthiness, and confidentiality, and personal comfort</li> </ul>	-	-
Barman-Adhikari et al, 2011 [13]	United States	169	13-24 years	Mostly male (68.2%), heterosexual (68.9%), gay or lesbian or bisexual (31.1%); African American (31%), Caucasian (26.9%), mixed race (18.5%), Hispanic or Latino (12.6%), and other (10.8%); runaway and homeless adolescents in an urban area	None	N/A	<ul style="list-style-type: none"> <li>61% use Internet to find answers to general health questions</li> <li>&lt;50% look for information about HIV or other STIs and 40% information about sex or sexuality</li> </ul>	Yes	Gender, race or ethnicity, frequency of Internet use; personal access to computers

Mustanski et al, 2011 [14]	United States	329 (including 16 interviewees)	18-24 years	All male born, male identified, Caucasian (48%), African American (20%), Hispanic or Latino (20%), other (12%); men who have sex with men identified as gay (49%), bisexual (8%), queer (3%), heterosexual (39%)	None	N/A	<ul style="list-style-type: none"> <li>88% used the Internet to find HIV or STI-related information</li> </ul>	Yes	Race or ethnicity and gender
Rushing et al, 2011 [15]	United States	405	13-21 years	Male (43%) and female (57%), American Indian, American Native youth living in rural (58%) and urban (39%) communities	None	N/A	<ul style="list-style-type: none"> <li>76% used the Internet to get information on a health topic</li> </ul>	Yes	Gender and age
Buhi et al, 2009 [16]	United States	34	18-19 years	Mostly female (67.6%), 1st year under graduate students, Caucasian, reported as experienced Internet users	None	Positive	<ul style="list-style-type: none"> <li>65% Internet is the predominant source for seeking health-related information</li> <li>73.5% ever look online for information on specific diseases or medical problems, treatment, or procedures</li> </ul>	Yes	-
Tercyak et al, 2009 [17]	United States	332	11-12 years	Mostly female (70%), African American (44%) or Caucasian (39%),	None	Neutral	<ul style="list-style-type: none"> <li>Moderate level of willingness to engage in electronic health (eHealth) promotion</li> </ul>	-	-

				living in predominantly middle class income areas			<ul style="list-style-type: none"> <li>• &lt;20% are unwilling to engage in any eHealth promotion activity</li> </ul>		
Ybarra et al, 2008 [18]	Uganda	500	12-18 years	Mostly male (61%), secondary school students (8th-11th grade) living in rural locations	None	Negative-	<ul style="list-style-type: none"> <li>• Source of health information: parents or other adults (81%) and the Internet (38%)</li> </ul>	-	-
Nwagwu, 2007 [19]	Nigeria	1145	13-19 years	All female, currently in school or dropped out of school, living in an urban area <sup>a</sup>	None	N/A	<ul style="list-style-type: none"> <li>• Main source of health information in in-school girls: parents (66.2%) and teachers (56.2%)</li> <li>• Main source of health information in out-of-school girls: friends (63.1%) and the Internet (55.2%)</li> <li>• More out-of-school than in-school girls use the Internet to obtain information about their reproductive health</li> </ul>	-	In-school or out-of-school status

Abbreviation: AA, African American; DM, diabetes mellitus; HIV, human immunodeficiency virus; HS, high school; LGBT, lesbian, gay, bisexual, and transgender; MSM, men who have sex with men; PS-QL, psychosocial quality of life; SNS, social networking sites; STI, sexually-transmitted infection; UG, undergraduate; UK, United Kingdom; USA, United States of America; yrs, years.

<sup>a</sup> The study states that participants were both educated and affluent.



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