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Ascertaining consumer perspectives of medication information sources using a modified repertory grid technique

Jennifer Tio · Adam LaCaze · W. Neil Cottrell

Abstract

Objective To establish the range of medicine information sources used by consumers and their perception of the reliability of these, using the repertory grid technique.

Method Consumers visiting three community pharmacies in Brisbane, Australia, were interviewed using the repertory grid technique. During the interview, consumers were asked to name up to three medicine information sources that they used for a supermarket medicine, an over-the-counter medicine and a prescription medicine. They were then presented with their named information sources in groups of three and asked to discriminate between these in terms of their perceived reliability of the information source. The descriptors used by the consumer to discriminate between the information sources are known as constructs and these were recorded. The consumer was then asked to rate each of their information sources against each generated construct.

Main outcome measure The range of information sources generated was determined along with the perceived reliability of these from the calculated median score of each information source when rated on each generated construct.

Results A total of 110 consumers were interviewed and identified 648 information sources that they would use. The most frequent information sources cited by the 110 consumers were their doctor (83%), written information (90%) and the pharmacist (78%). There were a total of 299 constructs generated by 88 of the consumers and these were themed into 16 discrete categories. The most common generated constructs themes were "good knowledge" (15%), "training" (14%) and "trustworthiness" (13%). The consumer perception of their information sources were that the doctor and pharmacist have good knowledge (median score 1) and are trained (median score 1) and were perceived to be trustworthy (median score 3 and 2, respectively).

Conclusion The repertory grid technique was successful in identifying the information sources consumers accessed to find out about their medicines and in identifying the perception of these sources in terms of their reliability. The repertory grid technique offers a novel method for future research into consumer preferences for different treatment options.

Keywords Consumer · Consumer decision · Medicine information · Pharmacist · Physician · Repertory grid · Quality use of medicines

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Impact of this study on practice

- Our findings confirm that previous research that consumers seek out and use a variety of sources, of varying quality, for information on their medicines
- Our findings suggest that consumers do not accept this variety of information sources passively, rather

consumers actively evaluate the quality of their information sources

- Our findings highlight that consumers evaluate the information sources they use on the basis of the perceived knowledge and trustworthiness of the source, and the ability for interaction

Introduction

There is growing consensus that consumers should be provided with the opportunity to be more involved in their own healthcare. This is marked by a shift from the concept of consumer compliance to that of adherence and concordance, with the consumer adopting an autonomous rather than a passive role [1–3]. Shared models of decision-making are proposed [4, 5], with an informed, and therefore empowered, consumer taking an active part in decisions about their medical management. A challenging, but crucial, aspect in achieving shared decision-making between consumers and healthcare professionals is acknowledging and managing the uncertainty evident in medical knowledge [6]. Inseparable from this movement towards shared decision-making is recognition of the 'democratisation' of medical knowledge, that is, a change in the traditionally paternalistic power relation between the 'sick patient' and healthcare professional as holder and arbiter of medical knowledge [7, 8].

The challenges for consumers to be more involved in their healthcare are prompted further by the vast array of information available to help consumers decide whether, and how, to use a medicine [7, 8] and the deregulation of an increasing number of medicines in many countries (i.e. medicines available without need for consultation with a prescriber). Such shifts in focus raise questions for how healthcare professionals can best assist patients to utilise these information sources optimally to ensure the quality use of medicines (QUM). In Australia, QUM is one of the central objectives of the National Medicines Policy 2000, which states that medicines should be used judiciously, appropriately, safely and efficaciously. To achieve QUM, healthcare professionals need to know not only which information sources consumers actually use but also how they evaluate the reliability of these sources. This study aims to provide some information towards achieving this goal.

Sources consumers utilise include healthcare professionals, traditional media (television, newspapers, magazines), the Internet, specific consumer-directed information (package inserts or consumer medicine information leaflets (CMIs), consumer support groups and telephone support), and the knowledge and experience of family and friends [9–15]. The most frequently used resource identified in the above studies is a healthcare professional (usually doctors and pharmacists) although there is increasing use of the internet [12], and also a trend for reliance on the 'media' for health/medicine information [9, 12–14]. Concern has been expressed regarding the reliability of some of these information sources, in particular, the media and internet [16, 17].

