

Exploring Web Design Elements of Mental Health Service Websites, Quality of Online Health
Information, and Inclusion of LGBTIQ+ Young Adults

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Abstract

Introduction: LGBTIQ+ young adults have reported experiencing higher levels of mental health challenges, psychological distress, stigma, and discrimination as compared to the general population. LGBTIQ+ young adults are increasing their time spent online to receive support and access information relating to their own experiences of mental health and wellbeing. Minimal research in Australia has been conducted on the mental health service websites available, and whether these websites provide mental health information to this community. Accordingly, this study explored whether mental health service websites based in Australia feature information for LGBTIQ+ young adults; and, if this was the case, what are the web design elements of this information. **Method:** Mental health service websites were sourced via generic web-search on Google using a string of search terms connected with Boolean operators. Websites were then analysed using content analysis guided by a modified framework outlining best practice web design elements. **Results:** The final dataset comprised a total of 15 mental health service websites. 10 of the websites offered mental health information specific to LGBTIQ+ young adults, and these were analysed in detail using the framework. However, none of the websites possessed all the best practice web design elements suggested by the literature. To increase user engagement and mitigate the effects of perceived (felt) stigma, these findings can help expand on what inclusive and affirmative healthcare can look like for the LGBTIQ+ community.

Keywords: LGBTIQ, young adults, mental health service websites, online health information.

Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any University, and, to the best of my knowledge, this thesis contains no material previously published except where due reference is made. I give permission for the digital version of this thesis to be made available on the web, via the University of Adelaide's digital thesis repository, the Library Search and through web search engines, unless permission has been granted by the School to restrict access for a period of time.

Date: 3rd October, 2022

Contribution Statement

In writing this thesis, my supervisors and I collaborated to generate research questions of interest and design the appropriate methodology. I conducted the literature search and completed the ethics application. I conducted the data collection process (internet search) and accumulated the data. My supervisors and I met to review the websites. I wrote up all aspects of the thesis.

Date: 3rd of October, 2022

Exploring Web Design Elements of Mental Health Service Websites, Quality of Online Health Information, and Inclusion of LGBTIQ+ Young Adults

Introduction

In 2022, the internet is estimated to be used by over five billion people worldwide (DataReportal, 2022) with young adults comprising the highest number of internet users. According to the most recent study on household use of information technology by the Australian Bureau of Statistics in 2016-2017, it was estimated that 97.7% of young adults in Australia aged 18-24 frequently use the internet (Australian Bureau of Statistics, 2018). As a product of the current global pandemic of COVID-19, this internet usage percentage has increased, with 99% of Australian adults aged 18-54 identifying as users of the internet in 2021 (Australian Communications and Media Authority, 2021). Young adults are understood to use the internet for a number of reasons, sourcing trusted information and connecting with peers being two of the most common (Burns et al., 2016).

As the internet can help young adults source trusted information, some relevant to their own mental health, it is helpful to understand what age group may benefit from sourcing this information. For the purposes of this study, young adults are defined as individuals who are 18-25 years of age. Young adults have been well documented to be at greater risk of experiencing mental health challenges (Cronin et al., 2021; Bowman et al., 2020), with 75% of these challenges occurring before the age of 25 (Kessler et al., 2005).

Previous literature has indicated that mental health services are increasing their efforts with this age group, to understand the challenges experienced by young adults and explore what

strategies are effective in promoting mental health help-seeking behaviours and reducing the risk of adult mental health illnesses (McGorry et al., 2013). The National Study of Mental Health and Wellbeing conducted in 2020-2021 found that two in five people (39.6%) between the ages of 16-24 years had experienced a mental health disorder for twelve months or longer (Australian Bureau of Statistics, 2022). Mental health service providers responded to this information by developing online mental health service websites in the attempt to focus on youth mental health awareness, alongside the promotion of help-seeking behaviours and prevention of adult mental health illnesses.

Young adults who identify as lesbian, gay, bisexual, transgender, intersex, or queer/questioning (LGBTIQ+) are at a higher risk of experiencing mental health challenges, as well as discrimination, rejection, and stigma compared to their heterosexual and cisgender counterparts (Cronin et al., 2021). Furthermore, individuals who identify as gender fluid, intersex, non-binary, pansexual or queer are often grouped within this acronym (Bowman et al., 2020). People who do not identify within heteronormative or cisgendered communities are commonly referred to as members of the LGBTIQ+ community (Bowman et al., 2020). It is also worth noting that there are varying levels of inclusion of the community within the studies conducted, as researchers' explore the experiences of LGB, LGBT or LGBTQ exclusively. For the purposes of the current study, the LGBTIQ+ community are addressed. To understand the rationale of the current study in focusing on this population, it is essential to acknowledge what mental health challenges are experienced within the LGBTIQ+ community.

The LGBTIQ+ Community and Mental Health: Challenges and Disparities

Recent literature has indicated that LGBTIQ+ people experience poorer physical and mental health, as opposed to their heterosexual counterparts (Bowman et al., 2020; Cronin et al., 2021; Holt et al., 2016). International evidence has identified that individuals who consider themselves to be lesbian, gay or bisexual are “at least 1.5 times more likely to have a diagnosis of depression, anxiety, or substance use disorders” than individuals who identify as heterosexual or cisgender (Cronin et al., 2021, p. 46). The National Study of Mental Health and Wellbeing (2021) found that 44.7% of people who identified as gay, lesbian, or bisexual, asexual, pansexual, or queer had experienced an anxiety disorder for twelve months or longer (Australian Bureau of Statistics, 2021). These numbers are alarming, and studies conducted throughout the COVID-19 pandemic have alluded to an increase in these numbers due to the social isolation experienced.

LGBTIQ+ young adults are also highly represented in mental health statistics, even though this community are considered a ‘minority’ within the general population. According to the General Social Survey by the Australian Bureau of Statistics in 2020, 3.8% of the respondents identified as gay, lesbian, or bisexual (Australian Bureau of Statistics, 2020). Furthermore, 7.36% of the respondents to this survey that identified as gay, lesbian, bisexual also reported to be aged between 15-24 years old compared to their heterosexual counterparts (Australian Bureau of Statistics, 2020). However, these statistics have been challenged by Wilson et al. (2020), who used three survey datasets and their average percentages to determine that around 3.6% of males and 3.4% of females identify as a ‘minority sexual identity’, bringing the total to 7.0% of people aged 18+ in Australia (Wilson et al., 2020). Due to the greater mental health disparities of the LGBTIQ+ community as compared to their heterosexual and cisgender

counterparts, research has suggested that LGBTIQ+ individuals may begin to experience fear, mistrust, or ambivalence towards these health care settings, driving the young person away from receiving the in-person support they need (Brown & Veinot, 2021; Cronin et al., 2021).

Mental health service websites have attempted to meet the unique needs of the LGBTIQ+ community, as the online format is more accessible for individuals, especially when considering the current global pandemic of COVID-19, and the geographical positioning of those LGBTIQ+ young people in rural areas (Bowman et al., 2020). However, to what extent these websites convey this information at a higher quality is unknown. To promote LGBTIQ+ wellbeing, and to facilitate easier access of these services, it is vital that mental health service websites provide specific information relating to LGBTIQ+ mental health care (Schueller et al., 2019). Therefore, the current study aims to investigate how these mental health services provide this information via the available websites.

