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Is Facebook use healthy for individuals experiencing homelessness? A scoping review on social networking and living in the streets

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ABSTRACT

Background: Although they are faced with a situation of extreme social exclusion, individuals experiencing homelessness (IEH) have gradually begun to incorporate the use of social networking sites (SNS) into their everyday lives.

Aims: To review the publications that have examined the use of SNS among IEH and to analyze the impact that this online activity has on the health of these individuals.

Methods: This study employed a scoping review method, analyzing scientific literature published up to the end of 2016.

Results: An analysis was performed on nineteen peer-reviewed articles and three grey literature publications. IEH, especially those who are younger, use SNS in a similar proportion to the overall population. When these individuals used the networks due to their own initiative, it was found to have a positive health effect in that it mitigated the consequences of living on the street. Interventions aimed at improving the participants’ health achieved positive results, both in terms of preventing problems associated with drug abuse and high-risk sexual behavior and of promoting mental health.

Conclusions: The use of SNS presents some health benefits for IEH. Virtual communication and information alternatives provide opportunities to improve the mental and general health of people in social exclusion situations.

Introduction

The nearly universal spread of social networking sites (SNS) has transformed human communication, and as such it has awakened a great deal of interest in the scientific community on the health effects of these networks, sparking a debate about the existence and extent of possible health benefits stemming from the use of SNS when people use them on their own initiative (Kim & Hancock, 2015; Twomey & O’Reilly, 2017). The use of Facebook, the most popular social network (Nowak, 2017), in the general population has sometimes been found to have damaging mental health effects, leading to increased anxiety (Chen & Lee, 2013) and loneliness (Muise, Christofides, & Desmarais, 2009) and to decreased self-esteem and happiness (Chou & Edger, 2012). However, Facebook use has also been associated with an increase in social support (Ko & Kuo, 2009; Nabi, Prestin, & So, 2013) and perceived wellbeing (Gonzales & Hancock, 2011) and with a decrease in depressive symptoms (Tandoc, Ferrucci, & Duffy, 2015). Eclectic opinions recognize that the convenience and ubiquity of Internet access have brought with them great opportunities, both to encourage individuals to engage with their own health (Househ, Borycki, & Kushniruk, 2014) and to improve the access of at-risk populations to health services (Capurro et al., 2014).

Individuals in highly vulnerable situations, including women immigrants (Almeida, Casanova, Caldas, Ayres-de-Campos, & Dias, 2014), older people living alone (Prince et al., 2015) or with mental illness (Forrester-Jones et al., 2012), asylum seekers and refugees (Bozorgmehr & Razum, 2015), and individuals experiencing homelessness (IEH) (Parker & Dykema, 2014) are likely to be socially isolated and consequently have greater difficulties in accessing healthcare services (de Andrade et al., 2015). Individuals in this latter group find themselves in an extremely serious social situation that poses great risks to their mental and overall health and even to their survival (The Lancet, 2014). The past decade has seen a great increase in the number of articles published on the use of technology by IEH and on the opportunities and the possible applications and health benefits that may arise from this use (McInnes, Li, & Hogan, 2013). The use of mobile and other devices and of the Internet has become widespread among IEH (La Sala & Mignone, 2014), but it is not clear whether this is also the case for SNS use or what effect social network use might have on their health.

Thus, the chief aim of this study is to review the current state of scientific knowledge about the effects of social networking on the health of IEH. What follows is a scoping review, which is the ideal technique for an area, such as this one that remains relatively unexplored (Arksey & O’Malley, 2005; Armstrong, Hall, Doyle, & Waters, 2011). The main objective of the study was to describe how IEH use SNS. The specific objectives were to: (i) summarize and call attention to current academic and community-based findings on
the use of SNS by IEH and the associated health effects, examining publications from around the world; (ii) examine the sources and use of evidence; (iii) identify any significant gaps in the current knowledge about this issue; and (iv) set out recommendations for policy and research.

Methods

A scoping review was conducted following Arksey and O’Malley’s (2005) methodological framework for scoping reviews (Arksey & O’Malley, 2005) and the reporting structure suggested by Gea-Sánchez et al. (2017).

Search parameters

A systematic search of documents published through the end of 2016 was conducted in May and September of 2017. The search criteria did not include a start date because the phenomenon was investigated since it appeared in the scientific literature. The search encompassed documents in English, Spanish and Portuguese. Grey literature was defined for the purposes of this study as consisting of documents or materials from sources outside the usual academic channels of publication and distribution (i.e. community-based research reports, government reports, theses and book chapters). In order to guarantee the rigor of this review, news reports were excluded because the information these reports can vary according to the source and the time and location of publication (Magalhaes, Carrasco, & Gastaldo, 2010).

Search terms

The search was carried out using the PubMed, PsycINFO, Scopus, Scielo, Homeless Hub and Open Grey databases, and it was complemented with searches conducted using Google Scholar and a manual search for the works cited in the reference list of documents that had been selected at other stages of the process.

First, search terms were established using the MeSH terms associated with homelessness were ‘homeless person’ and ‘homeless youth’, in addition to ‘homeless’, ‘homelessness’ and ‘indigent’, and for this study the search also included the MeSH terms ‘Internet’, ‘information and communication technologies’, ‘ICT’, ‘computer’, ‘web 2.0’, ‘online’, ‘phone’, ‘smartphone’, ‘social network site’, ‘social networking’ ‘m-health’, ‘mhealth’, ‘e-health’ and ‘ehealth’. Table 1 details the search strategy employed.

Selection criteria

The review attempted to uncover studies in which IEH were observed to access Information and Communication Technologies (ICT) in order to look in greater detail for sections about the use of SNS within the selected texts. The criteria for inclusion in this process were publications that covered: (i) Internet use by IEH on their own initiative and without prompting, and which described the meaning and/ or the effects of this technology use; (ii) analysis of interventions or projects that included the use of SNS; and (iii) experimental situations in which IEH participated as active research subjects.

Table 1. Search strategy used in the different databases.