There is limited literature available on how consumers perceive the reliability of the information sources they use. Consumers' perceptions of information sources have been qualified in terms of satisfaction [10, 13], usefulness and ease of use [11], saliency and credibility [15], or have focused on specific information sources with regard to their perceived reliability/utility [8, 18–21]. The methods used to elicit consumer perceptions on information sources have included case-studies [8], phone surveys [9–11, 13], semi-structured interviews [12], and attitude questionnaires with additional survey methodologies [19]. Although these are recognised as valid methodologies, such techniques often constrain the information that consumers can provide to investigator-generated and framed questions. Consumer responses may have more relevance if researchers know how people understand and frame a particular concept, making it easier to measure or determine consumer perceptions of the concept [22]. There is a need to utilise alternative methods that are sensitive to individual differences in consumer perceptions and provide insight into why these differences exist.

In reply to these challenges, Frewer et al. [23] has suggested the use of the repertory grid technique in health-related research. Originally developed in the area of personality theory [24], the repertory grid technique has been used in eliciting consumer perceptions and attitudes to genetic engineering [25], the food industry [26], complementary medicines [27], and the treatment of angina [28]. The advantage of using the technique in this study includes having highly individualised perceptions of the information sources that can be analysed both quantitatively and qualitatively.

The aim of this study was to use the repertory grid methodology to (i) establish the range of medicine information sources that consumers use and (ii) determine consumers' perceptions on the reliability of these medicines information sources (i.e. the information sources consumers personally utilise).

Methods

The study used a structured interview based on the repertory grid technique. All participants were consumers who attended one of three community pharmacies—two located in Brisbane, Australia and the other just outside the Brisbane metropolitan area—over a period of 6 weeks (February–March 2004). Approval for the study was obtained from the ethics committee at the School of Pharmacy, The University of Queensland.

Sample population

The sample population was a convenience sample of consumers attending one of the three community pharmacies. Participants excluded were those who could not consent to the study, were less than 18 years of age, or those who refused to participate. All participants provided written informed consent prior to taking part in the interview process. All interviews were conducted by a final year pharmacy student, within the community pharmacy out of earshot from the dispensary or front counter. Demographic information considered pertinent to the analysis was collected as part of the interview.

Interview procedure

The interview was divided into three parts and was generally 15 min, although in some instances lasted up to 25 min.

Identifying information sources

Participants were asked whether they had ever purchased a medicine from a supermarket, a pharmacy (over the counter (OTC)) or received a medicine on prescription from a doctor (Supermarket medicines are limited in type available and pack size. Medicines available in a pharmacy consist of a wider variety of more potent medicines and larger pack sizes of medicines available in supermarkets). Participants who answered 'yes' to the above were asked to specify the medicine (or if multiple items were identified to give one example). Participants were then asked to identify three information sources that they would consult to find out more about each type of medicine. The first three information sources the participant named for each type of medicine was recorded. Some participants identified the same information sources while other participants identified differing information sources for the different medicine types. Each participant could

identify a maximum of nine information sources. The information sources identified were placed in one of seven categories as detailed in Table 1. If the participant identified two or less information sources, the interview was terminated at this stage.

Eliciting consumer perceptions of the information sources

Participant perceptions of their individually identified information sources were determined by comparing information sources both within and between the seven categories. Each information source identified by the participant was written down on a separate card. The participant was then presented with groups of three information sources (triads) on the individual cards and asked to state which two of the three sources were more reliable. They were then asked the reason why they thought the two were more reliable (termed the emergent pole) [24]. The reason why the participant felt the third source was less reliable (the implicit pole) was also asked. The responses obtained—the emergent and implicit poles—formed the participant's personal association or construct for that triad. This method to elicit constructs using triads is termed the 'minimum context card' form for eliciting constructs in the repertory grid technique [29]. An example of a triad and resulting construct is shown in Fig. 1.