Mental Health Service Websites and Online Mental Health Information

LGBTIQ+ young people often turn towards the internet to find mental health information due to the high potential of anonymity, ease of access and perceived quality of information (Bowman et al., 2020; Schueller et al., 2019). Therefore, mental health services should be encouraged to include information for young people who belong to the LGBTIQ+ community. In response to the barriers surrounding service access, mental health services have attempted to adjust their delivery mode by making their information available online. Mental health service websites exist to provide individuals with a range of information about mental health or wellbeing that promote help-seeking behaviours. These websites also aim to validate the thoughts and feelings of those who may suspect that they or someone they know may have a

mental health challenge or illness. Funding has been allocated by organisations and research has been conducted on youth mental health and to ensure that the information provided will create better outcomes for the young people affected (Burns et al., 2016). The information provided by mental health websites can take many forms, displayed as running text, fact sheets, visual aids (e.g. charts, tables or diagrams) and in multimedia format (podcasts, audiobooks, and videos). In examining this information, previous literature has questioned how the website design may take effect on the quality of information. Several studies have shown that there is a high uncertainty within the LGBTIQ+ population on the quality of online health information provided by mental health service websites (Erdem & Harrison-Walker, 2006; Hawkins, 2017). In the current study, this research gap has been explored through assessing the web design elements of websites designed for LGBTIQ+ young adults.

Web design elements are seen as a component that “best facilitate and predict user engagement” within websites and their design (Garett et al., 2016, p. 1). Web design elements can be viewed as the ‘puzzle pieces’ that make up the ‘bigger picture’ – website designers achieving high functionality and high quality throughout their site. Garrett et al.’s (2016) study aimed to define the specific web design elements attributed to effective website design, due to the understanding that user engagement can be affected by the presence (or lack of) appropriate web design elements. A literature review was conducted, and the seven key web design elements identified were: navigation, graphical representation, content utility, organisation, purpose, simplicity, and readability (Garett et al., 2016). Among the 20 web design elements listed in their review, elements such as accuracy, credibility, interactivity, security/privacy, and valid links were highlighted as essential for effective website design. The researchers argued that the web design

elements referred to throughout their study can be considered as ‘best practice’ due to the high frequencies of reference within the previous literature (Garett et al., 2016).

With the knowledge that the LGBTIQ+ community has been found to experience greater health disparities, various studies have analysed the online mental health information available and explored what care-seeking behaviours are exhibited by young people within this community. Importantly, these studies also identified the benefits and limitations of mental health service websites for young LGBTIQ+ people. Bowman et al. (2020), Brown and Veinot (2021), Cronin et al. (2021), Deutsch (2016), Hawkins (2017), Holt et al. (2019), Liang and Shepherd (2020) and Wright and McKinley (2010) discussed the main themes of anonymity (combatting stigma and discrimination), ease of access, and uncertainty of quality of information are referred to throughout the studies listed above. These themes, in turn, make up the foundation of what ‘best practice’ mental health services should consider when incorporating certain web design elements.

Anonymity: Combatting Stigma and Discrimination

In general, young people who identify as belonging to the LGBTIQ+ community have voiced that anonymity is important to consider when accessing mental health service websites (Bowman et al., 2020). Echoed by mental health service providers in rural Australia, the privacy and anonymity maintained by the service provider facilitates identity exploration and encourages disclosures which may not have occurred had the service provision occurred in a face-to-face setting (Bowman et al., 2020). Explanations of this need for anonymity within the LGBTIQ+ community are closely linked to the stigma and discrimination experienced by this population. In the National Study of Mental Health and Wellbeing, 30% of people who identified as gay,

lesbian, or bisexual were more likely to report experiencing discrimination compared to the 13% reported by their heterosexual counterparts (Australian Bureau of Statistics, 2020). Young people who belong to this community often experience stigma and discrimination in more than one aspect of their life, and these events may deter the individual from seeking health care unless necessary or not at all (Lyons et al., 2020).

The Minority Stress Model can explain this perceived stigma (Meyer, 2003). Meyer's model (2003) theorised that LGBTIQ+ young people tend to have negative experiences as members of a marginalised group or as a 'minority'. The stigma and discrimination enable prejudice or abuse that is experienced by individuals based on their sexual orientation or gender identity. Stigma and discrimination also account for a lack of efficacy in the health care outcomes of LGBTIQ+ people (Cronin et al., 2021; Wright and McKinley, 2010). In health care settings, stigma and discrimination may look like refusal of health professionals to provide health care for the young person, or insufficient training or knowledge taken on by health professionals in gender-affirmative practices, such as hormone replacement treatment (Brown & Veinot, 2021; Deutsch, 2016; Hawkins, 2017). While mental health service websites are less likely to encourage feelings of perceived stigma or discrimination, members of the LGBTIQ+ community may still disengage from these websites due to the insufficient amount of information (or absence of information entirely) relating to their experiences.

Given that the LGBTIQ+ community are more vulnerable to potential discrimination from health care professionals, to mitigate the effects of minority stress, it is crucial for mental health services to understand that young people may feel safer accessing the information provided by these services via their websites anonymously, and in response to this knowledge, allow for anonymous use of their online resources accordingly (Bowman et al., 2020).

Ease of Access: Affirmative Practices in Mental Health Service Websites

Ease of access of the mental health service websites can be viewed as both a strength and limitation for LGBTIQ+ young adults, dependent on their geographical location and socioeconomic status (Bowman et al., 2020). Bowman et al. (2020) were interested in internet-based mental health services accessed in rural Australia and conducting interviews with two groups of interest: LGBT young adults and mental health service providers. Both groups had similar opinions of mental health service access. While mental health service websites are considered easily accessible in 'urban' locations, LGBTIQ+ young adults in rural Australia highlighted that a lack of stable or private connection when accessing these online services, which in turn acts as a barrier to mental health service website access. Upon accessing the health information provided on these mental health service websites, it is believed by Hawkins (2017) and Liang and Shepherd (2020) that the online information provided should be accessed in comfort and convenience.

Hawkins (2017) highlighted the distinctiveness of LGBTQ health needs and wanted to investigate how this community considers online health information. Six themes were identified: places that a negative impression for the participants, convenience, social costs, comfort, queer friendly spaces, and quality of information (Hawkins, 2017). The themes identified by Hawkins (2017) co-exist with each other and can be taken into consideration when looking at ease of access to mental health service websites. Additionally, the findings from this study correspond with existing literature, reinforcing the idea that more research is needed to fittingly support LGBTIQ+ young adults.

Liang and Shepherd's (2020) content analysis of mental health private practices' websites and intake forms argued that having a welcoming and inviting presence may influence the user to

continue engaging with the online content. To demonstrate this welcoming and inviting presence, non-discrimination statements and diverse and inclusive imagery both were said to promote and demonstrate to clients (or users) that their mental health practice is committed to multiculturalism, inclusion, and diversity (Liang & Shepherd, 2020). Overall, mental health websites that can foster ‘safe spaces’ and are easily accessible to the community are recommended as ‘best practice’, alongside the quality of online health information.

Uncertainty and Mistrust of Quality of Online Health Information

LGBTIQ+ young adults report varying opinions about the content sourced and the quality of information, cautious of relevancy and source (Gilbey et al., 2020). As highlighted by Hawkins (2017) within their study, it was noted that ‘only two to three participants’ involved with this study (n=11) did not communicate whether they were critical of the information sourced from online websites (Hawkins, 2017). A majority of LGBTQ youth involved in this study shared that they were more likely to seek information from multiple sources, and these sources were often found online due to the insufficiency of information available in person “for us, by us” (Hawkins, 2017, p. 700).

