Svar från SBU:s upplysningstjänst nr ut201909 • **Diarienummer:** SBU 2018/417 • **Datum:** 2019-04-02

Ungas erfarenhet av hälsoinformation via internet

En ungdomsmottagning är en rådgivande hälsomottagning för unga (12–25 år). Ungdomsmottagningarna strävar efter att vara både tillgängliga och diskreta. De har i regel öppet på vardagar och lokalerna är ofta belägna i miljöer som kan besökas av andra skäl som exempelvis gallerior. Många ungdomsmottagningar har egna eller gemensamma hemsidor med information och möjlighet att ställa frågor. För att bättre kunna nå ut till målgruppen är det viktigt att veta vad som gör att en mottagning upplevs som tillgänglig via internet.

Fråga

Hur upplever unga personer ungdomsmottagningarnas tillgänglighet via internet?

Frågeställare: Samordnare/verksamhetsutvecklare på Ungdomsmottagning, Västra Götalandsregionen

Sammanfattning

SBU:s upplysningstjänst har identifierat två systematiska översikter och fyra studier som delvis svarar på frågan. Ingen av artiklarna har undersökt insatser som syftar till att öka tillgängligheten till hälsoinformation för unga på internet. I de två identifierade översikterna och i en av studierna skrev författarna att unga kan ha flera skäl för att använda internet när de vill söka hälsoinformation [1,2,3]. Det finns också ett par studier där författarna tog upp särskilda grupper av unga som kan föredra att söka hjälp på internet framför vanliga mottagningsbesök [3,4]. I ett par studier beskrevs att de unga gärna vill ha interaktiv kontakt över nätet [3,5]. När det gäller att finna informationen så skrev författarna att det finns en stor variation vad beträffar hur avancerade de ungas sökmetoder på nätet är [1]. I en studie drog författarna slutsatsen att det bör utvecklas webbsidor som underlättar sådana sökningar för unga [6].

SBU har inte tagit ställning i sakfrågan eftersom vi inte har bedömt de enskilda studiernas kvalitet eller vägt samman resultaten. Här redovisar vi därför endast de enskilda författarnas slutsatser.

Bakgrund

På en ungdomsmottagning finns barnmorskor, kuratorer och läkare, och många gånger finns det även tillgång till sjuksköterska och psykolog. Rådgivningen kan handla om kroppen, psykisk hälsa, mat och ätande, utsatthet, sex och relationer. Mottagningarna utför också ofta tester för könssjukdomar eller graviditet, delar ut kondomer och tillhandahåller hjälp med akut-p-piller.

Enligt frågeställaren vill ungdomsmottagningar bli bättre på att nå ut till vissa grupper, som pojkar och unga män, migranter, ungdomar med funktionhinder (både kognitiva och fysiska), ungdomar med transerfarenhet och ungdomar som lever med hedersrelaterat våld och förtryck. Frågeställaren vill veta vad som gör att en mottagning upplevs som tillgänglig via internet.

Avgränsningar

Vi har avgränsat oss till studier som undersökt aspekter på tillgänglighet (antal besök, upplevelser och erfarenheter) hos ungdomsmottagningar och andra typer av hälsokliniker med digitala lösningar. Dessa var öppna för unga i åldern 13–25 år. Det gjordes inga avgränsningar i studieansats (kvalitativ eller kvantitativ forskning) eller studiedesign.

- Populationen: unga (13–25 år) som kan besöka ungdomsmottagning (UM), eller andra typer av hälsokliniker. Fokus är på unga med särskilda behov att besöka UM, eller andra typer av hälsokliniker (pojkar och unga män, migranter, unga med kognitiva och/eller fysiska funktionhinder, ungdomar med transerfarenhet, unga med hedersproblematik).
- Intervention: ökad tillgänglighet till UM eller - andra typer av hälsokliniker med digitala lösningar (t.ex. elektronisk bokning, e-möten)
- Control: alla studietyper.
- Outcome: antal besök eller patientupplevelser och erfarenheter av tillgänglighet.

