

# AN EXPLORATORY STUDY OF THE INFORMATION BEHAVIOUR OF VETERINARY PRACTITIONERS IN SOUTH AFRICA<sup>1</sup>

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## ABSTRACT

The importance of access to information and deepening understanding of information behaviour in order to improve library and information (LIS) services is widely recognised. An exploratory research project was therefore conducted at the Jotello F. Soga Library of the Faculty of Veterinary Science of the University of Pretoria to gain insight into the information behaviour of veterinary practitioners in South Africa, in order to recommend and develop appropriate information products and services. A survey of a small sample (70) with 24 respondents was undertaken to identify information needs and the methods used to satisfy such needs. The survey also covered the processes involved in information usage as well as the role of Google and other search engines, web services such as the International Veterinary Information Service (IVIS) and Web 2.0 applications such as blogs and wikis. Considering the importance of compulsory continued professional development (CPD) initiated by the South African Veterinary Council to assist veterinary practitioners in keeping up to date with contemporary veterinary developments, the role of the library in assisting veterinary practitioners earning CPD points was also investigated. In conclusion, a brief overview of existing products and services of the library is linked to recommendations for reducing information gaps and satisfying the requirements identified as a means of extending the services of veterinary libraries and furthering theoretical studies.

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## KEYWORDS

veterinary libraries, veterinary practitioners, information behaviour, information needs, exploratory study.

## 1 INTRODUCTION

“For millennia humans have been seeking, organizing and using information as they learned and evolved patterns of human information behavior for resolving problems related to survival, work and everyday life” (Spink & Cole 2006:25). Increased interest in information behaviour in general and in information-seeking behaviour, especially the use of the internet, is currently observable in the context of the development of theories and models of information behaviour (Case 2007) and the improvement of library and information (LIS) services and interventions such as training in information literacy (Dodd 2007).

People are more aware than ever before of the relationship between animal diseases and human health (Peter 2010). This recognition highlights the important role of veterinary practitioners (practising veterinarians, veterinary faculty staff and researchers) not only in South Africa, but all over the world.

Information is a key factor in any profession. We therefore tried to gain more insight into the information behaviour, information needs and information use of veterinary practitioners in South Africa, in order to ensure that these can be matched by the services provided by the library.

Following an overview of what has been reported globally regarding the information needs and information behaviour of veterinary practitioners, an exploratory study was conducted by means of a survey involving a questionnaire sent out to a sample of veterinary practitioners in South Africa. In addition to a literature review, the results of the survey are reported here, with recommendations for services and products to be developed by the Jotello F. Soga Library of the Faculty of Veterinary Science of the University of Pretoria, and for further research on the subject of information behaviour.

## 2 PURPOSE AND SCOPE OF THE STUDY

Following publications by Hepworth (2007), Haines et al (2010), Johnstone, Bonner and Tate (2004) and Taylor (1991) on the use of information behaviour studies to improve LIS services, the aim of this study was to gain insight into the information behaviour of veterinary practitioners in South Africa in order to support these information needs by facilitating, recommending and developing appropriate information products and services (e.g. portals). Although the recommendations will focus on the Jotello F. Soga Library, implications for veterinary libraries in the wider context will also be considered.

### **3 LITERATURE REVIEW AND BACKGROUND TO THE VETERINARY PROFESSION**

The literature review covers a number of issues considered important for contextualising the exploratory study, namely the veterinary profession in South Africa, continuing professional development (CPD) as a cornerstone of the current South African veterinary context, and research on information behaviour, with specific reference to studies dealing with the information behaviour of veterinary practitioners and their use of the internet.

#### **3.1 THE VETERINARY PROFESSION**

According to the South African Veterinary Council, a veterinary professional or practitioner is “a person practising a veterinary profession as a veterinarian or veterinary specialist registered in terms of the Act” (South African Veterinary Council 2008). Professional veterinary services are described as

performing an examination or surgical or dental procedure, ordering or performing tests or special investigations, diagnosing, administering or prescribing veterinary treatment or certifying the health status of an animal or group of animals and [include] the giving of professional advice derived from the knowledge, skills, resources, attitudes and competence attained from the completion of a veterinary qualification accepted by council for registration and the practice of a veterinary profession. (South African Veterinary Council 2008)

The veterinary profession serves the public and the interests of their animals on the basis of the latest scientific knowledge. In South Africa no person is allowed to practise as a veterinary practitioner unless that person is registered with the South African Veterinary Council or authorised to perform specific procedures.

The Faculty of Veterinary Science of the University of Pretoria at Onderstepoort offers a seven-year intensive training programme for veterinary practitioners. At the time of writing it was one of 46 veterinary faculties in Africa, and the only one in South Africa. The Jotello F. Soga Library at the Faculty of Veterinary Science of the University of Pretoria was therefore one of only two academic veterinary libraries to serve South Africa (and southern African countries) with information services. Owing to a lack of funding as well as other problems preventing access to information at other African veterinary faculties, not all the research and information needs of these African veterinary faculties can be filled by their own libraries. Although the library of the Agricultural Research Council (Onderstepoort Veterinary Institute) is also a veterinary science library, the Jotello F. Soga Library is the only one in the country to serve the information needs of students and practitioners in clinical subjects such as veterinary medicine and surgery.