Deutsch (2016) focused on internet-based information on gender-affirming hormone treatments. The researcher explored their topic by evaluating 40 websites with several rating scales or measures. Notably, it was found that this quality of information was measured effectively most when there was a bibliography published on the websites (Deutsch, 2016). Deutsch’s finding sits in conjunction with the previous works of Garrett et al. (2016) and Hawkins (2017), in that credibility was an element of health care that remained important for LGBTIQ+ young people. From the findings of this study, it was hypothesised that the role of gender-

affirming medical care may influence the likelihood of an individual feeling comfortable in these spaces (Deutsch, 2016). Furthermore, Holt et al.'s (2019) content analysis of mental healthcare providers' online materials in the USA aimed to determine whether these online materials included transgender and gender nonconforming identities and services. The findings of this study specified that 74.3% (n= 185) of the websites analysed did include at least one resource or service to gender and nonconforming identities (Holt et al., 2019). Upon closer examination, approximately a quarter of the websites analysed (25.7%) did not include least one resource or service to gender and nonconforming identities. In previous years, this number was significantly smaller, with Wright and McKinley's (2010) content analysis of college counselling centre web sites presenting that only 6% of sites analysed provided a pamphlet that focused on LGBT issues or linked students with further resources (Wright & McKinley, 2010).

The lack of high-quality information provided to LGBTIQ+ young people can be linked to experienced discrimination, as explained by Brown and Veinot (2021) in their proposed 'Model of the Pathways to LGBTIQ+ Well-Being'. The researchers aimed to develop a better understanding of how discrimination, whether it was feared or experienced, influenced an individuals' help-seeking behaviours. The proposed model indicated that LGBTIQ+ people were more likely to engage in 'peer-based information exchanges' (Brown & Veinot, 2021, p. 407) first before deciding to seek health information. An obvious problem with this method is that it cannot assure the young person that the health information provided to them by their peers is evidence-based. Wherein lies a gap, for mental health professionals to, develop online resources that are not only accessible and affirming, but also trustworthy, reliable and affirming for members of this community.

The questions raised about the online health information found by LGBTIQ+ young people indicate that this community has a need for active participation in their own health care support. Given the importance of online health information, mental health service websites must pay attention to LGBTIQ+ communities and make sure that the information is evidence-based, affirmative, and accurate to their unique health needs and experiences.

The Current Study

The current study aims to identify Australian mental health service websites that provide relevant mental health information for young people of the LGBTIQ+ community. Minimal research has been conducted about the quality of this information, which can be assessed through appraising the web design elements of mental health service websites. Critically reviewing the web design elements of the currently available mental health service websites is valuable, as these elements have been identified in previous studies to impact user engagement and satisfaction. Furthermore, the current study aims to make recommendations for additional research and for mental health services to help mitigate the effects of perceived stigma and to expand on what inclusive and affirmative healthcare can look like for the LGBTIQ+ community.

The current study's research questions are, 1) do mental health websites based in Australia feature information for LGBTIQ+ young adults? and 2) if this is the case, what are the web design elements of this information?

Methods

Low-risk research ethics approval was granted from the University of Adelaide School of Psychology Human Research Ethics Committee (#22/42). Mental health service websites were collected via a generic web-search (e.g., www.google.com.au) and subjected to the following inclusion and exclusion criteria:

Inclusion Criteria

Open and publicly accessible websites were considered for the current study. Websites were included in the dataset if, according to their website names or descriptions, they belonged to a mental health service or organisation that provided mental health information for ‘young adults’ (individuals that belong to the age group of 18-25). These websites also had to belong to an Australian-based mental health service or organisation, accessible in the English language (English translations were not accounted for).

Exclusion Criteria

Mental health service websites that specifically indicated that the information provided was select to LGBTIQ+ young people were excluded from this study to underline focus on the research question. Websites that were classified as a ‘mental health service directory’ were also excluded. Mental health service directories are used as an “overview of credible Australian online and teleweb programs” (eMHPrac, n.d.). Furthermore, websites that appeared more than once on each search were classified as duplicates and excluded from the final dataset.

Mental Health Service Website Search Strategy and Data Collection

A University Librarian at the University of Adelaide was consulted to ensure that the internet search strategy conducted was rigorous and sources the relevant data. Following the data collection strategy of Holt et al. (2019), mental health service websites were sourced via generic web-search on Google (www.google.com.au) using relevant internet search strategies, a string of search terms connected with Boolean operators. Search terms included “young adult”, “youth adults”, “mental health service”, “mental health services”, “mental health organisation” and “mental health organisations”. Search terms selected for the current study were guided by the research question, and based on previous literature (Holt et al., 2019). Furthermore, Boolean operators (“AND”, “OR”) were also applied in each internet search strategy to link the search terms together.

Each search was completed in ‘incognito’ mode, a setting that allows the user to keep their browser history, site data and cookies hidden. This setting also leaves out the user’s location data. Therefore, these settings mitigate the chances of any potential bias when collecting the secondary data. Using the advanced search settings option in Google, the language domain was narrowed to produce search results of Australian English-language websites only.

Google (www.google.com.au) was the utilised to conduct the internet search and in turn, attempting to replicate the user experience of seeking mental health information. Frequently used by over 93.37% of the Australian market at the time of this study, Google appeared to be the most popular search engine to date. Three search strategies were conducted in the Google search engine in June 2022, and the first 10 search results (first page) were reviewed, the maximum size

of the dataset totalling 30 search results. This constraint was established to keep the dataset size at a feasible level for the current study.

All websites collected were reviewed over a one-month period (June 2022), and the dataset was formed based on the inclusion and exclusion criteria of this study. The websites that met the inclusion criteria were set aside and stored in Microsoft Excel for further analysis to be conducted (See Table 1 for Overview of Included Mental Health Websites).

Data Analysis: Coding Framework of Web Design Elements

In the current study, a content analysis was conducted guided by a modified coding framework that outlined best practice web design elements. This framework was guided by previous literature that explored whether the online materials available included the LGBTIQ+ community (See Table 2 for Coding Categories for Content Analysis and Rationale). The coding framework developed for this research follows the methodology of Garrett et al. (2016), Holt et al. (2019), Liang and Shepherd (2020) and Wright and McKinley (2010).

Garrett et al.'s study (2016) aimed to explore what specific web design elements can be attributed to effective website design and were interested to see whether user engagement was affected by the presence (or lack of) of the web design elements identified. The authors highlighted seven key web design elements: navigation, graphical representation, organisation, content utility, purpose, and readability (Garrett et al., 2016). Upon further appraisal, it was identified that five other web design elements from Garrett et al.'s study were relevant to answering the research question in the current study: valid links, credibility, accuracy, security/privacy, and interactive (Garrett et al., 2016).

