SECTION 28 V2.0?

FILTERING SOFTWARE AND ACCESS TO LGBT INTERNET RESOURCES IN PUBLIC LIBRARIES

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DECLARATION

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ABSTRACT

This study investigates the extent to which the use of filtering software in Scottish public libraries results in the censorship of lesbian, gay, bisexual and transgender (LGBT) Internet resources. Additional considerations include the impact of censorship of LGBT Internet resources on LGBT patrons. There is a particular focus on censorship of Web 2.0 resources and the degree to which social networking websites provide LGBT people with a virtual support network.

The researcher utilized a mixed qualitative and quantitative methodological approach. Data was collected via two iterations of a survey technique. Freedom of Information requests were sent to all 32 Scottish local authorities and an online questionnaire was conducted through social networking forums managed by Stonewall Scotland and LGBT Youth Scotland.

The study found that the use of filtering in Scottish public libraries is widespread and Scottish library services have little control over the management of filtering software. Additionally there is a lack of co-ordination at national level in relation to the implementation of filtering in libraries. Filtering software utilised by Scottish library services was found to block LGBT material: specifically LGBT sexual health sites; LGBT social networking sites; and LGBT support organisations. Social networking websites were found to be one of the most blocked categories of website. The findings of the online questionnaire suggest that censorship of Web 2.0 sites is likely to have a substantial impact on LGBT library patrons: online questionnaire participants were frequent users of Web 2.0 resources and gained a significant sense of community from social networking sites.

The findings suggest that filtering software is at odds with the ethos of the library profession and the stated aims of Scottish local authorities. The findings also indicate that maladministration of filtering software in Scottish public libraries is related to the lack control which Scottish library services have over their computer networks. The primary recommendations of this study are as follows:

- Library services should replace filtering software with alternative Internet management policies such as patron education and improved Acceptable Use Policies.
- Control of library computer networks should be devolved from local authority IT departments to library services.

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LIST OF ABBREVIATIONS

ALA	_	American Library Association
AUP	_	Acceptable Use Policy
CILIP	_	Chartered Institute of Library and Information Professionals
CIPA	_	Children's Internet Protection Act
CLA	_	Canadian Library Association
FOI	_	Freedom of Information
ICCPR	_	International Covenant on Civil and Political Rights
ISP	_	Internet service provider
LGB	_	Lesbian, gay and bisexual
LGBT	_	Lesbian, gay, bisexual and transgender
ONS	–	Office for National Statistics
UDHR	_	Universal Declaration of Human Rights

INTRODUCTION

1.1 Background to the research

1.1.1 The function of libraries

One of the fundamental functions of public libraries is to provide all members of the communities they serve with open and unobstructed access to information. As Gorman notes, librarians must defend the intellectual freedom of "all members of our communities" and defend the free expression of minority opinion (Gorman, 2000). Similarly Rothstein's four values of librarianship include "intellectual freedom" and "helping people to secure the information they need" (Rothstein, 1968). Librarians have an ethical obligation to ensure that we do not limit either the categories of information we provide or the categories of individuals to whom we provide information. In Gorman's words:

> "Censorship is an anathema to us, because it inhibits our role in life – to make the recorded knowledge and information of humankind freely available to everyone, regardless of faith or the lack of it, ethnicity, gender, age, or any other of the categories that divide us one from the other" (Gorman, 2000).

Library patrons should be able to access all types of legitimate (i.e. legal) information. The only viable grounds for excluding material is illegality: Rothstein and Malley both state that the benchmark for the provision of library materials is legality (Rothstein, 1968, cited in Gorman 2000; Malley, 1990). To summarize, in providing all members of the communities we serve with open and unobstructed access to information, librarians encounter two interlinked ethical issues: freedom of information and equity of access.

These principles are upheld by numerous library associations globally. One example is the Canadian Librarian Association's (CLA) Statement on Intellectual Freedom:

> "Libraries have a basic responsibility for the development and maintenance of intellectual freedom. It is the responsibility of libraries to guarantee and facilitate access to all expressions of knowledge and intellectual activity including those which some elements of society may consider to be unconventional, unpopular, or unacceptable" (Canadian Library Association, 2011).

Similarly, the Association of College and Research Libraries declares that information should be provided to all members of society on an equal basis:

> "A service philosophy should be promoted that affords equal access to information for all in the academic community with no discrimination on the basis of race, gender, sexual orientation, cultural or ethnic background, physical or learning disability, economic status, religious beliefs or views" (Association of College and Research Libraries, 2012).

Gorman notes that these principles apply whatever format the information is delivered in:

> "everyone deserves and should be given the recorded knowledge and information she wants, no matter who she is and no matter in which format that knowledge and information is contained" (Gorman, 2000).

Freedom of information and equity of access are not restricted to the printed word; this is a crucial point to remember when discussing a modern public library service in which a significant portion of information is delivered in digital format.

1.1.2 Internet use in public libraries

The provision of public access computers is an important aspect of modern public library services; and its significance is increasing exponentially. According to a 2011 study, 14% of Scottish library patrons use their library for computer/Internet access and this number is growing (Scottish Government, 2011a). Consequently anything which restricts access to digital information in public libraries will have a significant

impact on patrons' right to open and unobstructed access to information. Any contemporary examination of the principles of freedom of information and equity of access in public libraries ought to consider the provision of digital information. One major obstacle to unimpeded access to digital information in public libraries is the use of filtering software on public access computers.

1.1.3 Ethical critique of filtering

The use of filtering software in public libraries can be critiqued on three grounds: ethical, legal and technical.

Firstly, the use of filtering software in public libraries potentially breaches the ethical principles upheld by the profession (Brown and McMenemy, 2012). The Chartered Institute of Library and Information Professionals' (CILIP) ethical principles include: a commitment to promote "equal opportunities and human rights"; and a "commitment to the defence, and the advancement, of access to information, ideas and works of the imagination" (Chartered Institute of Library and Information Professionals, 2009a; Chartered Institute of Library and Information Professionals, 2009b). Blocking access to online resources potentially breaches patrons' human rights: impeding access to digital information and communication channels could be viewed as obstructing freedom of expression and freedom of association (Council of Europe, 1966; International Federation of Library Associations, 2002; Zittrain and Palfrey, 2008). Freedom of expression and freedom of association are protected under the Universal Declaration of Human Rights (UDHR) and the International Covenant on Civil and Political Rights (ICCPR). Freedom of expression is protected by Article 19 of the UDHR and Article 19(2) of the ICCPR. Similarly, freedom of expression is protected by Article 20(1) of the UDHR and Article 21 of the ICCPR (United Nations, 1948; United Nations, 1966).

1.1.4 Legal critique of filtering

Secondly the use of filtering software in public libraries is potentially illegal. Library services have a legal duty to consider the needs of excluded and vulnerable groups

when designing or delivering services (Government Equalities Office, 2010; HMSO, 2010). The Public Sector Equality Duty amendment to the Equality Act 2010 obliges public authorities to deliver services in a way which prevents discrimination against excluded and vulnerable groups (Equality and Human Rights Commission n.d.). One such excluded group is Lesbian, Gay, Bisexual and Transgender (LGBT) patrons: sexual orientation and gender reassignment are protected characteristics under s7 and s12 of the Equality Act 2010 (HMSO, 2010). A library which delivers digital services in a manner which fails to preclude discrimination against LGBT patrons risks breaching the terms of the Public Sector Equality Duty. If the use of filtering software in public libraries prevents LGBT patrons from accessing LGBT Internet resources relevant to their needs this could be perceived as a failure to deliver digital services to LGBT people on an equal basis to heterosexual people.

1.1.5 Technical critique of filtering

Thirdly, the use of filtering software in public libraries can be criticised on technical grounds. Filtering software is not and never will be 100% effective. Numerous studies have demonstrated that filters consistently overblock and underblock (Deibert et al., 2008; Houghton-Jan, 2008; Kaiser Family Foundation, 2002; Murray, 2005; Resnick et al., 2004). Filters block access to legitimate material and fail to exclude illegal and offensive material. As Gorman states:

> "The truth is that filtering systems do not work and they never will work! They do not work because they are based on the same keyword searching using an uncontrolled vocabulary that gives you 48,332 'relevant hits' on the simplest Net search. Any librarian with knowledge of bibliographic control knows that controlled vocabularies and close classification are the only way to ensure precision and comprehensive recall… the only way to have filtering systems that work would be to catalogue and fully classify every Web page!" (Gorman, 2000).

1.1.6 LGBT peoples' Internet use

Studies have demonstrated that LGBT people access the Internet more than heterosexuals, particularly Web 2.0 resources, and the Internet is an important source of social support and health information for LGBT people (Baams et al., 2011; Bernstein, 2004; Garry et al., 1999; Harris Interactive, 2008; Holt, 2010; Lemon and Patton, 1997; McKenna and Bargh, 1998; Miller, 1995). Consequently, it is likely that LGBT patrons will be disproportionately affected by restrictions to Internet access in public libraries. Moreover a lack of access to Web 2.0 resource could have a significant impact on this group's ability to access a vital virtual support network.

1.2 Purpose and scope of research

This research aims to investigate the extent to which the use of filtering software in Scottish public libraries results in the censorship of LGBT Internet resources. The following hypotheses are investigated.

H1) *The use of filtering software in Scottish public libraries results in the unethical and potentially illegal censorship of legitimate LGBT Internet resources.*

For the purposes of this study censorship refers to the blocking of access to information which does not breach UK legislation; this is in line with the CILIP guidance on access to information (Chartered Institute of Library and Information Professionals, 2005, cited in Taylor and McMenemy, 2012).

Previous studies have demonstrated that filtering software overblocks and impedes access to legal and relevant information (Ayre, 2004; Brown and McMenemy, 2012; Houghton-Jan, 2008; Murray, 2005; Wilson and Oulton, 2000, cited in Brown and McMenemy). Both the American Library Association (ALA) and the CLA recognise that filtering systems frequently overblock and underblock (American Library Association, 2012; Canadian Library Association, 2000).

H2) *The following categories of LGBT websites will be blocked by filtering software: health information; support organisations; and social networking sites.*

Bridge and others have demonstrated that filtering software blocks legitimate LGBT material including resources used to form online communities and social support networks (Bridge, 2010; Holt, 2006; Holt, 2010; Storts-Brinks, 2010). Houghton-Jan's study of four filtering software packages found that the following websites were blocked: the lesbian support site Lesbian.org and the homepage of the support organisation Parents and Friends of Lesbians and Gays (Houghton-Jan, 2008). McMenemy's study of Internet access in UK public libraries found that an advice site for gay teenagers was amongst the most commonly blocked sites (McMenemy, 2008). Ten out of 32 Scottish public library services use filtering software which blocks Web 2.0 resources (Brown and McMenemy, 2012); it is likely that a significant number of the Web 2.0 sites blocked will be sites designed by or catering to the LGBT community (Brown and McMenemy, 2012).

Filtering software has also been shown to block a significant portion of health sites: a study by the Kaiser Family Foundation found that filtering software blocks up to a quarter of such sites (Kaiser Family Foundation, 2002). The same study found that, even when set at its lowest level, filtering software blocks sites relating to LGBT health (Kaiser Family Foundation, 2002).

H3) *LGBT patrons are unlikely to be aware of the censorship of LGBT Internet material in Scottish public libraries.*

Censorship of digital material is more opaque and absolute than censorship of printed material (Zittrain and Palfrey, 2008). This is particularly evident when the two forms of censorship are contrasted.

Censorship of printed material is likely to be partial: the most common responses to a challenge to the presence of a physical item in a public library is to either label the item or move it to another section of the library (Curry 1997, cited in Taylor and McMenemy, 2012). Such partial censorship at least gives patrons a level of access to the censored material. Additionally the censorship of printed material is usually prompted by a challenge from a patron and occurs in the context of a dialogue between patron and library staff.

In contrast, blocking of Internet resources can occur without the knowledge of the patron and can completely obstruct access to the blocked material. Since patrons are potentially unaware of this form of censorship there is no opportunity for a significant dialogue between patrons and staff. This lack of clarity is exacerbated by librarians' lack of control over the filtering system. Filtering software is frequently administered by external management and, more often than not, the parameters of filtering software are under the control of software suppliers rather than library services or local authorities.

H4) *LGBT patrons will be unlikely to approach library staff to challenge the blocking of LGBT Internet resources in Scottish public libraries. It is also likely that library staff will not have the permission or skills necessary to provide a prompt and adequate response to such a challenge.*

The sensitive nature of any material relating to sexuality makes it is unlikely a patron would be willing to approach library staff and request that a blocked LGBT site be unblocked.

Furthermore, previous research has demonstrated that staff in Scottish public libraries are not equipped with the skills or permission required to respond promptly and adequately to requests to unblock Internet resources. Fifty-nine percent of Scottish local authorities do not provide any form of staff training relating to filtering software on public access computers (Brown and McMenemy, 2012). Additionally for 88% of Scottish library services the most common response to a challenge to Internet blocking is a non-immediate release procedure (Brown and McMenemy, 2012). Perhaps more worryingly six percent of library services surveyed by Brown and McMenemy stated that no procedure existed to release blocked content (Brown and McMenemy, 2012). Brown and McMenemy's study also revealed that Scottish library services have little control over filtering software used to manage public Internet access: 56% responded that filtering policies were implemented from "External senior management (non-library)" level (Brown and McMenemy, 2012). As Anten and Auld note, the outsourcing of decisions regarding Internet content which should be made by professional librarians to private companies is a highly questionable policy (Anten, 2005; Auld, 2005).

H5) *Censorship via filtering software will have a disproportionate impact on LGBT patrons in Scottish public libraries.*

Firstly, the use of filtering systems in Scottish public libraries is widespread: 31 of the 32 Scottish public library services utilize some form of filtering software to control public Internet access (Brown and McMenemy, 2012).

Secondly, the Internet is an important source of social support and health information for LGBT people (Baams et al., 2011; Bernstein, 2004; Garry et al., 1999; Holt, 2010; Lemon and Patton, 1997; McKenna and Bargh, 1998; Miller, 1995). Additionally LGBT people are more likely than heterosexuals to access Web 2.0 resources (Harris Interactive, 2008; Holt, 2010).

1.3 Research objectives

RO1) Establish whether the use of filtering systems on public access computers in Scottish public libraries blocks access to LGBT Internet resources.

RO2) Establish the types of LGBT Internet resources blocked by filtering software in Scottish public libraries.

RO3) Establish the extent to which LGBT patrons are aware of the censorship of LGBT Internet resources in Scottish public libraries.

RO4) Establish if LGBT patrons are likely to contest the blocking of LGBT Internet resources in Scottish public libraries.

RO5) Establish how Scottish public libraries respond to patron requests to unblock websites. Do libraries keep records of requests to unblock materials; what percentage of unblock requests are successful; and does the topic of the website have an impact on the response?

R06) Establish the level of control which Scottish library services have over the management of filtering software on public access computers.

LITERATURE REVIEW

2.1 The function of libraries

Historically, the defence of freedom of information has been perceived as a fundamental mission of public libraries. Rothstein names “intellectual freedom” as one of the four values of librarianship and, more recently, Gorman lists “intellectual freedom” as one of the eight central values of librarianship (Gorman, 2000; Rothstein, 1968). Gorman’s definition of Intellectual freedom encompasses:

- maintaining a commitment to the idea that all people in a free society should be able to read and see whatever they wish to read and see
- defending the intellectual freedom of all members of our communities
- defending the free expression of minority opinion
- making the library’s facilities and programs accessible to all (Gorman, 2000).

In the final two points of this definition Gorman underlines that the defence of freedom of information is closely linked to the principle of equity of access. Additionally, Gorman names “equity of access to recorded information” as one of the eight central values of librarianship (Gorman, 2000). The concept of equity of access can be traced back to the 1960s and Ranganathan’s second law of library science: “Every reader his or her book” (Ranganathan, 1963).

The principles of freedom of information and equity of access are recognised by library associations across the globe (Gorman, 2000). For example the ALA’s Library Bill of Rights declares that:

> “Books and other library resources should be provided for the interest, information, and enlightenment of all people of the community the library serves. Materials should not be excluded because of the origin, background, or views of those contributing to their creation…Libraries should provide materials and information presenting all points of view on current and

> historical issues. Materials should not be proscribed or removed because of partisan or doctrinal disapproval" (American Library Association, 1996).

Similarly, CILIP's statement on intellectual freedom underlines that:

> "It is the role of a library and information service that is funded from the public purse to provide, as far as resources allow, access to all publicly available information whether factual or fiction and regardless of media format" (Chartered Institute of Library and Information Professionals, 2011).

2.2 Internet access and Internet filtering in public libraries

Gorman notes that the functions and values of librarianship have not changed despite revolutions in the channels through which services are delivered and principles defended:

> "Intellectual freedom is, broadly speaking, accepted as a key value of the profession of librarianship today as then. It is up against different challenges because of technology but the old challenges remain and the defence of intellectual freedom is no easier now than then" (Gorman, 2000).

This is also documented in CILIP's statement on intellectual freedom, which recognises that freedom of information and equity of access include free and equal access to Internet resources:

> "The principles of access are the same in the emerging networked society where the opportunities provided by information and communication technologies have revolutionised the way information is made available" (Chartered Institute of Library and Information Professionals, 2011).

Several recent discussions about freedom of information and equity of access consider the issue of access to Internet resources; specifically the extent to which the use of filtering software restricts access to Internet resources.

Deibert et al effectively demonstrate the prevalence of state-mandated censorship via filtering software globally. However the scope of the book is global and focused at Internet Service Provider (ISP) level. Consequently the global and ISP level foci of the work does not allow for an investigation of the implementation of filtering at local level. Neither the implementation of filtering systems at a local level nor their impact on individuals is considered (Deibert et al., 2008).

Gorman and others discuss the impact of filtering in libraries (Brown and McMenemy, 2012; Electronic Frontier Foundation, 2003; Gorman, 2011; Gottschalk, 2006). However Gorman's inclusion of public libraries in the discussion is unusual. There is little research on the use of filtering software in public libraries and the majority of investigations into filtering in libraries focus on the impact of the Children's Internet Protection Act (CIPA) in US school libraries (Electronic Frontier Foundation, 2003; Holt, 2006; Kubta, 1997; Storts-Brinks, 2010).

One such study is the Electronic Frontier Foundation (EFF) investigation of the impact of CIPA on US school libraries. This study concentrates specifically on the extent to which filtering software blocks access to material included in state-mandated curriculum topics. The EFF concludes that the impact of filtering varies widely depending on the level the filter is set at. In schools where the filter is set at its lowest level 0.5% of search results are blocked and in schools where the filter is set at its highest level 70% of search results are blocked. This study is restricted in geographical terms and limited to school libraries; there is no consideration of the impact of CIPA on public libraries. Additionally, the primary methodological technique is quantitative research which occurs in an artificial setting rather than a real life setting: EFF researchers conduct searches for phrases associated with curriculum topics on computers which have had filtering software installed. There is little consideration of the impact of student's behaviour on searches, for example the extent to which the experience of having material blocked in one search might deter a student from conducting future searches. The primary focus of the study is technical; the focus is on which material is blocked rather than the impact of this form of censorship on students. Any consideration of the impact of filtering on students is restricted to the extent to which filters impede students' ability to conduct academic work: there is no consideration of the impact of censorship on topics not covered by the curriculum, such as sexuality (Electronic Frontier Foundation, 2003).

Gottschalk discusses the impact of CIPA in public libraries as well as school libraries. However Gottschalk does not consider the effect of filtering software on patrons or provide any accounts of patrons' experiences of censorship via filtering software. Gottschalk concludes that the use of filtering systems in public libraries infringes the intellectual freedom of patrons and proposes that the establishment of clear Internet policies and the use of privacy screens or recessed monitors would be a more effective solution (Gottschalk, 2006).

Brown and McMenemy's study is the only extant research which addresses the issue of Internet filtering in all 32 Scottish public library services. Brown and McMenemy investigate the extent to which filtering software is used as a public Internet access management tool; the rationale behind its use; the policy source responsible for installing filtering systems on public access Internet computers; the procedures in place to manage filtering software; and the extent of staff training on filtering systems. Data is gathered through FOI requests which proves to be an effective method with 31 of 32 local authorities providing all the information requested. The study concludes that the use of Internet filtering in Scottish public libraries is widespread; filtering systems are likely to be implemented and administered by external management; and there is a need for staff training relating to Internet filtering software. Qualitative data relating to patrons' experiences of Internet filtering is outside the scope of this study. Additionally, as Brown and McMenemy note, the survey is limited to one UK region. Areas of further research proposed by Brown and McMenemy include two which are pursued by the current study: "the policies in place related to unblocking sites blocked in error by the filtering software" and "the impact on users of blocking material of a sensitive nature" (Brown and McMenemy, 2012).

The findings of Brown and McMenemy's study suggest that, in some instances, those responsible for purchasing filtering software and implementing it have no control over or knowledge of the types of material blocked (Brown and McMenemy, 2012). Houghton-Jan raises a similar point:

> "Filtering software companies do not tell their customers in detail, the types of things or what specific sites they block in each category… Because companies ferociously protect their list of categorized sites and their process for categorizing, there is no way of obtaining a list of sites that are blocked in

> certain categories, as that is considered a trade secret" (Houghton-Jan, 2008).

Moreover Houghton-Jan notes that as well as censoring Internet resources, filtering software has the potential to block access to internal digital information stored on the library's network and printed materials held by the library. Houghton-Jan notes that filtering software has the potential to inhibit a catalogue search for printed library material: searches for the key-word "lesbianism" on the library's online catalogue were blocked (Houghton-Jan, 2008).

2.3 Ethical critique of filtering

Article 19 of the UDHR states that "everyone has the right to freedom of opinion and expression; this includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers" (United Nations, 1948). Similarly Article 19.2 of the ICCPR states that:

> "Everyone shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice" (United Nations, 1966).

Gottschalk considers the ethical viability and legality of installing Internet filtering systems in school and public libraries (Gottschalk, 2006). Similarly Gorman critiques filtering software from an ethical perspective and considers the impact of filtering on human rights. However, the focus of Gorman's work is limited to the impact of filtering on child and young adult patrons. Moreover neither Gorman nor Gottschalk discuss the link between the ethical shortcomings of filtering software and potential breaches of the UDHR and the ICCPR (Gorman, 2000).

The connection between obstruction of access to information and potential infringements of UN conventions widely recognised by international law is made explicit in Deibert et al (Deibert et al., 2008). In the introduction to this work Zittrain and Palfrey note that, "Internet filtering implicates human rights concerns, particularly

the freedom of expression, and extends to the freedom of association" (Zittrain and Palfrey, 2008). This point is expanded in Rundell and Birdling's chapter; which proposes that unfettered Internet access is protected by extant international conventions and law and any filtering of Internet material potentially constitutes a breach of these conventions. As Rundell and Birdling observe, "the vast majority of current filtering practices would seem to fall short of the requirements of international law" (Rundell and Birdling, 2008). Rundell and Birdling stress that freedom of expression as protected by ICCPR is not restricted to any particular media but applies to all information channels:

> "The right to freedom of expression as articulated in these international documents is extremely broad and was intended to be applicable to all types of media – existing now or in the future. Hence, any state restrictions on the distribution of information via the Internet would seem to constitute a restriction (although not necessarily a breach) of the right to freedom of expression under the ICCPR" (Rundell and Birdling, 2008).

Rundell and Birdling also note that the World Summit on the Information Society recognizes that "freedom of expression in an Internet context is indeed protected by pre-existing instruments" (Rundell and Birdling, 2008).

2.4 Legal critique of filtering

In library studies, there is a long tradition of regarding the issue of censorship and freedom of information from a legal perspective. In the 1960s, Rothstein argued that the touchstone for the provision of library materials is legality and the only acceptable censorship is that imposed by law (Rothstein, 1968). This viewpoint is reflected in recent statements by CILIP and ALA: CILIP's statement on intellectual freedom notes that, "Access should not be restricted on any grounds except that of the law" and the ALA defends freedom of information on legal grounds, placing it firmly within the context of the First Amendment of the Bill of Rights to the United States Constitution (American Library Association, 2012a; Chartered Institute of Library and Information Professionals, 2011). Continuing this tradition, several contemporary studies discuss filtering software from a legal perspective.

Beaudry discusses plans to enforce the use of filtering software in Canadian public libraries and schools and summarises extant Canadian legislation relating to public Internet access in schools and libraries. Additionally Beaudry restates the CLA's opposition to Internet filtering. However the focus of the work is legal and there is no discussion of either the technical failings of filtering or its impact on patrons and students (Beaudry, 2009).

Kubota discusses the constitutionality of filtering software in US schools. Kubota's study summarises the Internet management issues faced by schools; gives and overview of legislative attempts to control Internet content; and considers the range of filtering software available. The focus of Kubota's research is legal and technical; there is no investigation of the volume or types of site blocked or the impact that blocking these sites has on young people (Kubota, 1997).

Storts-Brinks' study recounts a successful legal action against the Metropolitan Board of Education for the use of filtering systems in two US school districts. This study provides an insight into the decision making processes behind the blocking of sites and reveals the extent to which filtering systems reflect the political bias of their designers: for example Storts-Brinks notes that the category options for blocked material include an LGBT category. However the geographic focus of the study is very narrow, it is restricted to two US counties and despite a brief discussion of the positive impact of Gay Straight Alliance programmes Storts-Brinks does not investigate in any depth the impact that blocking LGBT material has on LGBT students (Storts-Brinks, 2010).

Legislation provides an effective benchmark for the provision of library materials and can be a powerful instrument for defending freedom of information. However, as Gorman notes, not all laws are ethically sound and the use of legality as a benchmark is not always clear-cut, "intellectual freedom is constrained by law in every jurisdiction. Here the initial and simple concept becomes tricky because, of course, there are just laws and unjust laws" (Gorman, 2000). One historical example of the latter in the UK is s28 of the Local Government Act 1988. This law, which has since been repealed, decreed that:

> "A local authority shall not—

(a) intentionally promote homosexuality or publish material with the intention of promoting homosexuality; .

(b) promote the teaching in any maintained school of the acceptability of homosexuality as a pretended family relationship" (HMSO, 1988).

Consequently, s28 placed any public library providing access to LGBT material at risk of prosecution for promoting homosexuality. Section 28 is a powerful illustration of Rothstein's point that, while legality offers an effective benchmark, librarians must remain vigilant and challenge legislation which threatens the ethical values which constitute the foundations of our profession. When faced with unjust laws librarians should "hold themselves obliged to seek appropriate liberalizations in the law" (Rothstein, 1968).

2.5 Technical critique of filtering

Gorman describes Internet filters as, "devices as ineffective as they are philosophically offensive" and several studies explore a technical critique of filtering (Gorman, 2000).

Houghton-Jan's study provides a comparative analysis of four filtering software products from a technical perspective. Barracuda; CyberPatrol; FilterGate; and WebSense are tested on behalf of San Jose City Council. The study concludes that filtering software has not improved since a similar study by Ayre in 2004 (Ayre, 2004). All products tested by Houghton-Jan are unsuccessful at blocking offensive and illegal material: they block a large volume of legitimate material, material which is "neither illegal nor harmful to minors". Houghton-Jan's study provides a useful overview of how filtering software works. Two major categories of filtering products are described: network-based and stand-alone options. Houghton-Jan also notes that there are two primary methods of filtering: filtering by URL and filtering by keyword (Houghton-Jan, 2008).

A Kaiser Family Foundation study concludes that Internet filters can block a significant amount of offensive and illegal material without significantly impeding access to health information. However the study concludes that this is only possible if

filters are set at their lowest setting and even at their lowest setting filters restrict access to health information. It could be argued that the methodology of the Kaiser Family Foundation's study is flawed as it involves simulations of young peoples' Internet behaviour rather than analysis of real life data. Additionally the study is entirely quantitative and does not investigate young people's experiences of Internet filtering systems (Kaiser Family Foundation, 2002).

Ayre notes that there are two primary reasons for the technical failings of filtering software; filtering is effectively an attempt by people who are not professional cataloguers to classify an unfeasible number of web pages:

> "Ironically, librarians – professionals trained to catalogue and evaluate content – subcontract their cataloguing job to Internet filter companies when they install a filter. Unlike librarians, the subcontractors are not information professionals, they typically use automated methods to classify the 3 billion web pages on the Internet" (Ayre, 2001).

2.6 Impact of filtering software on LGBT library patrons

A limited number of works consider the impact of filtering software on LGBT patrons. Bridge investigates the information needs of LGBT students in Northern Irish school libraries and evaluates the extent to which these needs are met. The study focuses on the provision of library services in general; nevertheless there is a section on the impact of Internet filters. Bridge notes that 51% of the students surveyed were unable to access LGBT websites in their school library. However her suspicions that this is due to filtering software cannot be confirmed as she lacks the data to confirm this (Bridge, 2010). Bridge uses self-selecting web based surveys and a mixture of quantitative and qualitative data to good effect. The study gives a good overview of the provision of library services to students across Northern Ireland and powerful, honest and detailed accounts of individual students' experiences (Bridge, 2010).