The South African veterinary profession is served by the South African Veterinary Association and its newsletter, *Vet News*, which features articles dealing with the profession *per se* and professional development. Scientific information across the full spectrum of veterinary science is communicated through the *Journal of the South African Veterinary Association*. Some of the challenges faced by the veterinary profession include “maintaining the ethical standards of practice and compliance with legislation that either directly or indirectly affects the individual veterinarian such as the Veterinary Act and Medicines Control Act” (Sykes 2008). The dynamic nature of the profession and the need to keep abreast of the latest information can be deduced from these articles as well as articles published internationally (Peter 2010).

### **3.2 CONTINUED PROFESSIONAL DEVELOPMENT (CPD)**

Cropley (in Short et al 2007:689) defines CPD as “a subset of lifelong learning, which is the formal and informal process of turning academic learning into professional skills and knowledge”.

The South African Veterinary Council considers CPD to be very important. According to Professor S. S. van den Berg, former President of the South African Veterinary Council, the main aim of CPD is to “sharpen the veterinarian’s mind and to intellectually empower him/her to successfully cope with these daily challenges”. It is “an attempt to ensure that all veterinary professionals in South Africa are making a reasonable attempt to keep up with contemporary veterinary science, provide services in line with the latest technology and procedures and thus continuously improving the image of the profession” (South African Veterinary Council 2008).

Short et al (2007:690) discuss the advantages of the internet and developments in information technology in lifelong learning, but warn that although the internet provides access to a range of online information sources, this may not necessarily translate into learning opportunities. “To learn online, e-learners need structure, pacing, group work, direction, guidance and interaction. They also need to develop new learning skills in order to interpret knowledge and use it to enrich their own professional practice” (Short et al 2007:690).

Petrak, Markulin and Matic (2007:49) discuss the role of the academic library in the continuing professional development of medical practitioners and suggest that librarians might consider participation in CPD programmes by developing information literacy courses. The role libraries can play in the development of CPD courses as well as the facilitation of information resources for CPD points might therefore be worth further consideration.

### **3.3 INFORMATION BEHAVIOUR: THE CONCEPT AND PREVIOUS STUDIES IN THE FIELD OF VETERINARY SCIENCE**

Chikonzo and Aina (2001:98) provide the following reason for information behaviour studies in veterinary science: “Knowledge of the information-seeking behaviour and information needs of veterinary researchers can be a big asset to veterinarian librarians in the design and implementation of library use instructions.”

Many authors, including Wilson (1999, 2000), Case (2006:293) and Courtright (2007: 275) agree that human information behaviour includes all aspects relating to information seeking, information searching and the supplying, using and sharing of information.

According to Wilson (2000:49), information behaviour “is the totality of human behavior in relation to sources and channels of information, including both active and passive information seeking and information use”. All active as well as passive aspects of information and communication are thus covered by the concept “information behaviour”.

Not many library and information science studies are devoted to the veterinary profession population. Ikpaahindi (1985:146) concurs, observing that there is “a relative lack of sufficient detailed knowledge of the information needs and gathering methods of veterinary scientists ... [and] only a few studies have been undertaken in this area so far”. Wales (2000:235) confirms this, stating that (LIS) research in the field of veterinary science is rare.

For the purposes of this article, the following information resources were searched: ISI Web of Science, Library and Information Science Abstracts (LISA), Emerald, ScienceDirect, and Library, Information Science & Technology Abstracts (LISTA). For a consideration of the information behaviour of veterinary practitioners, the use of both libraries and the internet is important. The latter will therefore also be addressed in this article.

Early studies on the information behaviour of veterinary practitioners focused mainly on information sources. These include studies by Drake and Woods (1978), Raw (1987) and Schmidt (1991).

Drake and Woods conducted a study of the information-gathering behaviour of practising veterinary practitioners in Indiana in the United States of America, and came to the conclusion that “veterinarians are actively seeking information” (Drake & Woods 1978:440). They are, however, relatively isolated from colleagues, information sources and public or medical libraries. A questionnaire was sent to 807 Indiana veterinarians, in large part to investigate journal- and book-reading habits and meeting attendance. The research revealed that at that time, which predated the internet, veterinary practitioners ranked journals as their main source of new information.

Another survey of libraries in veterinary practices was undertaken by Raw in 1987. In this study questionnaires were sent to veterinary practitioners registered with the Royal College of Veterinary Surgeons in the United Kingdom. The study revealed that at that time, “the average practice library contained between 11 and 30 books and one or two journals. Between £50 and £100 was spent on books each year. Practitioners wished they had more time to read and that the literature was orientated towards practice” (Raw 1987:129). Although information sources and the use of veterinary science literature were the main focus of this study, it was also found that more than 50 per cent of the respondents used the Royal College of Veterinary Surgeons’ library regularly, mainly to obtain photocopies of articles.