If the participant only generated a small number of information sources then they were presented with pairs of information sources (dyads). The participant was asked if they thought the information sources were equally reliable and if so the reason for this. If the dyad was not equally reliable, the participant was asked why they felt one was more reliable than the other and the construct poles generated by the participant were again recorded.

The combinations of information sources allowed opportunity for all the information sources identified

Table 1 Categories of identified information sources

Doctor
Pharmacist
Other individuals
(other healthcare professionals and help lines)
Written Information
(packet, pamphlets or leaflets, medication books and package inserts or
Consumer Medicines Information leaflets (CMIs))
Peers
(Family, friends)
Media
(Television, radio, popular magazines)
Internet

Fig. 1 Eliciting constructs and rating information sources—an example from a single participant

by the participant to be included in the triads (or dyads). This process was repeated for further sets of triads (or dyads) until the participant was not generating any new constructs or ten triads (or dyads) had been presented to them.

Rating information sources

Each construct pole generated by the participants was put onto a 10-point scale where '1' was the emergent pole and '10' was the implicit pole (Fig. 1). The participant was asked to rate each information source on these scales and the scores were then recorded in a rating matrix (grid) (Fig. 1). If the participant felt that a construct was not applicable to a particular information source, then this was noted on the matrix instead of a score.

Analysis

The participants demographic information, medicines identified, information sources identified and constructs elicited were analysed using standard descriptive statistics.

The participant-generated constructs were put into categories based on the meanings that they represented using generic content analysis undertaken by all three authors [30]. Where discrepancies existed in placing a

construct into a category, mutual consensus was reached after discussion. To explore the participant's perceptions of the reliability of their information sources, the median scores for these against the constructs were determined.

Results

A total of 110 consumers were interviewed of which 73 (66%) were female. The median age (IQR) of consumers was 55.5 years (42, 67). The remainder of the demographic information is shown in Table 2.

All the consumers had received a medicine on a prescription from their doctor (either currently or in the past), 86 (78%) had purchased a medicine from a supermarket and 99 (90%) from a pharmacy. The consumers identified 648 information sources out of a possible 990 for their named medicines. The most frequent information source identified was the doctor, 91 (83%), written sources, 90 (82%) and the pharmacist, 86 (78%) (Fig. 2).

The number of consumers who could not identify any information sources they would use decreased with the increasing restrictions on medicine availability; supermarket 15 (13.6%); pharmacy 4 (3.6%); and prescription 3 (2.7%).

Table 2 Consumer demographics

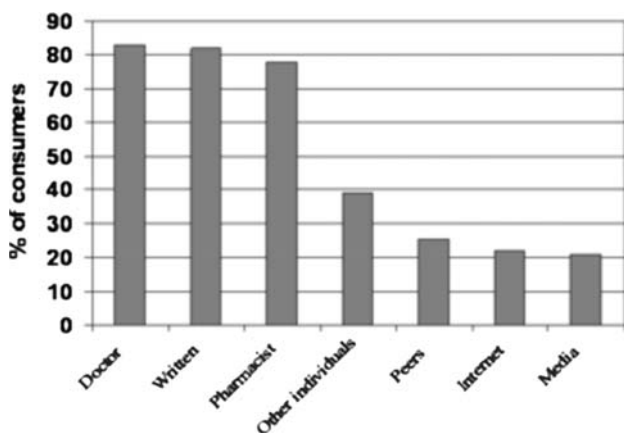| Demographic characteristic	
Gender (n = 110)	
Male	37 (34%)
Female	73 (66%)
Age, years (median (IQR))	55.5
	(42,67)
Internet access (n = 109)	
No	48 (44%)
Yes	61 (56%)
Source of internet access (n = 61)	
Home	40 (66%)
Work	2 (3%)
Library	2 (3%)
Other	3 (5%)
Home & Work	14 (23%)
Regular prescription medicines (n = 109)	
No	25 (23%)
Yes	84 (77%)
No. of doctor visits in past 6 months (median (IQR))	3 (1– 6)
No. of pharmacy visits in past 6 months (median (IQR))	6 (4–12)
Level of education completed (n = 109)	
Primary school	11 (10%)
Junior	35 (32%)
Senior	26 (24%)
University/TAFE	30 (28%)
Further degrees	7 (6%)

Fig. 2 Information sources identified by consumers

The information sources identified changed dependant upon the type of medicine (Fig. 3).