Table 1 – Overview of Included Mental Health Service Websites*

Name	URL	Purpose
1 Headspace	https://headspace.org.au	Mental Health/Wellbeing Support
2 Beyond Blue	https://www.beyondblue.org.au	Mental Health/Wellbeing Support
3 R U OK?	https://www.ruok.org.au/	Suicide Prevention
4 Kids HelpLine	https://kidshelpline.com.au/	Mental Health/Wellbeing Support
5 HelpingMinds	https://helpingminds.org.au	Mental Health Support
6 Youth Focus	https://youthfocus.com.au	Mental Health Support
7 Orygen, Revolution in Mind	https://www.orygen.org.au	Mental Health Education
8 Sonder	https://sonder.net.au	Mental Health Support
9 YouThrive	https://www.youthrive.com.au	Mental Health Support
10 Ramsay Clinic Northside	https://www.ramsaymentalhealth.com.au	Mental Health Support
11 Black Dog Institute	http://blackdoginstitute.org.au/	Mental Health/Wellbeing Support
12 LifeLine	http://lifeline.org.au/	Mental Health/Wellbeing Support
13 ReachOut	http://au.reachout.com/	Mental Health/Wellbeing Support
14 Mindspot	http://www.mindspot.org.au	Mental Health Support
15 SANE Australia	https://www.sane.org/	Mental Health/Wellbeing Support

*All sites last accessed August 6th, 2022

The framework adopted by Wright and McKinley (2010) was expanded by Holt et al. (2019) to examine whether mental healthcare providers' online materials in the USA included transgender and gender nonconforming identities and services (Holt et al., 2019). Two of the coding categories in Holt et al's study were included in the current study and altered based on current research. 'Affirmative Language in Gender/Sex Questions', adjusted to 'Affirmative Language LGBTIQ+), had a focus on understanding whether the service websites provided more gender selection options beyond the limiting scope of the gender binary (male and female).

Additionally, there was interest in whether the website adopted affirmative language using terms that exist within LGBTIQ+ terminology, such as 'chosen name', 'pronouns', 'sexuality' and 'gender'. Affirmative language has not commonly been addressed in previous studies, and not in the context of analysing online mental health service websites. Consequently, it was deemed relevant to Holt et al. (2019) and relevant to this study moving forward.

Liang and Shepherd's (2020) content analysis of mental health private practices' websites and intake forms suggested that non-discrimination statements and diverse and inclusive imagery both promote and demonstrate to clients (or users) that their mental health practice is committed to multiculturalism, inclusion, and diversity (Liang & Shepherd, 2020). Therefore, following their methodology, each website included in the current study was coded for the absence or presence of a non-discrimination statement, a declaration throughout their webpage to share that "(we) do not discriminate" (Liang & Shepherd, 2020, p. 328). Relevant to this study, it was determined that either a non-discrimination or diversity statement (e.g. "(we) welcome people who are gender and sexually diverse") would be a good demonstration of what affirmative and inclusive mental health care could look like for LGBTIQ+ young adults.

Wright and McKinley's (2010) content analysis of college counselling centre web sites examined whether mental health resources were provided to LGBT collegians. Their research created eight variables to assess LGBT inclusion, the two most relevant to this study being 'Link to LGBT web site' and 'Counsellor Speciality' (Wright & McKinley, 2010). 'Link to LGBT web site', which was adjusted to 'LGBTIQ+ Resources & External Links', focused on measuring whether any of websites provided a website URL that linked to a LGBTIQ+ specific mental health service (e.g. QLife). Additionally, 'Counsellor Speciality', which was adjusted to 'Provider Specialty (LGBTIQ+)' for the purposes of this study, was interested in exploring whether the mental health service website had self-identified as having a particular knowledge or interest in LGBTIQ+ mental health (Wright & McKinley, 2010).

Table 2. Coding Categories for Content Analysis and Rationale

Coding Category	Options	Theoretical Rationale
Accuracy: Is the mental health information provided to LGBTIQA young adults accurate?	Y/N	Adapted from Garrett et al. (2016) and reflected on in Hawkins (2017).
Affirmative Language (LGBTIQ+): Affirmative language in gender/sex communications.	Y/N	Included in Holt et al.'s (2019) study.
Credibility: Is the mental health information provided credible?	Y/N	Adapted from Garrett et al. (2016).
Content Utility: Is the information provided useful or interesting?	Y/N	Included in Garrett et al.'s (2016) as one of the seven key web design elements.
Interactivity: Can users contact the mental health service/organisation or other users through chat rooms, discussion forums or social media.	Y/N	Adapted from Garrett et al. (2016), combining 'strong user control capabilities', 'security/privacy' and 'interactive'. Explored by Hawkins (2017) and included in Bender et al. (2013).
Anonymity (Interactivity): If users can contact the mental health service/organisation or other users through chat rooms or discussion forums, does the website allow the user	Y/N	Adapted from Garrett et al. (2016), combining 'strong user control capabilities', 'security/privacy' and 'interactive'.

to be anonymous when engaging with the communication features?		
Graphical (Visual) Representation: Does the website feature icons of LGBTIQ+ visibility?	Y/N	Included in Garrett et al.'s (2016) as one of the seven key web design elements. Adapted from 'graphical representation' to 'visual representation'.
Navigation: Is the website easy to navigate? Is there a dedicated mental health information section for LGBTIQ+ young adults? If there is not a dedicated section for LGBTIQ+ young adults, is any information available easy to navigate to via handsearching or using the search bar?	Y/N Y/N	Included in Garrett et al.'s (2016) as one of the seven key web design elements. Discussed by Bowman et al. (2020). Expanded to explore two aspects of navigation, to further clarify whether the websites analysed provide either a dedicated section of mental health information for the LGBTIQ+ community or whether they provide any content at all.
Non-discrimination (or diversity) Statement (LGBTIQ+): Does the website include a diversity statement or policies?	Y/N	Included in Liang and Shepherd (2020).
Organisation: Is the website logically organised?	Y/N	Included in Garrett et al.'s (2016) as one of the seven key web design elements.
Provider Speciality (LGBTIQ+): Do mental health service websites feature descriptions of specific clinicians and/or programs having an interest or expertise (speciality) in LGBT issues?	Y/N	Included in Wright and McKinley (2010), and Holt et al. (2019).
Purpose: Does the website clearly state its purpose (i.e. personal, commercial or educational)?	Y/N	Included in Garrett et al.'s (2016) as one of the seven key web design elements.
Readability: Is the mental health information easy to read and understand?	Y/N	Included in Garrett et al.'s (2016) as one of the seven key web design elements.
Resources & External Links: Are there website links linking users to LGBTIQ+ specific services/organisations?	Y/N	Included in Wright and McKinley (2010), Deutsch (2016) and Holt et al. (2019).
Simplicity: Is the design of the website simple?	Y/N	Included in Garrett et al.'s (2016) as one of the seven key web design elements.
Valid Links: Does the website provide valid links?	Y/N	Included in Garrett et al.'s study (2016).

In summary, the web design elements evaluated in this study featured: accuracy, affirmative language, anonymity (interactivity), credibility, content utility, interactivity, navigation, non-discrimination/diversity statement, organisation, provider specialty, purpose, readability, resources/external links, simplicity, valid links, and visual representation (See Table 2 of Coding Categories for Content Analysis and Rationale). Each website was visited within the month of June 2022, and the coding categories established were then methodically applied to these websites to complete the content analysis in July 2022. Following the methodology of Holt et al. (2019), binary (yes or no) coding categories were implemented when completing the content analysis on the mental health service websites (Holt et al., 2019). Asterisks were used to refine the analysis of the coding categories, specifically visual representation, and interactivity (anonymity). An element adherence proportion score was calculated to identify the percentage of which how many of the web design elements were met by mental health service websites. In addition, a total website proportion score was also calculated to identify the percentage of mental health service websites that met each of the web design elements.