Pelzer and Leysen (1988) researched the library use and information-seeking behaviour of veterinary medical students at Iowa State University in the United States of America. Although this study involved students of veterinary science and focused mainly on library use and usage of information sources, a substantial part of the questionnaire focused on their future role in practice. It was found that veterinary medical students “saw computerized information services as a means of continuing education [and] represent a market for bibliographic services that can, in turn, play an instrumental role in reducing the information isolation of many veterinary practices” (Pelzer & Leysen 1988:333). The students also identified a personal library that included journals as the most important source of information for those practising the profession, with computerised information in second place. Interestingly this study, conducted in 1988, when computers were less numerous and popular than today, in fact constituted an accurate prediction of the information behaviour of professionals twenty years later.

Veterinary practitioners in another survey by Pelzer and Leysen (1991:14) listed journals and books, other practitioners, and continuing education courses as sources to help them keep up to date. Respondents cited university extension services, veterinary medical libraries and computer applications as being unimportant information sources.

Bawden and Valleley (1996:266) discussed the sources and use of veterinary information in light of a survey comprising short questions sent to British veterinary practitioners. It was revealed that computers were used primarily for administration and accounting tasks, with only a few respondents indicating that they used computers for information retrieval (Bawden & Valleley 1996:267). All respondents reported using veterinary libraries to solve their information needs. A number of well-designed internet resources were identified by Bawden and Valleley (1996:268), but, according to their study, “digital sources appear to have made little impact on the work of the practitioner, but it may be that the influence of the Internet, with its multimedia capability will change this”.

A series of articles by Gerrard (1998) explored the attitudes of veterinary practitioners in the United Kingdom towards the internet. The main focus of his work was not on information behaviour as such, but on the internet as a useful instrument in veterinary

practice. It is interesting to read that the majority of the respondents were still unsure about the internet as an aid to their job, and were reluctant to embrace it.

Another study among veterinary practitioners in the United Kingdom, undertaken by the Royal College of Veterinary Surgeons' Welcome Library, identified key issues in veterinary information use and information-seeking behaviour. This study showed that the majority of respondents preferred using the internet to contacting the library. Conventional journals, textbooks and conferences were indicated as the main sources of information (Wales 2000:235). One of the main recommendations of this study was the provision of online veterinary information services.

A few studies on the information behaviour of veterinary practitioners in Africa are also reported. Ikpaahindi (1985) investigated the information needs and information-seeking behaviour of Nigerian veterinary scientists by means of a questionnaire, and found that journal articles were the most used sources of information. Veterinary practitioners also preferred bibliographies, abstracts and indexes, and consulting library staff for new information. Respondents needed information for research purposes, to keep up to date and for teaching (Ikpaahindi 1985:152).

Chikonzo and Aina interviewed veterinary researchers at the University of Zimbabwe about their information environment. They found that "the veterinary library is the main information provider for the veterinary researchers, thus, there is a need to strengthen the library resources, as well as to provide constant training to the library staff" (Chikonzo & Aina 2001:111).

### **3.4 THE INTERNET AND INFORMATION BEHAVIOUR**

The internet simplifies and promotes information activities, such as current awareness services (CAS, alerting services) and database searching, which previously were performed mainly by librarians. Today more professionals prefer the speed and convenience of the internet as their main source of information. Apart from considering the information behaviour of veterinary practitioners per se, it also seemed necessary to consider studies on information behaviour in using the internet (especially by professionals), and how these might be incorporated in the study under discussion (i.e. considering the impact the internet and its digital information may have on the information behaviour of veterinary practitioners and the services provided by the library).

From the literature it would appear that an increasing number of people make use of the benefits of Web 2.0 technologies such as blogs, RSS feeds, wikis and podcasts (Gerrard 1998; Nicholas et al 2006; Survey identifies patterns ... 2008). These applications focus more on the human-to-human transfer and sharing of information and can serve as a competitive tool to access intellectual knowledge among people of the same discipline.

Pelzer and Wiese (2005:54) note that online veterinary information resources are "accessible from anywhere and deliverable to the point of need. Electronic media offers



many advantages such as quick accessibility and linking of information, but much of the information on the Web is uncontrolled. With so many animal related Web sites, it is difficult to know where to look for authoritative veterinary information”.

Fleishman-Hillard (2008) examined how veterinary practitioners were using the internet, digital devices and information technology to communicate, conduct research, learn, manage their practices and deliver medical care to animals. Their digital clinic study was conducted in conjunction with the American Veterinary Medical Association (AVMA) and the American Animal Hospital Association (AAHA) during December 2007. Fleishman-Hillard (2008:1123), focusing on the internet usage of American veterinary practitioners, found that veterinary practitioners relied on e-mail, and used the web for information and communication, but did not have confidence in the information found on blogs. In this study, 69 per cent of the respondents reported having their own website, on which basic information to clients and potential clients was supplied. However, according to the Fleishman-Hillard study, most veterinary practitioners were still in the Web 1.0 environment.