Holt investigates Internet filtering within the context of CIPA. Uniquely Holt's study focuses on the impact of filtering systems on LGBT patrons in public libraries. Holt concludes that LGBT adolescents are denied access to vital health information and

online support networks as a result of the use of filtering software in public libraries. The focus of Holt's study is limited in geographic terms and the demographic is limited: the research is restricted to the US and there is no consideration of the impact of filtering on LGBT adults. Moreover Holt does not survey LGBT adolescents directly but relies on second hand data provided by the American Psychological Association (Holt, 2006).

The impact of filtering systems on LGBT patrons is considered in a second work published by Holt in 2010. In this second study Holt does not provide any original research data. Instead Holt provides a comprehensive literature review of research on the impact of filtering systems on LGBT patrons' ability to form virtual social support networks. Holt argues that the LGBT community will be disproportionately affected by censorship via filtering software as LGBT people are more dependent on the Internet for information and social support than heterosexuals. No original research data is provided by Holt in this second study (Holt, 2010).

2.7 Summary

The majority of research on censorship and the use of filtering software in libraries focuses on the impact of CIPA on American school and public libraries (Gottschalk, 2006; Holt, 2006; Holt, 2010; Kubota, 1997; Storts-Brinks, 2010). Additionally there is a focus on legislative and technical issues (Beaudry, 2009; Kaiser Family Foundation, 2002; Kubota, 1997; Storts-Brinks, 2010). Very few studies utilising qualitative techniques to investigate the impact of filtering software on LGBT people do so in any depth: the only real exception to this is Bridge (Bridge, 2010).

One prominent gap in extant research on filtering software is research on alternatives to filtering. Exceptions to this omission include Gorman and Gottschalk (Gorman, 2000; Gottschalk, 2006). As Gorman notes it is essential for librarians to support alternatives to filtering, "we need to put out a positive message about the use and limitations of the Web and … the need for parental involvement in the use of libraries by minors" (Gorman, 2000).

RESEARCH METHODOLOGY

3.1 Methodological approach

The researcher utilised a mixed qualitative and quantitative methodological approach. Data was collected via two iterations of a survey technique:

1. Firstly, Freedom of Information (FOI) requests were sent to all 32 Scottish local authorities. The FOI requests sought data relating to the use of filtering software on public access computers in public libraries.

2. Secondly, an online questionnaire was conducted through social networking forums managed by the following LGBT support organisations: Stonewall Scotland and LGBT Youth Scotland. Participants were asked questions pertaining to their Internet use and experiences of filtering software in Scottish public libraries.

Both surveys gathered a mixture of qualitative and quantitative data. FOI responses provided qualitative data in the form of respondents' comments on their inability to provide some of the data requested. The majority of these comments relate to the level of control the library service has over the management of filtering software. The FOI responses also provided quantitative data including the number of URLs blocked by filtering software over a six month period and the number of requests received from patrons who wished to access a blocked site. The online questionnaire provided qualitative data in the form of responses to open questions; for example questions relating to the extent to which the people participants met online provided them with a sense of community. The online questionnaire also provided quantitative data in the form of responses to closed questions; for example questions relating to the frequency of participants' library visits and the number of hours they spent online. A qualitative approach was necessary in order to investigate patrons' experiences of filtering software and reactions when material is blocked. As Liamputoong and Ezzy note, a qualitative approach is effective when seeking to understand people's

experiences (Liamputoong and Ezzy, 2005). A quantitative approach was necessary in order to establish the extent of material blocked.

The use of mixed methodological techniques ensured that the potential weaknesses of each data collection technique were mitigated via triangulation (Silverman, 2005). Additionally a back-up data collection method was available if either technique failed. Moreover the rigour, validity and depth of data gathered was increased (Bridge, 2010).

3.2 Data collection: Freedom of Information requests

3.2.1 Rationale for technique choice

FOI requests were sent to all 32 Scottish local authorities. Please see appendix one to view a full copy of the FOI template. FOIs were chosen as a data collection method because the literature review suggested that they are an effective technique for gathering data on the use of filtering software in Scottish public libraries. A previous study of filtering software in Scottish public libraries by Brown and McMenemy experienced a high response rate to FOI requests: 31 of the 32 local authorities surveyed provided the information requested (Brown and McMenemy, 2012). Pickard notes that FOI requests risk placing the respondents on the defensive (Pickard, 2007). However, as Taylor and McMenemy observe, the benefits of an increased response rate and the fact that local authorities are experienced in handling FOI requests outweighs the risk of alienating respondents. Additionally as only quantitative data was required there was little need for cooperation beyond the supply of the requested information (Taylor and McMenemy, 2012).

FOI requests were placed via electronic format (email or online form) in order to eliminate postal transit time and ensure that respondents received the requests promptly. This had the additional advantage of being a low-cost method of data collection. The researcher requested that responses be sent in electronic format; this eliminated postal transit time and ensured that quantitative data from the FOI responses could be transferred easily to Excel documents. Excel was an appropriate tool for the volume of data. It was also adequate for the level of data analysis

required. Moreover the use of Excel did not incur any extra costs as there was no requirement to purchase additional data mining software such as SPSS.

3.2.2 Format

FOI requests were based upon a template letter published by the Campaign for Freedom of Information (Campaign for Freedom of Information, 2005). The requests included the following questions:

1) Does your Internet management policy include the use of Internet filtering software on the public access computers in your public library service?

2) If Internet filtering is used in relation to the public access computers in your public library service, could you please supply a list of the stop-words and blocked site lists used by the filter? Please supply a full list of stop-words or a full-list of the URLs covered by each blocked category.

3) If Internet filtering is used in relation to the public access computers in the public library service, could you please supply the following: a list of the sites blocked by the filtering software between 1st September 2011 and 28th February 2012; and a list of the words blocked by the filtering software between 1st September 2011 and 28th February 2012. I am seeking details of all sites and words blocked rather than any information relating to patrons.

4) Have you received any requests from members of the public to unblock material blocked by filtering software used in relation to the public access computers in the public library service?

5) If the answer to question four is yes, could you please supply details of the site the request related to and the local authority's response to the request?

The term censorship was avoided as the researcher recognized it would be likely to engender a hostile response; instead neutral terms such as "filtering software" and "blocked" were employed (Brown and McMenemy, 2012).

The researcher ensured that questions were phrased in a way which excluded any potential grounds for refusal. For example, it was recognized that question three could be misinterpreted as a request for data protected by the Data Protection Act 1998 (HMSO, 1998a). In order to mitigate this risk the researcher clearly stated that she was requesting details of the URLs blocked rather than details of the individuals who attempted to access those URLs, “I am seeking details of all sites and words blocked rather than any information relating to patrons”.

3.2.3 Geographic scope

All 32 Scottish local authorities were surveyed. Scotland was chosen as a geographic area large enough to provide a meaningful volume of data. Additionally the researcher could feasibly investigate this area within the three month time-frame allotted to the study. Moreover a comprehensive nationwide study facilitated an investigation of the level of co-ordination present in the implementation of filtering software in Scottish public libraries.

3.3 Data collection: online questionnaire

3.3.1 Overview

A survey was conducted via online questionnaire. Participants were sourced through social networking forums managed by Stonewall Scotland and LGBT Youth Scotland. The questionnaire consisted of open and closed questions relating to participants’ Internet use and experiences of filtering software in Scottish public libraries. The closed questions were categorical; multiple choice; numerical; and Likert-scale format. Please see appendix two to view the survey questions.

3.3.2 Rationale for technique choice

This data collection technique was chosen because online questionnaires have the potential to reach a large number of prospective participants (Couch and

Liamputtong, 2008; Pickard, 2007). Additionally online questionnaires are easy to distribute; their cost is negligible; and there are no geographic limits to sources of potential participants (Bridge, 2010; Hewson et al., 2003; Pickard, 2007; Walliman, 2011). Walliman notes that web-based surveys:

> "can potentially reach an enormous number of respondents anywhere in the world, the costs and time involved in distribution and collection of questionnaires are minimized, and analysis of data that are already in electronic format is made easy" (Walliman, 2011).

Participants can respond to an online questionnaire in their own time. This allows participants time to consider their responses and check data if necessary, increasing the accuracy of information provided (Walliman, 2011). Moreover, online questionnaires ensure a high level of standardisation. The questions are identical and presented in a set format which will not change in reaction to participants' responses (Walliman, 2011).

Online questionnaires guarantee a high degree of anonymity for participants; consequently they are well suited to surveys dealing with sensitive topics such as sexuality (Hewson, et al. 2003). The inherent anonymity of the questionnaire format is augmented when a questionnaire is conducted online and participants are more likely to provide accurate and honest responses (Bridge, 2010; Couch and Liamputtong, 2008; Fox et al., 2007; Pickard, 2007; Tatano Beck, 2005; Walliman, 2011). As Walliman notes, "Anonymity of the researcher and respondent are enhanced, which can help to overcome bias engendered by nationality, sex, age etc. and to encourage frankness and higher response rates" (Walliman, 2011). When data is collected online participants are less likely to be inhibited by considerations of social desirability (Tatano Beck, 2005). Moreover the absence of the power dynamic present in face to face interviews is likely to increase participants' confidence (which will of course procure more honest and richer data) (Fox et al., 2007).

3.3.3 Format

Qualtrics software was used since it was recommended by an authoritative source (the researcher's university department and MSc supervisor). As the researcher's

university has a multiple-user subscription to Qualtrics no additional expenses were incurred.

In order to maximise the response rate, the researcher ensured that the language of the questionnaire was clear and unambiguous and the questionnaire was kept as short as possible (Walliman, 2011). Also the questionnaire was pre-tested on a small number of the researcher's acquaintances in order to identify problems of comprehension or any other issues (Walliman, 2011). In response to this pre-test the researcher removed several questions which were beyond the scope of the study: for example questions relating to participants education level and income were removed.

3.3.4 Survey population

Survey participants were sourced through non-random sampling; primarily theoretical sampling. Theoretical sampling was used in order to collect data from a sample of the population familiar with the issues encountered by LGBT people (Walliman, 2011). As Walliman notes, "Theoretical sampling is a useful method of getting information from a sample of the population that you think knows most about a subject" (Walliman, 2011). In addition there was an element of accidental (or convenience) sampling: the researchers' social network was consulted for prospective volunteers.

Stonewall Scotland and LGBT Youth Scotland were chosen as sources of potential participants because they are well established and nationally recognised LGBT organisations which are prominent in the LGBT community. Additionally, the researcher recognised that these organisations' staff and volunteers were likely to be experienced in assisting researchers. Stonewall Scotland was chosen because it aims to represent and support all elements of the LGBT community: female; male; intersex; transgender; lesbian; gay; and bisexual (Stonewall Scotland, 2012). Consequently Stonewall Scotland potentially provided access to a demographic which was varied and representative of the LGBT population. The age demographic of LGBT Youth Scotland participants was restricted in comparison to Stonewall Scotland participants. However the researcher considered young LGBT people a relevant population to target as previous research demonstrates that this group are

heavy Internet users and more dependent upon virtual social support networks than older LGBT people (Holt, 2010). The researcher recognised that Web 2.0 forums managed by Stonewall Scotland and LGBT Scotland were likely to be a good platform for targeting a computer literate LGBT population.

3.4 Survey ethics

3.4.1 Participant notification

The survey followed ethical guidelines set out by the University of Strathclyde's Departmental and University Ethics Committee (University of Strathclyde, n.d.).

In order to gain participants consent and ensure that participants were fully informed about the purpose of the survey (and what was expected of them), the following message appeared alongside the link to the survey:

> *You are invited to participate in a survey exploring LGBT people's Internet use. If you choose to participate you are free to provide as much or as little information as you wish and the data you provide will be received and stored completely anonymously. I will have no access at all to the names or email addresses of the individuals who respond to the survey and all information provided will be managed in accordance with the Data Protection Act 1998.*
>
> *I am a postgraduate student at the University of Strathclyde and the data gathered from the survey will be used in a dissertation I am completing as part of a MSc in Information and Library Studies.*
>
> *The survey will ask questions relating to three different areas: your sexuality; your Internet use in general; and your Internet use in public libraries. The issues covered in the dissertation include: the extent to which LGBT people use the Internet and the way in which LGBT people use the Internet. For example to what extent do LGBT people use social networking sites? The main purpose of the survey is to give a voice to LGBT people's experiences of accessing the Internet in public libraries. Please complete the survey before*

24/07/2012. If you agree to complete the survey please follow the link below. Many thanks for taking the time to share your experiences and opinions!

3.4.2 Participant consent

Participants were self-selecting and participation in the survey was voluntary. No financial or other rewards were offered as incentives for participation. Participants were clearly notified that they were under no obligation to complete the survey. They were also informed that they were free to provide as much or as little information as they wish. The format of the online survey supported this: for example the 'force response' option was de-selected for every question. Additionally an, "I would rather not say" option was provided for sensitive questions.

3.4.3 Relevance of questions

In accordance with the Data Protection Act, the survey questions requested only information relevant to the research topic (HMSO, 1998a). Questions relating to sexual orientation were included for two reasons: firstly, to check the extent to which the survey population was representative of a cross-section of the LGBT community and secondly to identify patterns in public library Internet usage within specific sections of this community. Questions relating to Internet use outside of a public library environment were included to allow for a comparison of people's Internet usage within and outside of a public library environment. The researcher wished to investigate whether participants felt inhibited from accessing LGBT websites in a public library environment compared to other environments.

3.4.4 Data storage and data disposal

Data was gathered, stored, processed and disposed of in accordance with the Data Protection Act 1998 (HMSO, 1998a). The responses were completely anonymous: however there was a possibility that participants might include personal details in responses to open questions or in messages sent to the researcher via Qualtrics. In

order to mitigate this risk the researcher stored all of the survey data on a password protected database, Qualtrics. The researcher was the only person with access to the Qualtrics account. No responses identifying individuals were provided. If identifying personal data had been provided the researcher would have ensured that this data was not printed or transferred to any other digital database. Additionally data was accessed only on computers with anti-virus and anti-spyware software installed: the researcher's own laptop and computers situated in the University of Strathclyde's computer labs and library (Spybot and AVG 2012 were installed on the researcher's own laptop).

The Qualtrics account was deleted prior to the submission of the dissertation. If any data identifying an individual had been provided there would have been no requirement for any further data destruction measures: such data would have been stored on Qualtrics only and not printed or copied to any another digital information storage device. Furthermore the data obtained was used solely for the purpose of the dissertation; it was not used by the researcher or any other party for any other purpose.

3.5 Data analysis: FOI responses

3.5.1 Overview

The researcher had anticipated that FOI responses would provide quantitative data such as the number of Scottish library services which utilise filtering software; the number of URLs which patrons had been prevented from accessing over a six month period; the number of requests to unblock sites received by Scottish library services; and the number of unblock requests which were successful. It was expected that there would be only two exceptions to this. Firstly, the researcher would be required to classify websites included in blocked category lists and websites blocked over a six month period in order to discover which types of sites were being censored. Secondly, there was a possibility that some qualitative data might be supplied in response to question five; for example a local authority might have provided an explanation for their response to an unblock request.

However, none of the respondents supplied all of the quantitative data requested; in most cases this was because they lacked access to the data. In many instances, respondents provided qualitative data relating to the reason they had failed to provide quantitative data. For example, several respondents provided qualitative data in the form of statements relating to the management and administration of filtering software in their libraries. Several also supplied qualitative data concerning their relationship with software providers.

3.5.2 Quantitative data

Quantitative data from the FOI responses was transferred to Excel. Statistics were calculated using Excel functions and the resulting findings were transferred to graph and table formats.

3.5.3 Qualitative data

Qualitative data was analysed using iterative pattern coding and thematic analysis. The iterative pattern coding aspect was influenced by Walliman and the thematic analysis element was influenced by Thomas and Harden (Thomas and Harden, 2008; Walliman, 2011).

Firstly, the researcher familiarised herself with the material, reading and re-reading the FOI responses. Secondly, the data was coded. The researcher highlighted keywords and developed descriptive themes; generating a taxonomy. As Walliman notes:

> "The development of a coding system is an important aspect of forming typologies, as it facilitates the organisation of copious data … and …helps to prevent 'data overload' resulting from mountains of unprocessed data in the form of ambiguous words" (Walliman, 2011).

For example in relation to question three the responses were broken down into two main groups: those who provided details of URLs blocked over a six month period

and those who did not. The group who did not provide details of URLs blocked over a six month period were broken down into two sub-groups: those had access to the URLs blocked over a six month period and those who did not. The taxonomy was based as closely as possible on the original language of the responses, in order to ensure a faithful representation of respondents' meaning.

The next stage was thematic analysis: the descriptive codes were analysed for themes. Walliman describes this stage as follows:

> "The next stage of analysis requires us to begin to look for patterns and themes, and explanations of why and how these occur. This requires a method of pulling together the coded information into more compact and meaningful groupings. Pattern coding can do this by reducing the data into smaller analytical units such as themes, causes/explanations, relationships among people and emerging concepts, to allow the researcher to develop a more integrated understanding of the situation studied" (Walliman, 2011).

For example, the two sub-groups mentioned above were further refined. The group who had access to the URLs but refused to supply data were broken down into further sub-groups based on the reason they provided for failure to supply the data: intellectual property rights; data protection; IT systems security; cost of supplying data; and those who did not provide a reason.

Couch and Liamputtong also outline similar stages and their benefits:

> "The analysis began inductively with open coding. This allowed us to explore the data as we were collecting it, and to define the units of analysis, such as key issues, topics, concepts and actions (Ezzy, 2002), allowing the codes to emerge from the data (Liamputtong & Ezzy, 2005). It also allowed us to adjust the theme list to further explore issues and refine the methods by which we explored certain topics" (Couch and Limaputtong, 2008).

3.6 Data analysis: questionnaire responses

Statistical analysis of quantitative data from the online survey was automatically produced by the software package used, Qualtrics. In order to ensure that the findings were not distorted by incomplete responses, the data was cleaned. All incomplete responses were deleted. The cleansed data was then transformed into graph and table format.

3.7 Critique of methodology: Freedom of Information requests

3.7.1 Geographic scope

The three month time-scale of the study limited the geographic area the researcher could feasibly investigate to one UK region. Suggestions for future research include a UK wide study. Additionally, a comparative study of patrons' experiences of library Internet use in regions where the use of filtering software is legally mandated (for example school libraries in the US) and regions where it is less common for libraries to install filtering software (for example Australia) could provide valuable information about the impact of filtering software on patrons (Australian Library and Information Society, 2009; Federal Communications Commission, n.d.).

3.7.2 FOI questions

Question two clearly stated that a list of the URLs covered by blocked categories was required: "Please supply a full list of stop-words or a full-list of the URLs covered by each blocked category". However, several respondents misinterpreted question two as a request for blocked stop-words only and initially failed to supply any further data on the grounds that they used a filter which utilizes blocked stop-words rather than blocked URLs. These respondents had to be contacted again and informed that question two required disclosure of blocked URL category headings and full details of the URLs listed under each category. Suggestions for future research include splitting question two into two questions and re-phrasing these questions in a way which underlines the requirement for disclosure of blocked URLs:

2) If you use filtering software in relation to the public access computers in your public library service, and the filter uses stop-words, could you please supply a list of the categories of stop-words utilized and the stop-words listed under each of the categories.

3) If you use filtering software in relation to the public access computers in your public library service, and the filter uses blocked URL categories rather than stop-words, could you please supply: category headings; sub-category headings; and full details of the URLs listed under each category and sub-category.

In relation to question four, several respondents were unable to supply details of sites blocked by filtering software for the period requested (1st September 2011 to 28th February 2012) because they did not keep records that far back. Suggestions for future research include altering the time period requested as follows:

4) If Internet filtering is used in relation to the public access computers in the public library service, could you please supply the following: a list of the sites blocked by the filtering software over the last six months; and a list of the words blocked by the filtering software over the last six months. If this data is held on record for a period of less than six months, please supply all data held on record.

No time limit was stated in the original phrasing of question five; however several respondents misread question five as limited to the six month period stated in question four. Suggestions for future research include emphasising that data relating to *all* unblock requests held on record is required:

5) If the answer to question four is yes, could you please supply details of the website each request related to and the local authority's response to each request? Please supply these details for all unblock requests recorded since your records began.

Several respondents refused to supply data on the grounds that disclosure would threaten the security of their IT system. It is suggested that future researchers

include a pre-emptive argument against the validity of this response in their FOI requests. Given more time the current researcher would have utilised contacts in her university department who have extensive knowledge of IT software and IT security issues to construct such an argument.

3.7.3 Data analysis

The time-frame of the study did not allow for full analysis of data supplied in response to the request for URLs blocked over a six month period. Suggestions for future research include classifying all of the URLs supplied in response to this request.

3.8 Critique of methodology: online questionnaire

3.8.1 Population

The survey population was sourced via non-random sampling. As Walliman notes, findings from non-random sampling cannot be generalized with any degree of reliability, “non-random techniques relying on the judgement of the researcher or on accident cannot generally be used to make generalizations about the whole population” (Walliman, 2011). Accidental sampling is particularly problematic as “There are no ways of checking to see if this kind of sample is in any way representative of others of its kind, so the results of the study can be applied only to that sample” (Walliman, 2011). The representativeness of survey findings could have been improved by the use of stratified random sampling.

However, stratified random sampling would have proved problematic for two reasons. Firstly, as Marshall notes, random sampling is inappropriate for qualitative research (Marshall, 1996). Secondly, it would be very difficult to reach and represent all sections of the LGBT community, particularly individuals who are not publicly ‘out’ about their sexual orientation. The survey population consulted by this researcher illustrates this issue: the majority of participants were clients, employees or volunteers of LGBT support groups. Consequently they were more likely to be confident in discussing their sexuality; comfortable accessing LGBT online material in a public setting; and willing to publicly challenge any attempt to block LGBT material.

Bridge notes that this is an inherent problem for research involving LGBT participants: it is very difficult to locate participants who are not publicly 'out' about their sexual orientation. It is unlikely that individuals who have not publicly disclosed their sexuality would encounter any advertisements placed through LGBT organisations and even less likely that they would be willing to discuss their sexuality (Bridge, 2010).

Participants were self-selecting; increasing the likelihood that survey respondents were individuals who are 'out' and confident discussing their sexual orientation. However the researcher believed that using self-selecting participants would result in fuller and more accurate responses; additionally it would result in a higher completion rate. More importantly, requiring non-voluntary participation in a survey on a highly personal topic would have breached the ethical guidelines set out by the researcher's university department, not to mention the researcher's personal ethics (University of Strathclyde, n.d.).

Population size was limited: there were only 41 survey respondents. A larger population sample would have ensured responses more accurately representative of the LGBT community. As Walliman notes, "The greater the accuracy required in the true representation of the population, then the larger the sample must be" (Walliman, 2011). However, "the preference for a large sample must be balanced against the practicalities of the research resources, i.e. cost, time and effort" (Walliman, 2011).

3.8.2 Format

A web based survey is problematic in the sense that there is a lack of control by the researcher over the quality of the responses; for example respondents cannot be prompted for clarification. Walliman notes that this "lack of control by the researcher over the quality of the responses that can lead to questions about the reliability and validity of the data" (Walliman, 2011). However, because sexual orientation is a highly personal topic the researcher felt that anonymity was a far more important consideration.

3.8.3 Geographic scope

The focus of the survey, the impact of filtering software on patrons, is not dependent on the geographical location where the filtering occurs. Consequently there is potential to expand the geographic scope of the survey population. Suggestions for future research include advertising on Web 2.0 forums managed by the Lesbian and Gay Foundation and Stonewall UK.

3.8.4 Survey questions

The accuracy of responses to questions relating to frequency could be improved in future research via the inclusion of more specific time periods. For example the question, “How many hours a week do you spend on the Internet (in any location)”, could potentially be confusing for a respondent whose Internet usage varies considerably from week to week. Instead this question could be phrased as, “How many hours have you spent on the Internet over the last seven days (in any location)?” (Fink, 2003a).

One of the aims of the survey was to compare participants Internet use in a library environment with their Internet use in other environments. The survey’s findings suggest that the types of sites accessed by patrons differ considerably in a library setting: in particular respondents were less willing to accessing LGBT support organisation sites in a library. Future surveys could include open questions which explore the reasons for patrons’ reluctance to access LGBT websites in a library setting.

FINDINGS: FREEDOM OF INFORMATION REQUESTS

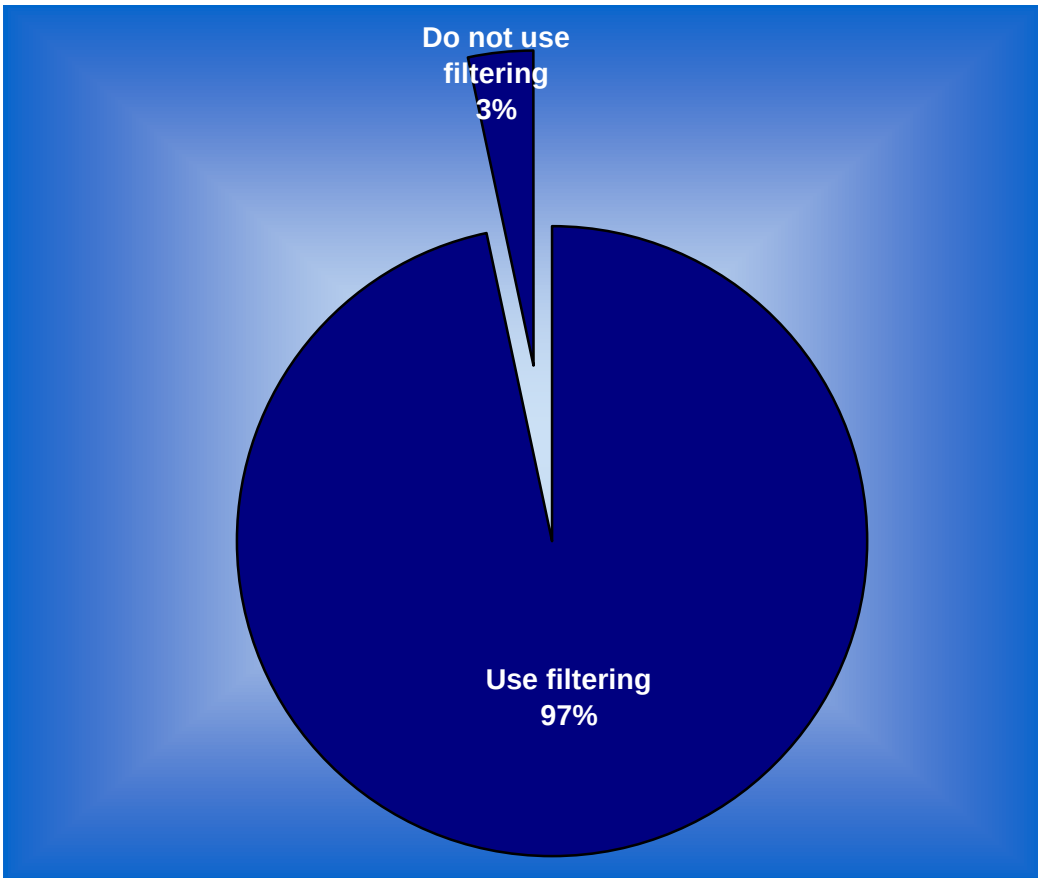
4.1 Response rate

Out of the 32 Scottish local authorities contacted, one respondent provided a full response to the FOI request; 31 provided partial responses; and one failed to provide any response within the 20 day time-frame stipulated by s1(10) of the Freedom of Information (Scotland) Act (HMSO, 2002).