Results

The primary search strategy produced a total yield of 30 websites. A total of 9 websites were identified as duplicates, with a total of 21 websites deemed provisionally eligible and being subjected to further consideration to assess whether they met the inclusion criteria. As shown in Figure 1, 13 websites were excluded from the study based on the exclusion criteria. Websites were excluded if they indicated that they were a mental health service directory (n=7) or if the website did not fit the description of a mental health service website (n=6). Further hand-searching of online mental health service directories found via the primary search strategy allowed for the inclusion of a further 7 websites (n=7). A total of 15 mental health service websites (n=15) met the inclusion criteria and were considered potentially eligible and subjected to preliminary analysis.

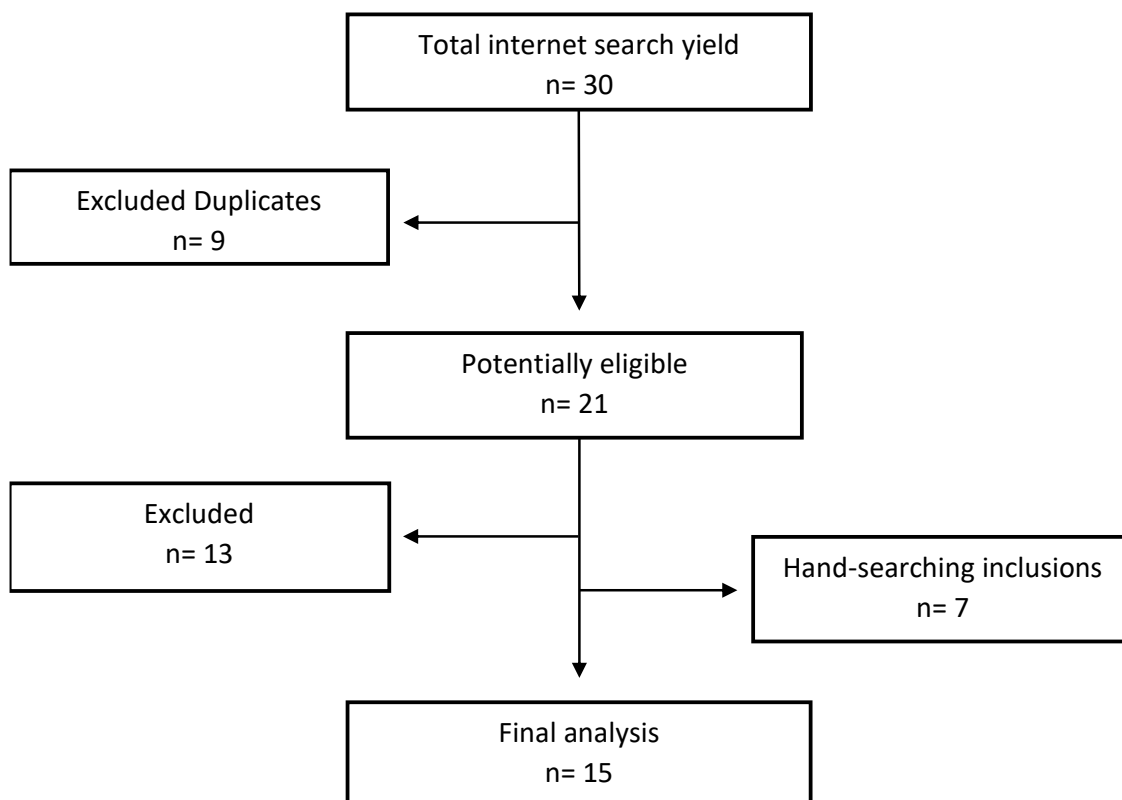


Figure 1. Flow Diagram of included mental health service websites.

The following results were found upon conducting a content analysis guided by a modified coding framework outlining best practice web design elements (See Table 3 for Web Design Element Adherence of Mental Health Service Websites). As the first part of the research question focused on the inclusion of LGBTIQ+ young adults by mental health service websites, the researcher examined the 15 mental health service websites to detect whether they did provide information for LGBTIQ+ young adults.

In conjunction with the research question, it was identified that a total of 10 mental health service websites (n=10) offered mental health information for LGBTIQ+ young adults. This information was based on a range of topics, with themes of gender identity, sexuality, allyship and stigma or discrimination (homophobia, transphobia, and biphobia). Moving forward, the following two coding criteria were applied to the whole dataset of websites, regardless of whether LGBTIQ+ mental health information was present within.

Non-Discrimination/Diversity Statement

Six of the fifteen mental health service websites included a non-discrimination or diversity statement, which was commonly located at the bottom of the webpage. To meet the coding criteria, the statement had to explicitly include the terms: “gender”, “sexuality”, “individuality”, “identity” or “diversity” in their non-discrimination or diversity statement. Each website displayed similar statements, focused on “*(committing) to safe inclusive spaces, policies and services for people of LGBTIQ+ communities and their families*” (Beyond Blue, n.d.) and “*(welcoming) all people irrespective of ethnicity, lifestyle choice, faith, sexual orientation, and gender identity*” (headspace, n.d.). Intriguingly, three of the six websites that included a non-

discrimination or diversity statement on their webpage did not deliver any LGBTIQ+ content (as seen in Table 3).

Visual Representation

Thirteen of the fifteen mental health service websites included images of LGBTIQ+ visibility. To meet this coding criteria, images of gender non-confirming individuals, non-heterosexual relationships, and the inclusion of the rainbow pride flag and/or other diversity flags had to be present within the LGBT content. Eight of these websites included the rainbow pride flag icon or miscellaneous rainbow imagery only, three of the websites not providing information for LGBTIQ+ adults.

Navigation to LGBTIQ+ Content

Ten of the fifteen mental health websites provided mental health information for LGBTIQ+ young adults. To meet this coding criteria, websites must have had any content relating to the mental health and wellbeing of LGBTIQ+ adults, and this information had to be accessible via a dedication section or via the search bar. It was found that all websites included a search bar to locate this information or provided subheadings within their resources section that featured information for LGBTIQ+ young adults.

Upon answering the first part of the research question, the following coding criteria below were applied solely to the 10 mental health service websites that provided LGBTIQ+ content.

Accuracy

Ten websites provided accurate mental health information, communicating their awareness of the mental health struggles faced by many LGBTIQ+ young adults. To meet the coding criteria, the mental health information was examined and compared to previous literature as sourced by the researcher. It was found that the mental health services that were able to provide references for the information presented on their website had also provided accurate mental health information. Therefore, in measuring accuracy, this seems to suggest that the quality of the mental health information is quite high across the websites analysed.

Affirmative Language

Six mental health service websites used affirmative language within the material. To meet the coding criteria, websites must have used terms such as ‘pronouns’ or ‘preferred name’, ‘sex’, ‘sexuality’, ‘gender’ and ‘gender identity’, in conjunction with the previous literature examined by the researcher. Pronouns were referred to across several websites, with the terms: ‘sex’, ‘sexuality’, ‘gender’ and ‘gender identity’ used frequently. When asking for a user’s personal information, websites largely adopted ‘preferred name’ and ‘gender’ rather than ‘birth name’ and ‘sex’. Throughout ‘Beyond Blue’, ‘Headspace’ and ‘ReachOut’, the acronym ‘LGBTIQ+’ was defined and expanded as a ‘glossary’ for users to read.