Academic veterinary medical library websites have been described as “excellent starting points for locating useful and reliable resources that have been evaluated, selected and organized by library professionals” (Pelzer & Wiese 2005:54). Libraries can also assist with current awareness services such as e-mail alerts and RSS feeds, the management of mailing lists, newsgroups and discussion boards, as well as the publication of new book lists to ensure that members of the profession stay up to date with new developments in the discipline. Open access institutional repositories can also be used for the preservation and sharing of valuable information and knowledge. An excellent example of an open access veterinary science collection on the University of Pretoria’s institutional repository, UPSpace, is the South African National Veterinary Repository. This collection, as well as many other collections for veterinary science, are developed and maintained by information specialists of the Jotello F. Soga Library.

No evidence of previous empirical studies on the use of the internet and information behaviour of South African veterinary practitioners could be found. This study is therefore the first to relate to the South African context.

## **4 METHODOLOGY**

Based on the literature review, a questionnaire was developed to obtain primary data and information on the information behaviour (including the information needs, information seeking and information use) of South African veterinary practitioners. The questionnaire (included as the appendix to this article) was based on guidelines by Struwig and Stead (2007) as well as related studies mentioned in this article.



## **4.1 SURVEY SAMPLE**

A non-probability convenience sample of 70 veterinary practitioners was randomly selected from a list of South African veterinary practitioners registered with the South African Veterinary Council in 2008. The list was obtained from the South African Veterinary Council. The questionnaire was e-mailed to the selected respondents. Despite a response rate of only 34 per cent (represented by 24 completed questionnaires), it was decided to continue. The survey was conducted in March and April 2009.

## **4.2 QUESTIONNAIRE**

The self-administered questionnaire included both closed and open-ended questions. The categories covered were: the information user, information needs, and information-seeking behaviour.

# **5 ANALYSIS AND FINDINGS**

The analysis is based primarily on quantitative data.

## **5.1 THE INFORMATION USER**

The first part of the questionnaire dealt with the demographic information. Of the respondents, 19 per cent were between the ages of 26 and 35 years; 66 per cent were between the ages of 36 and 50 years; 4 per cent were between 51 and 60 years of age, while 9 per cent were older than 61 years. Male respondents represented 62 per cent of the total respondents, and female respondents represented 38 per cent. English was indicated as language of preference by 66 per cent of the respondents, while 33 per cent preferred Afrikaans.

Respondents were also surveyed with regard to their highest academic qualification. The following results were obtained: 47 per cent had obtained a Bachelor's degree (BVSc); 23 per cent an Honours degree; and 30 per cent a Master's degree. One respondent also mentioned an additional diploma in senior management.

No respondents rated their level of computer literacy as low: 30 per cent of respondents rated their level of computer literacy as very high, while 70 per cent indicated an average level of computer literacy.

## **5.2 INFORMATION NEEDS**

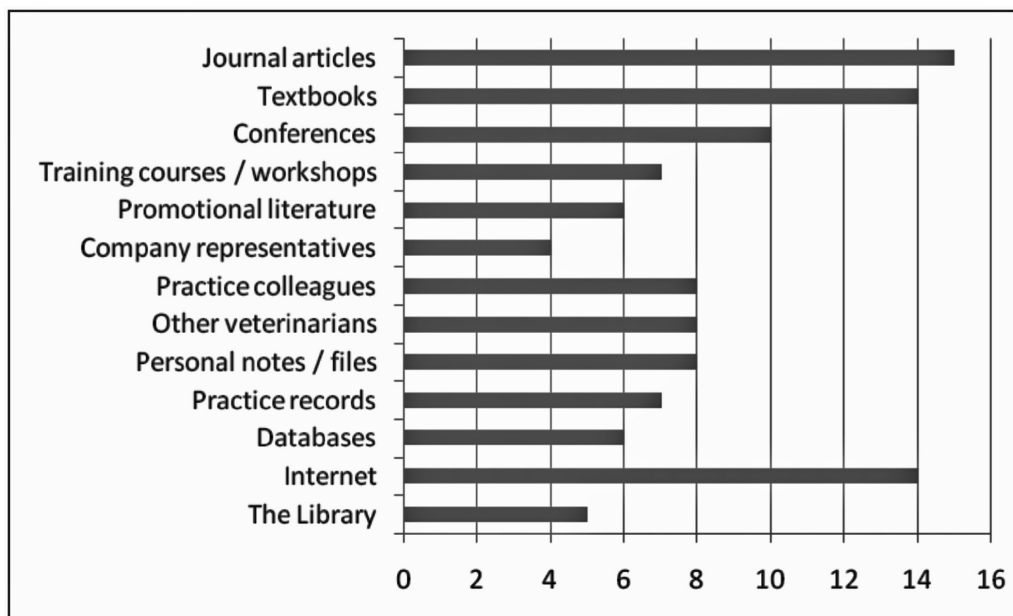
The second part of the questionnaire focused on information needs. The purpose of this section was to ascertain why veterinary practitioners need information in their work environment. Their perceptions of and attitude to information handling were also determined. The following reasons why veterinary practitioners need information in the work environment (in order of importance) were identified:

- Keeping up to date with new developments in the field for CPD;
- For emergency problem solving (e.g. to make a diagnosis);
- To do their work better (self development);
- For papers/presentations delivered at conferences;
- To buy new products, equipment or technology;
- For work-related projects (e.g. committees);
- For studies;
- For professional groups in which they participated (e.g. associations);
- For other interest groups.