Vi har gjort sökningar (se avsnittet Litteratursökning) i databaserna Pubmed, Cochrane Library, Cinahl, Psychology and Behavioral Sciences Collection och Science & Technology Abstracts.

Resultat från sökningen

Upplysningstjänstens litteratursökning genererade totalt 560 artikelsammanfattningar (abstrakt). En projektledare på SBU läste samtliga och bedömde att 24 primärstudier och systematiska översikter kunde vara relevanta. Dessa artiklar lästes i fulltext. De artiklar som inte var relevanta för frågeställningen exkluderades. Enskilda studier som redan ingick i de systematiska översikterna exkluderades och i upplysningstjänstsvaret ingår sex artiklar, varav två är systematiska översikter. Vi

har även lagt in en lista med lästips i detta svar, artiklar som inte besvarar den specifika frågan, men som behandlar närliggande frågor.

Observera att varken kvaliteten på översikterna eller de inkluderade primär-studierna bedömdes. Det är därför möjligt att flera av studierna kan ha haft lägre kvalitet än de som SBU brukar inkludera i sina ordinarie utvärderingar.

Systematiska översikter

Två systematiska översikter identifierades. De besvarade endast delvis frågan. I översikterna studerades vilka metoder som unga använde för att söka hälsoinformation på internet, hur de såg på och upplevde denna information. I den ena översikten, vilken huvudsakligen byggde på studier med kvalitativ studiedesign, gjordes en systematisk kvalitetsbedömning. Ingen av studierna exkluderades på grund av viktiga brister [1]. I den andra översikten var de flesta studierna kvantitativa och deskriptiva. Författarna kommenterade faktorer som påverkat validiteten i studierna negativt, de vanligaste kommentarerna gällde begränsad generaliserbarhet och självrapporterade data [2].

Tabell 1. Systematiska översikter/Table 1. Systematic reviews

Included studies	Population /intervention	Outcome
Freeman et al 2018 [1]		
34	13–18 years	Whether and how adolescents search for online health information, and the extent to which adolescents appraise online health information.

Authors' conclusion:

Adolescents are aware of the varying quality of online health information. Strategies used by individuals for searching and appraising online health information differ in their sophistication. It is important to develop resources to enhance search and appraisal skills and to collaborate with adolescents to ensure that such resources are appropriate for them.

- Use of Search Engines: One of the most striking themes across the literature concerned the widespread use of algorithm-based search engines by adolescents.
- Barriers to Searching: Various barriers to searching emerged throughout the papers. One of the more significant barriers described by participants was the challenge of navigating vast quantities of often irrelevant or inconsistent online health information.
- Absence of Searching: Numerous studies revealed that online health information searching is not a frequent activity undertaken by adolescents. Although adolescents demonstrated an awareness that the information was available, they were often not sufficiently motivated to actively search for it. or they viewed the Internet as a vehicle for entertainment rather than a source of health information.
- Evaluation Based on First Impression of Web Site: Adolescents demonstrated a preference for Web sites that were well-organized with online health information that was concise and clear. Participants reported a preference for Web sites that seemed to be in some way professional, using a professional tone, with language that was understandable and age appropriate.

Included studies	Population /intervention	Outcome
• Evaluation of Web Site Content: Adolescents reported cross-referencing and validating health information with other online and offline sources. When faced with conflicting information, participants described trusting the information provided by the majority of Web sites and thus corroboration was viewed as an indicator of the credibility of the online content. • Absence of a Sophisticated Appraisal Strategy: Many papers found that adolescents used no clear appraisal strategy when assessing the credibility of online health information. Instead, some participants reported using their instinctive responses to information.		
Park et al 2018 [2]		
19	<24 years	The objective of this systematic literature review was to examine the phenomenon of children and adolescents' health-related internet use and to identify gaps in the research.