Credibility

Six mental health service websites had presented evidence of citation on most, if not all their information regarding the LGBTIQ+ community. To meet the coding criteria, websites must have provided references that stated where the information present was sourced from. Across

Table 3. Web Design Element Adherence of Mental Health Service Websites

	Helping Minds	Mindspot	Ramsay Clinic Northside	Youth Focus	You Thrive	Beyond Blue	Black Dog Institute	Headspace	Kids Helpline	Lifeline	Orygen	ReachOut	R U OK?	SANE Australia	Sonder	Total Website %
Non-Discrimination/Diversity Statement (LGBTIQ+)	Yes	Yes	No	Yes	No	Yes	No	Yes	No	No	No	No	No	Yes	No	40%
Visual Representation	Yes*	Yes*	No	Yes*	No	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes	Yes*	Yes*	Yes*	86%
Navigation to LGBT Content	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	66%
Accuracy	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
Affirmative Language (LGBTIQ+)	N/A	N/A	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	80%
Credibility	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes*	No	Yes	No	Yes	No	No	60%
Content Utility	N/A	N/A	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes	Yes	No	Yes	70%
Interactivity	N/A	N/A	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	No	60%
Anonymity (Interactivity)	N/A	N/A	N/A	N/A	N/A	No*	N/A	No*	No	No*	N/A	No*	N/A	No*	N/A	0%
Navigation to LGBT Section	N/A	N/A	N/A	N/A	N/A	Yes	No	Yes	No	Yes	Yes	Yes	Yes	No	No	40%
Organisation	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
Provider Speciality (LGBTIQ+)	N/A	N/A	N/A	N/A	N/A	Yes	No	Yes	No	No	No	No	No	Yes	Yes	40%
Purpose	N/A	N/A	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90%
Readability	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
Resources/External Links	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes*	Yes	Yes	Yes	Yes	Yes	Yes	100%
Simplicity	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
Valid Links	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
Element Adherence Proportion Score (%)	N/A	N/A	N/A	N/A	N/A	94%	56%	94%	76%	76%	62%	76%	81%	76%	75%	

Visual Representation - Y* = LGBTIQ+ Pride Flag icon or rainbow imagery only.

Interactivity (Anonymity) - N* = Identifiable and unidentifiable demographics asked (preferred name, age, gender and state) to engage with group chat or 1:1 services OR account needed to interact with group chat or 1:1 services.

‘Beyond Blue’, ‘Black Dog Institute’, ‘Headspace’, ‘Kids Helpline’, ‘Orygen’ and ‘R U OK?’, styles of referencing took one of many forms. ‘Kids Helpline’ featured short sentences at the bottom of each page acknowledging that the information was *‘written and reviewed by people in the LGBTIQ+ communities’* (Kids Helpline, 2019).

Other websites, such as ‘Beyond Blue’ took a more formal approach, with a Harvard-style reference list or footnotes embedded throughout the webpage that linked directly to the reference. ‘ReachOut’, which had a large amount of mental health information for LGBTIQ+ young adults, did not cite any references in their webpages or list a review and publication date.

Content Utility

Seven mental health service websites provided information to LGBTIQ+ young adults consistently. To meet this coding criteria, the service websites had to display the date of publication. Furthermore, the information had to be relevant to the purpose of the website, which was subjectively assessed by the researcher. It was suggested that the information was consistent due to each website analysed providing similar information on mental health and wellbeing throughout other sections of their websites too. Only ‘Headspace’ and ‘Kids Helpline’ had listed the publication and review date on each article, both of which had been made available within the past three years (2019 onwards).

Interactivity

Six mental health service websites gave users the opportunity to contact the mental health service/organisation or fellow peers through chat rooms, discussion forums and social media. To meet the coding criteria, websites must have offered a range of communication features, such as:

chat rooms, discussion forums or social media groups. Each of the websites encouraged the user to engage with their communication features, using language such as “*join the community to discuss all things LGBTQIA+ and come along to weekly online chats*” (headspace, n.d.), “*share and learn from your peers and become part of our online community*” (Beyond Blue, n.d.) or “*hear from others about what has helped them and share what you’re going through*” (ReachOut, n.d.). ‘Headspace’ and ‘Beyond Blue’ were the only two websites that had discussion forums and chat rooms dedicated specifically for the LGBTIQ+ community. Both communication features appeared to be active and updated regularly.

Anonymity (Interactivity)

None of the mental health service websites analysed gave the option to the user to be anonymous when engaging with their communication features. To meet the coding criteria, chat rooms and discussion forums had to allow users to participate without disclosing identifiable data about themselves (e.g., having to sign up for an account to use these features or allowing an individual to share their preferred name only).

It was found that when attempting to access these communication features, both identifiable and unidentifiable information such as name, age, mobile number, gender, and location were asked for by websites to sign up for an account. Upon signing up for an account, users were then able to engage with the discussion forum or connect to a clinician for one-on-one mental health support. ‘Headspace’ and ‘Beyond Blue’ also asked for a phone number or email address, to contact the young person should the chat session be disconnected abruptly. While these websites specified that their services were ‘anonymous’ or ‘confidential’, it seems that this

could not be guaranteed as the user needed to create an account to participate in these communication features in the first place.

Navigation to LGBTIQ+ Section

Six mental health websites offered a dedicated section for LGBTIQ+ young adults. To meet this coding criteria, the service websites had to present a dedicated section for LGBTIQ+ young adults on their page, and this had to be discovered in less than a minute (via the search bar or navigation bars). On average, dedicated sections were found through drop down navigation bars, or searched for using the terms 'LGBT' or 'LGBTI' or 'LGBTIQ'.

Organisation

Ten mental health service websites provided mental health information that followed a logical structure. To meet this coding criteria, the title, headings and titles had to be related to the content that followed, which was subjectively assessed by the researcher. The information appeared meaningful to each webpage, and each website was consistent in their approach to information presentation. Commonly, the webpage title was at the beginning of the page, with headings and subheadings situated on the left and bolded to highlight the beginning or end of an information section. External links and resources were located at the bottom of each page.

Provider Speciality (LGBTIQ+)

Four mental health service websites featured descriptions of having an area of interest or expertise in LGBTIQ+ mental health. To meet this coding criteria, websites must have featured a dedicated section for LGBTIQ+ young adults and must have featured a description that their

mental health service had an interest in working with or had previously worked with this demographic. To demonstrate this, 'Beyond Blue' detailed that they have been '*working to reduce prejudice and discrimination that can lead to higher rates of depression, anxiety, and suicidal thoughts for lesbian, gay, bi, transgender, intersex (LGBTI) and other diverse communities since 2009*' (Beyond Blue, n.d.).

Purpose

Ten of the mental health service websites analysed clearly stated their purpose, which varied from '*(supporting) young people with mental health*' (headspace, n.d.), '*creating a world where we're all connected and protected from suicide*' (R U OK?, n.d.) and '*(providing) information and support for anxiety, depression, and suicide prevention for everyone in Australia*' (Beyond Blue, n.d.). To meet this coding criteria, the website had to explicitly list that it was a mental health website for young people, and if this were the case, the website needed to state whether they had provided information with LGBTIQ+ communities. This was communicated through the presence of a dedicated section, or through their language on their articles about LGBTIQ+ mental health.

In assessing the purpose of a mental health service website, the user may be able to detect whether this website is inclusive of LGBTIQ+ young people when addressing mental health and it may encourage the user to explore this 'safe space'. Upon having a closer look within the dedicated sections, Headspace' highlighted that they aim to '*help young people from the LGBTIQ+ community all over Australia get support with mental health and wellbeing*' (headspace, n.d.).