4.2 Prevalence of filtering in Scottish public libraries

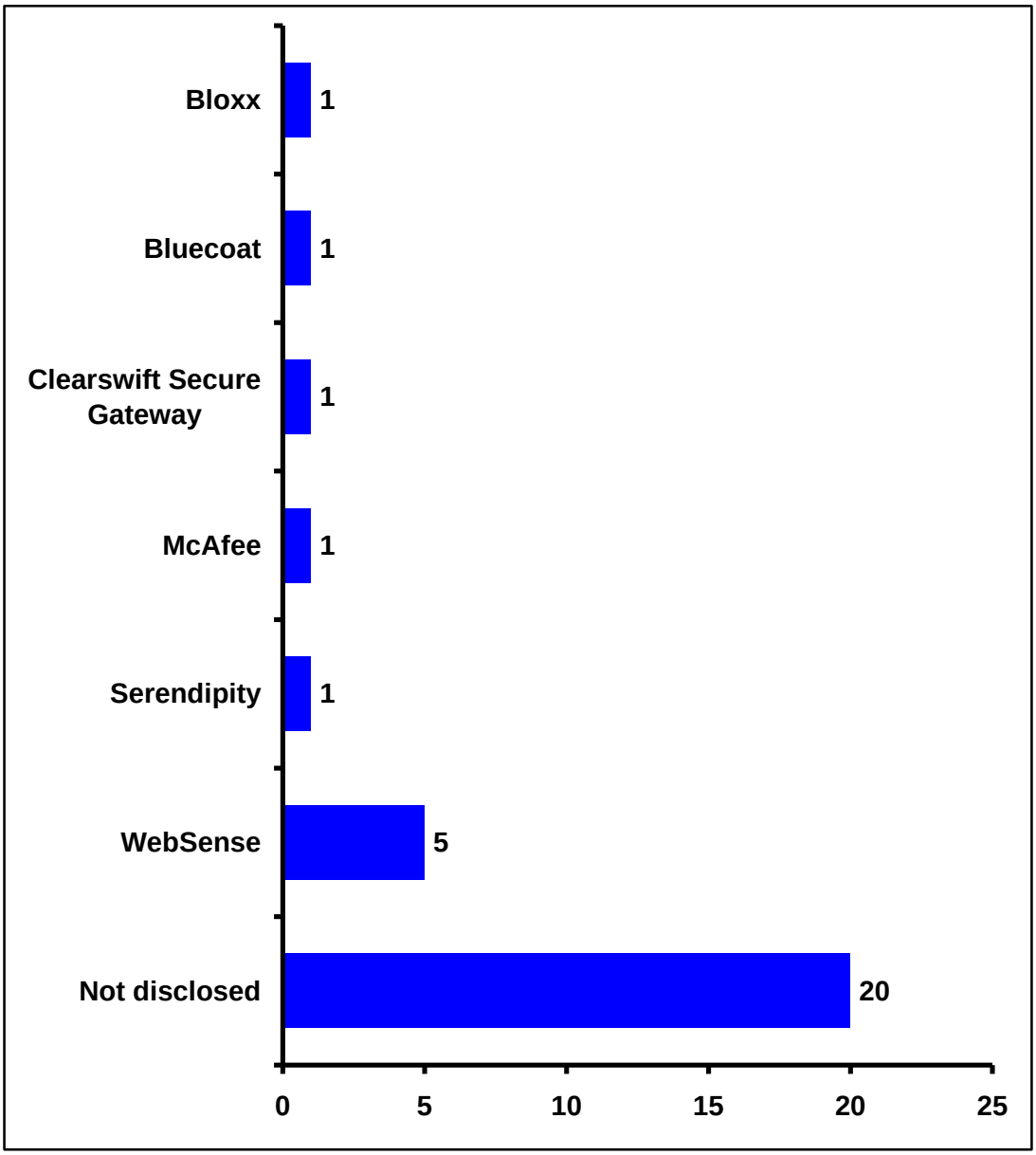
The use of filtering software in Scottish public libraries is endemic: 30 of the 31 respondents utilize filtering software.

Fig. 1 Proportion of Scottish library services which use filtering software (n=31)



Twenty of the 30 respondents who use filtering software failed to disclose the name of the software package they employ. The remaining eleven respondents utilize a wide variety of software products; a finding which indicates a lack of co-ordination of filtering practices in Scottish public libraries. Only one of the six filtering systems utilised by these eleven respondents is used by more than one library service: WebSense is utilized by five library services. The five remaining filtering systems are Bloxx; Bluecoat; Clearswift Secure Gateway; McAfee; and Serendipity. These five are utilized by just one Scottish library service each.

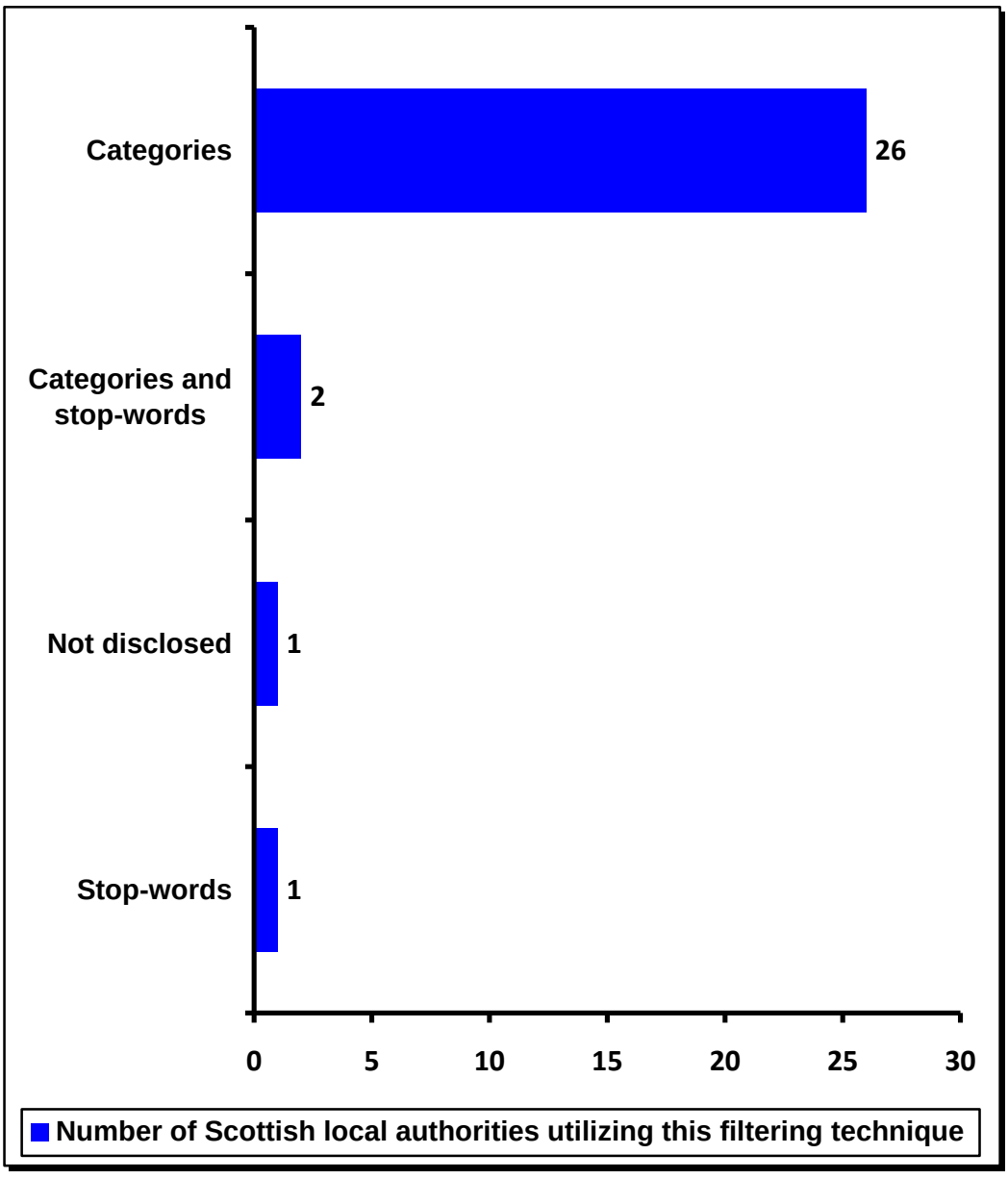
Fig. 2 Filtering software products utilized by Scottish library services (n=30)



4.3 Filtering software technique

The most widely used technique is filtering via categories of websites. Twenty-six Scottish library services use filtering software products which employ categories; one uses a filtering software product which employs stop-word techniques; two use filtering software products which employ both category and stop-word techniques; and one library service failed to state which technique their filtering software employs.

Fig. 3 Filtering software techniques utilized by Scottish library services (n=30)

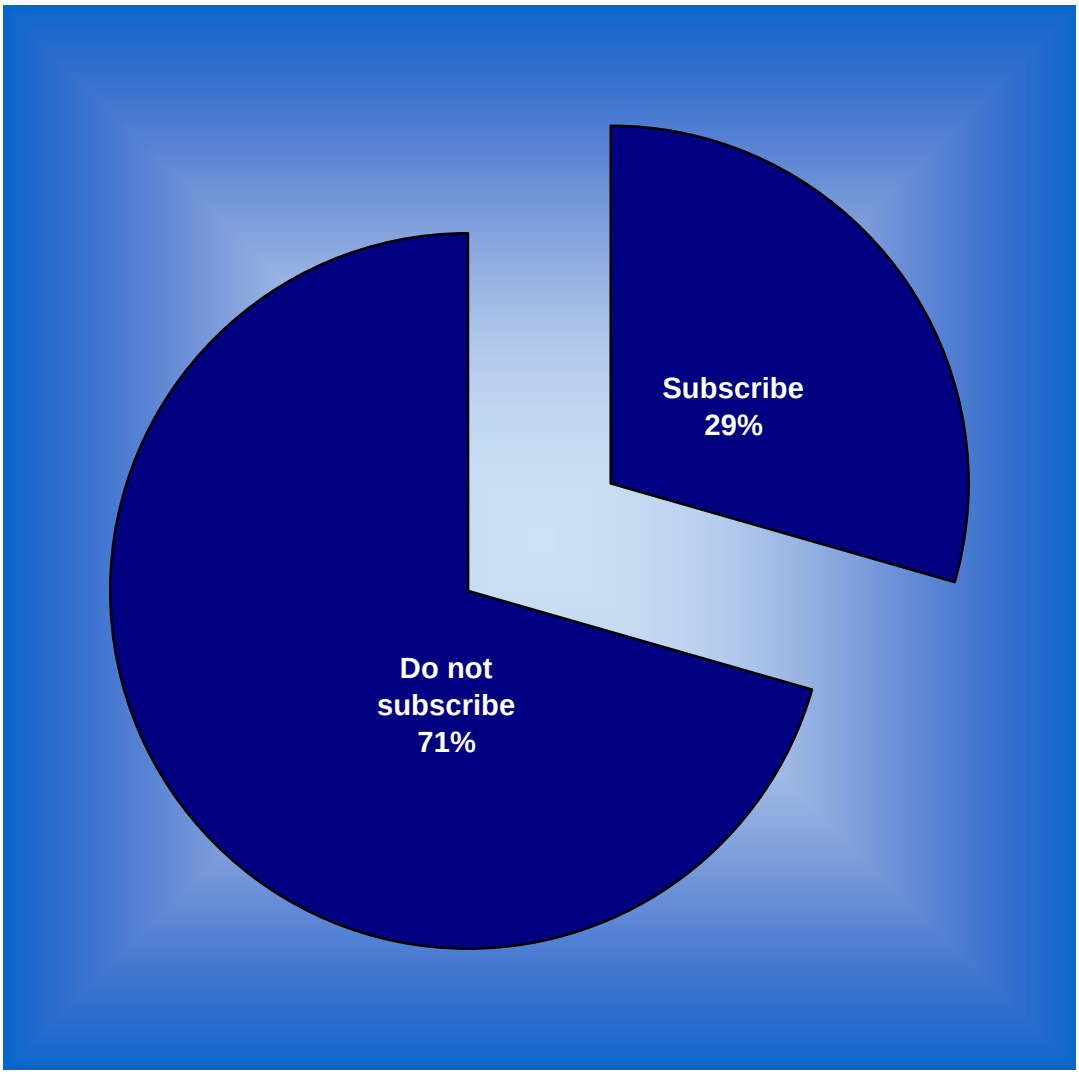


4.4 Categories utilized by software providers

4.4.1 LGBT

Seventeen respondents provided details of the filtering categories they employ. Five of these 17 respondents stated that they subscribe to a “Lifestyle” category which blocks non-pornographic LGBT websites.

Fig. 4 Proportion of respondents who subscribe to LGBT category (n=17)



One respondent subscribes to Clearswift’s “Lifestyle” category. This category is described as follows:

> “Lifestyle: Sites which contain general material relevant to sexual orientation. This will include pages dedicated to the groups themselves, discussions, issues, clubs, personal home pages that address or support sexual orientation lifestyle choices. These are sites mainly by target group members for target group members. Discussions and issues that are of an explicitly mature nature are not part of this category. The specific TARGET groups in question are gay, lesbian, bisexual and transgender and are subsequently referred to as "GLBT". Examples include: Sites dedicated to GLBT orientation issues, resources, outreach, including portals, clubs, associations, personal sites (personal home pages), activism, etc.” (Clearswift, 2012).

Four respondents subscribe to WebSense’s “Gay, Lesbian or Bisexual” category which is described as blocking:

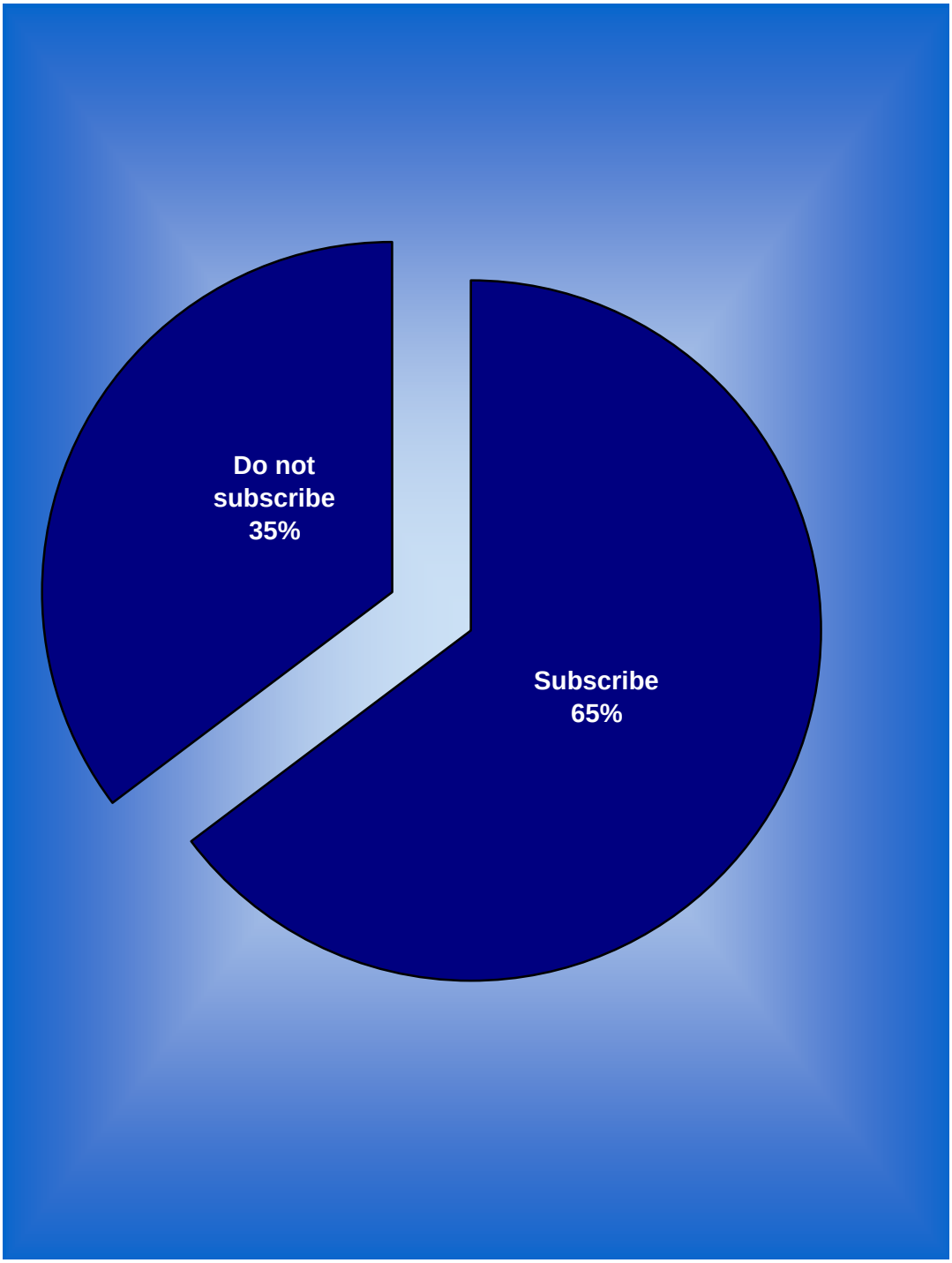
> “Sites that provide information about or cater to gay, lesbian, or bisexual lifestyles, but excluding those that are sexually or issue-oriented” (WebSense, 2012).

One additional respondent stated that they subscribe to a “Society and Lifestyle” category: however since they did not supply the name of their software provider the researcher was unable to confirm if this category blocks LGBT websites.

4.4.2 Social networking

Out of the 17 respondents who supplied details of the categories they subscribe to, 11 stated that they subscribe to a “Social networking” or “Internet communication” category.

Fig. 5 Proportion of respondents who subscribe to Web 2.0 category (n=17)

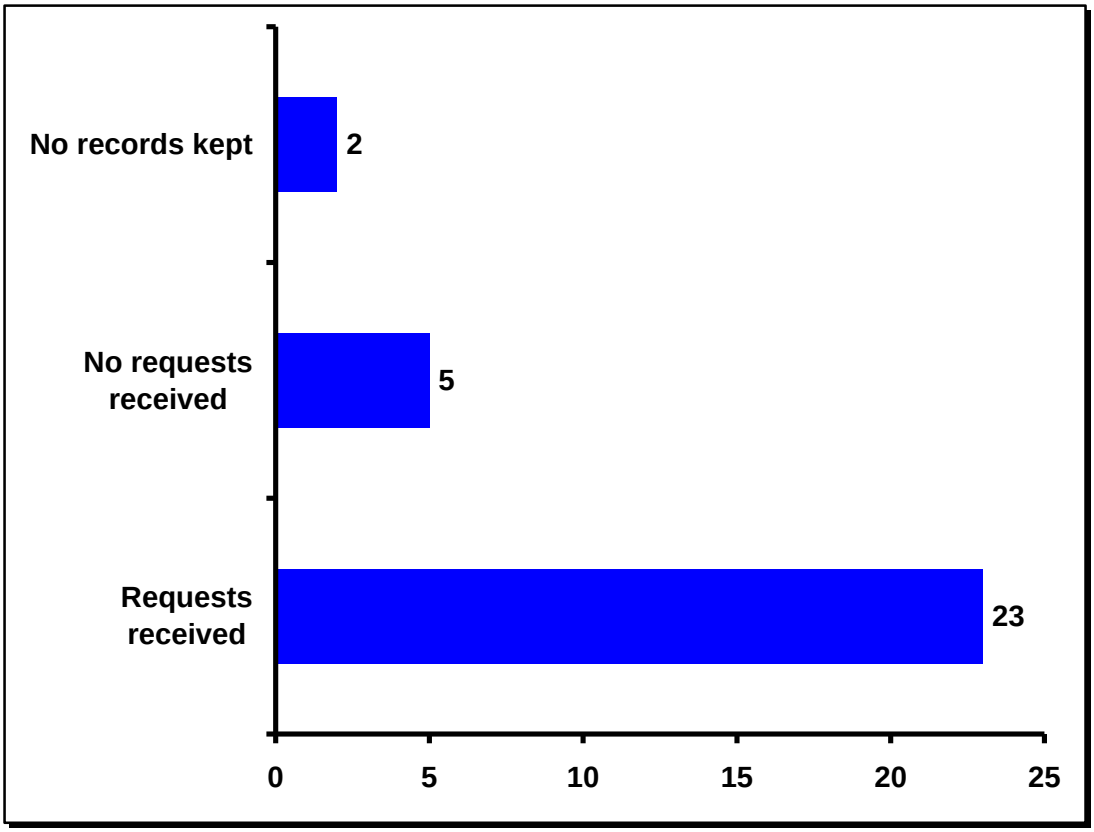


4.5 Requests to unblock websites

4.5.1 Overview

The majority of Scottish public library services have received requests to unblock websites: 23 have received requests; five have received no requests; and two were unable to respond as they keep no records of such requests.

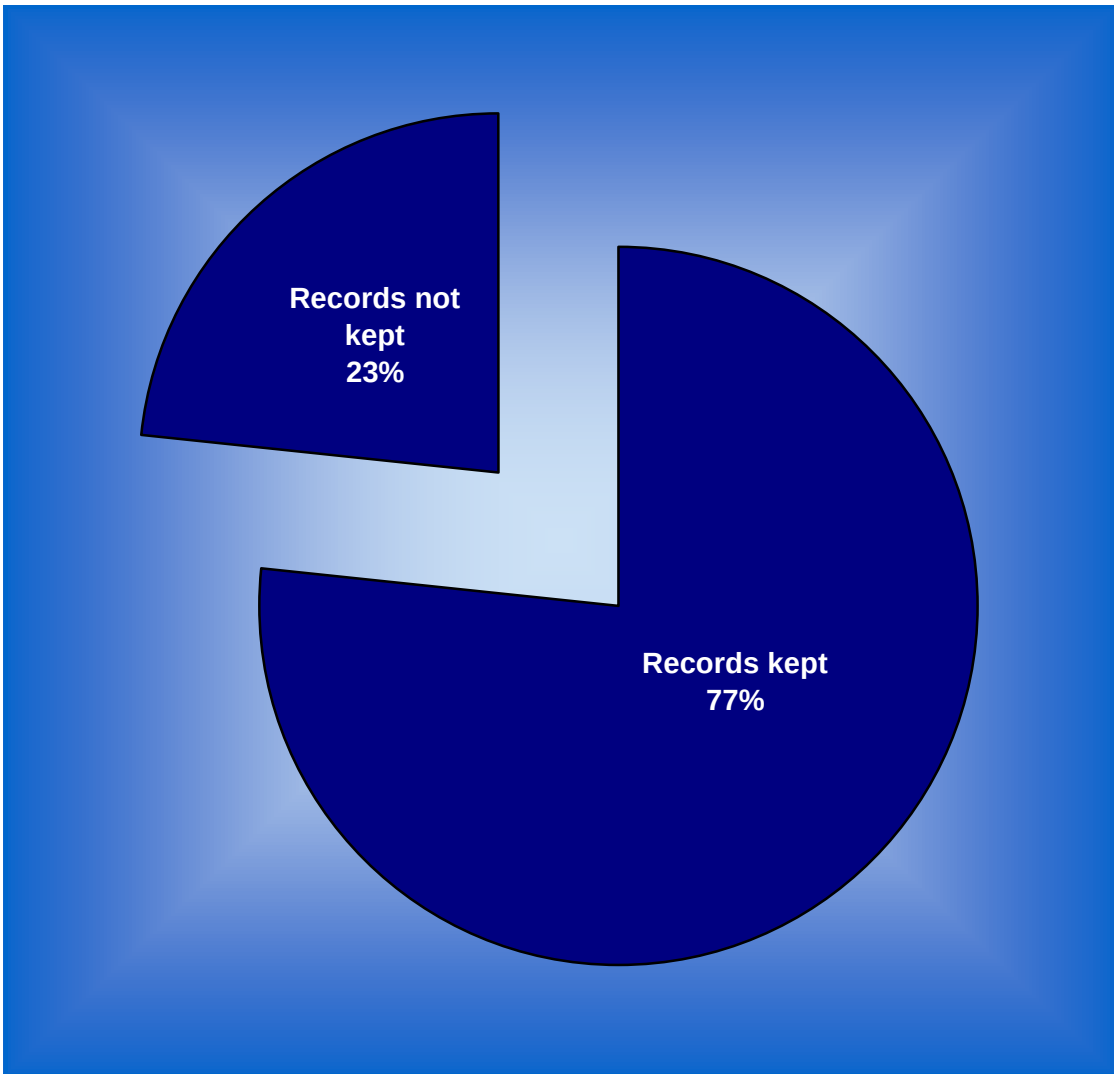
Fig. 6 Proportion of respondents who received unblock requests (n=30)



Not all respondents who supplied details of patron requests keep records of these requests; in two instances this data was provided from memory rather than records. While 23 Scottish local authorities keep records relating to patron requests to unblock websites a significant minority of seven keep no such records. One local authority stated that they had received unblock requests but only the software provider had access to records of the requests:

"In terms of Section 17 of the Freedom of Information (Scotland) Act 2002, we do not hold any records for such requests. They are submitted directly to the filtering service provider".

Fig. 7 Proportion of respondents who keep records of unblock requests (n=30)



Out of the 23 respondents who keep records of unblock requests, six provided details of the dates when requests were received. Five out of these six hold records predating 2009. One library service holds records of unblock requests dating back to 2003.

Table 1 Number of unblock requests received by respondents who disclosed the duration of their records

Date records begin	Number of requests recorded
2003	94
2009	45
2009	9
2010	10
2011	7
2011	4

One respondent who keeps records of unblock requests refused to disclose the number of requests received. Of the remaining 16 respondents who keep records, 13 have four or less requests on record. These numbers contrast starkly with the numbers provided by respondents who stated that they had records dating back to 2009 or before.

Table 2 Number of unblock requests received by respondents who did not disclose the duration of their records

Date records begin	Number of requests recorded
Not disclosed	14
Not disclosed	13
Not disclosed	10
Not disclosed	4
Not disclosed	4
Not disclosed	3
Not disclosed	3
Not disclosed	3
Not disclosed	2
Not disclosed	1
Not disclosed	1
Not disclosed	0
Not disclosed	0
Not disclosed	0
Not disclosed	0
Not disclosed	0

In the context of data provided by respondents who keep a record of dates, it is possible to estimate that the 13 respondents who have four or less requests on record keep records for a period of less than two years.

One respondent provided data which included staff comments on unblock requests. Some of these comments indicate that unblock requests had been merged with general IT helpdesk records. For example: “Site doesn’t exist”; “unable to locate web page. Message – not found”; and “Not filtered. After query user was using wrong URL”. This respondent also noted that in one instance they were unable to unblock a site as the system did not allow them to view the filter category which blocked the site: “could not identify filter that was blocking”. This indicates a significant lack of control over the software functions. Another comment underlines the difficulty of managing a filtering system effectively: “Links from these pages are filtered but they change on a daily basis so need those URLs”.

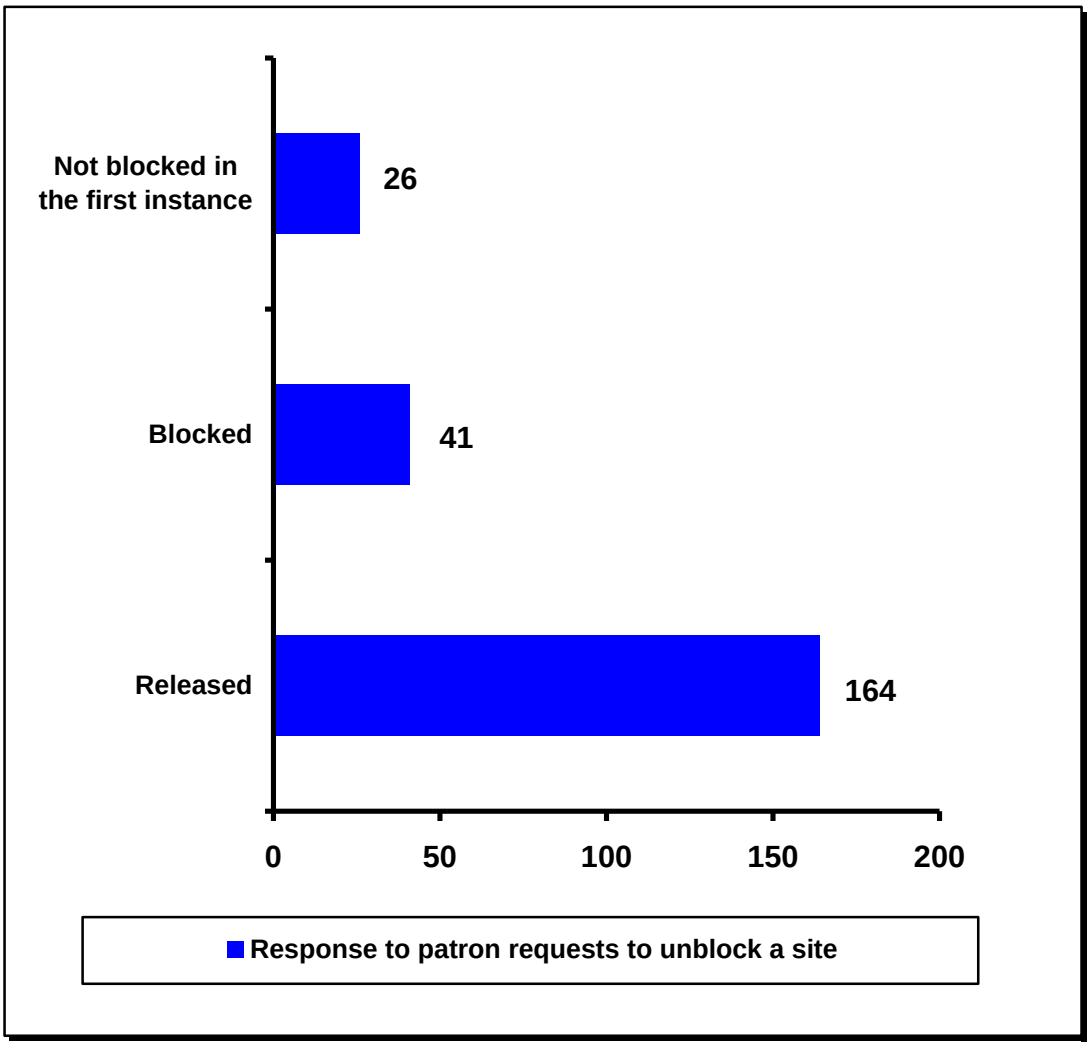
4.5.2 Rate of patron challenges to filtering

Scottish library services have a total of 231 requests to unblock websites on record. This is a low number of challenges within the context of a Scottish population of 5,252,800 and a library user population of approximately one million, 14% of whom use their library for computer and Internet access (General Register Office for Scotland, 2012; Scottish Government, 2011a).

4.5.3 Responses to requests to unblock websites

The vast majority of unblock requests were successful. Out of a total of 231 recorded requests: 164 were released; 26 were not blocked in the first instance; and 41 were blocked.