<table>
<thead>
<tr>
<th>Database</th>
<th>Search strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scielo</td>
<td>(“homeless OR homelessness OR indigent” AND (online OR internet OR social network sites OR web OR social network sites OR health OR m-health) AND la(“en” OR “es”))</td>
</tr>
<tr>
<td>Homeless Hub</td>
<td>“web” OR “computer” OR “online” OR “mhealth” OR “m-health” OR “social network sites” OR “information and communication technologies” OR “mobile phone”</td>
</tr>
<tr>
<td>Open grey</td>
<td>(“homeless OR homelessness OR indigent” AND (internet OR web OR mhealth OR m-health OR information and communication technologies OR online OR computer” OR social media))</td>
</tr>
</tbody>
</table>
Data management and charting

The reference management software Mendeley was used to eliminate duplicate references and to enter and correct the bibliometric and citation data. An Excel spreadsheet was designed in order to map out the data which was the focus of this study. The variables considered were: type of publication, author, year, city and country of the sample, specific subpopulation of IEH, sample, gender, age, recruiting institutions, methodological design, instrument, objectives, prevalence of SNS use and main results.

Ethics

The study was approved by the Ethics and Research Committee [Comitè d’Ètica d’Investigació] (Code XSO_2017).

Results

Characteristics of the articles selected

A total of 647 documents were retrieved, with the number reduced to 267 once 380 duplicates were eliminated. Publications were excluded if they: (a) did not explicitly define homelessness; (b) discussed the potential role of ICT in improving the lives of IEH but did not include the technology in the study or included only elements with a slight relationship to technology; (c) analyzed programs or instruments to improve interventions by professionals who carried out their work with IEH; or (d) described types of technologies other than ICT. Finally, 22 articles were selected (Figure 1).

The selected texts consisted of 19 articles published in peer-reviewed journals and three grey literature sources (Humphry, 2014; Woelfer & Hendry, 2010; Yost, 2012).
Tables 2 and 3 display the characteristics of these articles, which were published by 50 different authors, with an average of 3.1 collaborating authors per publication (SD = 2.1, range = 1–10). Rice was listed as an author in nine of the documents (40.9%) (Barman-Adhikari et al., 2016; Barman-Adhikari & Rice, 2011; Rice, 2010; Rice, Milburn, & Monro, 2011; Rice, Monro, Barman-Adhikari, & Young, 2010; Rice, Ray, & Kurzban, 2012; Rice, Tulbert, Cederbaum, Barman Adhikari, & Milburn, 2012; Rice & Barman-Adhikari, 2014; Young & Rice, 2011). Barman-Adhikari was an author of five (Barman-Adhikari et al., 2016; Barman-Adhikari & Rice, 2011; Rice et al., 2010; Rice, Tulbert, et al., 2012; Rice & Barman-Adhikari, 2014) and Bender (Barman-Adhikari et al., 2016; Pollio, Batye, Bender, Ferguson, & Thompson, 2013), Monro (Rice et al., 2011; Rice et al., 2010 ), Milburn (Rice et al., 2011; Rice, Tulbert, et al., 2012), Neale (Neale & Brown, 2015; Neale & Stevenson, 2014), Pollio (Guadagno, Muscanell, & Pollio, 2013; Pollio et al., 2013) and Young (Rice et al., 2010; Young & Rice, 2011) were listed as authors of two publications each. Rice was credited as the primary author of six of the texts (Rice, 2010; Rice, Ray, & Kurzban, 2012; Rice et al., 2011; Rice et al., 2010; Rice, Tulbert, et al., 2012; Rice & Barman-Adhikari, 2014), while Barman-Adhikari (Barman-Adhikari et al., 2016; Barman-Adhikari & Rice, 2011) and Neale (Neale & Brown, 2015; Neale & Stevenson, 2014) were the primary authors of two each. The works were published between 2007 and 2016: one in 2007 (Gemelli, 2007), three in 2010 (Rice, 2010; Rice et al., 2010; Woelfer & Hendry, 2010), three in 2011 (Barman-Adhikari & Rice, 2011; Rice et al., 2011; Young & Rice, 2011), three in 2012 (Rice, Ray, & Kurzban, 2012; Rice, Tulbert, et al., 2012; Yost, 2012), three in 2013 (Guadagno et al., 2013; Pollio et al., 2013; Post et al., 2013), four in 2014 (Humphry, 2014; Neale & Stevenson, 2014; Rice & Barman-Adhikari, 2014; Swahn, Braunstein, & Kasiy, 2014), two in 2015 (Neale & Brown, 2015; Vázquez, Panadero, Martín, & Díaz-Pescador, 2015) and three in 2016 (Barman-Adhikari et al., 2016; Harpin, Davis, Low, & Gilroy, 2016; Taylor & Narayan, 2016). No articles meeting the inclusion criteria were found prior to 2007, nor were any found for the years 2008 and 2009.

The articles featured samples from five different countries. Sixteen articles (72.7%) came from the United States, and of these, 50.0% came from the city of Los Angeles (Barman-Adhikari et al., 2016; Barman-Adhikari & Rice, 2011; Guadagno et al., 2013; Pollio et al., 2013; Rice, 2010; Rice, Ray, & Kurzban, 2012; Rice et al., 2011; Rice et al., 2010; Rice, Tulbert, et al., 2012; Rice & Barman-Adhikari, 2014; Young & Rice, 2011). Two articles came from the United Kingdom (Neale & Brown, 2015; Neale & Stevenson, 2014), two from Australia (Humphry, 2014; Taylor & Narayan, 2016), one from Spain (Vázquez et al., 2015) and another from Uganda (Swahn et al., 2014). With the exception of one article (Taylor & Narayan, 2016), they all described the specific subpopulation of IEH studied. A total of 14 publications dealt with runaways, homeless youth or teenagers (Barman-Adhikari et al., 2016; Barman-Adhikari & Rice, 2011; Guadagno et al., 2013; Harpin et al., 2016; Pollio et al., 2013; Rice, 2010; Rice, Ray, & Kurzban, 2012; Rice et al., 2011; Rice, Tulbert, et al., 2012; Rice & Barman-Adhikari, 2014; Swahn et al., 2014; Woelfer & Hendry, 2010; Young & Rice, 2011), while three focused on adults (Post et al., 2013; Vázquez et al., 2015; Yost, 2012), two on adults with drug-related problems (Neale & Brown, 2015; Neale & Stevenson, 2014) and one on women with children (Gemelli, 2007). Another study included young people, adults and families (Humphry, 2014).