Questions regarding the perceptions of and attitude to information handling furnished some interesting results. Of the respondents, 40 per cent felt that they were overloaded with information, while 65 per cent considered that they did not need assistance in finding information. Of the respondents, 60 per cent were willing to pay in order to get the correct information. While 80 per cent felt that they were aware of developments in the profession, all respondents stated that they needed information. To the question of whether respondents were aware of new information-sharing technologies such as blogs, wikis and social networks such as Facebook and MySpace, 50 per cent answered in the affirmative. (Their use of these is discussed in a later section.)

### **5.3 INFORMATION-SEEKING BEHAVIOUR**

In this section of the questionnaire, we endeavoured to identify preferred sources of information as well as the frequency of usage of these sources. Attention was also given to identifying the titles of journals to which respondents subscribed and information sources used in cases of emergency. The role of computers and the internet in the work environment was also explored in this section, through questions designed to ascertain the respondents' knowledge of freely available electronic products on the internet.

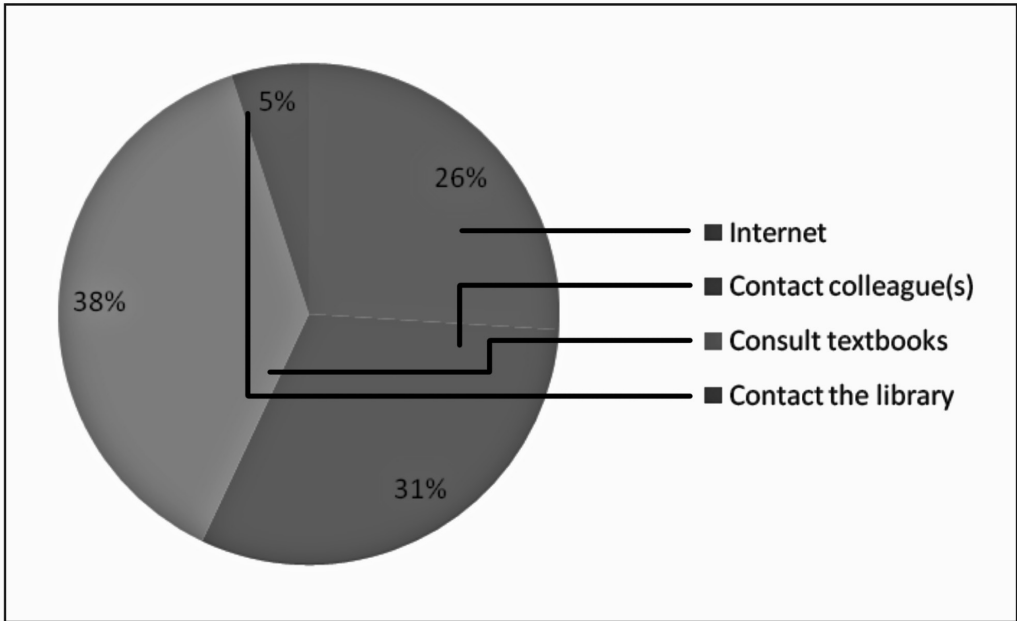


**Figure 1: Information sources used by the respondents**

Figure 1 shows the three sources of information most preferred by the respondents to be journal articles, textbooks and the internet. The library and company representatives were the least preferred by respondents.

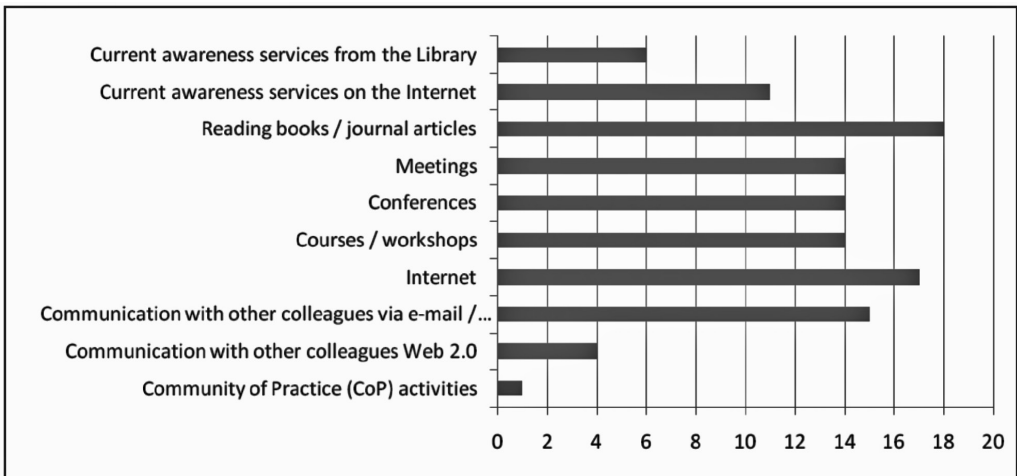
The results of the study revealed that 55 per cent of respondents or their practices subscribed to professional journals. Journals subscribed to were: *Bovine Veterinarian*, *Compendium on Continuing Education for the Practising Veterinarian*, *General Surgery*, *Hatchery Practice*, *Hooo-Hooo*, *Journal of Bone and Joint Surgery*, *Journal of the South African Veterinary Association*, *Journal of Small Animal Practice*, *Journal of Veterinary Cardiology*, *Journal of Veterinary Internal Medicine*, *LHPG Review*, *Orthopaedic Surgery*, *Pig International*, *Poultry International*, *South African Journal of Wildlife Research*, *Veegesondheid en Produksie Oorsig*, *Vet News* (sent to members of the SAVA), *Veterinary and Comparative Orthopaedics and Therapeutics*, *Veterinary and Comparative Oncology*, *Veterinary Economics*, *Veterinary Clinical Pathology*, *Veterinary Record*, *Veterinary Surgery* and *VetMed*.