From the 648 named information sources, the pharmacist was identified as the predominant source of information for OTC medicines (32%), the doctor for prescription medicines (37%) and the pharmacist and doctor equal proportions (19% versus 17%) for supermarket medicines. Breaking down written information into CMI/package insert and pack/box, the reliance on the CMI increases (0.6% to 0.5% to 7.5%) as the medicine type changes from supermarket to OTC to prescription and this is reversed for reliance on the pack (15.8% to 11.9% to 4.2%).

Twenty-two (20%) of the 110 consumers did not complete the final section of the interview; 15 consumers (13.6%) identified 2 or less information sources, 5 consumers (4.6%) stopped their interviews due to time constraints, and 2 consumers (1.8%) thought that all of their information sources were equally reliable. The remaining 88 consumers (80%) generated a total of 299 constructs (median of 3.4, range 1–7) that were categorised under 16 main themes (Table 3).
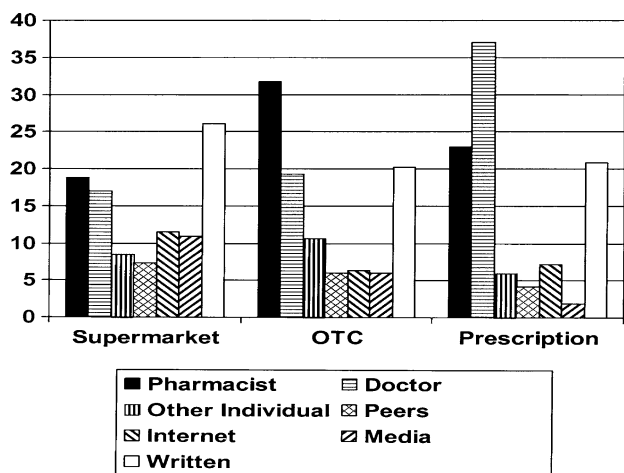
Knowledge, training and trustworthiness were the constructs most frequently elicited by consumers as a measure of reliability of the information sources they used. These key constructs need to be interpreted in light of which source is being considered. For example, while the knowledge and training of the doctor and pharmacist is clear, for the internet or print media, knowledge and training need to be understood as the consumer's perceived knowledge and training of the producer of these information sources. The median values for each information source, when rated against each construct, were calculated (Table 4).

These values give an indication of differences, participants may have had in the way they perceived the reliability of their information sources. In Table 4, a median score of less than 5 suggests that the perception of the information source is towards the named construct. A score greater than 5 suggests that the perception is not towards this construct, but to some other theme. Finally, a median score of 5 suggests that the particular information source does not comfortably lie at one end or the other for that construct. For example, the low median scores for the doctor and pharmacist suggest that they are perceived to have good knowledge, be trained, trustworthy, experienced, provide up-to-date and specific information and can provide the opportunity for more interaction compared with the other information sources.

Fig. 3 Elicited information sources compared to the of medicine

Table 3 Categorisation of construct themes

Construct	Frequency $n = 299$
Source has 'good knowledge'	45 (15%)
Source has been 'trained'	42 (14%)
Source is 'trustworthy'	40 (13%)
Source provides 'enough information as opposed to not enough'	27 (9%)
Source is 'experienced'	25 (8%)
'Specific information' is provided	21 (7%)
Source is 'up- to-date'	21 (7%)
'Interaction' is possible	17 (6%)
Ability of the source to explain things well	13 (4%)
Source 'knows medical history'	12 (4%)
Convenience or accessibility of source	11 (4%)
Source provides 'accurate' information	10 (3%)
Source is 'professional'	8 (3%)
Source provides 'enough information as opposed to too much information'	3 (1%)
'Confidence of the practitioner'	2 (1%)
Source is based on 'research'	2 (1%)