Six documents used qualitative methods (Gemelli, 2007; Neale & Brown, 2015; Neale & Stevenson, 2014; Taylor & Narayan, 2016; Woelfer & Hendry, 2010; Yost, 2012), four used mixed methods (Harpin et al., 2016; Humphry, 2014; Pollio et al., 2013; Rice, Tulbert, et al., 2012) and the rest employed quantitative designs. All the articles were cross-sectional and observation-based, with the exception of two longitudinal studies (Rice, Tulbert, et al., 2012; Taylor & Narayan, 2016). Ten studies used statistical regression (Barman-Adhikari et al., 2016; Barman-Adhikari & Rice, 2011; Harpin et al., 2016; Post et al., 2013; Rice, 2010; Rice, Ray, & Kurzban, 2012; Rice et al., 2011; Rice et al., 2010; Rice & Barman-Adhikari, 2014), contingency tables and comparisons of averages formed the basis for statistical evidence in another five studies (Guadagno et al., 2013; Pollio et al., 2013; Rice, Tulbert, et al., 2012; Swahn et al., 2014; Vázquez et al., 2015) and three studies used descriptive statistics (Humphry, 2014; Woelfer & Hendry, 2010; Yost, 2012). A total of 14 studies used ad hoc surveys for gathering data, with three of these survey instruments having been validated according to the requirements of the specific objectives of their respective studies (Pollio et al., 2013; Rice, Ray, & Kurzban, 2012; Rice et al., 2011). In-depth interviews or semi-structured interviews were used in seven cases (Barman-Adhikari et al., 2016; Gemelli, 2007; Humphry, 2014; Neale & Brown, 2015; Neale & Stevenson, 2014; Vázquez et al., 2015; Yost, 2012). Other procedures used were focus group (Harpin et al., 2016), a case study (Taylor & Narayan, 2016), participant observation (Woelfer & Hendry, 2010) and social graphing (Rice, Tulbert, et al., 2012).

The total number of participants in the studies was 3363, with a mean of 169.7 IEH per publication (SD = 223.8, min = 1, max = 1,046) and a median of 103 participants (Q25 = 34, Q75 = 194). The same sample was used in two different studies (Rice et al., 2011; Rice, Ray & Kurzban, 2012; Rice et al., 2010; Young & Rice, 2011). Of the participants, 60.7% were men (n = 2041), 36.7% were women (n = 1233), 1.5% were trans (n = 50) and 1.1% were of unknown gender (n = 39). With one exception (Taylor & Narayan, 2016), all the articles described the participants’ ages. The lowest mean age was 19.4 years old (Guadagno et al., 2013), while the maximum was 47.6 (Vázquez et al., 2015) and the range varied from 13 to 62 years of age. Ten documents (45.4%) dealt with participants of between 13 and 26 years of age (Barman-Adhikari et al., 2016; Barman-Adhikari & Rice, 2011; Pollio et al., 2013; Rice, 2010; Rice, Ray, & Kurzban, 2012; Rice et al., 2011; Rice et al., 2010; Swahn et al., 2014; Woelfer & Hendry, 2010; Young & Rice, 2011). Most of the
<table>
<thead>
<tr>
<th>#</th>
<th>Author/s Year</th>
<th>City: Los Angeles, CA (USA).</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Barman-Adhikari and Rice 2011</td>
<td>Subpopulation: Runaway and homeless youth.</td>
</tr>
<tr>
<td>2</td>
<td>Barman-Adhikari et al. 2016</td>
<td>City: Los Angeles, CA (USA).</td>
</tr>
<tr>
<td>3</td>
<td>Guadagno et al. 2013</td>
<td>City: NYC, NY &amp; Los Angeles, CA (USA).</td>
</tr>
<tr>
<td>5</td>
<td>Harpin et al. 2016</td>
<td>City: Denver, CO (USA).</td>
</tr>
<tr>
<td>6</td>
<td>Humphry 2014</td>
<td>City: Sydney and Melbourne (Australia)</td>
</tr>
<tr>
<td>7</td>
<td>Neale and Brown 2015</td>
<td>Subpopulation: Adults with drug-related problems.</td>
</tr>
<tr>
<td>8</td>
<td>Neale and Stevenson 2014</td>
<td>City: Two cities in England (Not specified).</td>
</tr>
<tr>
<td>9</td>
<td>Pollio et al. 2013</td>
<td>City: Denver, CO &amp; Los Angeles, CA (USA).</td>
</tr>
<tr>
<td>10</td>
<td>Post et al. 2013</td>
<td>City: New Haven &amp; Bridgeport, CT (USA).</td>
</tr>
<tr>
<td>11</td>
<td>Rice 2010</td>
<td>City: Los Angeles, CA (USA).</td>
</tr>
<tr>
<td>12</td>
<td>Rice and Barman-Adhikari 2014</td>
<td>Subpopulation: Homeless youth.</td>
</tr>
<tr>
<td>13a</td>
<td>Rice et al. 2011</td>
<td>City: Los Angeles, CA (USA).</td>
</tr>
<tr>
<td>14b</td>
<td>Rice et al. 2010</td>
<td>City: Los Angeles, CA (USA).</td>
</tr>
</tbody>
</table>

Table 2. Summary of sample characteristics of the selected articles.
samples were recruited at drop-in centers (Barman-Adhikari et al., 2016; Barman-Adhikari & Rice, 2011; Rice, 2010; Rice, Ray, & Kurzban, 2012; Rice et al., 2011; Rice et al., 2010; Rice, Tulbert, et al., 2012; Rice & Barman-Adhikari, 2014; Young & Rice, 2011), shelters or similar facilities (Gemelli, 2007; Guadagno et al., 2013; Humphry, 2014; Neale & Brown, 2015; Neale & Stevenson, 2014; Swahn et al., 2014; Yost, 2012), or recruitment was done both at these locations and in the street (Harpin et al., 2016; Pollio et al., 2013; Vázquez et al., 2015; Woelfer & Hendry, 2010). Finally, one sample was recruited at an emergency medical facility (Post et al., 2013) and another one was recruited online (Taylor & Narayan, 2016).