The following sources were consulted in the case of an emergency, in order of importance: textbooks, colleagues, the internet, and lastly the library. These results are illustrated in figure 2.



**Figure 2: Information sources consulted by respondents in case of an emergency**

Figure 3 illustrates the sources of information consulted by respondents (in order to keep up to date) and preference rates.



**Figure 3: Sources consulted by respondents in order to keep up to date**

This study found that 10 to 20 per cent of the average time of the respondents was spent on information seeking. All respondents had a computer and were connected to the internet. They reported using the internet for the following main purposes in their veterinary practices:

- Browsing for information;
- Reading electronic books and journals;
- Communication (e-mail).

Respondents used free subject information tools or websites on the internet. The three most frequently used tools were

- databases (PubMed);
- International Veterinary Information Service (IVIS);
- Food and Agriculture Organisation (FAO) and the World Animal Health Organisation (OIE).

Most respondents did not use Web 2.0 technologies such as blogs, wikis and social networking platforms such as Facebook and MySpace.

All respondents strongly agreed that the internet enhanced their ability to access the latest science, research and information, while 47 per cent felt overwhelmed by all the information on the internet. Results showed that 81 per cent of respondents felt comfortable with the way they conducted information searches on the internet.

## **5.4 INFORMATION USE, SHARING AND TRANSFER**

Information use, sharing and transfer are the primary focus of section four of the questionnaire, the aim of which was to identify what is done with the retrieved information, the frequency of information sharing and the attitude of respondents towards information sharing, with special reference to the internet.

Most respondents indicated that they saved retrieved information in a personal file on their computer. The second most common use for retrieved information was the preparation of a publication of some sort such as a report, guideline, notes, a paper or an article. Of the respondents, 50 per cent found it important to share or communicate retrieved information with other people or colleagues by means of e-mail or face-to-face communication at professional networking functions. Regarding the frequency of information sharing, 34 per cent of respondents indicated that they shared information constantly; 43 per cent indicated that they often shared information with colleagues; 19 per cent sometimes shared information, while only four per cent indicated that they rarely shared information.

To the question as to whether social networks are important in the veterinary profession, 71 per cent of respondents responded in the affirmative, while 33 per cent felt that the

internet helped them to establish business relationships within the profession. Nearly all the respondents (95%) agreed that the internet can be used as a tool to facilitate CPD, possibly through the presentation of online courses. The study did not attempt to identify other possible means for this, however.

## **5.5 GENERAL ASPECTS INFLUENCING INFORMATION BEHAVIOUR**

Section five of the questionnaire consisted of two open-ended questions. The first question asked respondents how they felt about CPD, while the second gave respondents the opportunity to add their own comments to ensure that all relevant opinions and suggestions were covered.

Most respondents agreed that CPD is essential, but limitations such as time, distance from centres where CPD activities are held, problems relating to administration and registration, and cost implications were mentioned. Some respondents suggested that more CPD activities could be web based. No other comments were made by respondents in this section.

## **6 RECOMMENDATIONS**

The Jotello F. Soga Library of the University of Pretoria has the potential to play an essential role in the development of products and services on the internet to enhance information support to veterinary practitioners in South Africa. Training courses in the use of veterinary databases and information portals on the internet can also be presented and facilitated by the library, in order to ensure the effective retrieval and use of information. An information portal may include information about new resources, such as books, journals and other material published in the field of veterinary science. It can also include useful links to databases, such as PUBMED and other free information products available on the internet. Furthermore, it can provide links to open access research articles as well as other institutional repository collections of veterinary interest. An information portal such as this may facilitate collaboration among veterinary practitioners, faculty researchers, specialists in the profession (national as well as international) and the library.

CPD is a requirement for veterinary practitioners, and most respondents indicated a need for web-based courses. In collaboration with the South African Veterinary Council, the library can assist in providing information support for such courses, as also suggested by Petrak, Markulin and Matic (2007). The library can also focus on promoting alert services as well as other information services to practitioners in support of their CPD needs (as explained by Fourie and Claasen-Veldsman (2007) with regard to CAS for oncology nurses).

Although the use of questionnaires sent out by e-mail or even web-based questionnaires is widely accepted (Fleishman-Hillard 2008), follow-up surveys sent out by post might be useful, as might reminders to potential respondents to complete and return questionnaires. Other options for faculty and student participants might be individual and focus-group interviews, which seem to work well in certain contexts (Wales 2000).