Table 4 Median scores of information sources on top eight themed constructs

Construct		Doctor	Pharmacist	Internet	Written	Media	Peers	Other individuals
Source has 'good knowledge'	Frequency	33	41	16	44	9	13	15
	Median (25th, 75th)	1 (1–2.5)	1 (1–2)	2 (1–4.75)	3 (1–4.75)	6 (5–7)	6 (3–8)	2 (1–5)
Source has been 'trained'	Frequency	37	36	5	29	10	13	13
	Median (25th, 75th)	1.0 (1–1)	1 (1–3)	4 (2–7)	2 (1–6.5)	7.5 (4–9.25)	8 (4–10)	2 (1–4)
Source is 'trustworthy'	Frequency	31	36	21	40	19	6	10
	Median (25th, 75th)	3 (1–5)	2 (1–3.75)	5 (2–8)	3.5 (1–6.5)	8 (5–10)	3.85 (1–7)	2.5 (1.75–4)
Source provides 'enough information as opposed to not enough'	Frequency	25	26	8	41	9	4	6
	Median (25th, 75th)	2 (1–4)	2 (1–2)	1.5 (1–3)	3 (2–6)	6 (4.5–8)	7 (4.75–7.75)	1.5 (1–3)
Source is 'experienced'	Frequency	22	22	2	18	5	9	5
	Median (25th, 75th)	1 (1–2.25)	1 (1–2)	4 (1 & 7)	3 (1–5)	8 (7.5–9)	5 (2–6.5)	1 (1–3.5)
'Specific information' is provided	Frequency	17	19	6	31	4	5	5
	Median (25th, 75th)	2 (1–3)	2 (1–3)	4.5 (3–6.5)	5 (2–6)	6 (3.25–9)	5 (2.5–7.5)	4 (3–6.5)
Source is 'up-to-date'	Frequency	17	19	10	24	5	4	3
	Median (25th, 75th)	2 (1–2.5)	1(1–2)	3.0 (1.75–5)	2.5 (2–3)	2 (1–6)	9 (3,9)	2 (1, 2 & 7)
'Interaction' is possible	Frequency	17	13	5	5	3	4	5
	Median (25th, 75th)	1 (1–2)	1 (1–2.5)	10 (5–10)	8 (4.5–9)	6 (3–10)	2.5 (1–4.75)	1 (1–3.5)

Median score <5 suggests that the perception of the information source is towards the named construct

Median score >5 suggests that the perception is not towards this construct

Median score = 5 suggests that the perception does not comfortably lie at one end or the other for that construct

Discussion

The use of the repertory grid technique to interview consumers visiting community pharmacies was successful in providing a method of identifying the information sources that consumers use and also how the reliability of these information sources are perceived relative to each other.

In this study, consumers identified a number of information sources that they access to find out information about their medicines. The doctor and pharmacist were identified in the top three information sources, 83% and 78%, respectively, and this is comparable with other studies [10, 11, 13]. Given the sample population, this may be expected as all consumers had received a medicine on prescription and can be regarded as frequent visitors to both the doctor and a pharmacy with a median number of 3 and 6 visits in 6 months, respectively. However written information was the second main information source identified (82%) and this is different from previous studies where written information did not figure as highly [12, 13, 19]. This may be accounted for due to the different approaches used in these studies, which included asking only for two sources [13, 19], or providing a list for the participant to choose from [12]. This is a potential strength of the repertory grid technique in that the information sources elicited were provided by the consumers as opposed to a list from the researcher. Thus the information sources are meaningful to the consumer who provided them and the fact that they named a source, strongly suggests that they have experienced accessing that source. The importance of this is further enhanced when considering that the subsequent perceptions of these sources are then based on experience as opposed to an 'artificial' response to a source that they have never used. This is a key concept in the application of the repertory grid that the choice of elements (in this example information sources) is meaningful to the individual and in the context of the subject under study [24].