Fig. 8 Responses to unblock requests (n=231)



4.5.4 Categories of websites involved in requests

Those unblock requests which were recorded relate to websites on a very broad range of topics: the researcher noted 31 different categories of website. Responses to requests varied considerably between categories.

Table 3. Categories of website in order of number of unblock requests received (n=231)

Website category	Total	Released	Blocked	Not blocked in first instance
Other	46	26	6	14
Web 2.0	41	31	10	0
Shopping	28	17	6	5
Information technology	16	15	1	0
Education	13	10	3	0
Travel	10	8	1	1
Film, music and television	9	4	4	1
Sport	7	7	0	0
Voluntary organisation	7	6	0	1
Gambling	6	3	3	0
Recruitment	6	6	0	0
Web-mail	6	4	0	2
News	5	5	0	0
Children's	4	2	2	0
Search engine	4	2	2	0
Government	3	2	0	1
Genealogy	2	1	1	0
Health	2	2	0	0
History	2	2	0	0
Religion	2	2	0	0
Science	2	2	0	0
Author's webpage	1	1	0	0
Cookery	1	1	0	0
Housing	1	1	0	0
LGBT	1	0	1	0
Library	1	0	0	1
Maritime	1	1	0	0
New age	1	1	0	0
Peer to peer file-sharing	1	0	1	0
Political party	1	1	0	0
Restaurant	1	1	0	0

Web 2.0 sites received the highest number of unblock requests, once requests relating to sites classed as 'other' were excluded. The ten categories which received the joint lowest number of requests (just one request) include LGBT websites. There were 41 requests to unblock Web 2.0 sites; 13 requests to unblock education sites; seven requests to unblock voluntary organisation sites; six requests to unblock recruitment sites; three requests to unblock Government sites; one request to unblock a housing site; and one request to unblock a LGBT site. Requests relating to LGBT, library and peer to peer file sharing were the least successful: requests relating to these categories had a 100% failure rate.

Table 4 Categories of website in order of unblock request failure rate (n=231)

Website category	Percentage unsuccessful	Percentage successful	Percentage not blocked in first instance
LGBT	100	0	0
Peer to peer file-sharing	100	0	0
Children's	50	50	0
Gambling	50	50	0
Genealogy	50	50	0
Search engine	50	50	0
Film, music and television	44	45	11
Web 2.0	24	76	0
Education	23	77	0
Shopping	21	61	18
Other	13	57	30
Travel	10	80	10
Information technology	6	94	0
Author's webpage	0	100	0
Cookery	0	100	0
Government	0	67	33
Health	0	100	0
History	0	100	0

Housing	0	100	0
Library	0	0	100
Maritime	0	100	0
New age	0	100	0
News	0	100	0
Political party	0	100	0
Recruitment	0	100	0
Religion	0	100	0
Restaurant	0	100	0
Science	0	100	0
Sport	0	100	0
Voluntary organisation	0	86	14
Web-mail	0	67	33

Sites which were blocked included:

- The website of Scottish crime author Alex Gray www.alex-gray.com
- Genealogy site www.ancestry.co.uk
- Global news channel Aljazeera http://english.aljazeera.net
- The European Parliament http://www.europarl.europa.eu/
- Facebook www.facebook.com
- The General Medical Council http://www.gmc-uk.org
- The talking book catalogue of the Royal National Institute for the Blind http://info.rnib.org.uk/tbookcat/
- Twitter http://twitter.com
- A Wikipedia page about breastfeeding http://en.wikipedia.org/wiki/Breastfeeding_in_public

4.6 Blocked URLs and stop-words used by software providers

None of the 30 respondents who utilize filtering software supplied full details of blocked URLs or stop-words lists employed by the software provider. Eighteen

respondents were unable to supply data because they did not have access to the URL and stop-word lists utilized by the software provider. Of the remaining 12 respondents nine failed to provide an explanation for their failure to disclose the URL or stop-word lists used by their software provider; one claimed that disclosure would endanger the security of their IT systems; one claimed that disclosure would breach the intellectual property rights of the software provider; and one stated that they have access to this data but refused to provide it on the grounds that, “Cost of data retrieval would exceed £600”.

Fig. 9 Reasons for failure to supply blocked URL and stop-word lists (n=30)

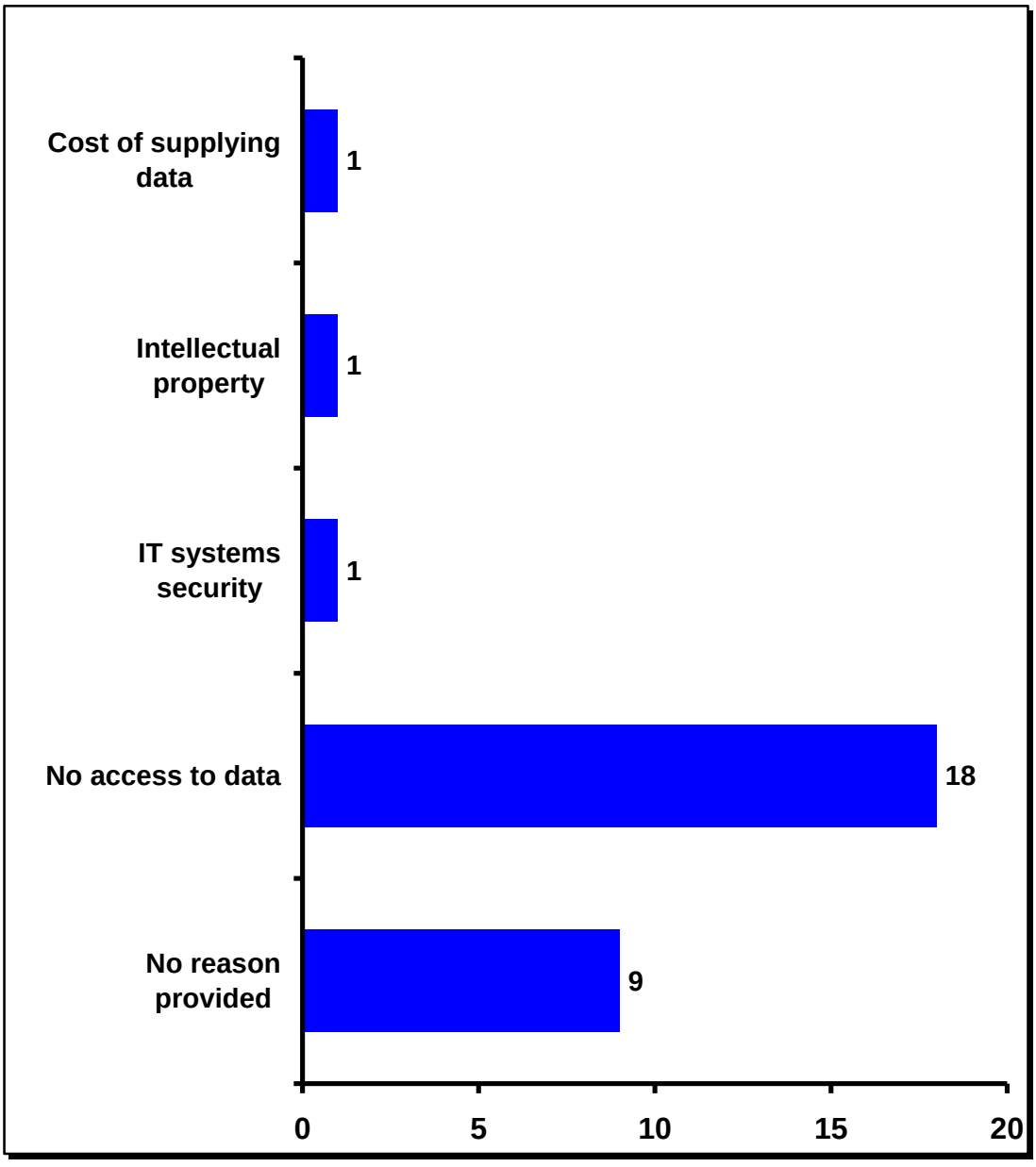
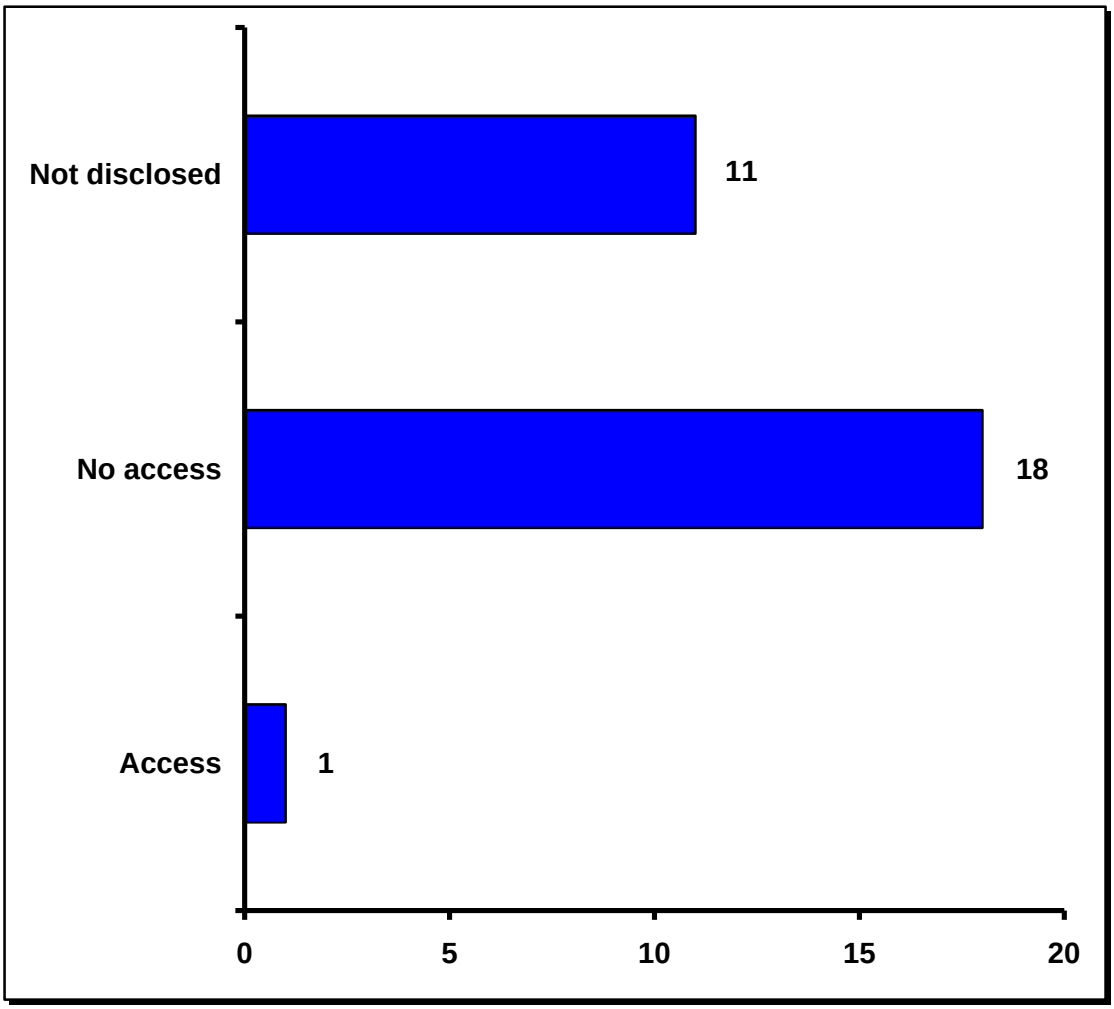


Fig. 10 Respondents with access to blocked URL and stop-word lists (n=30)



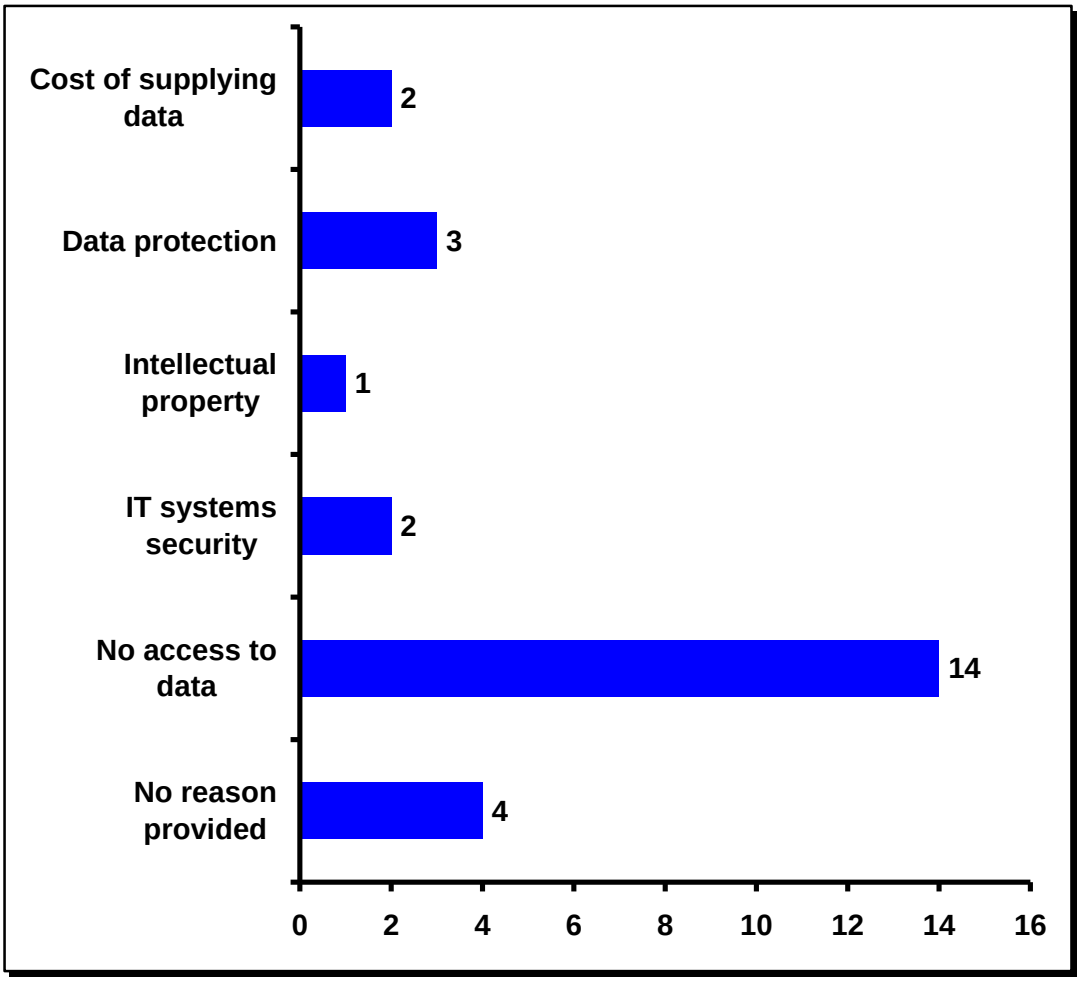
4.7 URLS and stop-words blocked over a six month period

4.7.1 Overview

Twenty-six of the 30 respondents failed to provide a list of URLs blocked over a six month period (i.e. URLs which patrons had attempted to access). The primary reason provided for failure to supply this information was a lack of access to data. Out of the 26 respondents who failed to provide details of URLs blocked over a six month period, 14 stated that they do not have access to details of blocked URLS. Four respondents failed to provide an explanation. The remaining eight respondents stated that data could not be provided because disclosure would involve labour costs

of over £600; endanger the security of their IT systems; breach the data protection rights of patrons; or breach the intellectual property rights of the software provider.

Fig. 11 Reasons for failure to supply blocked URL data (n=26)



4.7.2 Volume of URLs blocked

Two respondents provided details of URLs blocked over a six month period. The remaining two respondents provided details of URLs blocked over a two month period as they only store this data for two months

The volume of sites blocked varies considerably between local authorities. The two local authorities who provided two months of data had blocked 31,606 sites: the two respondents who provided six months of data had blocked a fraction of this number, just 5,535 sites. One respondent who provided details of sites blocked over a six

month period had blocked 5,072 sites: the other respondent who provided details of sites blocked over a six month period had blocked 463 sites. Similarly one respondent who provided details of sites blocked over a two month period had blocked 29,401 sites: the other respondent who provided details of sites blocked over a two month period had blocked 2,205 sites.

Fig. 12 Number of sites blocked over a six month period (n=5535)

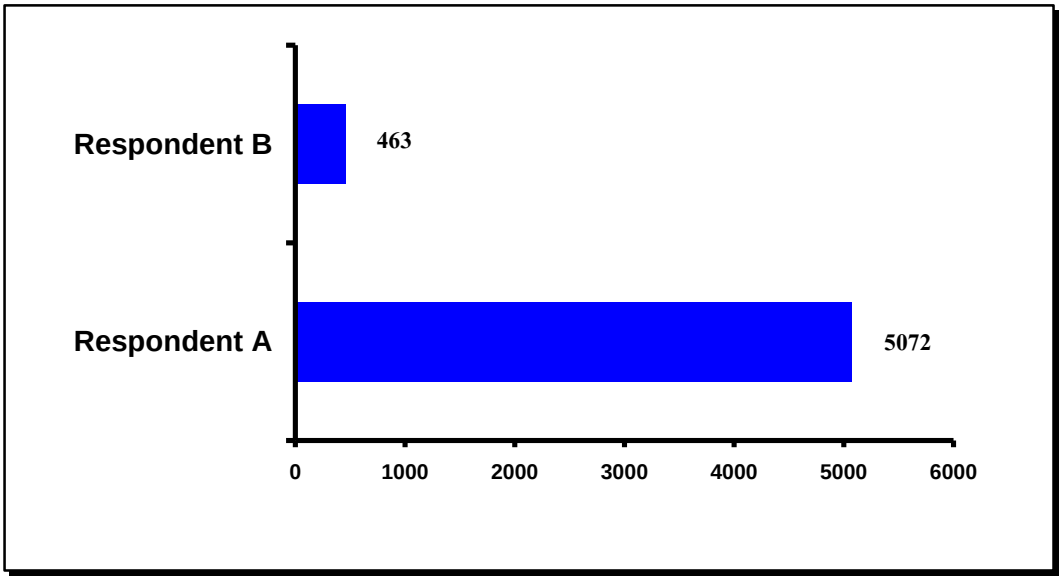
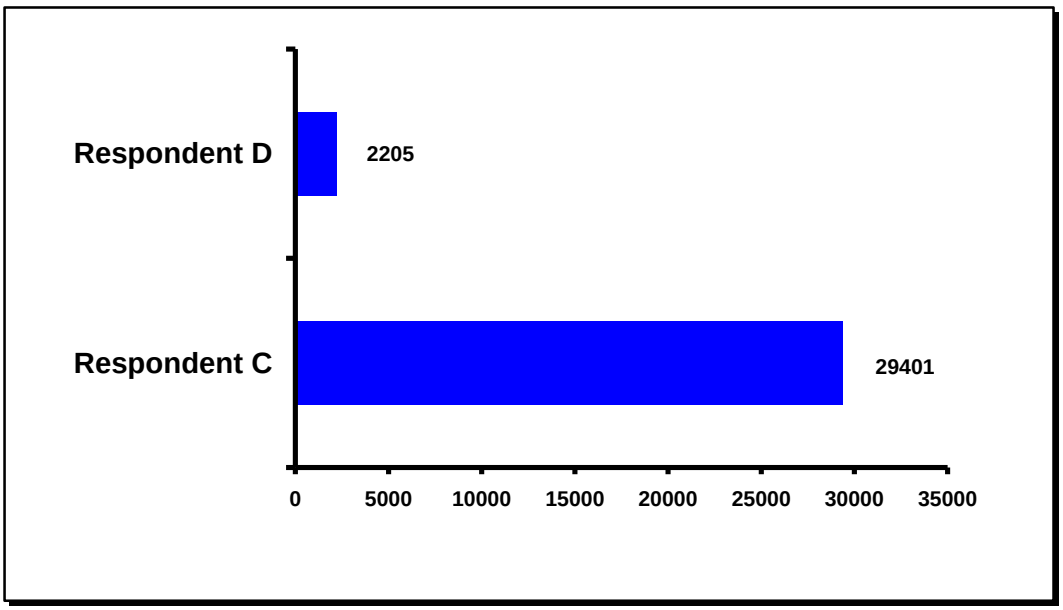


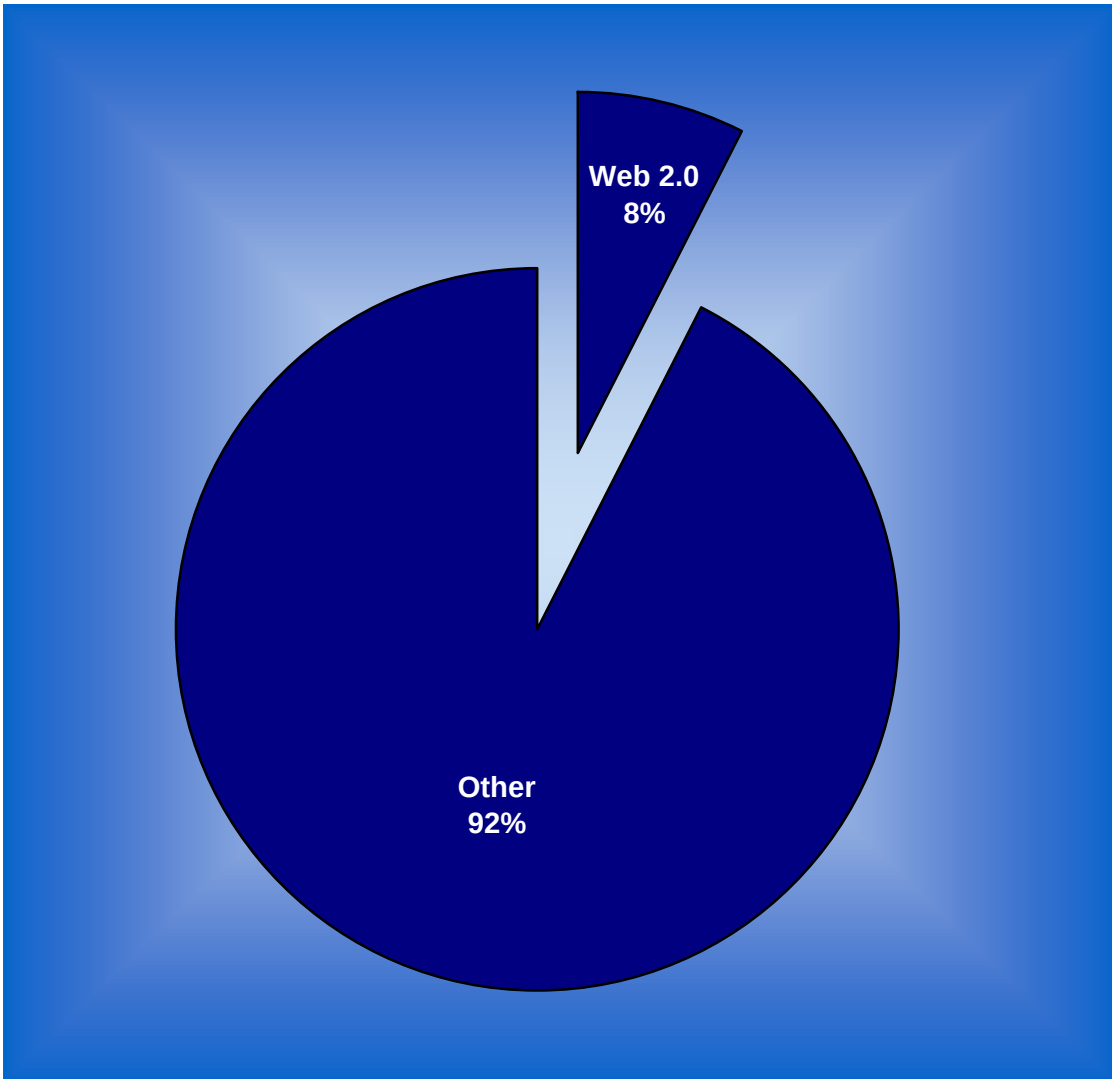
Fig. 13 Number of sites blocked over a two month period (n=31606)



4.7.3 Categories of URLs blocked

Out of the 37141 sites blocked there were: five LGBT sites; 149 recruitment sites; and 2834 Web 2.0 sites.

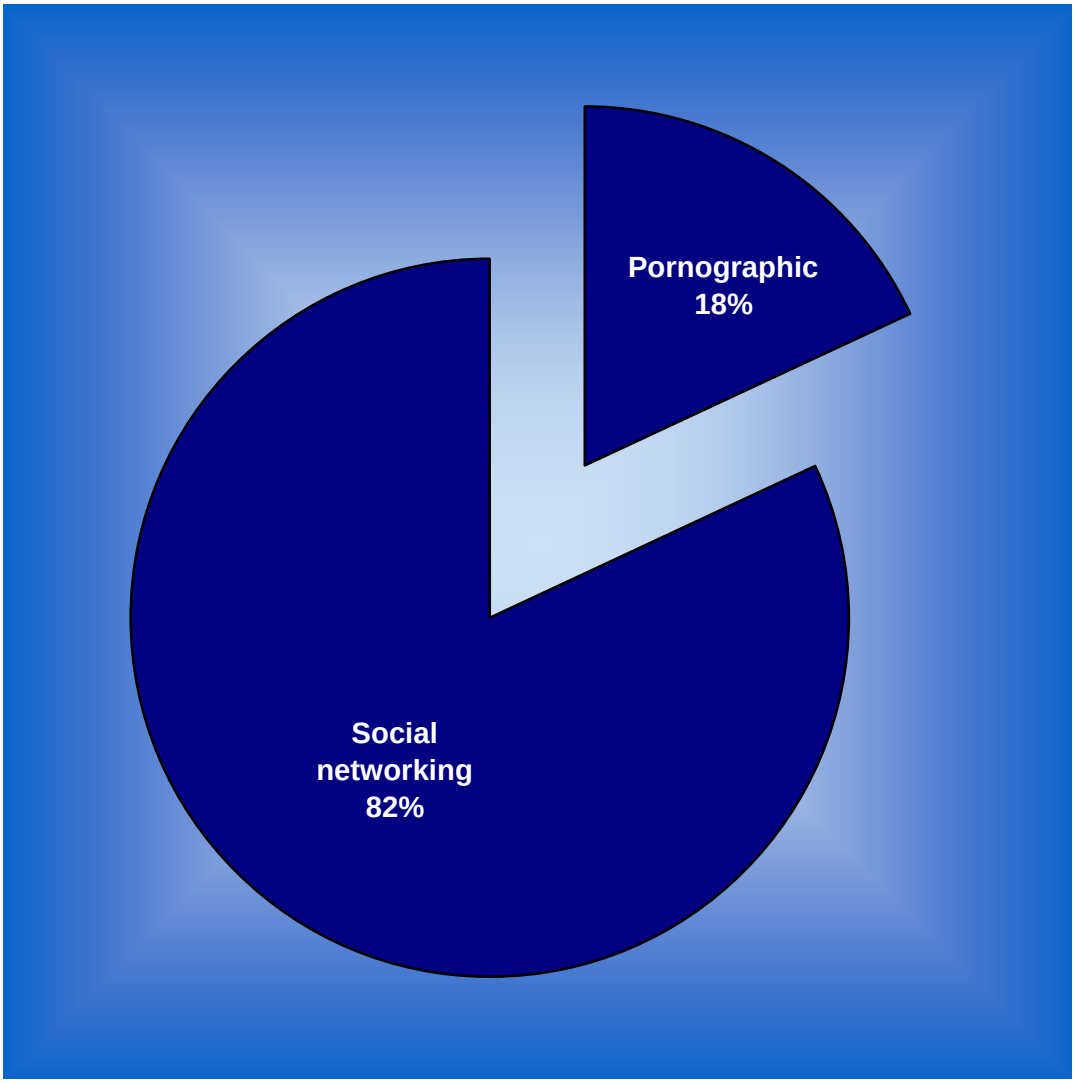
Fig. 14 Proportion of blocked sites which are Web 2.0 sites (n=37141)



There were eleven blocked attempts to access LGBT websites. Eight these related to social networking sites and two related to pornographic sites. The attempts to access social networking sites included: two attempts to access Web 2.0/dating site www.gaydargirls.com; one attempt to access the social Web 2.0/dating site www.gayromeo.com; two attempts to access a Web 2.0/travel site http://www.gayscout.com/: one attempt to access LGBT youth forum Queer Attitude

www.queerattitude.com/ and three attempts to access LGBT Youth Scotland's Twitter page http://twitter.com/LGBTYS .