Authors' conclusion:

This study's findings provide important information on how youth seek information and related support systems for their health care on the internet. The conceptual and methodological limitations of the identified studies, such as the lack of a theoretical background and unrepresentative samples, are discussed, and gaps within the studies are identified for future research.

- The most common means for accessing the internet were personal computers or laptops (65%), followed by cell phones or other mobile internet-enabled devices (42%), with many reporting using both.
- The topics that young people search for online includes information on daily health-related issues, physical well-being, sexual health, mental health social problems, and culturally and religiously sensitive topics.
- Youths often use the internet to connect and create supportive communities on particular health issues, expressing interest in diverse online activities related to health, including messaging and connecting with others, networking, and receiving information. Intriguingly, 61.2% preferred an online support group to offline in-person groups.
- Gender, age, and in-school status are associated factors for the frequency of health-related internet use. Girls tend to use the internet more often for help seeking online. Youth of both sexes aged 16 to 17 years reported the internet to be their primary source for information.
- Overall, children and adolescents' perception of health-related internet use is positive.
- Regarding the perceived importance and usefulness of the internet, 90% of the participants in one study responded that having access to health-related resources on the Web is important, but only 8% of those in another study stated that their preferred source of information was the internet. When adolescents are asked specifically about their sexual health–related use, 48.1% reported that they are relieved or comforted by the information online. Online privacy was a key issue for youth, with 87.7% stressing the importance of online privacy, which was particularly important for those with a specific health problem such as mental health issues. Looking for sexual health information online was also closely linked to privacy issues as many youth felt reluctant to speak with an HCP about sensitive issues surrounding sexuality and instead use the internet to avoid embarrassment and overcome privacy issues. On the other hand, lesbian, gay, bisexual, and transgender (LGBT) youth identified fear as an obstacle to online sexual health behaviors because of the perceived stigma resulting from being "caught".
- Another strong concern among youth who use the internet was the accuracy of the information.

Studier

Fyra studier som stämde med avgränsningarna identifierades. De besvarar endast delvis frågan. Studierna undersökte hur unga söker hälsoinformation på internet och vad de söker. Studierna presenterade även resultat om patientupplevelser och vad unga önskar sig av online-kontakter. Studiedesignen var kvalitativ med explorativ ansats. Ingen av studierna undersökte effekter eller var av typen randomiserad kontrollerad studie.

Tabell 2. Studier/ Table 2. Studies

Population	Study design	Outcome
Ellis et al 2013 [3].		
486 males (aged 16 to 24) and 17 focus groups involving 118 males (aged 16 to 24).	Mixed methods study	This mixed-methods study was designed to explore young Australian men's attitudes and behaviour in relation to mental health and technology use to inform the development of online mental health services for young men.
Authors' conclusion: The key challenge for online mental health services is to design interventions specifically for young men that are action-based, focus on shifting behaviour and stigma, and are not simply about increasing mental health knowledge. Furthermore, such interventions should be user-driven, informed by young men's views and everyday technology practices, and leverage the influence of peers. • The focus group data suggested that young men would be less likely to seek professional help for themselves, citing a preference for self-help and action-oriented strategies instead. • Most survey participants reported that they have sought help for a problem online and were satisfied with the help they received.		
Flanders et al 2017 [4]		
18 sexual minority women between the ages of 16–29	Exploratory qualitative study on focus groups	This exploratory qualitative study employed a series of focus groups to understand more about what types of Online resources young sexual minority women access, their motivations for using those resources, and what types of sexual health information they need.
Authors' conclusion: These findings help begin to fill the gap on knowledge of young sexual minority women's sexual health information seeking practices, which can be used for the development of effective online sexual health information resources targeting young sexual minority women. • Results indicate that participants used a wide range of online resources, such as apps, websites, blogs, and YouTube. • The type of resource accessed often depended upon the information needed. • Participants reported preferring online resources due to experiences or expectations of heteronormativity from their sexual health service providers, convenience and accessibility, the capacity to remain anonymous, and the lack of relevant sexual health information offline.		