The 88 consumers who were able to generate constructs, produced a median of 3.4 (range 1–7). In a previous study using the repertory grid in angina, participants generated a median of seven constructs (range 5–12) [28]. The low median number may reflect that these are the main constructs used by individuals in their perception of the reliability of

their information sources and the other constructs are considered less important.

Consumers contrasted the reliability of their information sources in terms of the key constructs of perceived knowledge, training and trustworthiness. When comparing the doctor and pharmacist to the other information sources that they used, consumers judge the health professionals as more reliable on the basis of their knowledge, training, trustworthiness and experience. Similar reasons have been cited elsewhere for patients wishing to use the doctor and pharmacist as their primary information source for medicines [10]. The internet was contrasted with alternative information sources as being seen as coming from a knowledgeable source but less trustworthy and up- to-date. This perception has been reported in other studies where the internet was ranked as the fourth most distrusted information source [11], and also acknowledged as potentially an unreliable source of information [31]. This may be explained by difficulties experienced by consumers in determining the trustworthiness of the source [15]. Written information in comparison with the internet was regarded as coming from a more trustworthy and knowledgeable source. This also has been reported previously where credibility and accuracy were considered important by consumers for written medicines information [32]. In the report by Bunn, media was also regarded as less accurate and credible when compared with other information sources [32]. This was a perception reflected by the consumers in our study where media was regarded as coming from neither a trustworthy nor knowledgeable source. These latter two findings suggest that although consumers access the internet and the media as sources of information on medicines, they do acknowledge that there are limitations on the reliability of these sources. The repertory grid technique provided an excellent tool for eliciting key discretionary themes that consumers use to evaluate the reliability of their information sources.

There are limitations that must be considered in interpreting the results of this study. The convenience sample may not be reflective of all consumers who seek information on medicines. The consumers who did not complete the interview or could not generate constructs may have very different perceptions of their medicine sources although often they would claim that they regarded them to be equally reliable. The fact that the interviews were conducted within the community pharmacy may have resulted in a more favourable response to the pharmacist as a reliable source of medicine information.

Conclusion

The repertory grid technique was successful in identifying the information sources consumers accessed to find out about their medicines and also in identifying the perception of these sources in terms of their reliability. The repertory grid provided a different approach to identifying consumer perceptions without introducing interviewer generated themes that may not have been meaningful to the participant. Thus this technique could offer a valuable tool for future research into consumer preferences for their treatment options or establishing perceptions towards medications and subsequent compliance with these.

References

1. From compliance to concordance. Acheiving shared goals in medicine-taking. London: Royal Pharmaceutical Society of Great Britain; 1997
2. Horne R. Nonadherence to medication: causes and impliation for care. In: Gard P, editor. A behavioural approach to pharmacy practice. Oxford: Blackwell Science; 2000. pp. 111–30. ISBN 0632051388
3. Kravitz R, Melnikow J. Engaging patients in medical decision making. BMJ 2001;323:584–5.
4. Charles C, Gafni A, Whelan T. Decision-making in the physician–patient encounter: revisiting the shared treatment decision-making model. Soc Sci Med 1999;49:651–61
5. Montgomery A, Fahey T. How do patients treatment preference compare with those of clinicians? Qual Health Care 2001;10(Suppl 1):i39–43.
6. Gerrity MS, DeVellis RF, Earp JA. Physicians' reactions to uncertainty in patient care. A new measure and new insights. Med Care 1990;28(8):724–36.
7. Cotten S, Gupta S. Characteristics of online and offline health information seekers and factors that discriminate between them. Soc Sci Med 2004;59:1795–806.
8. Hardey M. Doctor in the house: the Internet as a source of lay health knowledge and the challenge to expertise. Sociol Health Illn 1999;21(6):820–35.
9. Bourke L. Australian rural consumers' perceptions of health issues. Aust J Rural Health 2001;2001(9):1–6.
10. Newby DA, Hill SR, Barker BJ, Drew AK, Henry DA. Drug information for consumers: should it be disease- or medication-specific? Results of a community survey. Aust N Z J Public Health 2001;25(6):564–70.
11. Pennbridge J, Moya R, Rodrigues L. Questionnaire survey of California consumers' use and rating of sources of health care information including the Internet. West J Med 1999;171(5–6):302–5.
12. Sleath B, Wurst K, Lowery T. Drug information sources and antidepressant adherence. Community Ment Health J 2003;39(4):359–68.