Use of SNS

A total of 12 articles described the percentage of participants who used SNS. These percentages ranged from 4.9 to 87.1%. Seven documents showed a percentage of access to SNS over 67%, all of them dealing with youth samples (Barman-Adhikari et al., 2016; Guadagno et al., 2013; Harpin et al., 2016; Humphry, 2014; Rice et al., 2011; Yost, 2012; Young & Rice, 2011). However, one sample of youth participants reported an access rate of 4.9% (Swahn et al., 2014). The samples described in the rest of the articles consisted of adults, and the percentages of participants using SNS ranged from 17 to 41% (Neale & Brown, 2015; Neale & Stevenson, 2014; Post et al., 2013; Vázquez et al., 2015). Facebook was the most commonly used SNS (Harpin et al., 2016; Humphry, 2014; Neale & Brown, 2015; Neale & Stevenson, 2014; Rice, Tulbert, et al., 2012; Rice & Barman-Adhikari, 2014; Swahn et al., 2014; Yost, 2012; Young & Rice, 2011), accessed by percentages of participants ranging from 4.9 (Swahn et al., 2014) to 86.7% (Yost, 2012). It was followed by Myspace (Rice, Tulbert, et al., 2012; Rice & Barman-Adhikari, 2014; Swahn et al., 2014; Yost, 2012; Young & Rice, 2011) which was shown to be used by 78.1% of one sample (Young & Rice, 2011), and Twitter (Harpin et al., 2016; Taylor & Narayan, 2016; Young & Rice, 2011), with proportion of use ranging from 9.9 (Young & Rice, 2011) to 12.2% (Harpin et al., 2016). Two studies also observed the use of “other” SNS (Harpin et al., 2016; Rice & Barman-Adhikari, 2014). A 42.8% of the users reported signing in every day (Young & Rice, 2011), 47.9% every other day...
1. To assess the degree to which young people use the Internet to seek out information about sexual health, with sociodemographic characteristics they display and what social networks they display. 

   **Table 3.** Summary of objectives, methods and results of the articles selected.

<table>
<thead>
<tr>
<th>#</th>
<th>Objective</th>
<th>Methodological design</th>
<th>Description of access to SNS</th>
<th>Main results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>To assess the degree to which young people use the Internet to seek out information about sexual health, what sociodemographic characteristics they display and what social networks they display.</td>
<td>Design: Quantitative. Transversal observational. Statistical analysis: Multivariate logistical regression. Instrument: Ad hoc survey.</td>
<td>Went online occasionally to seek out health information (n = 102, 61.0%), about ETS (n = 79, 47.3%), about sex (n = 68, 40.7%) and about HIV testing (n = 39, 23.3%). 34.1% communicate with parents (n = 57), 66.4% with flatmates (n = 111), 47.9% with online acquaintances (n = 87), and 52.7% with other people living in the street (n = 88). The content of the interactions consists of: 75.4% receiving content about health (n = 126) and 27.5%, talking about sex (n = 46).</td>
<td>People with private Internet access were more likely to seek out information on testing (OR = 4.4) and infectious diseases (OR = 2.8). Connecting with parents increased the likelihood of searching for information about HIV testing (OR = 3.5). Receiving online health information increased young people’s interest in submitting to HIV tests (OR = 3.07) and in searching for information on sexual health (OR = 2.8) and information on general health (OR = 3.2).</td>
</tr>
<tr>
<td>2</td>
<td>To determine the degree to which homeless youth use SNS, who they connect with, what contents predominate and the relationship between the type of connection and risky or protective sexual behavior.</td>
<td>Design: Quantitative. Transversal observational. Statistical analysis: Bivariate logistical regression. Instruments: Ad hoc survey and interview.</td>
<td>79.2% (n = 829) sometimes used SNS, and 47.9% (n = 501) did so once every couple of days. Of those who used them, some did so to contact street peers (45.6%), family members (62.7%), partners (41.7%) friends from home (70.8%) people they met online (24.3%) and caseworkers (10%). They use them to talk about drugs (32.6%), about sex (26.7%), about school and work (26.2%), about family issues (24%), about being homeless (23.9%), about goals (5.3%) and about safe sex (7.2%), and sometime to contact other IEH (23.9%).</td>
<td>The factors that increased high-risk sexual behavior were: connecting with street-based friends and talking about drugs, sex and homelessness. The factors that protected them from high-risk sexual behavior were: connecting with a partner or a social worker online, talking about safe sex and talking about personal goals.</td>
</tr>
<tr>
<td>3</td>
<td>To assess an empowerment project consisting of an online artistic (photography) workshop. Participants took photos of their daily lives and posted them on a website like an SNS, specially created for the project.</td>
<td>Design: Qualitative (Photo Elicitation Interview). Procedure: In-depth interview and web analysis where pictures were published.</td>
<td>All the participants had personal accounts, both for an SNS and for the website that was created for the purposes of the project.</td>
<td>The workshop limited the publications of women, as in their posts on their personal websites they wrote more about conflicts in their lives in the shelter than they did on the website created for that purpose. On the project website, they were more politically correct and limited their emotional expression.</td>
</tr>
<tr>
<td>4</td>
<td>To determine whether SNS use is similar among university students and IEH of university age.</td>
<td>Design: Quantitative. Transversal observational. Statistical analysis: Chi-square Tests. Instrument: Ad hoc survey.</td>
<td>75% (n = 62) of IEH used SNS.</td>
<td>University students were more likely to use SNS than IEH (96.7 vs. 75%, p = 0.001), specifically using Facebook (95.1 vs. 42%, p = &lt;0.001), but IEH were more likely to use Myspace (65.9 vs. 35.6%, p &lt; 0.001). The sample of students was more likely to use SNS to keep in touch with friends (97.3 vs. 73.9%, p &lt; 0.001) or relatives (46.2 vs. 33%, p &lt; 0.05). IEH were more likely to use SNS to send private messages (p &lt; 0.001) and write or comment on blogs (p = 0.001), while students were more likely to use them to play games (p &lt; 0.001).</td>
</tr>
<tr>
<td>5</td>
<td>To explore point prevalence of mobile phone and social media use</td>
<td>Design: Mixed Transversal and observational. Statistical analysis: Logistic regression. Instrument: Ad hoc surveys. Qualitative procedure: Focus group.</td>
<td>71.9% of participants reported regularly using social media. Facebook (71.8%), Twitter (12.2%) Other (&lt;10%).</td>
<td>Participants who lived in a house or apartment were more likely to use SNS than those with private Internet access who lived in the street (90.6 vs. 55.6%, p = 0.001). A similar trend was observed for Facebook use (67.5 vs. 59.3%, p = 0.01). Participants who lived at campsites were more likely to use mobile networks to access the Internet than the general population (67.9 vs. 39.2%, p = 0.01).</td>
</tr>
<tr>
<td>6</td>
<td>To determine whether SNS use and Internet access by IEH, to detect needs and make recommendations to improve their access to information.</td>
<td>Design: Mixed Transversal and observational. Statistical analysis: Descriptive frequencies. Instruments: Ad hoc survey. Qualitative procedure: In-depth interview.</td>
<td>67% are SNS users, mostly of Facebook and they access the Internet via mobile phones (95% had mobile phones and 77% smartphones).</td>
<td>Some difficulties with maintaining a connection were associated with homelessness: difficulties in charging mobile phones, in getting service contracts (because they did not have a residence), in paying bills via bank transfers, etc.</td>
</tr>
<tr>
<td>7</td>
<td>To explore the role of friendship in the lives of IEH and how ICT is involved in their relationships.</td>
<td>Design: Qualitative. Instrument: Semi-Structured Interviews.</td>
<td>18.2% (n = 4) used a computer to contact friends on Facebook. Most frequent use was to contact other IEH who have moved and with whom direct contact has been lost.</td>
<td>Friendships were small and fleeting, but all of them expressed a desire for friendships of greater quality. Friendships made on the street, connected with drug consumption or dealing, were not considered positive for recovery. ICT and SNS were seen as the center of many friendships and were considered indispensable to the maintenance of social capital.</td>
</tr>
</tbody>
</table>
To examine whether the relationship of IEH using SNS with condom use is protective to infections.