Population	Study design	Outcome
Frost et al 2016 [5].		
N=457 Age range: 14–25	Mixed-methods exploratory analysis	To investigate the perspectives of young people who self-injure regarding online services, with the aim of informing online service delivery.
Authors' conclusion: Young people expressed clear preferences regarding online services for self-injury, supporting the importance of consumer consultation in development of online services. • Seven themes emerged in relation to preferences for future online help-seeking: information, guidance, reduced isolation, online culture, facilitation of help-seeking, access, and privacy. • Direct contact with a professional via instant messaging was the most highly endorsed form of online support.		
Gilbert et al 2005 [6].		
N=1242 Age range: 13–17	Online survey	A pilot study was conducted to measure audience and information-seeking characteristics of the www.iwannaknow.org Web site. (A teen STD prevention Web site.)
Authors' conclusion: Methods and findings will assist researchers, Web site developers, and health educators to refine these evaluation methods, develop effective Web sites, and tailor STD prevention messages by age group and gender. The Internet is a cost-effective method for educating teens and those who care for or work with teens about STD risks and prevention, however, more research is needed to assess the behavioral effects of online interventions. • The content analyses and the usability tests were useful for revising the site content and aesthetics and preparing the online survey. • Most accessed the Internet from home. • The most frequent topic of interest was sexual expression, followed by teen sexuality, virginity, relationships, contraception, and then STD information and these varied by age and gender.		

Lästips

Lästipsen handlar om hur olika grupper av unga använder internet för hälsoinformation [7–14] och hur hälsoinformation på internet kan fungera [15–19], samt hälsoinformation via SMS [20–23] och mobilapp [24].

Projektgrupp

Detta svar är sammanställt av Alexandra Snellman (projektledare), Sally Saad (utredare), Sara Fundell (projektadministratör), Åsa Fagerström (kommunikatör) och Miriam Entesarian Matsson (produktsamordnare) vid SBU.

Litteratursökning

PubMed via NLM 190131

Adolescents experience of accessibility to online health information

	Search terms	Items found
Population:		
1.	Adolescents[tiab] OR Adolescence[tiab] OR Teens[tiab] OR Teen[tiab] OR Teenagers[tiab] OR Teenager[tiab] OR Youth[tiab] OR Youths[tiab] OR young[tiab] OR "Adolescent"[Mesh] OR "Young Adult"[Mesh]	2601838
Intervention:		
2.	“sexual and reproductive health services” OR srhs OR “youth-friendly health services” OR yfhs OR "Adolescent Health Services"[Mesh] OR "Reproductive Health Services"[Mesh] OR "Mental Health Services"[Mesh] OR “health care service”[tiab] OR “health care services”[tiab] OR “health education”[tiab]	171695
3.	"Information Seeking Behavior"[Mesh] OR ((information[tiab] OR help[tiab] OR health[tiab]) AND (seek[tiab] OR seeking[tiab]))	55135
4.	Digital[tiab] OR internet[tiab] OR online[tiab] OR mobile[tiab] OR phone[tiab] OR “social media”[tiab] OR "Internet"[Mesh] OR "Online Systems"[Mesh] OR “Web-based”[tiab] OR website[tiab] OR computer[tiab] OR “e-health”[tiab] OR "Cell Phone"[Mesh]	587988
5.	1 AND 2 AND 3 AND 4	2295
Final	**5**	**229**

The search result, usually found at the end of the documentation, forms the list of abstracts

[MeSH] = Term from the Medline controlled vocabulary, including terms found below this term in the MeSH hierarchy
[MeSH:NoExp] = Does not include terms found below this term in the MeSH hierarchy
[MAJR] = MeSH Major Topic
[TIAB] = Title or abstract
[TI] = Title
[AU] = Author
[TW] = Text Word
Systematic[SB] = Filter for retrieving systematic reviews
* = Truncation
“ “ = Citation Marks; searches for an exact phrase