13. Stergachis A, Maine LL, Brown L. The 2001 national pharmacy consumer survey. J Am Pharm Assoc 2002;42(4):568–76.
14. Trewin V, Veitch GBA. Patient source of drug information and attitudes to their provision: a corticosteriod model. Pharm World Sci 2003;25(5):191–6.
15. Gray NJ, Klein JD, Noyce PR, Sesselberg TS, Cantrill JA. Health information-seeking behaviour in adolescence: the place of the internet. Soc Sci Med 2005;60(7):1467–78.
16. Brodie M, Foehr U, Rideout V, Baer N, Miller C, Fluornoy R et al. Communicating health information through the entertainment media. Health Aff 2001;20(1):192–9.
17. Hotham N. Information on drugs and environmental influences in pregnancy in popular magazines: a critical review. Med J Aust 1995;162:417–20.
18. Bernhardt JM, Lariscy RAW, Parrott RL, Silk KJ, Felter EM. Perceived barriers to Internet-based health communication on human genetics. J Health Commun 2002;7(4):325–40.
19. Makoul G, Arntson P, Schofield T. Health promotion in primary care: physician–patient communication and decision making about prescription medications. Soc Sci Med 1995;41(9):1241–54.
20. Raynor D, Knapp P. Do patients see, read, and retain the new mandatory medicines information leaflets? Pharm J 2000;264(7083):268–70.
21. Raynor DJK, Savage I, Knapp P, Henley J. We are the experts: people with asthma talk about their medicine information needs. Patient Educ Couns 2004;53(2):167–74.
22. Lloyd A. The extenet of patients understanding of the risk of treatments. Qual Health Care 2001;10(Suppl 1):i14-8.
23. Frewer L, Salter B, Lambert N. Understanding patients preferences for treatment the need for innovative methodologies. Qual Health Care 2001;10(Suppl 1):i50–4.
24. Kelly G. The psychology of personal constructs. New York: Ruoteledge; 1991 (Previously Norton; 1955). ISBN 0415037972
25. Frewer L, Howard C, Shepherd R. Public concerns in the United Kingdom about general and specific applications of genetic engineering: risk, benefit, and ethics. Sci Technol Human Values 1997;22(1):98–124.
26. Frewer L, Howard C, Hedderley D, Shepherd R. What determines trust in information about food-related risks? Risk Anal 1996;16(4):473–86
27. Lewith G, Chan J. An exploratory qualitative study to investigate how patients evaluate complementary and conventional medicine. Complement Ther Med 2002;10:69–77
28. Rowe G, Lambert N, Bowling A, Ebrahim S, Wakeling I, Thomson R. Assessing patients' preferences for treatments for angina using a modified repertory grid method. Soc Sci Med 2005;60(11):2585–95.
29. Fransella F, Bell R, Bannister D. A manual for repertory grid technique. 2nd ed. Chichester: John Wiley & Sons Ltd; 2004. ISBN 0470854901
30. Jankowicz D. The easy guide to repertory grids. Chichester: John Wiley & Sons; 2004. ISBN 0470854049
31. Fox S, Rainie L, Horrigan J, Lenhart A, Spooner T, Burke M, et al. The online health care revolution: how the Web helps Americans take better care of themselves [Internet]. The Pew Internet and American Life Project; 2000. In; 2000. Available at http://www.pewinternet.org/reports/toc.asp?Report=26. Accessed 1 Jul 2003
32. Bunn MD. Consumer perceptions of medical information sources: an application of multidimensional scaling. Health Mark Q 1993;10(3–4):83–104