Fig. 15 Blocked attempts to access LGBT websites: categories of LGBT website blocked (n=11)



Other sites blocked included:

- E-government website www.directgov.gov.uk
- Facebook www.facebook.com
- The International Committee of the Red Cross www.icrc.org
- Job Centre Plus www.jobcentreplus.gov.uk
- Cancer care and support charity Macmillan www.macmillan.org.uk

- A local government recruitment portal www.myjobscotland.gov.uk
- The National Library of Scotland www.nls.uk
- Nursing Times www.nursingtimes.net
- Renfrewshire Council www.renfrewshire.gov.uk
- Scottish Courts Service www.scotcourts.gov.uk
- Twitter www.twitter.com

4.8 Summary

Overall the data provided in response to the FOI requests indicates that Scottish library services do not have adequate access to details of the type of digital data blocked by filtering software: the majority of respondents were unable or unwilling to provide a full response. This suggests that Scottish library services have little control over the filtering practices employed in public libraries. Additionally there appears to be little or no co-ordination of filtering practices across Scottish public library services.

Categories of website blocked include government; health; recruitment; and voluntary organisations. At least five Scottish library services subscribe to a “Lifestyle” category designed to block access to non-pornographic LGBT websites. Additionally, at least 11 Scottish library services subscribe to a “Social networking” or “Internet communication” categories designed to prevent Internet users from participating in online communities.

Perhaps the most worrying evidence uncovered by this research is the low incidence of challenges to filtering; Scottish library patrons are either unwilling to challenge the use of filtering software or are unaware of its existence.

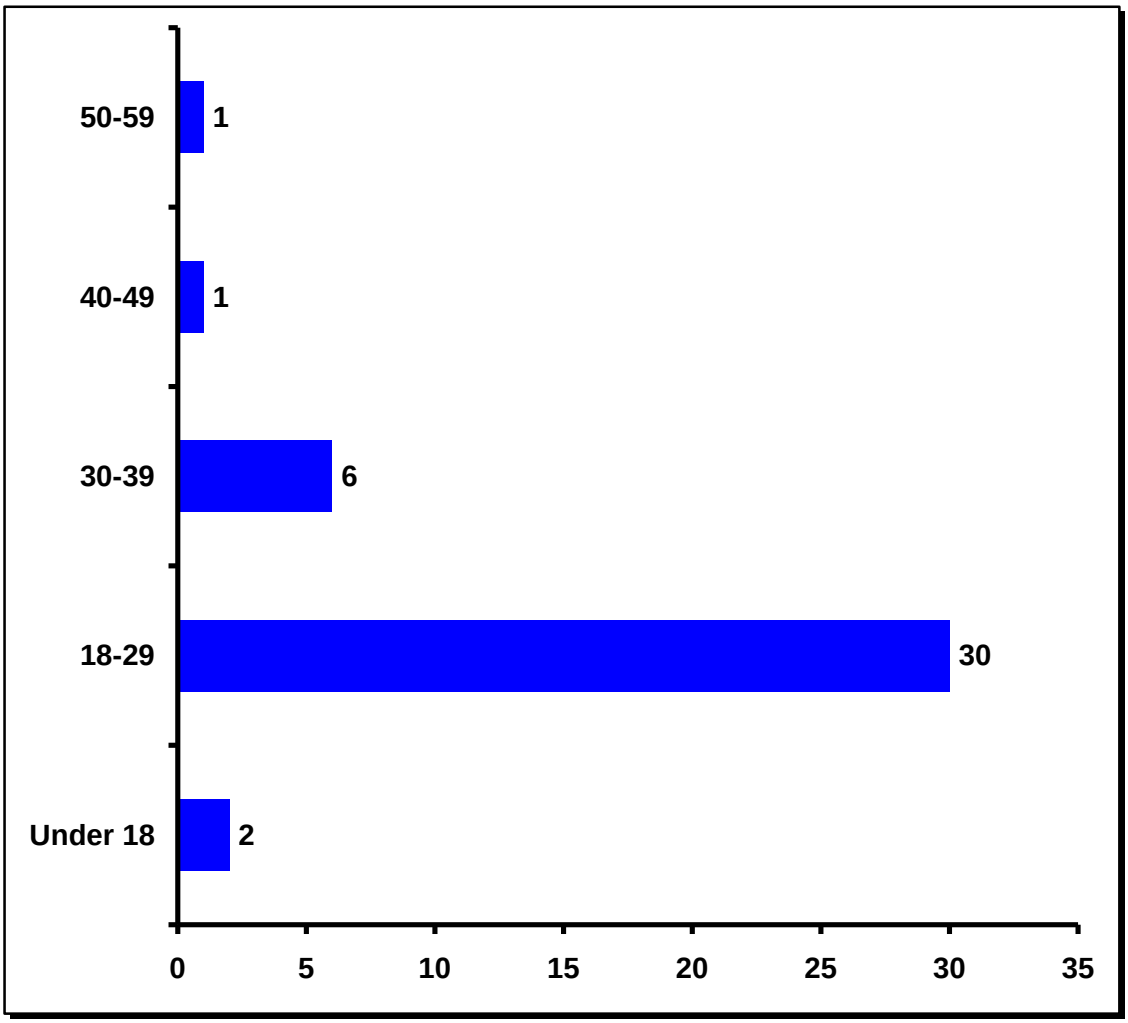
FINDINGS: ONLINE QUESTIONNAIRE

5.1 Demographic

5.1.1 Age

The majority of participants were aged between 18 and 29; there were very few participants aged 40 or over; and there were no participants aged 60 or over. There were 30 participants aged 18-29; six participants aged 30-39; one participant aged 40-49; and one participant aged 50-59.

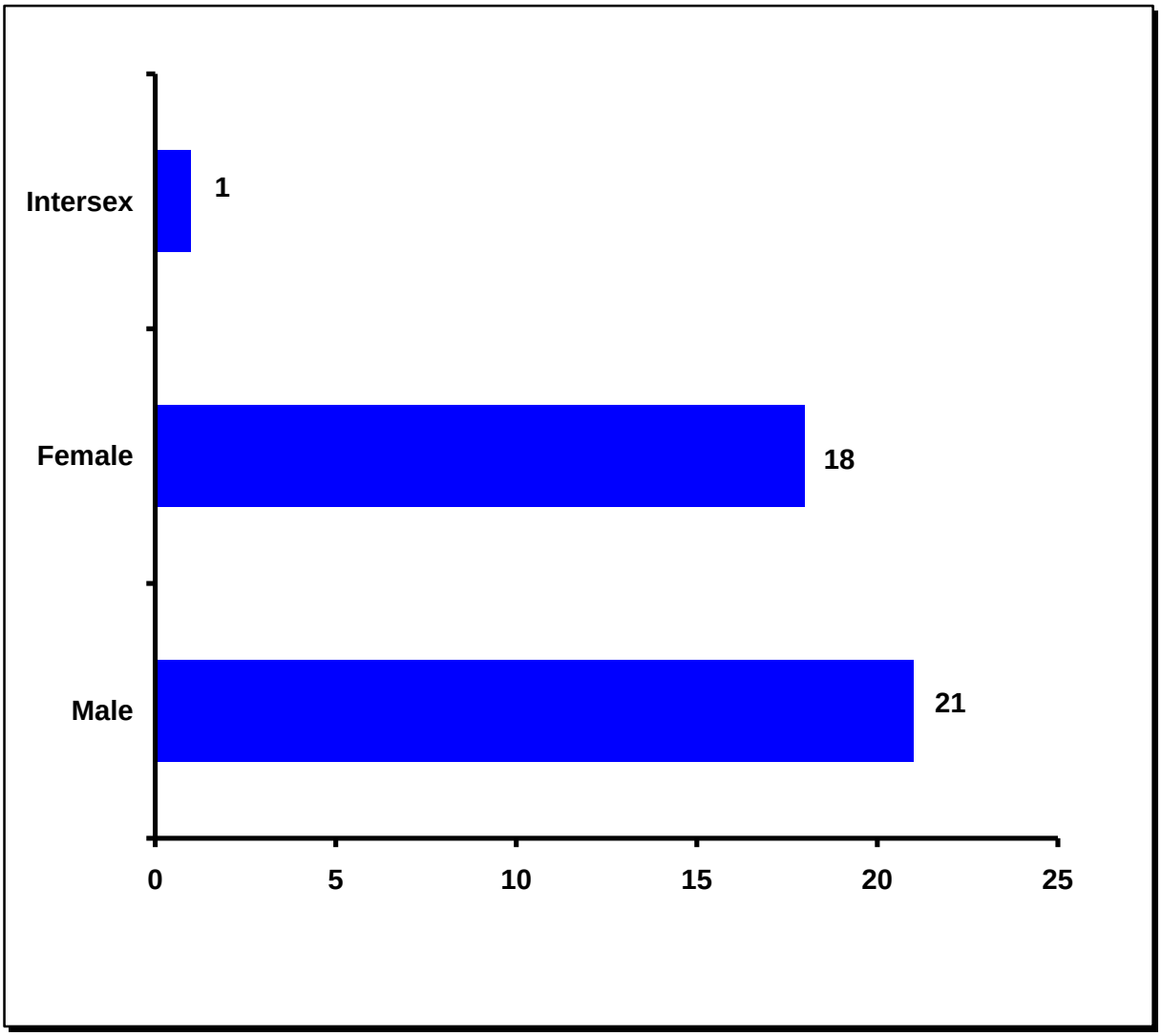
Fig. 16 Age of participants (n=40)



5.1.2 Gender

The survey population was divided nearly evenly along male-female gender lines and included a minority of intersex participants. Forty-five percent of participants were female and 52% were male: there were 21 male participants; 18 female participants. Additionally there was one intersex participant.

Fig. 17 Gender of participants (n=40)



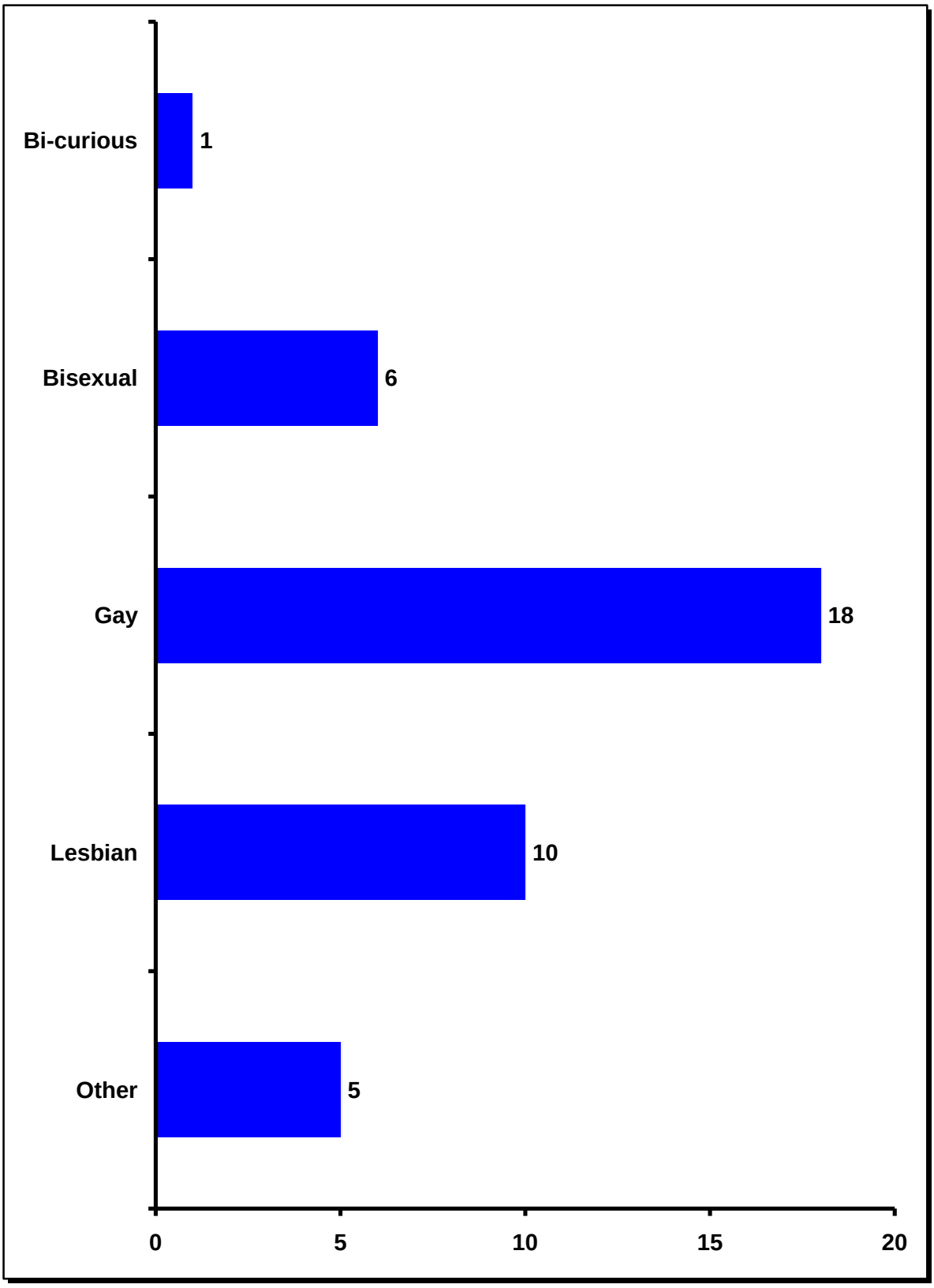
These figures are similar to the demographic of the Scottish population which is 48% male and 52% female (Register General for Scotland 2012). It is not possible to make a comparison with the percentage of Scotland's population who are intersex as the 2001 Scottish Census did not give respondents the option of describing themselves as intersex (Register General for Scotland 2012).

5.1.3 Sexual orientation

The majority of participants described themselves as gay or lesbian; additionally there was a significant minority of bisexual and bi-curious respondents. One participant described themselves as bi-curious: six described themselves as bisexual; 18 participants described themselves as gay; and ten described themselves as lesbian. Additionally, a significant minority of five described their sexuality in terms of another queer identity.

Seventy percent of participants described themselves as either lesbian or gay: out of the 40 participants, 28 used these terms to describe their sexual orientation. This is similar to the demographic of the UK's lesbian, gay and bisexual (LGB) population: 66% of LGB people in the UK describe themselves as gay or lesbian (Office for National Statistics, 2011). Eighteen percent of participants described themselves as either bisexual or bi-curious: six described themselves as bisexual and one described themselves as bi-curious. This is not representative of the UK's LGB population: 34% of LGB people in the UK describe themselves as bisexual (Office for National Statistics, 2011). The proportion of transgender participants cannot be compared with the UK national demographic because there are no Office for National Statistics' (ONS) statistics on the percentage of the UK's LGBT population who are transgender. Similarly, distinct comparisons cannot be made for gay and lesbian participants as the ONS integrated household survey recorded statistics for these two groups in one joint category (Office for National Statistics 2011).

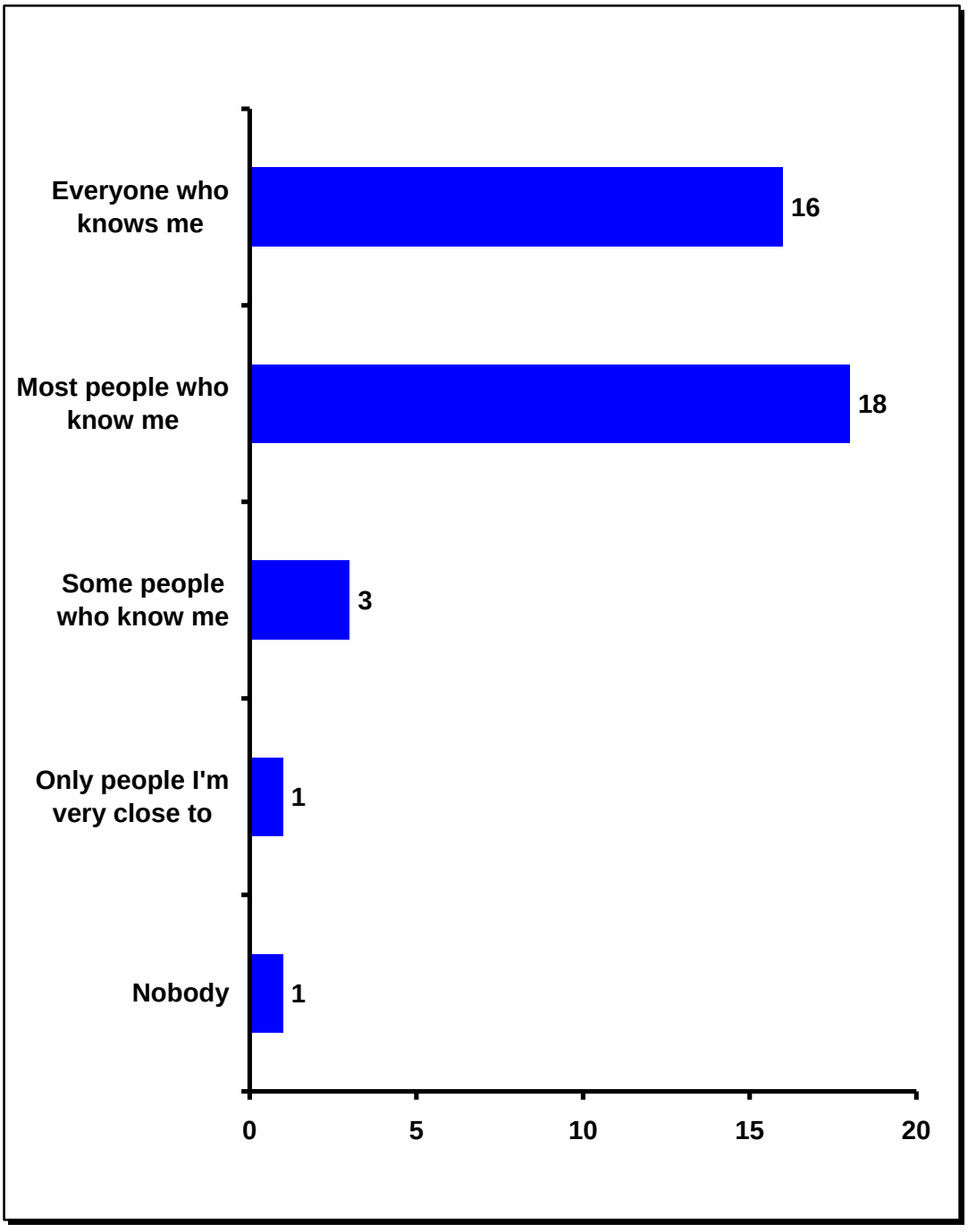
Fig. 18 Sexual orientation of participants (n=40)



5.1.4 Disclosure of sexual orientation

The majority of participants had disclosed their sexual orientation to everyone they know or to most people they know. Of the 39 participants who did supply data 18 had come out to most people they know and 16 had come out to everyone they know. One participant chose not to provide data in relation to this topic.

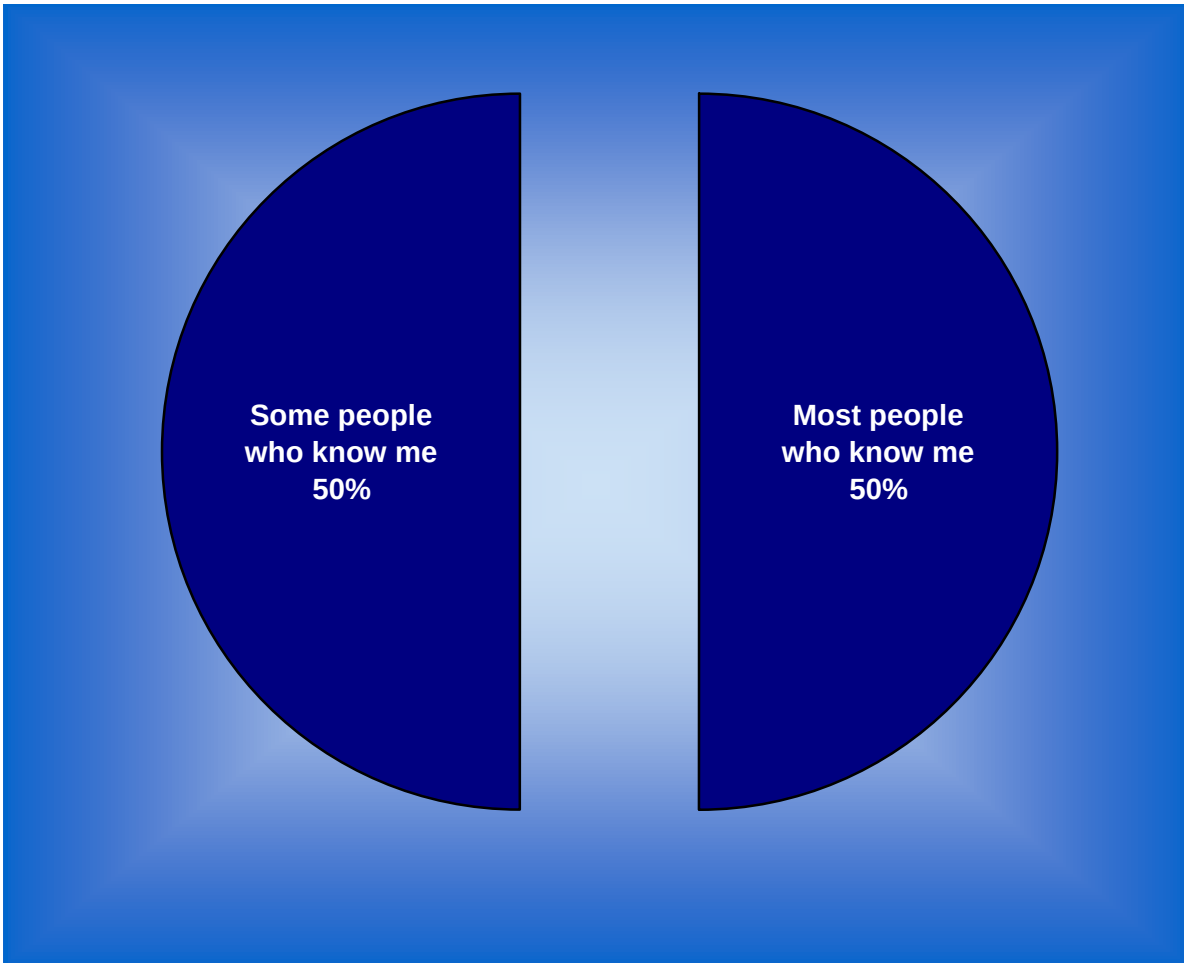
Fig. 19 Groups participants have disclosed their sexual orientation to (n=39)



5.1.5 Disclosure of transgender status

There were four transgender participants. All transgender participants had disclosed their transgender status to either most people who know them or some people who know them: two had disclosed their transgender status to most people who know them and two had disclosed their transgender status to some people who know them. None of the transgender participants had disclosed their transgender status to everyone who knows them.

Fig. 20 Groups participants have disclosed their transgender status to (n=2)

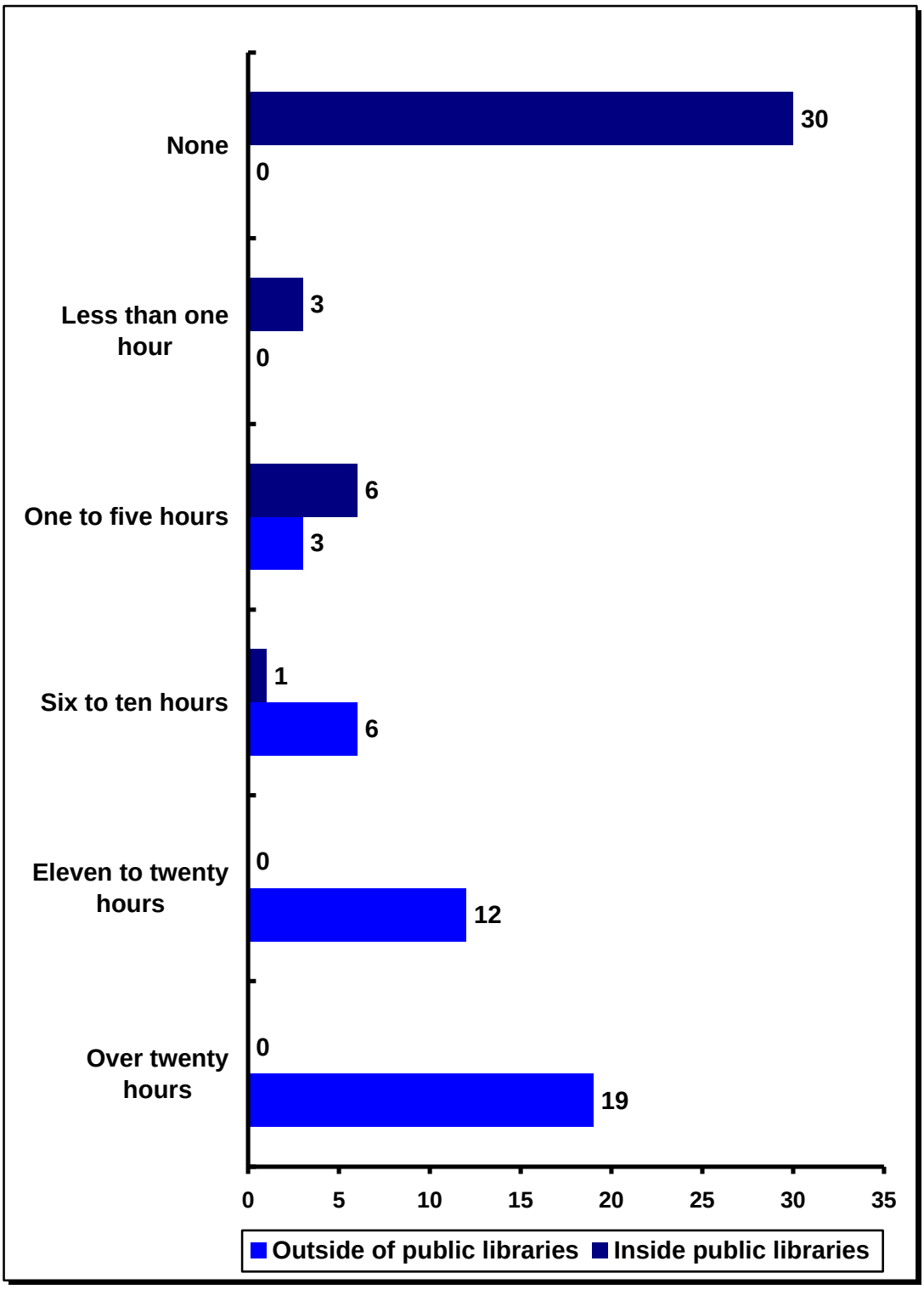


5.2 Internet use: time spent online

All 40 participants had Internet access at home and the majority of participants spent 11 or more hours a week on the Internet outside of public libraries: 19 participants

spent over 20 hours a week on the Internet outside of public libraries and 12 spent between 11 and 20 hours a week on the Internet outside of public libraries. In contrast, a majority of 30 participants spent no time online in public libraries.

Fig. 21 Number of hours participants spend online per week (n=40)

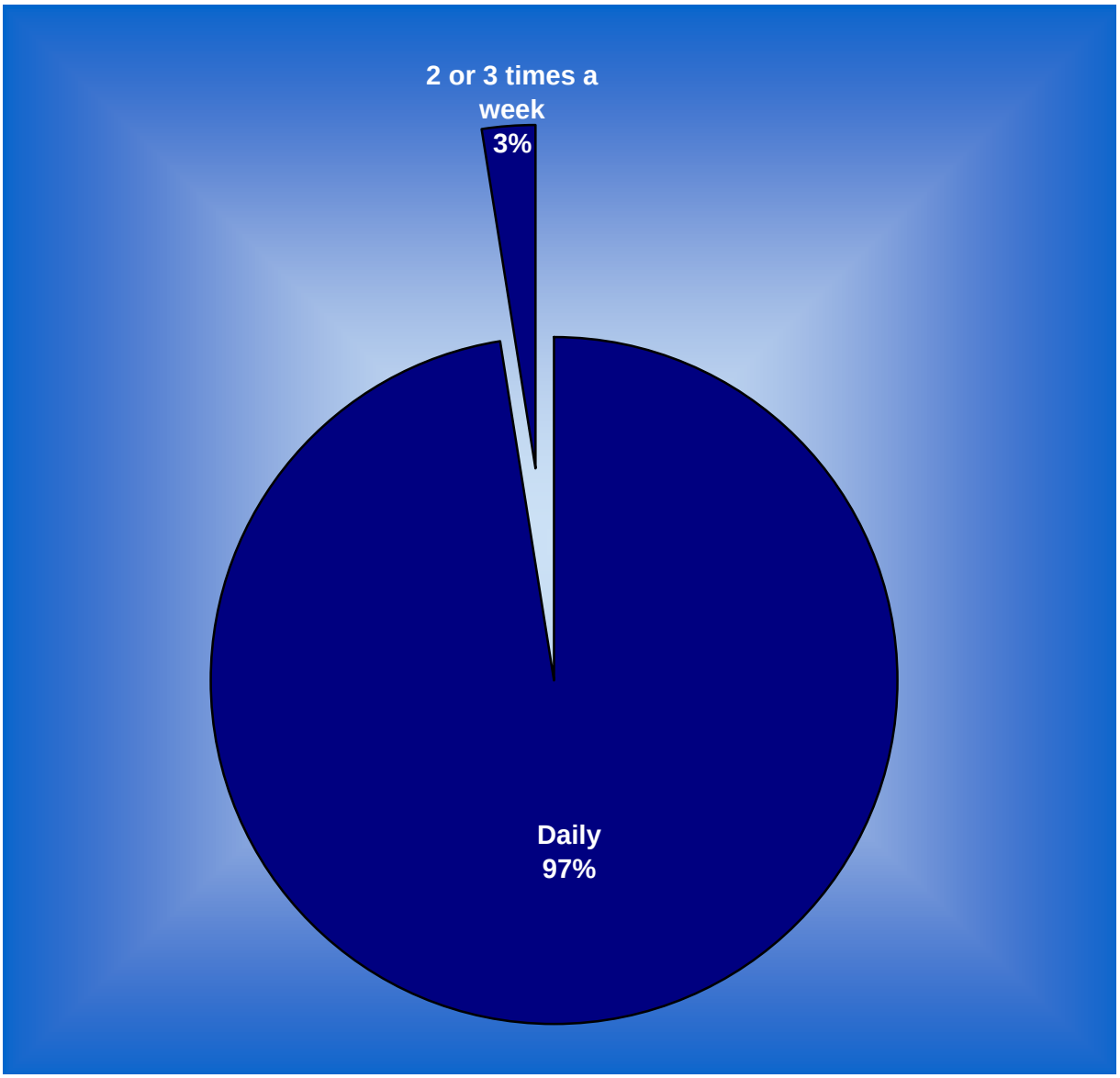


5.3 Internet use: Web 2.0

5.3.1 Overview

The majority of participants are very frequent users of Web 2.0 resources: 39 of the 40 respondents access social networking sites daily. The remaining respondent accesses Web 2.0 sites two or three times a week.