Cochrane Library via Wiley 190131

Adolescents experience of accessibility to online health information

	Search terms	Items found
Population:		
1.	Adolescents:ti,ab,kw OR Adolescence:ti,ab,kw OR Teens:ti,ab,kw OR Teen:ti,ab,kw OR Teenagers:ti,ab,kw OR Teenager:ti,ab,kw OR Youth:ti,ab,kw OR Youths:ti,ab,kw OR young:ti,ab,kw OR [mh Adolescent] OR [mh "Young Adult"]	164243
Intervention:		
2.	“sexual and reproductive health services” OR srhs OR “youth-friendly health services” OR yfhs OR [mh "Adolescent Health Services"] OR [mh "Reproductive Health Services"] OR [mh "Mental Health Services"] OR “health care service”:ti,ab,kw OR “health care services”:ti,ab,kw OR “health education”:ti,ab,kw	14221
3.	[mh "Information Seeking Behavior"] OR ((information:ti,ab,kw OR help:ti,ab,kw OR health:ti,ab,kw) AND (seek:ti,ab,kw OR seeking:ti,ab,kw))	4320
4.	Digital:ti,ab,kw OR internet:ti,ab,kw OR online:ti,ab,kw OR mobile:ti,ab,kw OR phone:ti,ab,kw OR “social media”:ti,ab,kw OR [mh "Internet"] OR [mh "Online Systems"] OR “Web-based”:ti,ab,kw OR website:ti,ab,kw OR computer:ti,ab,kw OR “e-health”:ti,ab,kw OR [mh "Cell Phone"]	61220
Combined sets: 1 AND 2 AND 3 AND 4		
Final	**1 AND 2 AND 3 AND 4**	**35**

The search result, usually found at the end of the documentation, forms the list of abstracts

[mh] = Term from the Medline controlled vocabulary, including terms found below this term in the MeSH hierarchy
:ti = Title
:ab = Abstract
:kw = Keyword
:ti,ab,kw = Title or abstract or keyword
* = Truncation
“ “ = Citation Marks; searches for an exact phrase

CDSR = Cochrane Database of Systematic Review
CENTRAL = Cochrane Central Register of Controlled Trials, “trials”
CRM = Method Studies
DARE = Database Abstracts of Reviews of Effects, “other reviews”
EED = Economic Evaluations
HTA = Health Technology Assessments

Cinahl via EBSCO 190131

Adolescents experience of accessibility to online health information

	Search terms	Items found
Population:		
1.	TI (Adolescents OR Adolescence OR Teens OR Teen OR Teenagers OR Teenager OR Youth OR Youths OR young) OR AB (Adolescents OR Adolescence OR Teens OR Teen OR Teenagers OR Teenager OR Youth OR Youths OR young) OR (ZG "adolescent: 13-18 years") OR (MH "Young Adult") OR (MH "Adolescence+")	625452
Intervention:		
2.	TX (“sexual and reproductive health services” OR srhs OR “youth-friendly health services” OR yfhs OR “health care service” OR “health care services” OR “health education”) OR (MM "Mental Health Services+")	139932
3.	(MH "Information Seeking Behavior") OR TI (((information OR help OR health) AND (seek OR seeking))) OR AB (((information OR help OR health) AND (seek OR seeking)))	32019
4.	TI (Digital OR internet OR online OR mobile OR phone OR “social media” OR “Web-based” OR website OR computer OR “e-health”) OR TI (Digital OR internet OR online OR mobile OR phone OR “social media” OR “Web-based” OR website OR computer OR “e-health”) OR (MH "Internet+") OR (MH "Cellular Phone+")	173555
5.	1 AND 2 AND 3 AND 4	116
Final	**5**	116

The search result, usually found at the end of the documentation, forms the list of abstracts
TI = Title
AB = Abstract
MH = Term from the thesaurus
MH+ = Includes terms found below this term in the thesaurus
MM = Major Concept
TX = All Text. Performs a keyword search of all the database's searchable fields
ZG = Methodology Index
* = Truncation
“ “ = Citation Marks; searches for an exact phrase