To determine whether IEH use the Internet and SNS to communicate, to establish how they spend their time online and to analyze whether relationships via SNS have an influence on the search for resources online.

To examine how differences in the composition of the social bond could be associated with drug use.
<table>
<thead>
<tr>
<th>#</th>
<th>Objective</th>
<th>Methodological design</th>
<th>Description of access to SNS.</th>
<th>Main results</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>To analyze the association between sexual health risk and protection factors and Internet use.</td>
<td>Design: Quantitative. Transversal and observational. Statistical analysis: Logistic regression model. Instrument: Ad hoc survey.</td>
<td>96.5% used the Internet (n = 194). 23.3% (n = 47) were online more than an hour a day, and 83.1% (n = 167) were online at least once a week. They used SNS to contact home-based friends (n = 120, 59.8%), family members other than their parents (n = 96, 47.8%), friends they met online (86, 42.8%), brothers or cousins (85, 42.3%), Street-based friends (82, 40.8%) and parents (38, 18.9%).</td>
<td>25.4% (n = 51) sought out sexual partners online, and 9.0% (n = 18) had exchanged sex for money, drugs, food or shelter. 56.7% had recently undergone HIV testing (n = 114). Having sex with other men (OR = 3.8, p &lt; 0.01), being a man (OR = 3.6, p &lt; 0.05) and spending more time online (OR = 1.3, p &lt; 0.05) all increased the likelihood of seeking out sexual partners online. Subjects who used the Internet to communicate with their families displayed a 68% reduction in the likelihood of exchanging sex for money, goods or services (OR = 0.32, p = 0.05). Subjects who communicated with their families (OR = 2.5, p &lt; 0.01) or with home-based peers (OR = 2.0, p &lt; 0.05) were more likely to submit to HIV testing.</td>
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<td>15</td>
<td>To analyze the influence of social isolation and street- and home-based networks, on depression and anxiety.</td>
<td>Design: Quantitative. Transversal and observational. Statistical analysis: Logistic regression model. Instrument: Ad hoc survey for sociodemographic data and Beck’s Depression Inventory and Beck’s Anxiety Inventory to measure mental health.</td>
<td>Participants reported having an average of 13.5 relationships (SD = 8), and of these, 7.2 were with friends (SD = 6.14). In general, adolescents report having more face-to-face relationships than relationships over social networks. Greater bonds were created with street-based peers when interacting face-to-face (M = 6.34 and SD = 6.14), and more bonds with home-based peers were created over SNS (M = 1.54 and SD = 2.21).</td>
<td>A greater number of face-to-face peers was associated with increased symptoms of depression (β = 0.30, SE = 0.14, p &lt; 0.05) and anxiety (β = 0.33, SE = 0.15, p &lt; 0.05). More frequent online contact with home-based friends reduced depressive symptoms (β = −1.16, SE = 0.70, p &lt; 0.05).</td>
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<td>16</td>
<td>To examine the feasibility of an HIV prevention program via SNS.</td>
<td>Design: Mixed. Quasi-experimental longitudinal. Analysis: t-test and graphic describing sexual relationships. Instrument: Ad hoc auto-administrate survey.</td>
<td>The program lasted a total of 108 h. The participants created preventive materials (YouTube videos) and shared them with one another over Facebook and Myspace, communicating messages that promoted healthy sexual behavior. The tendency to form relationships with people of similar characteristics was analyzed, as both online and face-to-face contact with peers is preventive. Greater homophobia was associated with greater contact with prosocial-peers in the creation of preventive materials and thus with greater prevention of high-risk behavior.</td>
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<td>17</td>
<td>To determine the effects of mobile phone ownership and use and the psychosocial characteristics that distinguish those who have and use phones from those who do not.</td>
<td>Design: Quantitative. Transversal and observational. Statistical analysis: Chi-square tests. Instrument: Questionnaire modeled from existing surveys.</td>
<td>45.5% (n = 199) had mobile phones and used them daily. 54.5% (n = 224) did not have mobiles or used them weekly or less frequently. 9.3% reported using the Internet, 5.3% had an email account and 4.9% used Facebook.</td>
<td>Mobile phone owners were more than 18 years old (149 vs. 88, p &lt; 0.001), were more likely to be vigilant at night (92 vs. 80, p &lt; 0.001), had taken more drugs in the past month (47 vs. 30, p &lt; 0.001) and were more likely to engage in prostitution in exchange for drugs or money (77 vs. 56, p &lt; 0.001). The analysis of the tweets revealed that many of the people with whom the subject interacted were homeless and that these people were an important part of the subject’s social network. Friendship via Twitter offered opportunities to improve the circumstances of homeless people.</td>
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<td>18</td>
<td>To follow a homeless person’s Twitter use to observe the type of use made of the network.</td>
<td>Design: Qualitative. Longitudinal and exploratory. Analysis: Case study. Procedure: Analysis of the “Tweets” posted by the participant.</td>
<td>The participant is a habitual user of SNS and blogs. In order to gauge the size of the individual’s social network, an analysis of Twitter mentions was conducted. The person’s 1438 tweets had 1231 mentions. They were attributable to 340 different Twitter accounts, of which 232 were mentioned only once. Of the remaining 108 tweets, there were 21 people mentioned 10 times or more, representing 57% of the total number of mentions.</td>
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<td>19</td>
<td>To analyze ICT access in a representative sample of homeless people in Madrid (Spain).</td>
<td>Design: Quantitative. Transversal and observational. Statistical analysis: Chi-square tests. Instrument: Structured interview (items ad hoc).</td>
<td>17.0% (n = 32) used SNS.</td>
<td>People with university degrees (X²=9.1, p &lt; 0.01), those under 43 years of age (X²=23.1, p &lt; 0.01) and those of foreign (non-Spanish) origin (X²=16.5, p &lt; 0.001) were most likely to use SNS.</td>
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(Barman-Adhikari et al., 2016), 71.6% within the past 3 d (Rice & Barman-Adhikari, 2014). Meanwhile, in one study (Yost, 2012), 86.7% reported using the networks regularly, although the frequency was not specified (averaging an hour a day of use). In others, this figure was 79.2% (Barman-Adhikari et al., 2016) and 71.9% (Harpin et al., 2016).