## **7 VALUE OF THIS REPORT FOR FURTHER STUDIES IN THE SOUTH AFRICAN CONTEXT**

No evidence of previous studies on the information behaviour of South African veterinary practitioners could be found. This exploratory study was thus the first of its kind in South Africa and could provide the basis for future studies on the information behaviour of South African veterinary practitioners. The report could be used to recommend and develop appropriate information products and services for this population group. It could also be used as a foundation for a more in-depth study.

## **8 CONCLUSION**

The study reported on, explored the information behaviour, information needs and information use of veterinary practitioners in South Africa. Although journal articles and textbooks are still the preferred sources of information, the study revealed significant interest in the internet and information on the internet. Veterinary practitioners use the internet to seek information, to keep up to date with new information, to read electronic books and articles, and to communicate via e-mail.

Communication with colleagues in the profession and knowledge sharing are also important in veterinary practice. Although most respondents indicated that they felt social networks to be important, the study showed that communication took place predominantly through e-mail and that the benefits of Web 2.0 and social networking platforms such as Facebook and MySpace have not yet been fully implemented in this profession.

Most respondents felt that they did not need the library in order to satisfy their information needs, and that the internet was adequate for information retrieval. Nevertheless, the library has a role to play in the development of focused electronic information products and services, as well as the facilitation of training in the use of the internet and other web-based products. The library could also promote the benefits and implementation of Web 2.0 products in order to encourage information and knowledge sharing within the broader profession and in the practice specifically.



The introduction of compulsory CPD might positively influence the information use and behaviour of veterinary practitioners in future, and might lead to greater use of the library.

On a more theoretical level, a follow-up study might consider the applicability of models of information behaviour for veterinary practitioners such as the model proposed by Leckie, Pettigrew and Sylvain (1996). The models suggested by Wilson (1999) might also be useful.

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# APPENDIX: INFORMATION BEHAVIOUR QUESTIONNAIRE

## 1 INFORMATION USER

### 1.1 Personal data

Please mark (X) the option corresponding to your choice:

#### 1.1.1 Age:

<25 years	26 – 35 years	36 – 50 years	51 – 60 years	> 60 years

#### 1.1.2 Gender:

Male	Female

#### 1.1.3 Language of preference:

English	Afrikaans	African language (specify)	Other (specify)

## 1.2 Education, training & experience

### 1.2.1 Education

		B degree	Honours degree	Masters degree	Doctors degree	Other -specify
1.2.1.1	Academic qualification:					
1.2.1.2	Year obtained:					

### 1.2.2 Experience

		< 10 years	10 – 19 years	20 – 30 years	> 30 years
1.2.2.1	Total years of experience				
1.2.2.2	Years of experience in current practice:				

### 1.2.3 Training

1.2.3.1	How do you rate your level of computer literacy?	Very high <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very low
1.2.3.2	How will you rate your level of other skills to do your work effectively (e.g. time management, language / writing skills, etc.)	Very high <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very low

## 1.3 The practice

### 1.3.1 Indicate how many people are employed in your practice:

1 – 4	5 – 10	11 – 20	21 – 39	More than 40

### 1.3.2 How many veterinary practitioners are in your practice?

<input type="text"/>	<input type="text"/>	<input type="text"/>
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### 1.3.3 What is your role in the practice:

Owner	Partner	Employee	Other (specify)

### 1.3.4 Indicate your practice type:

Mixed	Large animals	Equine	Small animals	Poultry	Wildlife	Other (specify)

## 2 INFORMATION NEEDS

### 2.1 Please mark all the reasons why you feel you need information in your work:

- For emergency problem solving (e.g. to make a diagnosis)
- To do work better (self development)
- Keeping up to date with new developments in the field for continued professional development (CPD)
- For studies

- For other interest groups
- For professional groups participated in (e.g. associations)
- For papers / presentations delivered at conferences
- For work related projects (e.g. committees)
- To buy new products, equipment or technology
- Other (specify)

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## 2.2 To what extent do you agree with the following statements?

		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
2.2.1	I feel overloaded with information					
2.2.2	I usually need someone to help me find the correct information					
2.2.3	I am satisfied with the information I can find on my own					
2.2.4	I am willing to pay for the correct information					
2.2.5	I am aware of contemporary developments in the profession					
2.2.6	I do not need any information					
2.2.7	I am aware of new information technologies in sharing information (e.g. blogs, wikis, Facebook, etc.)					