Databas via ebsco.com Psychology and Behavioral Sciences Collection via EBSCO 190131

Adolescents experience of accessibility to online health information

	Search terms	Items found
Population:		
1.	TI (Adolescents OR Adolescence OR Teens OR Teen OR Teenagers OR Teenager OR Youth OR Youths OR young) OR AB (Adolescents OR Adolescence OR Teens OR Teen OR Teenagers OR Teenager OR Youth OR Youths OR young) OR DE "YOUNG adults" OR DE "TEENAGERS"	74848
Intervention:		
2.	TX (“sexual and reproductive health services” OR srhs OR “youth-friendly health services” OR yfhs OR “health care service” OR “health care services” OR “health education”) OR DE "REPRODUCTIVE health services" OR DE "MENTAL health services" OR DE "COMMUNITY mental health services"	47296
3.	TI (((information OR help OR health) AND (seek OR seeking))) OR AB (((information OR help OR health) AND (seek OR seeking)))	6914
4.	TI (Digital OR internet OR online OR mobile OR phone OR “social media” OR “Web-based” OR website OR computer OR “e-health”) OR TI (Digital OR internet OR online OR mobile OR phone OR “social media” OR “Web-based” OR website OR computer OR “e-health”) OR DE "INTERNET" OR DE "SMARTPHONES" OR DE "CELL phones"	11917
Combined sets:		
5.	1 AND 2 AND 3 AND 4	20
Final	**5**	**20**

The search result, usually found at the end of the documentation, forms the list of abstracts

AB = Abstract
AU = Author
DE = Term from the thesaurus
MH = Term from the “Cinahl Headings” thesaurus
MM = Major Concept
TI = Title
TX = All Text. Performs a keyword search of all the database's searchable fields
ZC = Methodology Index
* = Truncation
“ “ = Citation Marks; searches for an exact phrase

Science & Technology Abstracts via EBSCO 190131

Adolescents experience of accessibility to online health information

	Search terms	Items found
Population:		
1.	TI (Adolescents OR Adolescence OR Teens OR Teen OR Teenagers OR Teenager OR Youth OR Youths OR young) OR AB (Adolescents OR Adolescence OR Teens OR Teen OR Teenagers OR Teenager OR Youth OR Youths OR young) OR DE "TEENAGERS"	53590
Intervention:		
2.	TX (“sexual and reproductive health services” OR srhs OR “youth-friendly health services” OR yfhs OR “health care service” OR “health care services” OR “health education”)	2194
3.	TI (((information OR help OR health) AND (seek OR seeking))) OR AB (((information OR help OR health) AND (seek OR seeking)))	7593
4.	TI (Digital OR internet OR online OR mobile OR phone OR “social media” OR “Web-based” OR website OR computer OR “e-health”) OR TI (Digital OR internet OR online OR mobile OR phone OR “social media” OR “Web-based” OR website OR computer OR “e-health”) OR DE "INTERNET" OR DE "INTERNET & youth" OR DE "ONLINE information services"	77879
Combined sets:		
5.	1 AND 2 AND 3 AND 4	11
Final	**1 AND 2 AND 3 AND 4**	**11**

Referenser

1. Freeman JL, Caldwel PHY, Bennett PA, Scott KM. How adolescents search for and appraise online health information: A systematic review. J Pediatr 2018;195:244-55.

2. Park E, Kwon M. Health-related internet use by children and adolescents: Systematic review. J Med Internet Res 2018;20:e120.

3. Ellis LA, Collin P, Hurley PJ, Davenport TA, Burns JM, Hickie IB. Young men's attitudes and behaviour in relation to mental health and technology: implications for the development of online mental health services. BMC Psychiatry 2013;13:119.