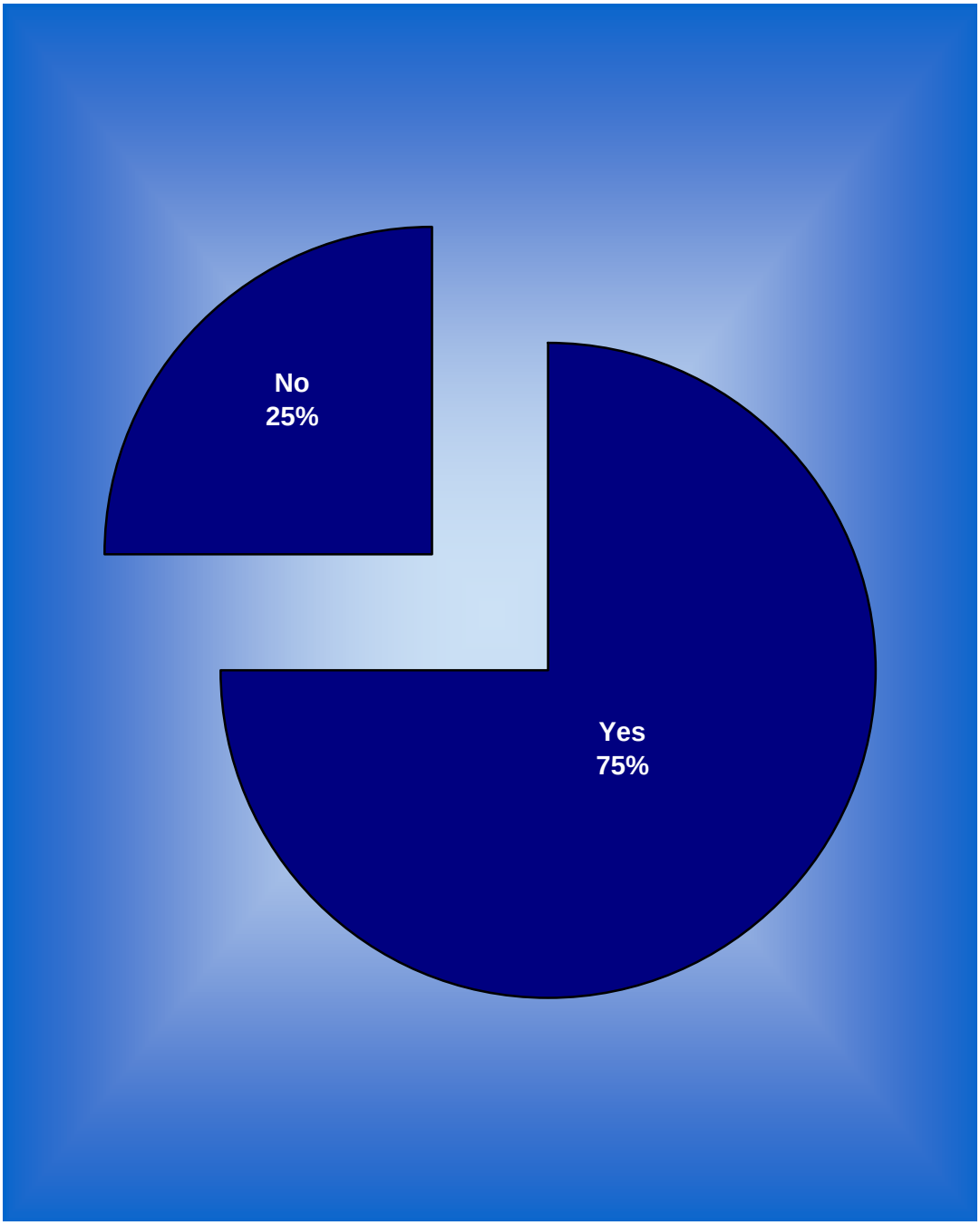
Fig. 22 Frequency of Web 2.0 usage (n=40)



5.3.2 Disclosure of sexual orientation on Web 2.0

The majority of participants had disclosed their sexual orientation on Web 2.0 sites: 30 of the 40 participants stated that they had revealed their sexual orientation on social networking sites.

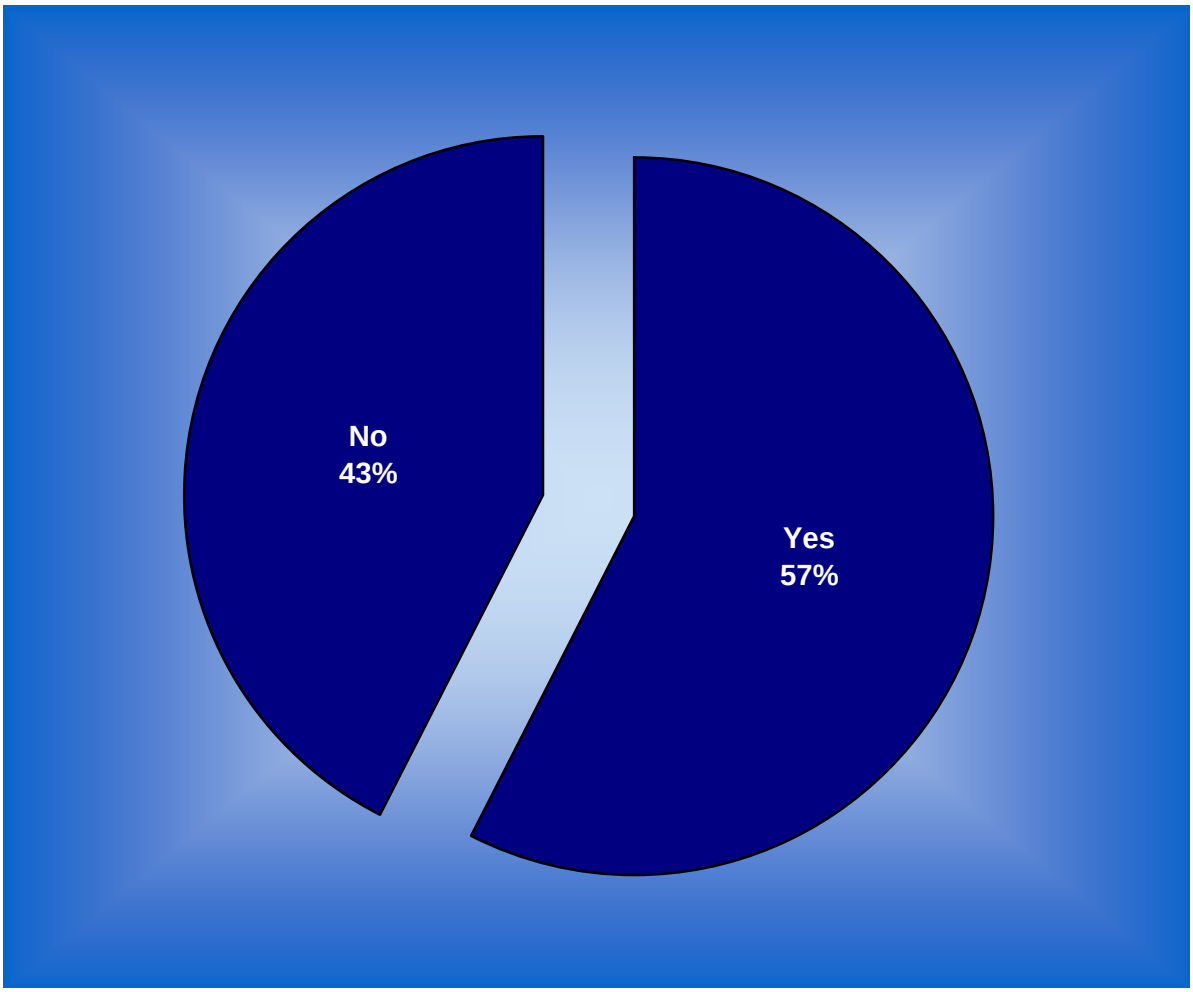
Fig. 23 Proportion of participants who disclose their sexual orientation on Web 2.0 sites (n=40)



5.3.3 Virtual communities

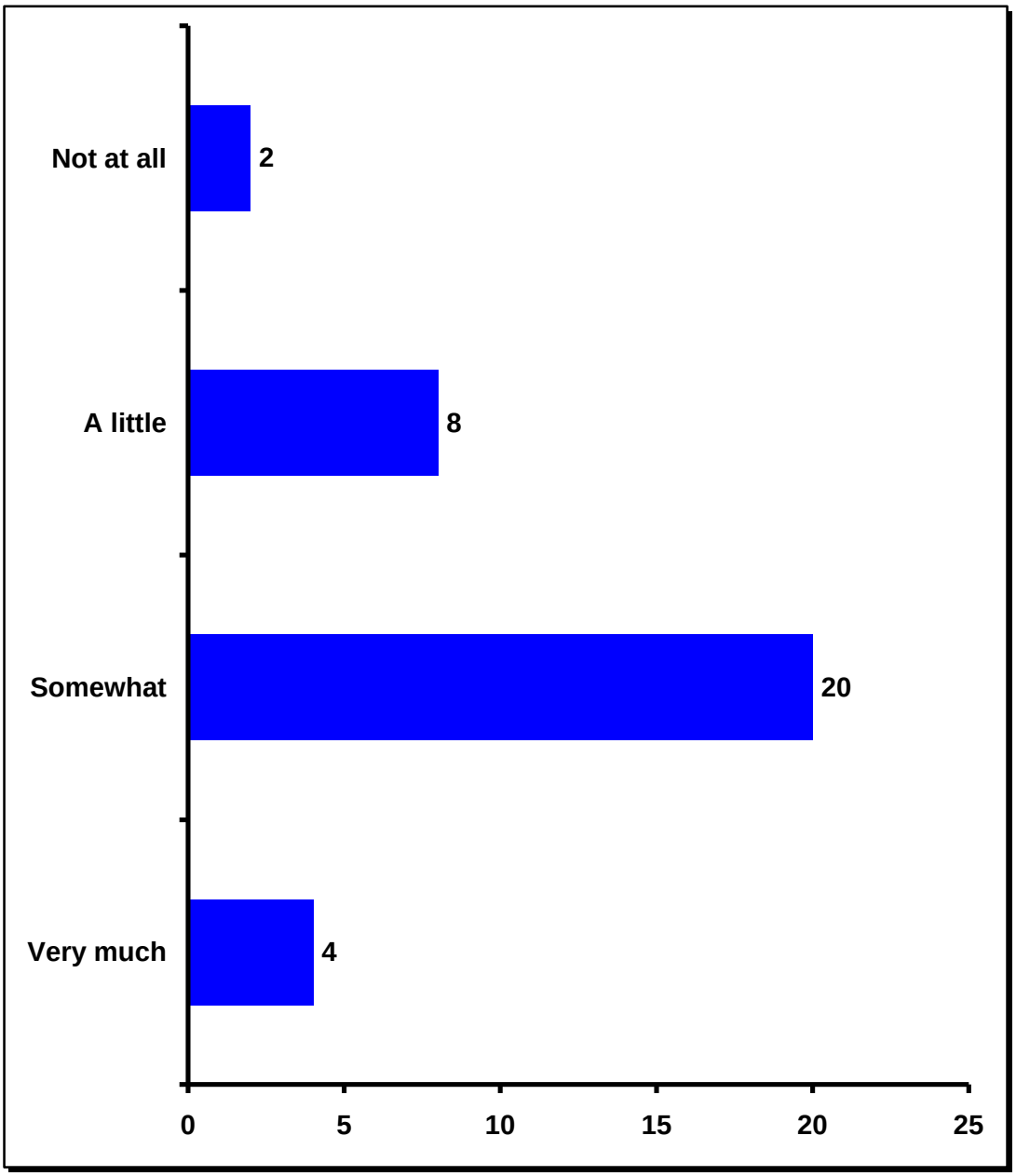
The majority of participants stated that they use the Internet to meet other LGBT people: 23 of the 40 participants use the Internet to meet other LGBT people.

Fig. 24 Proportion of participants who use the Internet to meet LGBT people (n=40)



A minority of six participants stated that they do not use the Internet to socialise and meet people. The vast majority of the 34 participants who socialise online stated that they gained a substantial sense of community from online contacts: when asked to describe the extent to which the people they met online provide them with a sense of community, four said “very much” and 20 said “somewhat”. Eight participants stated that they gain “a little” bit of a sense of community from online contacts and two participants stated that they gain no sense of community from online contacts.

Fig. 25 Sense of community gained from online contacts (n=34)

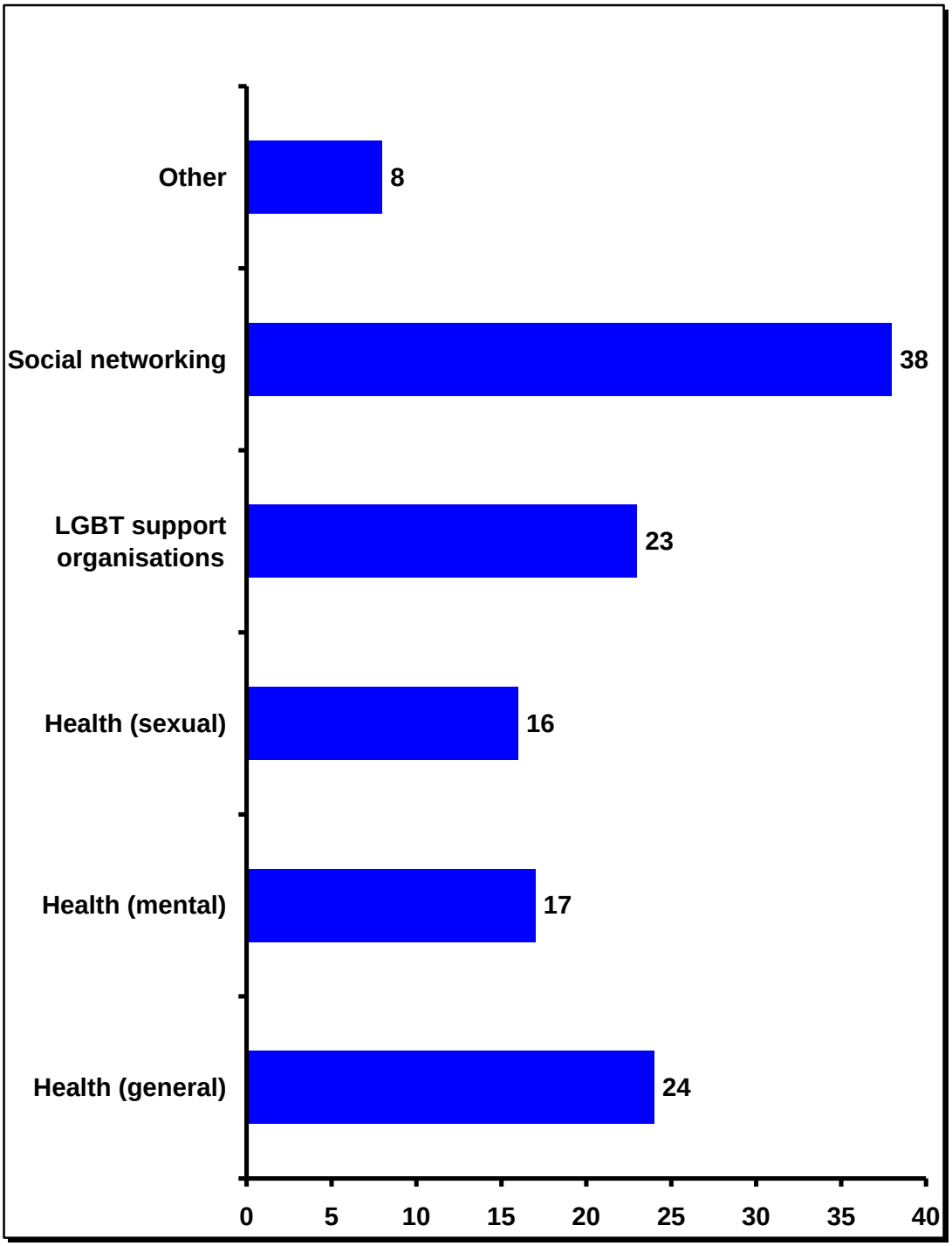


5.4 Internet use outside of public libraries

Outside of libraries, 97% of participants access LGBT websites: 39 participants stated that they access LGBT websites in a non-library location and one stated that they do not. The majority of participants also access social networking sites; LGBT support organisation sites; and general health sites outside of libraries. Thirty-eight of the 40 participants access social networking sites; 24 access general health sites

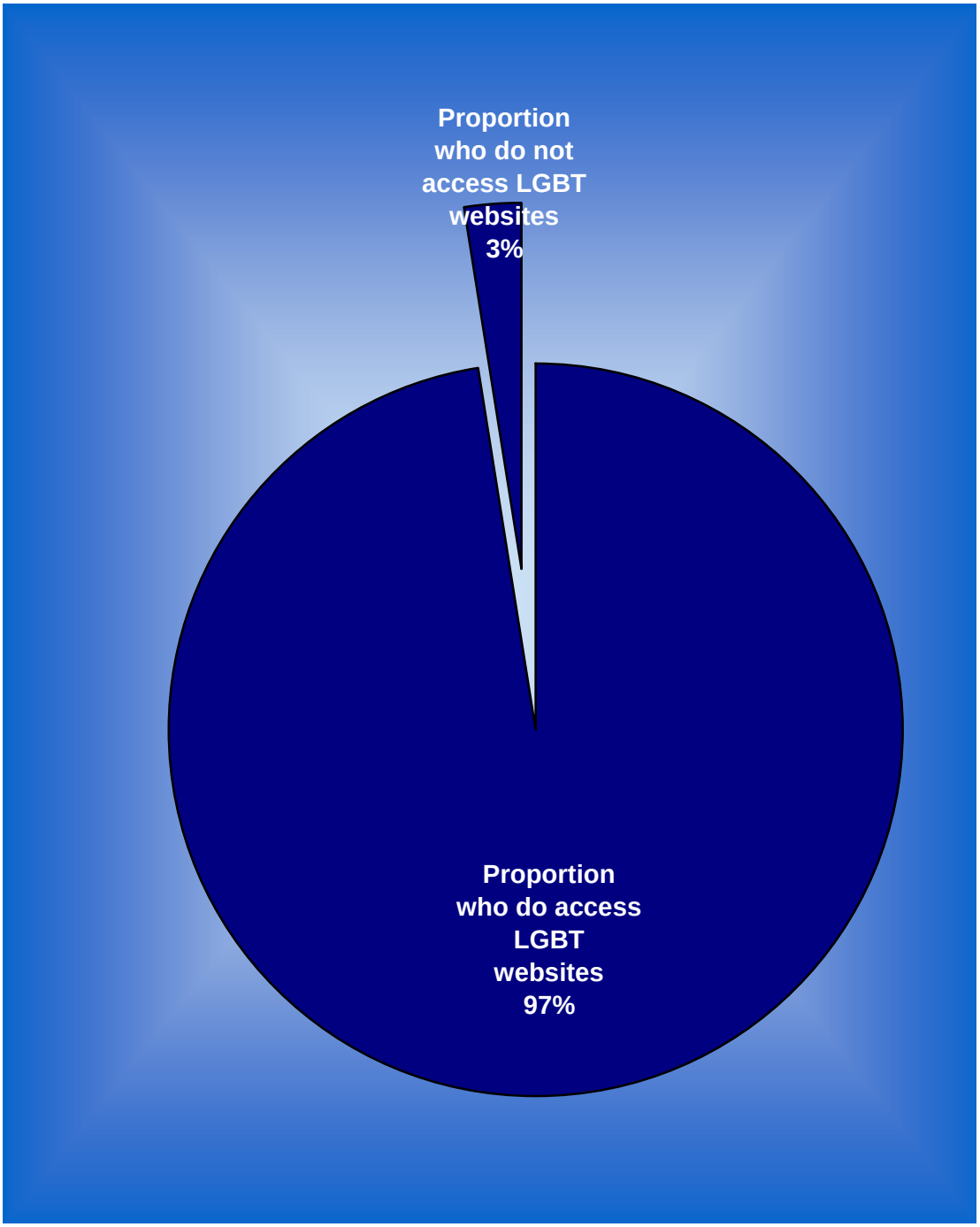
and 23 access LGBT support organisations. A significant minority access mental health and sexual health sites: 17 access the former and 16 access the latter. The two most popular categories of site in a non-library context are social networking and general health.

Fig. 26 Categories of website accessed outside of libraries (n=40)



Five of the eight respondents who visit sites classed as 'other' visit additional categories of LGBT and Web 2.0 sites: two visit "dating/sex" sites; one visits "political/campaigning" sites; one visits LGBT news sites; and one visits "LGBT performers and activists groups" sites.

Fig. 27 Proportion of participants who access LGBT websites outside of libraries (n=40)

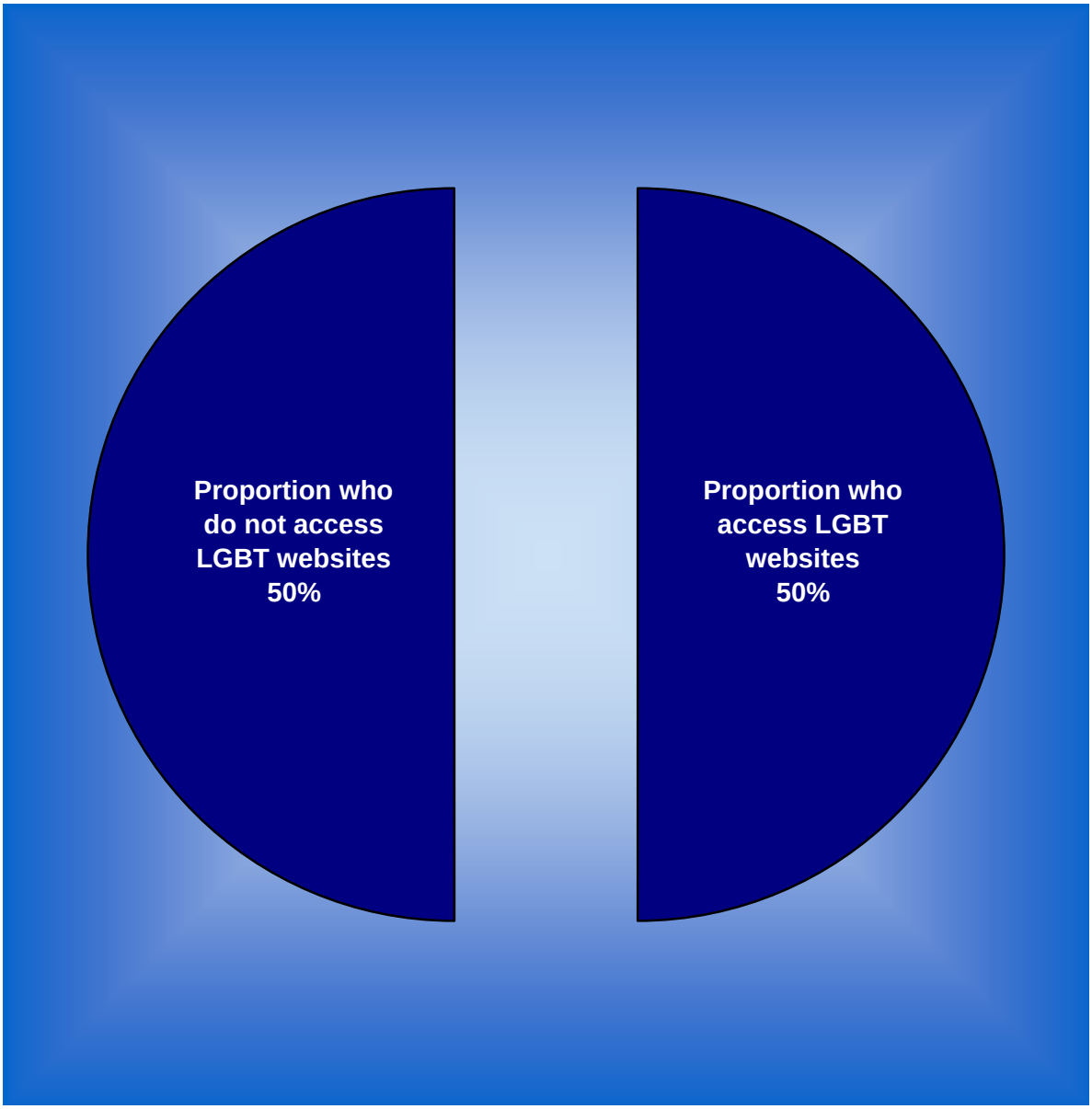


5.5 Internet use in public libraries

5.5.1 LGBT websites

The percentage of participants who access LGBT websites drops sharply inside public libraries. Out of the 40 participants, 39 access LGBT websites outside of public libraries: in contrast, only five of the ten participants who use computers in public libraries access LGBT websites on library computers.

Fig. 28 Proportion of participants who access LGBT websites in libraries (n=10)



5.5.2 Categories of website accessed in public libraries

The proportion of respondents who use the Internet to access health information; LGBT support organisations; and social networking websites is lower inside public libraries compared to other locations.

- Out of the 40 participants, 23 access general health websites outside of public libraries. In contrast, only four of the ten participants who access the Internet in public libraries access general health websites on library computers.

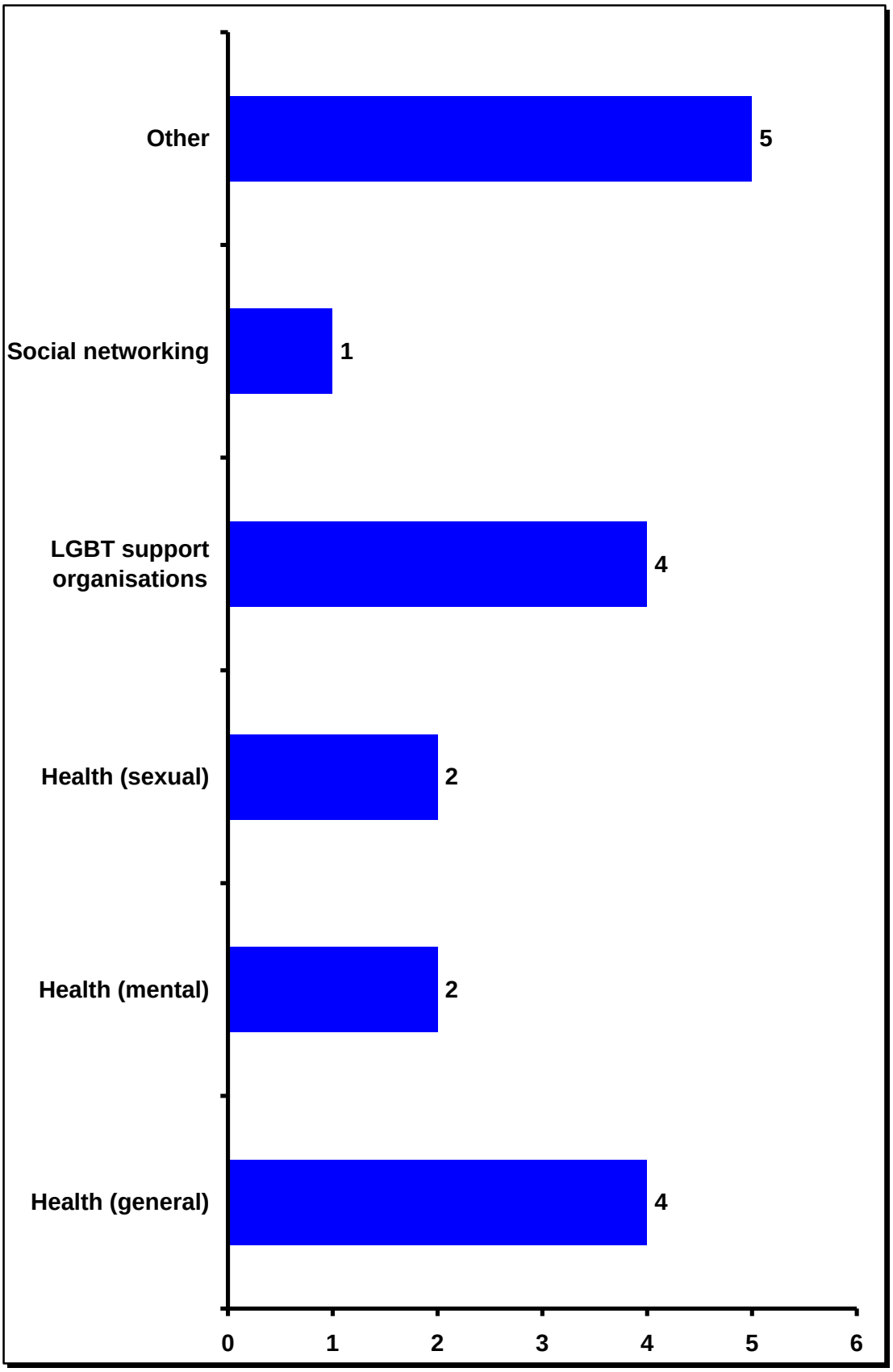
- Out of the 40 participants, 17 access mental health websites outside of public libraries. In contrast, only two of the ten participants who access the Internet in public libraries access mental health websites on library computers.