## 3 INFORMATION SEEKING BEHAVIOUR

### 3.1 Information sources

**3.1.1** *Please indicate how often do you use the following sources of information in your profession:*

3.1.1.1	Journal articles	Always <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Never
3.1.1.2	Textbooks	Always <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Never
3.1.1.3	Conferences	Always <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Never

3.1.1.4	Training courses / workshops	Always <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Never
3.1.1.5	Promotional literature	Always <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Never
3.1.1.6	Company representatives	Always <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Never
3.1.1.7	Practice colleagues	Always <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Never
3.1.1.8	Other veterinarians	Always <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Never
3.1.1.9	Personal notes / files	Always <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Never
3.1.1.10	Practice records	Always <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Never
3.1.1.11	Databases	Always <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Never
3.1.1.12	Internet	Always <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Never
3.1.1.13	The library	Always <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Never
3.1.1.14	Other (specify)	Always <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Never

**3.1.2** *Are you or your practice subscribed to any professional journals?*

YES  NO

**3.1.3** *If yes, give as many titles as possible:*

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**3.1.4** *In case of an emergency in your practice, which sources of information do you consult? Please rank in order of priority, where 1 indicates your first choice:*

- Internet
- Contact colleague(s)
- Consult textbook(s)
- Contact the library
- None
- Other (specify)

**3.1.5** *How do you keep up to date? Mark all relevant options.*

- Current awareness services offered by the library
- Current awareness services on the Internet (e.g. journal table of contents alerts / RSS feeds)

- Reading books / journal articles
- Meetings
- Attending conferences
- Attending courses / workshops
- Browsing the Internet
- Communication with other colleagues via e-mail/ telephone
- Communication with other colleagues Web 2.0 technologies
- Community of practice (CoP) activities (e.g. blogs, Facebook, Google groups, etc.)
- None
- Other (specify)
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_

**3.1.6** *What estimated percentage of your time do you spend on information seeking?*

0%	1 – 10%	11 – 20%	21 – 30%	31 – 40%	41 – 50%	51 – 60%	61 – 70%	71 – 80%	81 – 90%	91 – 100%

**3.2 The Internet**

**3.2.1** *Do you have a personal computer in your practice?*

YES  NO

If YES, continue with the questions in this section.

If NO, go to section 3.5

**3.2.2** *Are you connected to the Internet?*

YES  NO



If YES, continue with the questions in this section.

If NO, go to section 3.5

### 3.2.3 *What benefits do you / your practice get from the Internet?*

Mark all relevant options.

- Practice administration and management
- Keeping up to date: current awareness services on the Internet (e.g. journal table of contents alerts / RSS feeds)
- Reading electronic books / journal articles
- Browsing the Internet
- Communication with other colleagues via e-mail
- Communication with other colleagues via Web 2.0 technologies (e.g. blogs, Facebook, Google groups, etc.)
- Communication with clients
- Communication with suppliers
- Communication with academics
- Communication with the library
- Advertising
- Pursuing hobbies / interests
- None
- Other (specify)

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### 3.2.4 *Please mark all the freely available subject information tools on the Internet which your practice is currently using:*

- CONSULTANT (Cornell University, College of Vet Med)
- DATABASES (Agricola)
- DATABASES (PubMed)

- Electronic Zoo (NetVet)
- FAO (Food and Agricultural Organisation)
- Institute: health & life sciences (formerly called BIOME)
- Institute: health & life sciences (formerly called Vetgate)
- IVIS (International Veterinary Information Service)
- OIE (World Animal Health Organisation)
- Vetscite (for current awareness)
- WHO (World Health Organisation)
- None
- Other (specify)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**3.3 Please mark all the Web 2.0 technologies or tools your practice is currently using**

- Web services (e.g. internet banking / product ordering)
- Blogs
- RSS feeds
- Wikis
- Podcasts
- Social networking (Facebook)
- Mash-ups (Flickr, You Tube)
- Cellular phone technologies (SMS, MMS, GPS, etc.)
- None
- Other (specify)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**3.4 To which extent do you agree with the following statements?**

		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
3.4.1	The Internet enhances my ability to access the latest science, research and information					
3.4.2	The available information on the Internet confuses my clients					
3.4.3	I mainly use the Internet to communicate					
3.4.4	The Internet makes my work and practice more profitable					
3.4.5	I feel overloaded with all the information available on the Internet					
3.4.6	I feel comfortable with the way I do information searches on the Internet					

Please continue with section 4

**3.5 What are your major reason(s) for not using the Internet? Mark all relevant options.**

- Cost of hardware
- Usage costs
- Unsure of benefits
- Lack of knowledge of what is offered by the Internet
- Lack of access to the Internet
- Lack of access to a computer
- Lack of trust in the Internet
- Lack of search skills
- Lack of time

- Speed of access or downloads
- Other (specify)

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Please continue with section 4

#### **4. INFORMATION USE, SHARING AND TRANSFER**

**4.1 What do you do with information gained / retrieved? Mark all relevant options.**

- Nothing
- Save as personal files
- Write report / guideline / notes / papers / articles
- Store in a personal database
- Share / communicate with others
- Other (specify)

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**4.2 How often do you share information with other colleagues in the veterinary profession?**

Constantly	Often	Sometimes	Rarely	Never

**4.3 To what extent do you agree with the following statements?**

		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
4.3.1	Social networks are important in the veterinary profession					

4.3.2	The Internet helps me to establish business relationships within the profession					
4.3.3	The Internet can be used as a tool to facilitate continued professional development (CPD)					

## **5. GENERAL**

### **5.1 How do you feel about continued professional development (CPD) implemented by the South African Veterinary Council?**

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### **5.2 Any other comments?**

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Thank you for your time and cooperation!