Readability

Ten of the mental health service websites were calculated to be easy to read and understand. To meet the coding criteria, each website must have demonstrated that the mental health information provided was able to be easily understood by young adults, aged 18-25. This was determined through putting each website through a series of readability tests, notably the 'Flesch-Kincaid Reading Grade Level Formula' (1975) and the 'SMOG Index Readability tool' (1969). Their scores were calculated, and this score further indicated what the recommended readability age was. The average readability score for each website highlighted that the readability level would be suitable for young people aged 12-16 years old. Therefore, these findings indicated that the language used within these websites were accessible to 18-25 years old with varying levels of readability.

Resources and External Links

Ten of the mental health service websites provided resources or URLs that linked to LGBTIQ+ specific mental health organisations. To meet this coding criteria, service websites had to present hyperlinks that connected users to LGBTIQ+ specific services/organisations, whether that was found in their resources section or elsewhere. The resources and links were commonly located at the bottom of each dedicated section or included within their websites' resources section. Websites that were referred to belonged to mental health services such as qHeadspace, Q Life, ReachOut, and Minus18.

Simplicity

Ten of the mental health service websites were consistent in their design throughout their pages, having simple titles, headings, and subheadings. To meet this coding criteria, websites had to be visually similar on each page visited, and this was assessed subjectively by the researcher. It was also found that each website was optimised to be viewed on both a computer and mobile phone screen – seeming to be uncluttered in layout, with high user functionality.

Valid Links

Ten of the mental health service websites provided external links. To meet the coding criteria, each website link listed on the webpage must have opened into another tab, redirected to another webpage within that service website or must have redirected to another website entirely.

Discussion

The current study aimed to identify the available mental health service websites that provide relevant mental health information for young people of the LGBTIQ+ community in Australia. Furthermore, the study aimed to critically appraise the quality of the information available in the context of best practice standards as articulated in previous research.

Generic web-searches on Google utilised three search strategies that included terms to source Australian-based mental health service websites were conducted to answer my research questions. This search revealed a total of 15 mental health service websites that met the inclusion criteria and were then subjected to preliminary analysis. To answer the first part of my research

question, it was identified that only 10 of the 15 mental health service websites collected in the final dataset offered mental health information for LGBTIQ+ young adults in Australia. This finding is consistent with previous literature that argues service providers are increasing their outreach to provide mental health information for this age group (McGorry et al., 2013).

All 10 of the mental health service websites analysed clearly stated their purpose and provided accurate mental health information that followed a logical structure. The mental health information provided was clear and concise, following a consistent website design and linked resources that connected users to LGBTIQ+ specific mental health organisations. None of the mental health service websites analysed met all of the best practice web design elements suggested by the literature. As highlighted by Garrett et al. (2016) and Holt et al. (2019), the recommendations made by these studies have been identified as ‘best practice’ website design. Therefore, each of the coding categories chosen for the current study aimed to answer the research question and explore the quality of the online mental health information analysed.

Reflexivity was an important part of both the data collection and data analysis process. As an individual who identifies as an ‘insider’ within this research, I can acknowledge that my beliefs and experiences may have impacted the research process. It is also important to acknowledge that some of the coding categories in my research were assessed by myself using subjective measures, which may or may not influence the results. To mitigate any potential influences of my own beliefs and experiences, I made sure to present all the results found in my analysis as transparently as possible in the results section. In addition, to maintain reflexivity

within the current study, regular discussions were had with my supervisors that encouraged me to reflect on how the coding criteria chosen was relevant to the study.

Embracing Diversity: Affirmative Language, Non-discrimination/Diversity Statements, Provider Specialty, and Visual Representation

In line with recommendations made by Holt et al. (2019) and Liang and Shepherd (2020), six of the 10 mental health service websites analysed included a non-discrimination or diversity statement. Interestingly, three of the six websites that did include a non-discrimination or diversity statement on their webpage did not provide any mental health information for LGBTIQ+ young people. It is also unknown whether these websites provided specific services for LGBTIQ+ young people, due to the lack of information present. In addition, 13 of the 15 mental health service websites subject to preliminary analysis included images of LGBTIQ+ visibility. Upon further analysis, eight of these websites included the rainbow pride flag icon or miscellaneous rainbow imagery only, three of the websites not providing information for LGBTIQ+ adults. The positioning of the rainbow pride flag icon alongside the non-discrimination/diversity statement with no contextual information may be interpreted as ‘ingenuine’ and ‘tokenistic’ attempts to connect with the LGBTIQ+ community, which in turn may also discourage young adults in the community to engage with mental health services in general. It is essential that substantial efforts are made to effectively communicate this message of inclusion to the community. Based on the findings of Brown & Veinot (2021), as peer connections have been proven to make a positive difference when concerning the care seeking behaviours of LGBTIQ+ young people, word of mouth can encourage or discourage this community from conducting their own appraisal of the information available. Long term, this

conversation may feed into the perceived stigma and discrimination faced by the individual and prolong the care seeking behaviour.

Ease of Access: Anonymity, Interactivity, Navigation, Organisation, Readability, Simplicity, and Valid Links

In line with recommendations made by Brown and Veinot (2021), Garrett et al. (2016), Hawkins (2017), most mental health service websites gave users the opportunity to contact the mental health service/organisation or fellow peers through chat rooms, discussion forums and social media. However, none of the mental health service websites analysed gave the option to the user to be anonymous when engaging with their communication features. Each mental health service website required young people to create an account before being able to participate in the chat rooms and discussion forums within the website. Young people have emphasised the need for privacy and anonymity when engaging with these services, with the literature stating that anonymity within mental health service website use is vital to mitigate the effects of minority stress (Brown and Veinot, 2021). Therefore, the findings within the current study contradict the recommendations made by researchers (Garrett et al. 2016; Bowman et al. 2020). Admittedly, these discussion forums are available to view without having to create an account. However, as the LGBTIQ+ community are more vulnerable to facing stigma and discrimination, it may serve a purpose to safeguard participants who frequent these forums – mitigating the risks of homophobia, biphobia, and transphobia. Additionally, service providers can understand that user engagement and satisfaction should be considered when designing online content and this can be applied to the LGBTIQ+ community too.

Quality of Online Health Information: Accuracy, Credibility, Content Utility, and Purpose

Ten websites offered accurate mental health information, six providing references for the information that was aimed towards the LGBTIQ+ community. Seven of the mental health service websites provided this information consistently, with all the websites clearly stating their purpose. In conjunction with the previous research conducted by Hawkins (2017), Deutsch (2016), and Erdem and Walker (2006), it has been often found difficult to assess the quality of the information provided by these websites. Notably, each website had a distinguishable referencing style, e.g. “Kids Helpline’ featured short sentences at the bottom of each page acknowledging that the information was ‘written and reviewed by people in the LGBTIQ+ communities” (Kids Helpline, 2019). Other websites, such as ‘Beyond Blue’ took a more formal approach, with a Harvard-style reference list or footnotes embedded throughout the webpage that linked directly to the reference.

Intriguingly, ‘ReachOut’ did not cite any references in their webpages or list a review and publication date. This was disheartening, as this mental health service website provided a substantially large amount of mental health information that was not only relevant for LGBTIQ+ young adults, but also for their family and friends. Comparing these findings to the current literature, this indicates that mental health service websites will all vary in levels of which they present their mental health information and its quality.