- Out of the 40 participants, 16 access sexual health websites outside of public libraries. In contrast, only two of the ten participants who access the Internet in public libraries access sexual health websites on library computers.

- Out of the 40 participants, 23 access LGBT support organisation websites outside of public libraries. In contrast, only four of the ten participants who access the Internet in public libraries access LGBT support organisation websites on library computers.

- Out of the 40 participants, 38 access social networking websites outside of public libraries. In contrast, only five of the ten participants who access the Internet in public libraries access social networking websites on library computers.

Fig. 29 Categories of website accessed in libraries (n=18)

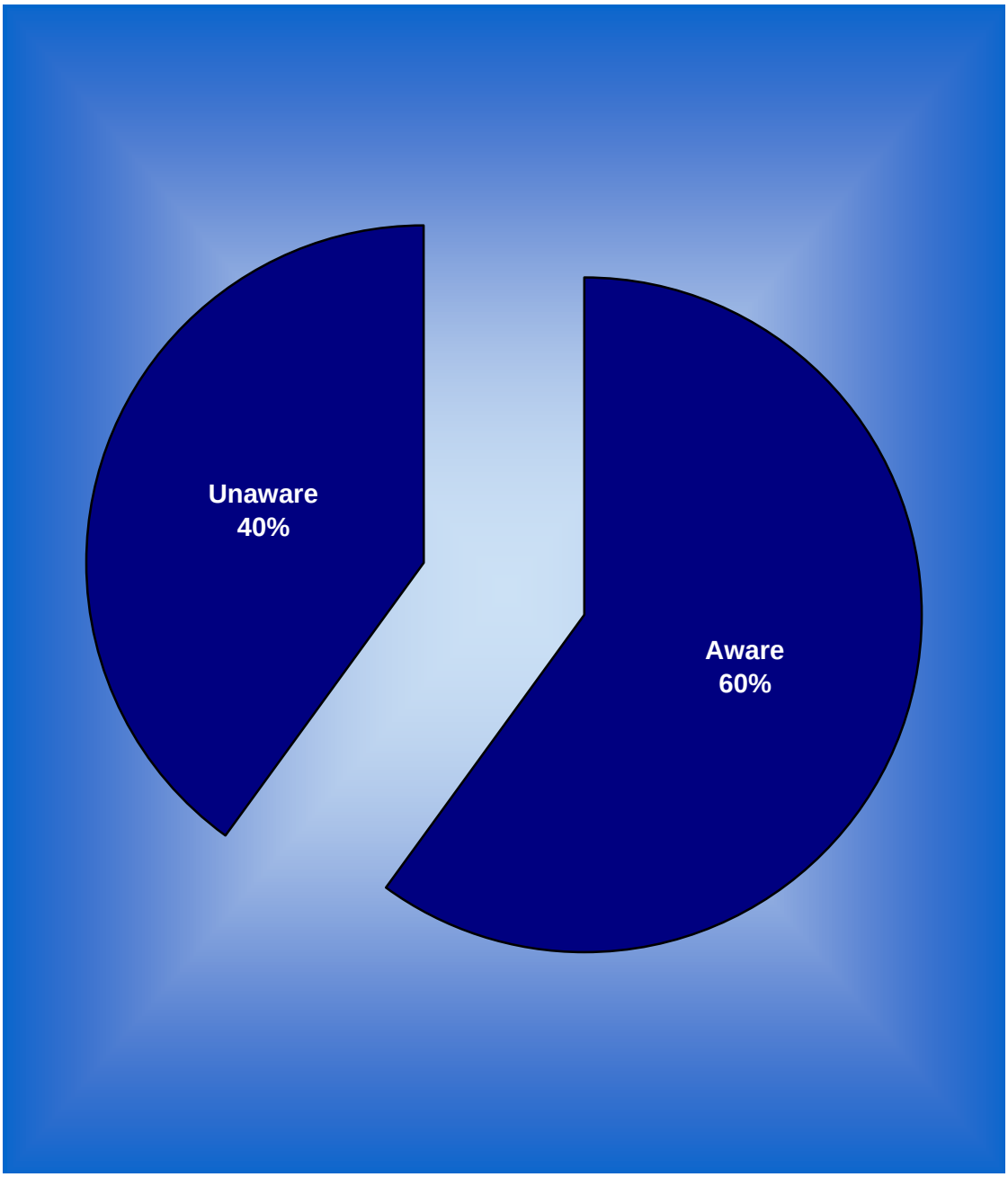


5.6 Filtering software

5.6.1 Knowledge of filtering software

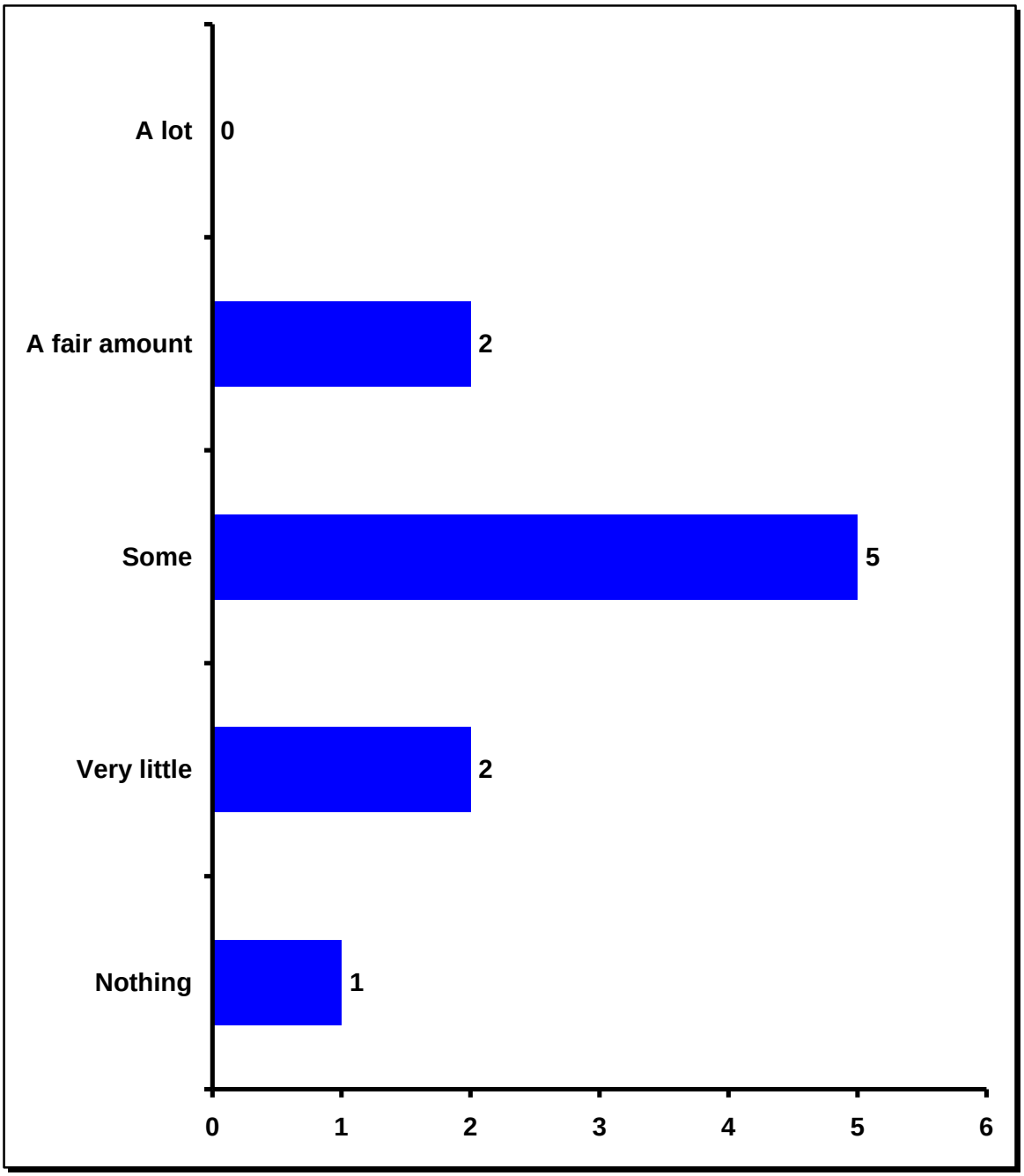
Six of the ten participants who use public library computers were unaware that some public libraries use filtering software to block certain categories of website.

Fig. 30 Proportion of participants who were aware that some public libraries use filtering software (n=10)



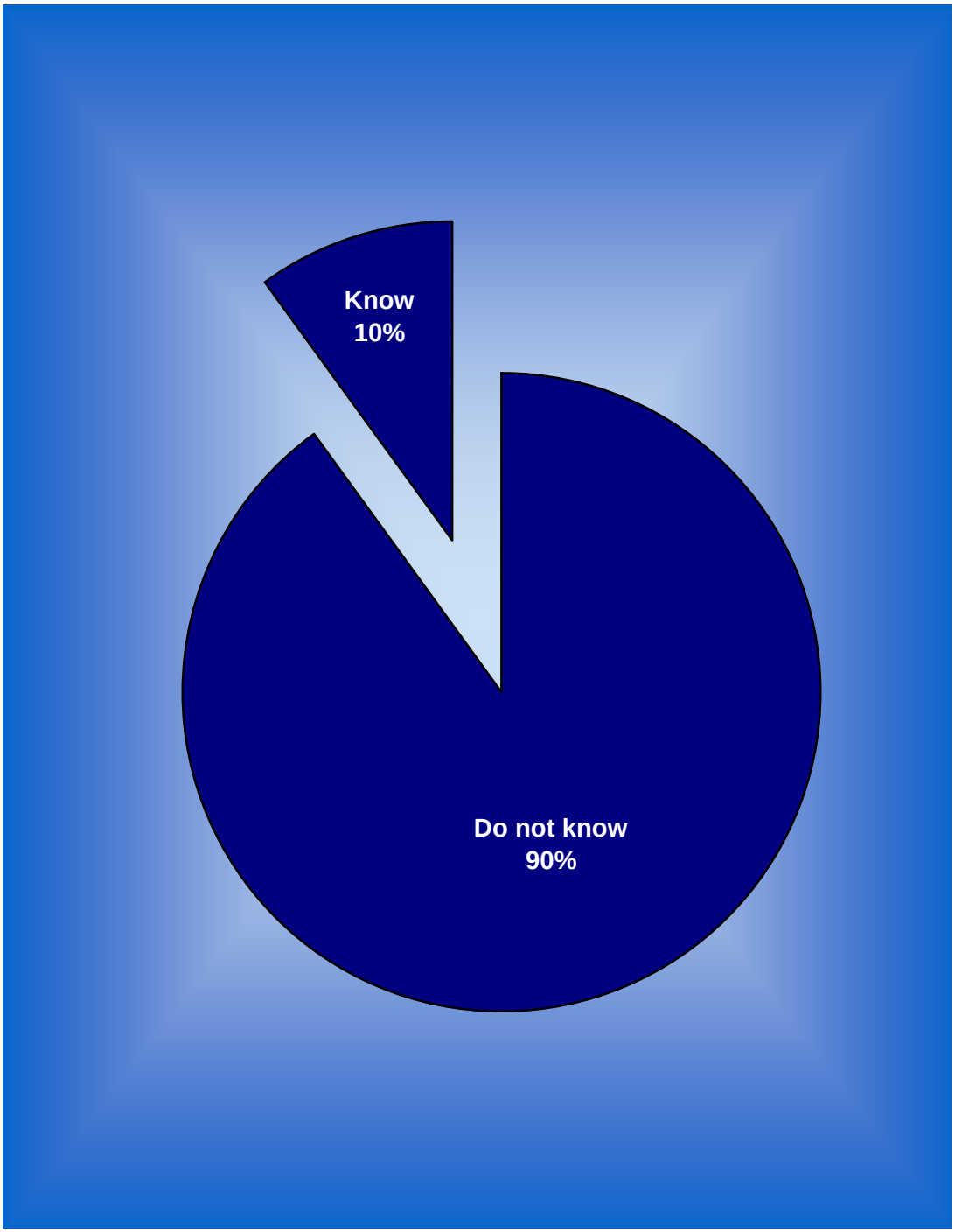
Out of the ten library computer users, the majority expressed some knowledge of filtering software: two stated that they know a fair amount and one stated that they have some knowledge. However a sizeable minority of three expressed a poor or non-existent level of knowledge about filtering: two stated that they know very little and one stated that they know nothing. None of the respondents described themselves as knowing “a lot” about filtering software.

Fig. 31 Extent of participants’ knowledge of filtering software (n=10)



Out of the ten participants who access the Internet in libraries, an overwhelming majority of nine stated that they do not know whether their local library uses filtering software on its public access computers.

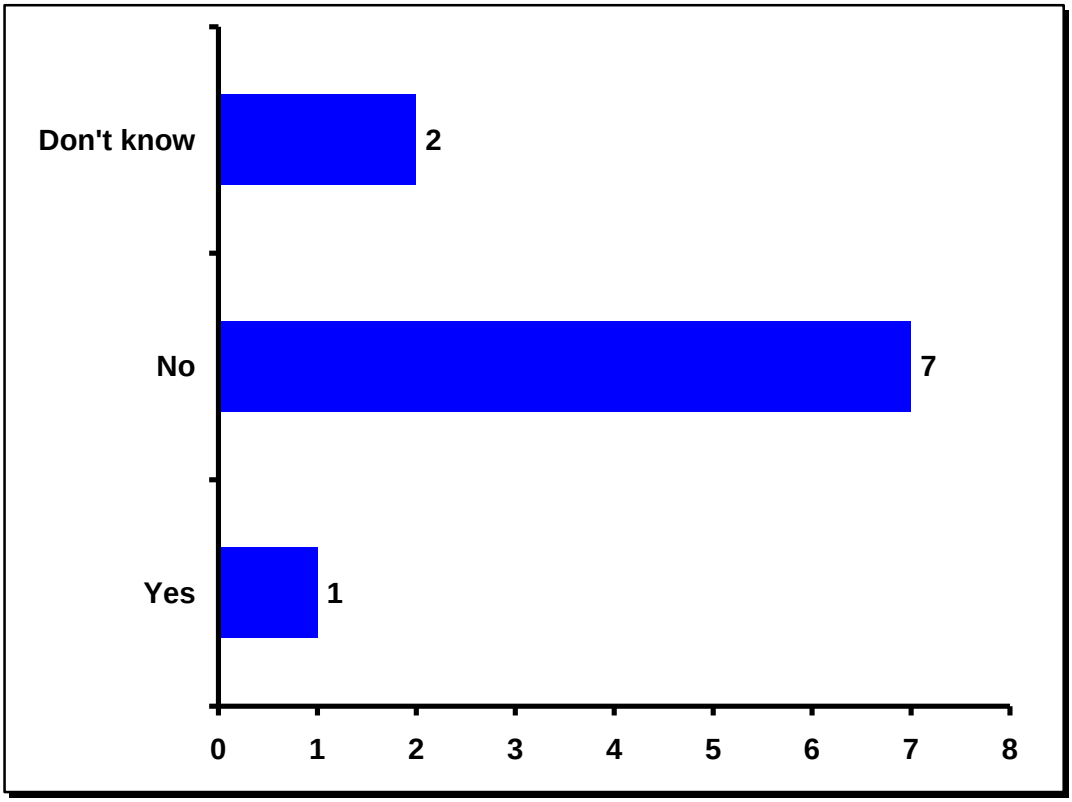
Fig. 32 Proportion of participants who know if their library service utilizes filtering software (n=10)



5.6.2 Experience of filtering software

Out of the ten participants who utilize library computers, a majority of seven stated that they have not had a website blocked by filtering software while using a library computer. One participant was aware of having a website blocked while using a library computer. Two participants did not know if they had ever had a website blocked while using a library computer.

Fig. 33 Proportion aware of having a website blocked (n=10)



The participant who was aware of having had a website blocked in a library stated that the website blocked was a LGBT support organisation website: www.lgbthealth.org.uk. They had attempted to access this website for information about a sexual health education programme run by the organisation:

> "I was trying to access some information from the website about a sexual safety training night".

The participant stated that a message had appeared explaining why the website had been blocked. They felt that the site was blocked because it had been classed as sexually explicit:

> "I assume that the computers at the local library counted that as sexually explicit".

The use of the word "assume" here indicates that the participant's awareness of the grounds on which the site was blocked did not come from the site blocked message which appeared on the computer monitor. At the very least it indicates a level of ambiguity in the explanation provided by the site blocked message.

The experience of having a website blocked discouraged this library patron from using computers in public libraries: when asked the extent of this impact the participant stated that the experience had "a little bit" of an impact on their willingness to use computers in public libraries. This indicates a moderate level of impact as the wording was chosen from a Likert-scale which included the following options: not at all; a little; somewhat; and very much. The participant also noted that the experience of having a website blocked had a moderate impact on their attitude towards public libraries in general. They stated that the experience had discouraged them "a little bit" from using public libraries.

In response to an open question about the impact of this experience the participant expressed some willingness to tolerate the use of filtering software (particularly in light of the fact that children can access library computers). However they were unhappy about the stringency of the categories used:

> "I can understand the difficulty of monitoring Internet content on such a large scale and the library choosing for quite a stringent interpretation of explicitness considering that the computers can be accessed by anyone. It's just that I wasn't looking up porn or anything, I was just trying to get some confirmation on information on a sexual health course".

This statement indicates that the participant perceived the library to have a substantial level of control over the implementation of filtering software.

5.6.3 Unblock requests

None of the participants had challenged the blocking of a website. The one participant who was aware of having had a website blocked in a public library did not request that the website be unblocked.

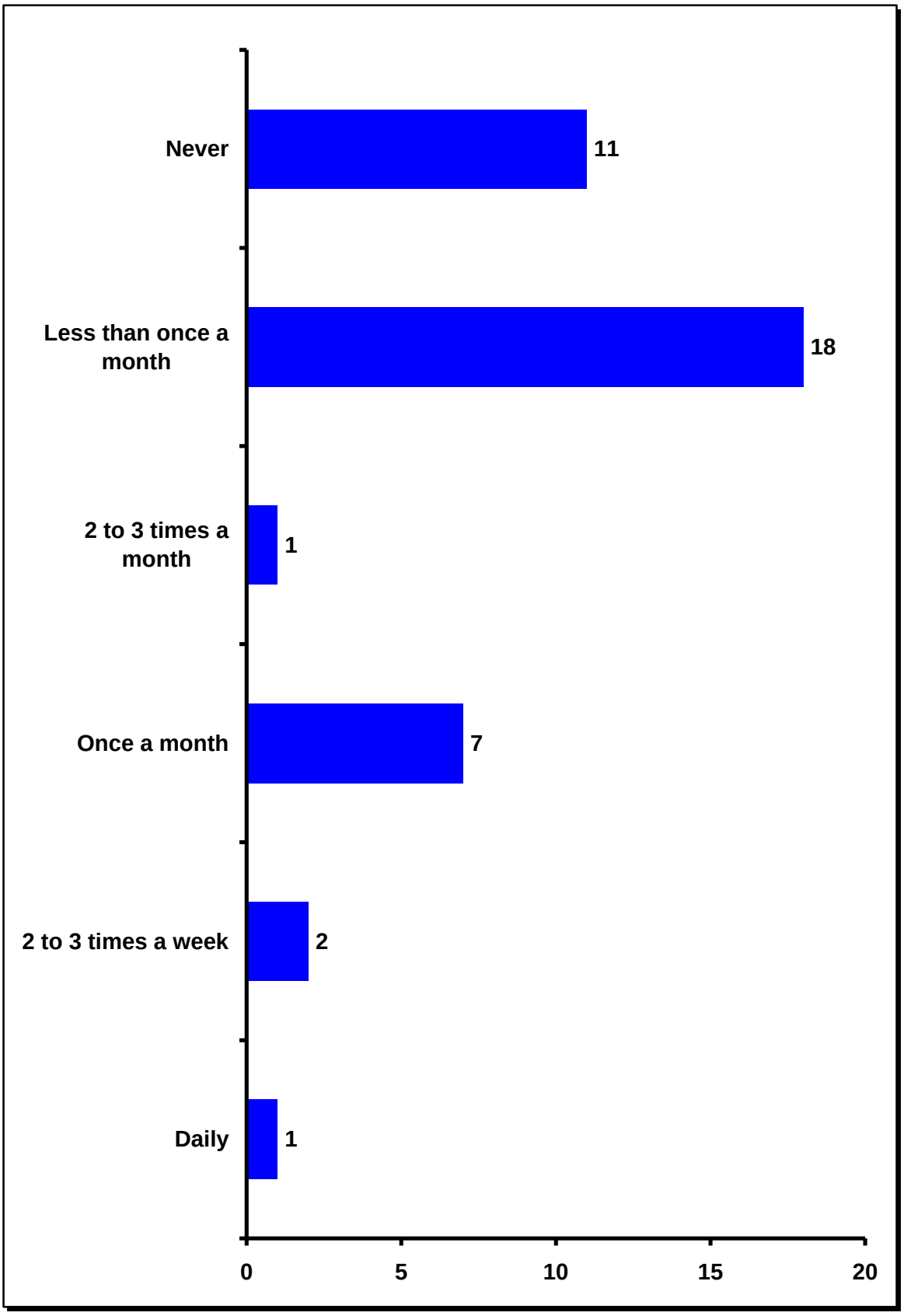
5.6.4 Effectiveness of filtering software

The participant who was aware of having a website blocked stated that the filter had proved ineffective: they were able to circumvent the software filter by asking the organisation which ran the sexual health course to email the information to them, “I simply requested the information in email form and read it on the same computer in the library”.

5.7 Library membership

The majority of participants are not active library members: 18 visit a library less frequently than once a month and 11 never visit a library. A sizeable minority of 11 are regular or frequent library users: one visits a library daily; two visit a library two or three times a week; seven visit a library once a month; and one visits a library two to three times a month.

Fig. 34 Frequency of participants' library visits (n=40)



5.8 Summary

Overall the data provided in response to the online questionnaire suggests that participants are very frequent users of Web 2.0 resources. Additionally the majority of participants stated that they gain a significant sense of community from social networking sites. The findings indicate that this sense of community is a specifically LGBT community: the majority of participants had disclosed their sexual identity on social networking and used the Internet to meet other LGBT people.

There is a wide variation in the type of sites participants access inside and outside of libraries. Participants are much less likely to access health websites; LGBT websites; and Web 2.0 resources inside a library.

Additionally, participants expressed a very low level of awareness about the use of filtering software in public libraries: out of the 10 respondents who access the Internet in public libraries, nine do not know if their local library uses filtering software.

DISCUSSION

6.1 Overview

There is a fundamental conflict between the stated aims of Scottish local authorities and the use of filtering software in Scottish public libraries. The objectives listed in the corporate plans of Scottish local authorities include commitments to promote: equality, citizens' employment prospects and citizens' health. In contradistinction to these aims, Scottish library services utilize filtering software which blocks the following categories of Internet resources: LGBT, recruitment and health.

Additionally, there is evidence of maladministration of filtering software in Scottish public libraries. The findings indicate that Scottish library services have little control over the implementation of filtering. Firstly, management of filtering software is routinely delegated to council IT departments. Secondly, the filtering products utilized are designed by and (to varying degrees) administered by external companies. Moreover, there is evidently a lack of co-ordination in relation to the implementation of filtering at a national level. Given this level of maladministration it is unsurprising that Scottish library services lack adequate access to information about the filtering products they employ.

Filters used by Scottish library services censor legitimate LGBT Internet resources. The following categories of LGBT Internet resources are censored: LGBT sexual health information; LGBT support organisation websites; and LGBT social networking resources. Web 2.0 sites are by far the most commonly blocked category of LGBT website.

Censorship of Web 2.0 resources is likely to have a significant impact on LGBT patrons. The findings of the online questionnaire are substantiated by previous research which indicates that LGBT people are frequent users of Web 2.0 resources and view the Internet as an important source of social support (Baams et al., 2011; Bernstein, 2004; Garry et al., 1999; Harris Interactive, 2008; Holt, 2010; Lemon and Patton, 1997; McKenna and Bargh, 1998; Miller, 1995).

The findings also indicate that filtering is a particularly opaque form of censorship: the majority of questionnaire participants expressed an extremely low level of awareness about the use of filtering software in public libraries.

6.2 Filtering conflicts with the stated aims of Scottish local authorities

6.2.1 Overview

There is a fundamental conflict between the stated aims of Scottish local authorities and the use of filtering software in Scottish public libraries. The corporate plans of all Scottish local authorities include a commitment to delivering and promoting equality. This commitment is supported by a legislative duty to deliver services in a manner which precludes discrimination. Many Scottish local authorities also declare a commitment to improving the employment prospects and health of citizens. However, in contradistinction to these stated aims, Scottish library services utilize filtering software which blocks the following categories of Internet resources: LGBT, recruitment and health. Moreover the use of filtering software in Scottish public libraries prevents patrons from accessing key government websites such as www.directgov.gov.uk and consequently restricts citizens' ability to participate in e-Government.

6.2.2 Equality

All Scottish local authorities express a commitment to equality in their mission statement. For example Angus Council pledges to "Promote fairness and equality" (Angus Council, n.d.). Many Scottish local authorities specifically pledge to promote equality for LGBT citizens. For instance Argyll and Bute Council vow to ensure that:

> "no-one is disadvantaged because of their age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation" (Argyll and Bute Council, n.d.).

This commitment to equality is frequently located within the context of the local authority's legal obligations under the Equality Act 2010. For example, Falkirk Council places its commitment to equality within this legal framework:

> "We recognise that people can be discriminated against for reasons including age, disability, sex, gender reassignment, pregnancy, maternity, race (which includes colour, nationality and ethnic or national origins), sexual orientation, religion or belief, or because someone is married or in a civil partnership. These characteristics are known as protected characteristics under the Equality Act 2010" (Falkirk Council, 2011).

In contradistinction to this avowed commitment to equality, five Scottish library services subscribe to a "Lifestyle" category which blocks non-pornographic LGBT websites. It is possible that the number of Scottish library services which subscribe to a "Lifestyle" category is higher: only 17 of the 32 library services surveyed supplied details of the categories they employ.

Furthermore, filtering results in discrimination against other excluded groups. For instance filtering software has a tendency to block peer to peer file sharing: this means that access to audio resources crucial to visually impaired patrons can be obstructed. One respondent disclosed that their filtering software blocks access to the Royal National Institute for the Blind's audio-book catalogue http://info.rnib.org.uk/tbookcat/ .

6.2.3 Employment

Many Scottish local authorities declare a commitment to improving the employment prospects of citizens. For example, one of East Renfrewshire's stated outcomes is a commitment to ensuring that "more of our residents have the skills needed for employment". Similarly Dundee City Council lists "Jobs and employability" as one of its strategic priorities (Dundee City Council, 2009; East Renfrewshire Council, 2011). However, the limited data released in response to FOI enquires reveals that filters utilized by Scottish library services block access to at least 149 recruitment websites.

Websites blocked include key recruitment portals such as www.jobcentreplus.gov.uk and www.myjobscotland.gov.uk .

6.2.4 Health

Another common objective of Scottish local authorities is improving the health of citizens. Glasgow Life is typical in listing "The right to health and well-being" as a strategic priority (Glasgow Life, 2006). Similarly, Renfrewshire Council commits itself to "Improving levels of health". Renfrewshire's objectives include the promotion of "good mental health" and "a significant reduction in the number of people whose consumption of alcohol is beyond safe levels" (Renfrewshire Council, n.d.). Moreover, the creation of a healthier Scotland is one of the Scottish Government's strategic objectives (Scottish Government, 2012).