IEH tended to access the networks to connect with relatives (Rice & Barman-Adhikari, 2014; Yost, 2012), friends (Neale & Brown, 2015; Pollio et al., 2013; Yost, 2012), both (Neale & Stevenson, 2014) or with home-based friends or peers (Rice, Ray, & Kurzban, 2012). Two studies found percentages of use for connecting with participants' parents to be 34.1% (Barman-Adhikari & Rice, 2011) and 19.9% (Rice et al., 2010). Meanwhile, findings for percentages of use for connecting with participants' peers were 34.1% (Barman-Adhikari et al., 2016), 55% (Pollio et al., 2013), 50% (Rice et al., 2011) and 47.8% (42.3% connecting with siblings or cousins) (Rice et al., 2010). The percentage using

### Table 3. Continued.

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<th>#</th>
<th>Objective</th>
<th>Methodological design</th>
<th>Description of access to SNS</th>
<th>Main results</th>
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<td>20</td>
<td>To gain an understanding of how homeless young people experience media and to develop an ICT training course.</td>
<td>Design: Qualitative. Transversal. Participant observation. Statistical analysis: Descriptive estimations. Procedure: Analysis of records written during the observation of the capacitación course.</td>
<td>Reference is made to their frequent use of MySpace (no data are given).</td>
<td>The course was offered (6 sessions of 90’) to IEH, and a bond was formed between them and the volunteer teachers. The appeal and potential usefulness of the Internet and ICT are viewed as a good resource to attract young people to participate in this kind of intervention. Young people have the perception that the Internet can help them to find work, as it protects them from the prejudices they have experienced when meeting potential employers face-to-face. The use of MySpace seems to reinforce a sense of personal identity associated with “life on the streets”, making it more difficult to leave homelessness behind.</td>
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<td>21</td>
<td>To examine how homeless people use SNS.</td>
<td>Design: Qualitative. Transversal observational. Statistical analysis: Descriptive data. Instrument: Semi-structured interviews.</td>
<td>93.3% (n = 14) regularly used the Internet, and 86.7% (n = 13) used Facebook for about an hour a day (Range: A few minutes – four hours) with the objectives of keeping in touch with family and friends, seeking support and sharing ideas in a safe space. None of them had their own computers, and all of them used computers in public spaces.</td>
<td>The most frequently use Facebook: i) to keep in touch with friends and family and reduce their feelings of loneliness (it made them feel like equal members of the community), ii) to be more aware of events in the community (it increased their participation and improved their ability to look for work), iii) to get a sense of support from contact with friends, relatives and people with similar interests and iv) to feel they were in a safe space where they could express their ideas and could relax. There was less use of Twitter because they did not want to be constantly connected to SNS. None of them had LinkedIn profiles, but they were aware of their potential benefits. Gay men, lesbians and bisexuals (OR = 4.01, p &lt; 0.01) and those who used SNS to talk to their contacts about safer sex (OR = 1.54, p &lt; 0.01) were more likely to have used the Internet to find sexual partners over the past 3 months. Women (OR = 0.14, p &lt; 0.05), people who had had sex with people they had met online (OR = 6.82, p &lt; 0.05) and those who had used SNS to talk about consuming alcohol and drugs (OR = 2.03, p &lt; 0.05) were more likely to exchange sex for money, drugs, shelter, food or other things. Those who had used the Internet to talk about love were less likely to have had sexual relations (OR = 0.71, p &lt; 0.05). Men (OR = 0.19, p &lt; 0.05) and participants who did not use SNS (OR = 0.80, p &lt; 0.01) were less likely to have undergone STI testing. MySpace users were more likely to have undergone STI testing. Participants who used SNS to talk about (Coef. = −0.26, p &lt; 0.05) or safe sex (Coef. = 0.51, p &lt; 0.01) got higher scores for knowledge of VIH.</td>
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<td>22</td>
<td>To analyze the relationship between SNS use and risk/ protection behaviors associated with HIV transmission.</td>
<td>Design: Quantitative. Transversal and observational. Statistical analysis: Multivariate logistic regression model. Instrument: Ad hoc survey.</td>
<td>87.1% (n = 175) used SNS and 42.8% (n = 86) used them on a daily basis. 78.1% (n = 157) used MySpace, 29.8% (n = 60) Facebook and 9.9% (n = 20) Twitter. The contents of their communication tended to be: about love and relationships (n = 92, 45.8%), videos (n = 62, 30.8%), about drinking, taking drugs or partying (n = 61, 30.3%), sex (n = 56, 27.9%), school (n = 56, 27.9%), being homeless (n = 42, 20.9%) and practicing safer sex (n = 12, 6.0%). 22.8% (n = 31) had found sexual partners online over the past three months.</td>
<td>Gay men, lesbians and bisexuals (OR = 4.01, p &lt; 0.01) and those who used SNS to talk to their contacts about safer sex (OR = 1.54, p &lt; 0.01) were more likely to have used the Internet to find sexual partners over the past 3 months. Women (OR = 0.14, p &lt; 0.05), people who had had sex with people they had met online (OR = 6.82, p &lt; 0.05) and those who had used SNS to talk about consuming alcohol and drugs (OR = 2.03, p &lt; 0.05) were more likely to exchange sex for money, drugs, shelter, food or other things. Those who had used the Internet to talk about love were less likely to have had sexual relations (OR = 0.71, p &lt; 0.05). Men (OR = 0.19, p &lt; 0.05) and participants who did not use SNS (OR = 0.80, p &lt; 0.01) were less likely to have undergone STI testing. MySpace users were more likely to have undergone STI testing. Participants who used SNS to talk about (Coef. = −0.26, p &lt; 0.05) or safe sex (Coef. = 0.51, p &lt; 0.01) got higher scores for knowledge of VIH.</td>
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the networks to communicate with home-based-friends was found to be 74% (Rice et al., 2011), 70.8% (Barman-Adhikari et al., 2016), 59.8% (Rice et al., 2010) and over 50% (Rice, 2010), while the proportions of participants who connected with street peers were found to be 52.7% (Barman-Adhikari & Rice, 2011), 48.8% (Rice et al., 2010) and 45.6% (Barman-Adhikari et al., 2016). In three studies, 47.9% (Barman-Adhikari & Rice, 2011), 42.8% (Rice et al., 2010) and 23.4% (Barman-Adhikari et al., 2016) reported connecting with online acquaintances. Finally, 66.4% maintained online contact with flatmates (Barman-Adhikari & Rice, 2011), 41.7% with partners and 10% with caseworkers (Barman-Adhikari et al., 2016). It can be observed, then, that these individuals tend to connect to SNS mainly to communicate with family and friends (Rice & Barman-Adhikari, 2014) and to seek out support (Yost, 2012). The most common topics of discussion they engage in are health (Barman-Adhikari & Rice, 2011; Post et al., 2013) and homelessness (Barman-Adhikari et al., 2016).