4. Flanders CE, Pragg L, Dobinson C, Logie C. Young sexual minority women's use of the internet and other digital technologies for sexual health information seeking. Canadian Journal of Human Sexuality 2017;26:17-25.

5. Frost, M, Casey L, Rando N. Self-injury, help-seeking, and the internet: Informing online service provision for young people. Crisis 2016;37:68-76.

6. Gilbert LK, Temby JRE, Rogers SE. Evaluating a teen STD prevention Web site. Journal of Adolescent Health 2005;37:236-42.

7. Aicken CRH, Estcourt CS, Johnson AM, Sonnenberg, P, Wellings K, Mercer CH. Use of the Internet for sexual health among sexually experienced persons aged 16 to 44 years: Evidence from a nationally representative survey of the British population. J Med Internet Res 2016;18(1).

8. Chang FC, Chiu CH, Chen PH, Miao NF, Lee CM, Chiang JT, Pan YC. Relationship between parental and adolescent ehealth literacy and online health information seeking in Taiwan. Cyberpsychology, Behavior, and Social Networking 2015;18:618-24.

9. Frost M, Casey L. Who seeks help online for self-injury? Arch Suicide Res 2016;20:69-79.

10. Lan CM. Predictors of willingness to use cyber counseling for college students with disabilities. Disabil Health J 2016;9:346-52.

11. Mitchell KJ, Ybarra ML, Korchmaros JD, Kosciw JG. Accessing sexual health information online: use, motivations and consequences for youth with different sexual orientations. Health Educ Res 2014; 29:147-57.

12. nez-Pernett JJ, de Labry-Lima AO, García-Gutiérrez JF, Salcedo-Sánchez MC, Bermúdez-Tamayo C. Sex differences in the use of the Internet as a source of health information among adolescents. Telemedicine and e-Health 2010; 16:145-53.

13. Rose ID, Friedman DB. We need health information too: A systematic review of studies examining the health information seeking and communication practices of sexual minority youth. Health Education Journal 2013;72:417-30.

14. Samuelsson, U (2014). Digital (o)jämlikhet? IKT-användning i skolan och elevers tekniska kapital. Högskolan i Jönköping Dissertation. School of Education and Communication, 1652-7933; 23.

15. Chisolm DJ. Does online health information seeking act like a health behavior? A test of the behavioral model. Telemedicine and e-Health 2010;16:154-60.

16. Gray NJ, Klein JD, Noyce PR, Sesselberg TS, Cantrill JA. Health information-seeking behaviour in adolescence: The place of the internet. Social Science & Medicine 2005;60:1467-78.

17. Hagley M, Pearson H, Carne C. Sexual health advice centre. Int J Adolesc Med Health 2002;14:125-30.

18. Kauer SD, Mangan C, Sanci L. Do online mental health services improve help-seeking for young people? A systematic review. J Med Internet Res 2014;16:e66.

19. Korp P. Health on the Internet: implications for health promotion. Health Education Research 2006;21:78-86

20. Akinfaderin-Agarau F, Chirtau M, Ekponimo S, Power S. Opportunities and limitations for using new media and mobile phones to expand access to sexual and reproductive health information and services for adolescent girls and young women in six Nigerian states. Afr J Reprod Health 2012;16:219-30.

21. Baig QNA. SMS: An effective way to break the silence in conservative settings. Journal of Sexual Medicine 2015; 12 Supplement 5:320.

22. Evans, C, Suggs LS, Turner K, Occa A, Juma A, Blake H. Mobile phone messaging to promote uptake of HIV testing among migrant African communities in the UK. Health Education Journal 2019; 78:24-37.

23. Willoughby JF, L'Engle KL. Influence of perceived interactivity of a sexual health text message service on young people's attitudes, satisfaction and repeat use. Health Educ Res 2015;30:996-1003.

24. Gilliam M, Hebert L, Brown R, Akinola M, Hill B, Whitaker A, Quinn M. Exploring the feasibility and effectiveness of a contraceptive counseling waiting room app. Contraception 2016;94:412.