The outcomes of the current study highlights that there are a wide range of general mental health services that exist on the internet that do include mental health information for LGBTIQ+ young adults. However, these young adults must continue to assess the degree to which the information provided is relevant and easily accessible to their experience. Mental

health service providers who deliver online mental health information to young adults that identify as a member of the LGBTIQ+ community should consider the web design elements highlighted in the current study. Mental health service providers may make further investigation as to whether their communication features are accommodating to the needs of the community, as anonymity was not guaranteed as per the findings of the current study. Additionally, service providers may explore whether their websites are affirmative of the LGBTIQ+ community and young peoples' needs when seeking online mental health information. Encouragingly, this research will add to the existing literature on LGBTIQ+ mental health and the quality of online mental health information.

Recommendations

The recommendations made below are from the findings of the current study, according to the literature that highlighted what the best practices for mental health service websites are when providing information for LGBTIQ+ young adults as presented by Garrett et al. (2016), Holt et al. (2019), Liang and Shepherd (2020) and Wright and McKinley (2010). These recommendations will help mental health services demonstrate their understanding and awareness of LGBTIQ+ issues (stigma and discrimination) through their online content and to pave the way towards inclusive and affirmative healthcare for the LGBTIQ+ community in the coming years. As the world moves to telehealth consults and online support, the following recommendations can be seen as 'best practice' to foster inclusion of LGBTIQ+ young adults in mental health service websites:

Service websites that do not provide a dedicated section on their website for the LGBTIQ+ community but do provide relevant content should consider creating an easily accessible section for young adults to read. Websites that offer information for LGBTIQ+ young adults must be able to provide references from evidence-based research on this community and the information available must be presented in a way that is easy to read from top to bottom.

Mental health service websites that provide a non-discrimination/diversity statement and rainbow pride flag icons must also present mental health information to this community, as a gesture of earnest inclusion. The non-discrimination/diversity statement should, through including the terms: “gender”, “sexuality”, “individuality”, “identity” or “diversity”, explicitly declare that their services are LGBTIQ+ friendly.

When encouraging LGBTIQ+ young adults to create an account, service websites should ask for ‘preferred name’ or ‘chosen name’ instead of ‘birth name’. Following this recommendation, websites should only ask for ‘gender’ not ‘sex’, as prior literature has indicated inclusive practice in health care settings (online or in-person) should not assume an individual’s sexual or gender identity.

Service websites that provide information for LGBTIQ+ young adults must also have images of gender non-confirming individuals and non-heterosexual relationships present within the content. Following this recommendation, service websites that include the rainbow pride flag icon must take into consideration whether their service may benefit from displaying other pride flag icons (e.g. bisexual, pansexual, asexual, and transgender) throughout their webpage or within the LGBTIQ+ content.

These recommendations are to be followed by mental health services that are looking to strengthen their website design and are committed to demonstrating that their services available are inclusive to the LGBTIQ+ community. In looking at the recommendations, it is also important to highlight some of the strengths and weaknesses within the current study.

To my knowledge, the current study is the first content analysis to explore how mental health service websites in Australia include of LGBTIQ+ young adults through their website design. This strength can be attributed to further research, to encourage fellow researchers to take a closer look into these service websites and critically appraise their web design elements. By conducting a qualitative study on this research topic, the current study allowed me to explore how these web design elements are portrayed throughout these websites and the relationships between each element. Additionally, another strength of this study is that the coding framework applied to the websites for analysis was a combination of coding categories from evidence-based studies on website design and LGBTIQ+ inclusion – creating a well-rounded approach to answering the research questions developed.

Notably, there are several weaknesses within the current study, including the smaller sample size of websites collected. It is worth noting that the sample size impacted the validity of the current study. However, this number was kept small with purpose, to continue being a feasible number of websites to analyse within the context of an honour's thesis. Future research should increase the number of search strategies completed in their data collection process, as this will allow for a larger amount of data available to apply the inclusion and exclusion criteria to.

Another weakness within the current study is the exclusion of mental health service websites that were specifically made for the LGBTIQ+ community. The decision to solely focus on the inclusion of this community in the general mental health service websites available was made to gain a deeper understanding of the extent to which these service websites include LGBTIQ+ young adults. When conducting the search strategies for the data collection process, none of the search results returned any mental health service websites specifically targeted towards LGBTIQ+ young adults. According to Bowman et al. (2020), this could be due to the general lack of knowledge about internet mental health services, which in turn may provide justification of the search results. Therefore, future research could benefit from including these websites in their analysis as this could also strengthen the assumption that the pre-existing service websites available to LGBTIQ+ are the ‘gold standard’ of inclusive and affirmative healthcare. In addition to this, future research may also benefit from focusing on transgender and intersex individuals within the community due to the specialized mental and physical health care needs that are often unmet (Deutsch, 2016).

As mentioned above, future research into LGBTIQ+ mental health and wellbeing is highly recommended. The current study is only a small part of the research that is required to be undertaken to fully acknowledge and understand what the unique needs of young adults in the LGBTIQ+ community are, and how we as mental health advocates and professionals can provide the best support possible. However, the results of the current study do support the existing literature, as the findings highlight that mental health services can do more for LGBTIQ+ young adults on their online websites.

Future research should focus on developing a universal website design framework that can be applied to determine the quality of the online mental health information provided and how inclusive a mental health service website is when addressing young adults in the LGBTIQ+ community. Researchers would need to develop a framework, similar to the framework developed in the current study, that can be used by health care professionals to intermittently assess how well service websites are including this population. As mentioned above, a limitation present in the current study is that the coding criteria used for analysis of the websites would not be considered objective enough to be used on a wider scale. While the results of the current study are in align with the findings expressed in the current literature, more research needs to be conducted to increase validity and allow for greater support of this community.

Future research should also examine LGBTIQ+ young adults and their thoughts on these mental health service websites available. Website design can be explored through ‘participatory design theory’ - a hands-on method of product development that encourages and involves the intended user in the planning, consultation, and execution of designing products, systems, and interventions (Hagen et al., 2012). By hosting a focus group with the population of interest and assigning the participants with the task to visit these websites, the researchers may be able to collect key information about LGBTIQ+ young people’s experiences with these websites, providing their opinions on how easy the mental health information is to navigate, read and understand.

Conclusion

LGBTIQ+ young adults experience higher levels of mental health challenges, psychological distress, stigma, and discrimination as compared to the general population. These mental health disparities experienced by the community are at an individual, social, cultural, and structural level, as highlighted within previous literature. To mitigate the effects of these barriers to mental healthcare access, mental health services have created websites that provide information to individuals who may be experiencing or know someone who is experiencing mental health challenges. However, little research has looked into what ‘best practice’ web design elements are featured within these mental health service websites to enable high quality information and inclusion of LGBTIQ+ young adults.

The current study critically evaluated 15 of the available mental health service websites for their inclusion of LGBTIQ+ young adults in Australia. The results indicated that only 10 of the 15 mental health service websites collected in the final dataset offered mental health information for LGBTIQ+ young adults in Australia. Furthermore, none of the 10 mental health service websites subjected to further analysis met all of the best practice web design elements suggested by the literature. To deliver high quality mental health information via website design and to mitigate the effects of stigma and discrimination within mental health care settings, mental health services should use these findings to help expand on what inclusive and affirmative digital mental health care can look like for young people who belong to the LGBTIQ+ community in Australia in the future.

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