Qualitative studies determined that SNS are the center of positive and prosocial relationships and that IEH considered them healthy as opposed to direct relationships with their homeless peers (Neale & Brown, 2015; Taylor & Narayan, 2016). This positive relationship occurred both with friends (Neale & Brown, 2015) and with care providers and social workers (Neale & Stevenson, 2014). IEH, especially young people, felt more secure with online contact because they thought that it reduced the barriers caused by prejudices that other people or services might have during face-to-face contact. This fact was more significant in personal relationships with employers. Young people believed that SNS improved the equality of their opportunities when compared to non-homeless people (Woelfer & Hendry, 2010). The IEH also felt that SNS increased the possibility of community participation and made them feel much more integrated (Yost, 2012). Finally, the attempts to develop specific communication forums to study the impact of SNS in IEH did not give the same positive results, in terms of participation, as the free and spontaneous communication via personal and private profiles on other SNS (Gemelli, 2007).

Use of SNS and health

Half of the documents analyzed the effects of SNS on health, six documents looked at the degree to which SNS acts as a protective or risk factor when it comes to high-risk sexual behavior, and they examined the potential for prevention programs conducted via these networks (Barman-Adhikari et al., 2016; Barman-Adhikari & Rice, 2011; Rice, 2010; Rice et al., 2010; Rice, Tulbert, et al., 2012; Young & Rice, 2011). Meanwhile, four articles analyzed the effects of SNS on mental health problems and addictions and considered the prevention potential of the networks (Neale & Stevenson, 2014; Pollio et al., 2013; Rice, Ray, & Kurzban, 2012; Rice et al., 2011), while one document studied general health care consultations made via ICT (Post et al., 2013).

Regarding the risk of sexual behavior, eleven documents analyzed the issue, and the results indicated that the use of SNS itself was a protective factor. This protective quality is magnified when SNS are used to seek out information on sexually transmitted infections (STIs) (Barman-Adhikari & Rice, 2011), testing (Barman-Adhikari & Rice, 2011; Young & Rice, 2011) and condom use, especially when online connections are made with people who use protective measures (Rice, 2010). Connecting online with ex-partners or with caseworkers are also protective factors (Barman-Adhikari et al., 2016). Using networks to find health information or to connect with relatives also leads to increased interest in submitting to health testing (Barman-Adhikari & Rice, 2011; Rice et al., 2010). Connecting with relatives tends to decrease the likelihood of engaging in prostitution (Rice et al., 2010). Talking online about love tends to reduce the number of sexual partners (Young & Rice, 2011). Some factors contributed to increase risky sexual behavior, including connecting with street-based friends, especially to discuss issues related to drugs, sex and homelessness (Barman-Adhikari et al., 2016), and being a man and having sex with other men (Rice et al., 2010; Young & Rice, 2011). Being a woman, seeking sex with online acquaintances and talking about drugs were all factors that make it more likely for an individual to engage in prostitution, while being a man and not using SNS means you are less likely to submit to STI testing (Young & Rice, 2011).

With regard to overall health, IEH believes that they maintain healthier relationships via SNS than they do when interacting face-to-face (Neale & Brown, 2015). Greater degrees of face-to-face contact with peers has been associated with increased depressive symptoms, but, conversely, more frequent online contact has been seen to reduce depressive symptomology (Rice, Ray, & Kurzban, 2012). This online contact also made individuals more likely to look for jobs or housing (Rice & Barman-Adhikari, 2014). It does seem that healthier relationships are forged via SNS than offline. Specifically, participants in the studies were more likely to have face-to-face interactions with drug users than to connect with drug users online. Online connections are associated with decreased alcohol consumption, while face-to-face relationships are linked to greater consumption of different drugs (Rice et al., 2011).

SNS use was found to reduce loneliness and to increase the degree of perceived support and community participation. Many studies concluded that use of these networks also led to increased opportunities for employment and job training, in addition to representing a space where the individuals could express their opinions and ideas (Yost, 2012), where they could be themselves (Gemelli, 2007) and where they could empathize with others in similar circumstances as they attempted to escape homelessness (Taylor & Narayan, 2016). The value attached to SNS access by IEH meant that these individuals sought to preserve their network access and refrained from any criminal activity associated with their online lives (Neale & Stevenson, 2014). However, in certain cases, it was found that network use could reinforce the role of living on the street as a part of individuals’ identities, especially among young people (Woelfer & Hendry, 2010).
Discussion

This study is the first scoping review to undertake a description of how individuals suffering from homelessness access SNS and how this use affects their health. The results suggest that the majority of those who use these technologies do so to communicate with relatives, friends and acquaintances, and that this use exerts a positive influence on their health. These positive health effects have been observed both in studies in which individuals used the networks based on their own initiative and in projects and interventions that based their efforts in SNS use to improve participants’ quality of life.

The scientific literature analyzed for the purposes of this study was published over a period of 10 years, and with the exception of a single publication from the year 2007, all the documents were published between 2010 and 2016. This period corresponds to an era of constant expansion of ICT use in the population at large (GWI, 2017), where the percentage of access to networks in the general population is similar to that of IEH, especially when the homeless population studied consists of younger people in North America (Guadagno et al., 2013). There are two exceptions to this phenomenon: the first has to do with the older homeless population whose members are less likely than the overall population to access SNS, and the second is due to a lack of overall connectivity in a country (Uganda) (Poushter & Stewart, 2016).