However, the findings of this study indicate that filtering software used by Scottish library services blocks access to health information including information relating to mental health and addiction. Internet material blocked by one respondent over a two month period includes information relating to alcohol and drug addiction; mental health; and sexual health. Additionally websites which patrons might wish to access to investigate their treatment options and rights under the NHS are blocked. The websites blocked include:

- A breast cancer support organisation http://www.breastcancer.org/
- A Web 2.0 resource for depression sufferers www.depressionroom.com/forums/index.php
- An epilepsy support organisation http://www.epilepsy.org.uk/
- A government sponsored drugs advice service www.talktofrank.com/
- NHS Forth Valley www.nhsforthvalley.com
- NHS Greater Glasgow & Clyde's sexual health website http://www.sandyford.org/
- NHS National Institute for Health and Clinical Excellence http://www.nice.org.uk/

Websites blocked by another respondent included cancer support charity Macmillan www.macmillan.org.uk. Blocking access to Macmillan's website is in direct conflict with a project run by another library service: Glasgow Libraries' partnership with Macmillan (Glasgow Libraries, 2010).

6.3 Maladministration of filtering software in Scottish public libraries

6.3.1 Overview

Scottish library services are extremely reluctant to discuss the use of filtering software in public libraries. This is unsurprising given that the use of filtering software conflicts directly with the mission statements of their parent organisations. Moreover, Scottish library services do not have full access to data relating to the filtering products they employ. The unavailability of this data is indicative of a lack of control over the implementation of filtering. Furthermore Scottish library services' lack of control over the implementation of filtering is representative of their lack of control over library computer networks. The findings also indicate a lack of co-ordination in the implementation of filtering at a national level.

6.3.2 Reluctance to discuss filtering

Scottish library services were reluctant to discuss filtering software: 31 of the 32 local authorities contacted failed to provide a full response to the FOI request and one respondent failed to reply to the FOI request within the stipulated time-frame. Out of the 30 respondents who subscribe to filtering software: 13 failed to provide the names of the filtering categories they subscribe to and 26 failed to provide a list of URLs or stop-words blocked over a six month period. None of the respondents supplied details of the websites or stop-words listed under these categories. In many cases respondents failed to provide any explanation for their refusal to supply data requested under the Freedom of Information (Scotland) Act.

In addition to an evident lack of co-operation many FOI responses expressed a degree of hostility and a disinclination to consider the issue of filtering seriously. For

example, one respondent commented that they considered time spent answering the FOI request to be a waste of resources:

> "I have asked … [librarian A] not to respond to you any further on this. As you know, resources are extremely tight … and … [librarian A] has already spent more than enough time on this".

This respondent also requested that the researcher re-submit the FOI request to a different department (the council's IT department) in order to access the requested data: a demand which breaches the Freedom of Information (Scotland) Act since an FOI request can be lodged with any member of an organisation (HMSO, 2002).

6.3.3 Lack of adequate access to data about filtering

One reason for respondents' failure to supply the information requested is a lack of access to data: Scottish library services do not have adequate access to information about the filtering products they employ. An inability to access data was the principal explanation provided for refusal to supply data. Out of the 30 Scottish library services which utilize filtering software, 29 do not have access to details of the websites and stop-words covered by the categories they subscribe to. Additionally, 14 do not have access to details of websites which were blocked in their libraries over a six month period.

These findings support Houghton-Jan's supposition that software providers are unlikely to provide library services with specific details of websites blocked:

> "Filtering software companies do not tell their customers in detail, the types of things or what specific sites they block in each category… Because companies ferociously protect their list of categorized sites and their process for categorizing, there is no way of obtaining a list of sites that are blocked in certain categories, as that is considered a trade secret" (Houghton-Jan, 2008).

6.3.4 Inadequate control over the implementation of filtering

Scottish library services have little control over the implementation of filtering software. This lack of control is a consequence of the outsourcing of management of library computer networks at two levels: internally and externally. Firstly, management of public Internet access is delegated to another department within the parent organisation: council IT departments are granted control over many aspects of the library's computer network. Secondly, the filtering products utilized are designed by and (to varying degrees) administered by external companies. Software providers who lack the classification skills of professional librarians and possess values alien to the ethos of the library service are granted considerable control over the management of public Internet access. These findings are supported by a recent study: Brown and McMenemy similarly found that Scottish library services have little control over implementation of filtering software (Brown and McMenemy, 2012).

Administration of filtering software on public access computers in Scottish libraries generally falls under the jurisdiction of council IT departments rather than library services. This is evident from comments indicating that FOI requests had been forwarded to the local authority's IT department. The following statement by one respondent is typical: "I have forwarded your request to ICT services". Several respondents directly stated that the implementation of filtering software in their libraries comes under the jurisdiction of the wider IT policy of the council. For example, one respondent remarked that, "Internet filtering is operated by a managed service arrangement as part of a larger ICT contract".

Responses to the FOI requests also indicate that administration of filtering software is frequently delegated to the software provider. Many respondents perceive the selection of criteria for blocking to be the responsibility of the software provider. The following comment is typical: "We block on category, and leave it up to the filtering software provider to mark a site against a category within their database".

One of the risks associated with outsourcing services is that patron's will presume the values of the external organisation are those of the library service. For example if a library service subscribes to a "Lifestyle" category which blocks legitimate LGBT Internet resources, they could be associated with the homophobic values of the

software provider. The participant who was aware of having a website blocked clearly indicated that they perceive the library service to have a great deal of control over the implementation of filtering software:

> "I can understand the difficulty of monitoring Internet content on such a large scale and the library choosing for quite a stringent interpretation of explicitness considering that the computers can be accessed by anyone. It's just that I wasn't looking up porn or anything, I was just trying to get some confirmation on information on a sexual health course".

It is noteworthy that this participant stated that as well as having a negative impact on their attitude towards Internet use in libraries the experience had a negative impact on their attitude towards public libraries in general.

6.3.5 Lack of co-ordination

The limited data provided in response to FOI requests indicates a lack of co-ordination in the implementation of filtering software across Scottish public libraries. This lack of coherence is evident in the wide variety of filtering products used. At least six different software products are utilized by Scottish library services and only one of these products is utilized by more than one library service.

A lack of coherence is also evident in the large variation in the number of sites blocked by different library services. One respondent blocked 2205 sites over a two month period: another respondent blocked 29401 sites over the same period. Similarly, one respondent blocked 463 sites over a six month period: another respondent blocked 5072 sites over the same period. Scottish library services are either using filters of widely varying strengths or setting their individual filters at different levels.

6.3.6 Failure to process unblock requests properly

Scottish library services fail to handle unblock requests in a competent and co-ordinated manner. The majority of Scottish library services do keep unblock request records: out of the 30 Scottish library services which stated that they employ filtering software, 23 keep records of unblock requests. However, only six of the 23 respondents who keep unblock request records were able to provide full and detailed information such as the date on which the request was placed.

The findings indicate that in some instances the processing of unblock requests was outsourced to either the Council's IT department or the software provider. Data provided by one respondent indicates that the council's IT department, rather than their library service, is responsible for responding to unblock requests. The unblock request records provided by this respondent included notes which suggest that these records had been merged with general IT helpdesk comments. For example in one instance the comment clearly refers to general IT troubleshooting rather than a filtering issue: "Not filtered. After query user was using wrong URL". Similarly, another respondent noted that they did not have permission to view the filter that was blocking a website; consequently they were unable to release the website and had to forward the request to their software provider.

Monitoring of responses to unblock request would be impossible in any case: at least 30 Scottish library services do not have access to details of the URLs or stop-words blocked by their software providers. There would be no way for these library services to monitor blocked site lists to ensure that the site remained unblocked.

6.3.7 Wide variations in responses to unblock requests

Responses to unblock requests vary greatly between different categories of website. For example, requests to unblock LGBT websites are among the least successful and have a 100% failure rate. This contrasts markedly with responses to other categories of website. Only one other category (peer-to-peer file sharing) has a 100% failure rate and out of the 31 categories noted by the researcher no other categories of unblock request have a failure rate above 50%.

However, the vast majority of unblock requests were successful. Out of a total of 231 recorded requests 164 were released and 26 were not blocked in the first instance. This indicates that library staff are willing to override filtering software when they have an opportunity to do so. The willingness of librarians to unblock websites highlights a disparity between the ethos of Scottish library services and the ethos of the external software providers they employ.

6.4 Filters block LGBT material

Filters utilized in Scottish public libraries censor the following categories of LGBT information: support organisations; sexual health; and Web 2.0 resources. The majority of blocked attempts to access LGBT websites relate to Web 2.0 resources. Out of the eleven blocked attempts to access LGBT sites, nine relate to social networking sites. Specific LGBT websites blocked include:

- LGBT Centre for Health and Wellbeing's website www.lgbthealth.org.uk
- LGBT Youth Scotland's Twitter page http://twitter.com/LGBTYS
- LGBT youth forum Queer Attitude www.queerattitude.com/
- Web 2.0/dating site www.gaydargirls.com;
- Web 2.0/dating site www.gayromeo.com.
- Web 2.0/travel site http://www.gayscout.com/

These findings are corroborated by previous studies by Holt and others which indicate that filtering software blocks legitimate LGBT Internet material, particularly material relating to the formation of online LGBT communities (Holt, 2006; Holt, 2010; Storts-Brinks, 2010).

6.5 Filters block access to virtual social support networks

6.5.1 Overview

Filtering software utilized by Scottish library services blocks access to a substantial number of social networking sites. The responses provided by the online

questionnaire participants indicate that this is likely to have a considerable impact on LGBT patrons: the majority of participants use Web 2.0 resources frequently and gain a significant sense of community from the people they meet online. These findings substantiate previous research indicating that LGBT people are frequent users of Web 2.0 resources and gain a sense of community from social networking sites (Baams et al., 2011; Bernstein, 2004; Garry et al., 1999; Harris Interactive, 2008; Holt, 2010; Lemon and Patton, 1997; McKenna and Bargh, 1998; Miller, 1995).

6.5.2 Filters block Web 2.0 resources

Filtering software utilized in Scottish libraries blocks access to a large number of social networking sites. The limited data supplied indicates that patrons were prevented from accessing social networking sites on at least 2834 occasions. Additionally, it is indicative that unblock requests relating to Web 2.0 resources were the second most common category of unblock requests.

6.5.3 Scottish library services censor LGBT social networking sites

The data provided in response to FOI requests confirms that LGBT social networking sites are blocked by filtering products utilized in Scottish public libraries. Blocked LGBT social networking sites include:

- Dating/Web 2.0 site Gaydar Girls www.gaydargirls.com
- Dating/Web 2.0 site www.gayromeo.com
- Travel/Web 2.0 site www.gayscout.com
- LGBT youth forum Queer Attitude http://www.queerattitude.com/

Furthermore, the LGBT “Lifestyle” category subscribed to by at least five Scottish library services clearly targets community building resources such as support organisation websites and blogs. For example, Clearswift explicitly states that its Lifestyle category blocks access to LGBT organisation websites and personal home pages:

> “Sites dedicated to GLBT orientation issues, resources, outreach, including portals, clubs, associations, personal sites (personal home pages), activism, etc.” (Clearswift, 2012).

6.5.4 LGBT people are frequent users of Web 2.0 resources

The findings of the online questionnaire indicate that censorship of Web 2.0 resources is likely to have a significant impact on LGBT patrons. The participants are very frequent users of Web 2.0 resources: 39 out of the 40 participants access social networking sites on a daily basis.

6.5.5 LGBT people gain a sense of community from Web 2.0 resources

The questionnaire responses indicate that LGBT people gain a significant sense of community from Web 2.0 resources. The majority of participants consider social networking sites to be a source of a specifically LGBT virtual community. Out of the 40 participants, 30 had disclosed their sexual orientation online and 23 use the Internet to meet other LGBT people. Additionally out of the 34 participants who socialise online, 32 stated that they gain a sense of community from their online contacts.

Participants were sourced via social networking sites; consequently it is possible that they are more frequent users of Web 2.0 resources than the general LGBT population. However, the findings are validated by previous studies which indicate that LGBT people are frequent users of social networking sites and gain a sense of community from these resources (Baams et al., 2011; Bernstein, 2004; Garry et al., 1999; Harris Interactive, 2008; Holt, 2010; Lemon and Patton, 1997; McKenna and Bargh, 1998; Miller, 1995).

The importance of the online LGBT community is underlined by the response of one participant; a young LGBT person who stated that they had not disclosed their sexual orientation to anyone either in real life or on Web 2.0 resources. However this individual indicated that the Internet provided them with access to a virtual LGBT

community: they stated that they use the Internet to access LGBT websites and to meet other LGBT individuals. Additionally they stated that they gain a sense of community from these online interactions.

6.6 Filtering is a covert form of censorship

The reluctance of LGBT patrons to challenge censorship of a LGBT website is not surprising within the context of the personal nature of information relating to sexuality. However responses to the online questionnaire reveal another possible explanation for the low rate of challenges: the majority of participants expressed a low level of awareness about filtering software. Out of ten participants who access the Internet in public libraries: nine did not know if their local library uses filtering software and three expressed a low or non-existent level of knowledge about filtering software. As Zittrain and Palfrey state, the censorship of digital material is a particularly dangerous form of censorship because it is more opaque and absolute than censorship of printed material (Zittrain and Palfrey, 2008).

6.7 Patron self-censorship

The findings suggest that LGBT library patrons self-censor their Internet behaviour in public libraries. Participants stated that they are less likely to access LGBT resources in libraries.

The percentage of participants who access LGBT websites drops sharply inside public libraries. Out of the 40 participants, 39 access LGBT websites outside of public libraries: in contrast, only five of the ten participants who use computers in public libraries access LGBT websites on library computers. Similarly the proportion of participants who access LGBT support organisation websites drops in public libraries. Out of the 40 participants, 23 access LGBT support organisation websites outside of public libraries. In contrast, only four of the ten participants who access the Internet in public libraries access LGBT support organisation websites on library websites.

An evaluation of the extent to which this is the result of either the observer effect or an internalisation of homophobic values is beyond the scope of the present study. However the alteration in participants Internet behaviour inside libraries is noteworthy and indicates a problematic relationship between public libraries and LGBT library patrons.

6.8 Value and limitations of the study

6.8.1 Value of the study

There is a paucity of research on the extent to which filtering software censors LGBT Internet material in public libraries. Similarly research about the impact of the censorship of LGBT Internet resources on LGBT patrons is virtually non-existent. Holt's study is the only extant research to consider the impact of filtering software on LGBT public library patrons (Holt, 2006).

Furthermore, filtering has an impact upon a substantial number of Scottish library patrons. Firstly, the use of filtering software in Scottish public libraries is endemic: out of 32 Scottish library services, at least 30 utilize filtering software. Secondly, the proportion of Scottish library patrons who use their library for Internet access is significant; moreover this number is increasing exponentially (Scottish Government, 2011a).

The researcher anticipates that the findings of this study will inform the establishment of Internet management policies in Scottish public libraries which are more in line with the ethics of the library profession and the stated aims of Scottish local authorities. More importantly, the researcher envisages that the formation of improved Internet management policies will have a positive impact upon patrons: facilitating access to crucial virtual support networks and critical information on important topics such as employment and health.

6.8.2 Limitations of the study

The number of online questionnaire participants was limited. Findings relating to a larger population sample could be applied to the LGBT community with a greater degree of reliability. Stratified random sampling would have increased the accuracy of the online questionnaire findings. However, as Bridge notes, any attempt to source a truly representative sample of the LGBT community is inherently problematic as it is not always possible to source participants who have not disclosed their sexual orientation publicly (Bridge, 2010).

Additionally, the absence of quantitative data relating to Internet material blocked by filters in Scottish public libraries necessitated a focus on technical data. There is scope for more in-depth qualitative analysis of the impact of filtering on LGBT patrons.

6.8.3 Suggestions for future research

Potential topics for future research include:

- The effectiveness of Acceptable Use Policies (AUP) and patron education as alternatives to filtering. A comparative study of Internet use in libraries which utilize filtering software and libraries which do not utilize filtering. Depending on the time-frame available to the researcher the geographic scope of this study could be national or international:
    - A comparative study involving the one Scottish library service which does not use filtering and the remaining 31 Scottish library services.
    - A comparative study of public Internet access in countries where the use of filters in libraries is common and in countries where the use of filters in libraries is not common.

- The impact of filtering software on job seekers. The findings of the current study indicate that filters block a substantial number of recruitment websites. This is a particularly important topic within the context of the current economic crisis.

- The impact of filtering software on benefit claimants. The findings of the current study indicate that filters block Department of Work and Pensions sites including Job Centre Plus. This is an important topic within the context of the coalition government's plans to digitise the benefits system (BBC, 2012).

- The impact of filtering software on patrons' ability to participate in e-Government.

CONCLUSION

7.1 Purpose and scope of research

This study investigated the extent to which the use of filtering software in Scottish public libraries results in the censorship of LGBT Internet resources. Additional considerations included the impact of censorship of LGBT Internet resources on LGBT patrons.

7.2 Major findings of the study

Use of filtering software in relation to public Internet access in Scottish public libraries is widespread: 30 of the 31 respondents utilize filtering software. Additionally Scottish library services have very little access to data about the material blocked by filtering software and little control over the management of filtering software. Moreover there is a lack of co-ordination at national level in relation to the implementation of filtering.

The findings of both the FOI requests and the online questionnaire confirm that LGBT material is blocked by filtering software utilised in Scottish public libraries. The following categories of LGBT information are blocked: sexual health; social networking; and support organisations. There is also evidence that filtering software used in Scottish public libraries overblocks other categories of website including health; government; recruitment; and Web 2.0.

Online questionnaire participants expressed a very low level of awareness about filtering: out of the ten participants who accessed the Internet in public libraries, nine did not know if their local public library utilized filtering software. Responses to FOI requests indicate that social networking websites are among the most heavily blocked categories of site. Online questionnaire participants stated that they are frequent users of Web 2.0 resources and gain a significant sense of community from social networking sites. Additionally, the online questionnaire findings indicate that LGBT patrons' online behaviour differs significantly inside and outside of libraries:

online questionnaire participants were less likely to access the following categories of websites in libraries: health; LGBT; and Web 2.0.

7.3 Conclusion and recommendations

The use of filtering software in Scottish public libraries is at odds with the ethos of the library profession and the stated aims of Scottish local authorities. Moreover the use of filtering software places library services at risk of prosecution for breaches of the Equality Act 2010.

At the root of the problems arising from the use of filtering software in Scottish public libraries is the lack of control which Scottish library services have over their IT networks. Regaining control over the delivery of digital services should be a priority for our profession. The role of digital information in public libraries is increasing exponentially and librarians must ensure that we are in a position to administer and facilitate access to digital information effectively and in accordance with the stated ethical principles of our profession. Internet resources provide patrons with information crucial to their wellbeing: for example recruitment websites which improve their employment prospects and Web 2.0 websites which promote good mental health via the provision of access to a virtual support network. Moreover, demand for these resources has increased during the current economic downturn. A recent study by Child and Goulding found that, as per James' axiom, patron demand for Internet access has increased during the present recession: they note that there has been "a greater demand for PCs for job-hunting" (Child and Goulding, 2012; James, 1986). The facilitation of public Internet access in libraries is a crucial function of contemporary libraries and it is too valuable to outsource to external organisations and individuals who possess neither the skills nor the motivation necessary to provide patrons with adequate access to digital resources.

The primary recommendations of this study are as follows:

- Filtering software should be replaced with more effective and patron centred methods of managing public Internet access in libraries. A viable alternative to filtering would be investment in patron education and the creation of clear and

effective AUPs. AUPs could be improved by the involvement of patrons in the creation of AUPs and regular evaluation and updating of AUPs via patron surveys.

- Control of library computer networks should be devolved from local authority IT departments to library services.

APPENDIX ONE: FREEDOM OF INFORMATION TEMPLATE

Isla Boag
Flat 1/1
79 Octavia Terrace
Greenock
PA16 7PX

Dear FOI Officer,

Re: Freedom of Information request

I am seeking information relating to the use of filtering software in Scottish public libraries. I am a postgraduate student at the University of Strathclyde: I am undertaking an MSc in Information and Library Studies and the purpose of my request is to gather data for my dissertation.

Please treat this as a request under Sch. 1 para. 21 of the Freedom of Information (Scotland) Act 2002.

Could you please supply me with information pertaining to the following questions:

1) Does your Internet management policy include the use of Internet filtering software on the public access computers in your public library service?

2) If Internet filtering is used in relation to the public access computers in your public library service, could you please supply a list of the stop-words and blocked site lists used by the filter? Please supply a full list of stop-words or a full-list of the URLs covered by each blocked category.

3) If Internet filtering is used in relation to the public access computers in the public library service, could you please supply the following: a list of the sites blocked by the filtering software between 1st September 2011 and 28th February 2012; and a list of the words blocked by the filtering software between 1st September 2011 and 28th

February 2012. Obviously I am seeking details of all sites and words blocked rather than any information relating to patrons.

4) Have you received any requests from members of the public to unblock material blocked by filtering software used in relation to the public access computers in the public library service?

5) If the answer to question four is yes, could you please supply details of the site the request related to and the local authority's response to the request?

I would be grateful if you could supply this information in electronic format via email.

I understand that under the Freedom of Information Act I should be entitled to a response within 20 working days. I would be grateful if you could confirm via email that you have received this request. I look forward to hearing from you in the near future.

Please contact me via the following email or telephone number if you need any further information to clarify the request: isla.boag@strath.ac.uk or 07787961322.

Many thanks for your assistance

Kind regards

Isla Boag

APPENDIX TWO: SURVEY QUESTIONS

Q1 Gender

- ❍ Male
- ❍ Female
- ❍ Intersex

Q2 Which age group do you belong to?

- ❍ Under 18
- ❍ 18-29
- ❍ 30-39
- ❍ 40-49
- ❍ 50-59
- ❍ 60-69
- ❍ 70+

Q3 We realise that you may not be comfortable with traditional labels, however, for the purposes of this survey, please select a term from below that comes closest to how you identify your sexuality

- ❍ Gay
- ❍ Lesbian
- ❍ Bisexual
- ❍ Bi-curious
- ❍ Other (please provide details) _____
- ❍ I would rather not say

Q4 If you identify as gay, lesbian, bisexual or bi-curious, or any other queer identity, who have you disclosed your sexual orientation to?

- ❍ Everyone who knows me
- ❍ Most people who know me
- ❍ Some people who know me
- ❍ Only people I am very close to
- ❍ Other LGBT people only
- ❍ Nobody
- ❍ I would rather not say

Q5 Are you transgender?

- ❍ Yes
- ❍ No
- ❍ I would rather not say

Q6 If you are transgender who have you disclosed that fact to?

- ❍ Everyone who knows me
- ❍ Most people who know me
- ❍ Some people who know me
- ❍ Only people I am very close to
- ❍ Other LGBT people only
- ❍ Other transgender people only
- ❍ Nobody
- ❍ I would rather not say

Q7 Do you have Internet access at home?

- ❍ Yes
- ❍ No

Q8 How many hours a week do you spend on the Internet (in any location)?

- ❍ None
- ❍ Less than one hour
- ❍ One to five hours
- ❍ Six to ten hours
- ❍ Eleven to twenty hours
- ❍ More than twenty hours

Q9 Do you access lesbian, gay, bisexual and transgender websites (in any location)?

- ❍ Yes
- ❍ No

Q10 Do you access any of the following types of information on the Internet (in any location)? Please select as many options as appropriate.

- ❑ Health (general)
- ❑ Health (mental)
- ❑ Health (sexual)
- ❑ Social networking sites such as Facebook and Twitter
- ❑ LGBT support organisations
- ❑ Other (please provide details) _____
- ❑ I would rather not say

Q11 How frequently do you use social networking sites such as Facebook and Twitter?

- ❍ Daily
- ❍ 2-3 Times a Week
- ❍ Once a Week
- ❍ 2-3 Times a Month
- ❍ Once a Month
- ❍ Less than Once a Month
- ❍ Never

Q12 Do you disclose your sexual identity on social networking sites such as Facebook and Twitter?

- ❍ Yes
- ❍ No
- ❍ I do not use social networking sites
- ❍ I would rather not say

Q13 Do you use the Internet to meet other lesbian, gay, bisexual, bi-curious and transgender individuals?

- ❍ Yes
- ❍ No
- ❍ I would rather not say

Q14 Do the people you meet online give you a sense of community?

- ❍ Not at all
- ❍ A little
- ❍ Somewhat
- ❍ Very much
- ❍ I do not meet people online

Q15 How frequently do you visit public libraries?

- ❍ Daily
- ❍ Once a Week
- ❍ 2-3 Times a Week
- ❍ Once a Month
- ❍ 2-3 Times a Month
- ❍ Less than Once a Month
- ❍ Never

Q16 How many hours a week do you spend on the Internet (in public libraries)?

- ❍ None
- ❍ Less than one hour
- ❍ One to five hours
- ❍ Six to ten hours
- ❍ Eleven to twenty hours
- ❍ More than twenty hours

Q17 Do you access lesbian, gay, bisexual and transgender websites (in public libraries)?

- ❍ Yes
- ❍ No

Q18 Do you access any of the following types of information on the Internet (in public libraries)? Please select as many options as appropriate.

- ❑ Health (general)
- ❑ Health (mental)
- ❑ Health (sexual)
- ❑ Social networking sites such as Facebook and Twitter
- ❑ LGBT support organisations
- ❑ Other (please provide details) _____
- ❑ I would rather not say

Q19 Were you aware that some public libraries use filtering software to block certain categories of Internet site?

- ❍ Yes
- ❍ No

Q20 How much do you know about filtering software?

- ❍ Nothing
- ❍ Very little
- ❍ Some
- ❍ A fair amount
- ❍ A lot

Q21 Does your local public library service use filtering software on its public access computers?

- ❍ Yes
- ❍ No
- ❍ I don't know

Q22 Have you had access to a website site blocked by filtering software while using a computer in a public library?

- ❍ Yes
- ❍ No
- ❍ I don't know

Q23 If you wish to please provide the URL address or name of the website blocked

Q24 If you wish to please provide details of the type of website blocked

Q25 Did the message which appeared on the computer explain why the website had been blocked (for example did it state the category of blocked information which the site belonged to?)

- ❍ Yes
- ❍ No
- ❍ I don't know

Q26 Did the computer message state that the website had been blocked because it belonged to any of the following categories? We wish to stress that

these categories reflect the software's assessment of the website rather than the type of information which actually appeared on the website.

Cultural	❍ Anti-ethnic	❍ Insensitivity	❍ Racism	❍ Sexism
Sexual	❍ Nudity	❍ Sex education	❍ Sexually explicit	❍ Unsuited to age group
Sexuality	❍ Lesbian, Gay, Bisexual or Transgender			
Value grounds	❍ Anti-family	❍ Offensive language	❍ Religious viewpoint	❍ Violence
Social Issues	❍ Abortion	❍ Drugs	❍ Occult	❍ Suicide

Q27 Did the experience of having access to a website blocked discourage you from using computers in public libraries?

❍ Not at all
❍ A little
❍ Somewhat
❍ Very much

Q28 Did the experience of having access to a website blocked discourage you from using public libraries?

- ❍ Not at all
- ❍ A little
- ❍ Somewhat
- ❍ Very much

Q29 Did the experience of having access to a website blocked have any impact on you? Please describe in your own words.

Q30 Did you request that the website be unblocked?

- ❍ Yes
- ❍ No

Q31 Was there a particular reason why you did not request that the website be unblocked?

Q32 How did you place your request

- ❍ I made the request in person
- ❍ I telephoned the library
- ❍ I emailed the library
- ❍ I completed an online form
- ❍ I posted a letter to the library
- ❍ I handed a letter to library staff
- ❍ Other (please provide details) _____

Q33 Was there a particular reason why you placed your request in this way?

Q34 Did the library provide facilities for you to place your request anonymously? For example did the library provide anonymous comments forms which you could place in a 'comments box'?

- ❍ Yes
- ❍ No
- ❍ I don't know

Q35 Did you place your request anonymously?

- ❍ Yes
- ❍ No
- ❍ Other (please provide details) _____

Q36 Was your request to have the website unblocked

- ❍ Successful
- ❍ Unsuccessful
- ❍ Other (please provide details) _____

Q37 How satisfied were you with the way the library dealt with your request

- ❍ Very Dissatisfied
- ❍ Dissatisfied
- ❍ Somewhat Dissatisfied
- ❍ Somewhat Satisfied
- ❍ Satisfied
- ❍ Very Satisfied

Q38 How quickly did the library respond to your request?

- ❍ They responded on the same day
- ❍ They responded within one week
- ❍ They responded within one fortnight
- ❍ They responded within one month
- ❍ They took longer than a month to respond

Q39 If you placed your request in person or by telephone

	Not at all	A little	Somewhat	Very Much
How approachable was the individual who dealt with your request?	❍ Not at all	❍ A little	❍ Somewhat	❍ Very much
Do you feel the individual understood your request	❍ Not at all	❍ A little	❍ Somewhat	❍ Very much
Did the individual's attitude make you uncomfortable	❍ Not at all	❍ A little	❍ Somewhat	❍ Very much

Q40 Do you have any general comments you wish to make about the way the library handled your request to have a website unblocked?

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