IEH experience great difficulties in maintaining contact with others, and they often find SNS to be their only channel of communication with the “real world”, the only safe space where they can ‘be themselves’ and not be subjected to judgment or criticism. Online, they feel that they can maintain healthier communication with those closest to them, in contrast to other more harmful patterns of contact with others (Taylor & Narayan, 2016). As is the case in the population as a whole, a more accurate self-presentation via SNS tends to result in improvements in mental health (Kim & Hancock, 2015). For IEH, who must face a context marked by conflict where they are often cut off from others and even forced to defend themselves from attack (Hersberger, 2003), SNS provide tools for more authentic and freer communication, allowing them to break free of their isolation and thus providing mental health benefits.

The studies of Eric Rice and his colleagues are at the forefront of research into the effects of SNS use on health, especially when it comes to sexual health. Their results indicate that new STI prevention strategies are both possible and necessary. Given the great effort that IEH must make to access the Internet, it is clear that making their access easier via free Wi-Fi and carrying out preventive interventions online could be a more efficient policy than offering annual HIV and HCV treatment (WHO, 2018). It is necessary to explore new paths for intervention, with a commitment to considering the use of ICT in the prevention of health problems in IEH, and to offering universal free access to the Web 2.0 or Participative Web.

Gaps of knowledge

This review has identified several gaps of knowledge to consider. First, there is a lack of a transnational analysis on the relationship between technology and IEH. The fact that most of the articles come from a North American context and focus on youth points out the need for research in other subpopulations of IEH and in other contexts, especially in Europe, where there are immense cultural heterogeneity and huge economic differences, both among European countries and between Europe and other parts of the world (Pleace, 2016). Thus, although access to technology does not differ too much among Western countries (GWI, 2017) there are great differences between the consequences of life on the street as a result of cultural, economic and institutional factors (Muñoz, Koegel, Vázquez, Sanz, & Burnam, 2002). Therefore, it would be convenient to carry out transnational studies to have a global perspective on this topic.

Second, no study has considered the migratory factor in the use of SNS. The use of technology is very present in forced migratory flows, mainly because the smartphone and SNS are the only point of connection people have with family and friends (Dekker, Engbersen, Klaver, & Vonk, 2018). In fact, significant differences have been found in the impact and meaning given to the use of smartphones and SNS between immigrants and natives in European territories (Calvo, Carbonell, Turró, & Giralt, 2018).

Third, no gender analysis was found on the use of ICT. The specific impact of SNS in IEH should be analyzed from a gender perspective since women suffer the most serious consequences of life on the street (Phipps, Dalton, Maxwell, & Cleary, 2018). This gender perspective must also include other groups such as gays, lesbians, transsexuals and bisexuals. Half of the analyzed articles dealt with the impact of SNS use in the prevention of transmission of sexually transmitted diseases and the group that presents the most risk, at present, is that of men who have unprotected sex with other men (Smith, Herbst, Zhang, & Rose, 2015).

Implications for practice and policy

This study has provided a taking off point for the study of factors involved in the protective effects exerted by the use of SNS. This use appears to have great significance in terms of increased socializing in the everyday lives of IEH, a group of people who tend to be especially isolated and deprived of social relations, with negative implications for their mental health (Perron, Cleverley, & Kidd, 2014). This benefit of SNS opens up a wide range of possibilities to explore in terms of interventions by social workers and health care providers, incorporating the use of SNS in mHealth and mHealth interventions that demonstrate feasibility, especially in mental health problems (Parast, Tucker, Pedersen, & Klein, 2018). The deliberate use of SNS has been related to a better psychological state at the level of self-esteem and one’s perception of one’s own life (Calvo et al., 2018). The extent to which psychologically healthy IEH are more likely to use SNS or vice versa is unknown. In relation to this question, a clinical trial concluded that the use of SNS improved several areas of mental health (self-esteem, life satisfaction, self-efficacy and social skills) (Calvo &
Carbonell, 2018). Therefore, helping the IEH to communicate through SNS was positioned as an efficient and simple resource with a direct effect on psychological well-being (Naslund, Marsch, McHugo, & Bartels, 2015).

Not everything related to the use of ICT and SNS with IEH is positive. As we have seen, SNS designed specifically for IEH have not had the expected results (Gemelli, 2007) and teaching the use of computers without a direct link to the real needs of IEH could have counterproductive results (Calvo & Carbonell, 2018). It is, therefore, necessary that the analysis of needs conducted prior to the design of interventions takes into account the context, subpopulation, needs and opinion of the IEH.

Finally, many times IEH’s access to the Internet is slow and with restrictions on time and space. Since immediacy is one of the characteristics that amplifies the communicational and informational benefits of ICTs, the articles reviewed recommend that services facilitate access to the Internet with consideration for privacy, dignity and speed.

Limitations

This study is not without its limitations. A large percentage of the articles examined were from a limited number of researchers and centered on a very specific location, which means that any attempt to extrapolate more general results should be undertaken with great care. It would be highly desirable to conduct further reviews as more research is done on this issue, and it would be of great interest to be able to examine the differences, for example, between the phenomena of homelessness in North America and Europe. Nonetheless, this initial review sketches a wide-ranging, albeit incomplete, picture of the possible benefits of SNS use for the homeless population.

It should be borne in mind that this revision reached only up to 2016 and that due to the rapid evolution of technology, it is likely that many things have changed since then. For instance, the popularity and accessibility of smartphones for everyone is a recent phenomenon and this phenonema offers new and more efficient paths to intervention for health, social and other service providers to access and care individuals experiencing homelessness. There is a need for cross-cultural studies which take into account migration and gender.

Conclusion

We can see that the growing interest in why and how homeless people use SNS is a response to their increasing use of them, especially by the youngest segment of the homeless population and that the differences in use compared with the general population are minimal. We can observe that IEH are motivated to use SNS and in several cases this is the only way for them to communicate positively with peers, thereby becoming an important protection factor for mental and general health, especially when it comes to sexual health. SNS can play a positive health role thanks to increased communication, and they offer new and more efficient paths to intervention for health, social and other service providers to access and care individuals experiencing homelessness. There is a need for cross-cultural studies which take into account migration and gender.

Disclosure statement

No potential conflict of interest was reported by the authors.

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