Painkiller Purchasing in the UK: an Exploratory Study of Information Search and Product Evaluation

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Abstract

Purpose: The aim of this paper is to explore, through exploratory qualitative research, how perceptions of involvement and risk, for female consumers, influences their information search and product evaluation decision-making for Over-the-Counter (OTC) painkillers.

Methodology: In-depth interviews were conducted amongst twenty-five female OTC painkiller purchasers from one pharmacy. Females are more engaged with and have a greater likelihood to use OTC medication. Despite the benefits of applying qualitative approaches when researching self-medication, there are few self-care qualitative studies.

Findings: Despite the greater availability and awareness of OTC medicines, the purchasing process is still underpinned by inherent risk. Alongside base levels of involvement, painkillers had situational importance with there being unease as to the risk involved. Consumers felt uncertainty as to the worth of their knowledge and this was compounded by a lack of informational clarity. Finally, the risk of side-effects and the relative importance of subjective beliefs often took precedence during evaluation.

Research limitations/implications: Information needs to be made more accessible, whilst there is scope to capitalise upon family history as interpersonal sources were deemed to be empathetic. As the study was conducted once in a 'local' setting, the time span and level of interactivity could be extended by studying consumers 'lived experiences'. Triangulated research amongst related parties, such as pharmacists, could build on this exploratory study.

Originality/value: OTC medicine sales have grown with self-medicating consumers purchasing painkillers the most frequently. Previous research has stemmed from medical sociology, pharmacy practice and public policy, and there is a lack of contemporary (UK) consumer behaviour research on OTC painkiller purchasing.

Keywords: painkiller purchasing, involvement, risk, information search, evaluation

Article type: Research paper

Introduction

Pain relieving analgesics are the largest sector in the growing Over-the-Counter (OTC) pharmacy market (Keynote, 2004; PAGB, 2005a) with 90% of UK consumers using painkillers annually (PAGB, 2005b). Consumer awareness of self-care issues has been associated with the importance of OTC availability (PAGB, 1997), both of which are reflected in increasing product choice (PAGB, 2005c). Perhaps surprisingly, in view of the scale and importance of OTC medication purchasing, Ward & Tully (1998) noted a lack of research on consumer views of OTC medication. Although OTC medication has been researched in medical sociology, pharmacy practice and public policy, there is a lack of contemporary (UK) consumer behaviour research on OTC painkiller purchasing. In distinguishing between prescribed medicines and OTCs, the terms patient and consumer are associated, respectively, with each classification. The emphasis on OTC purchasers as consumers is a function of, and reaction to, the involvement associated with self-care. Although consumers may make a greater input into the decision-making process compared to patients, OTC purchasing is still associated with risk. It is the continued existence of this risk that distinguishes the decision-making process for OTCs notwithstanding that it is not the only purchasing situation where one has to be mindful of such considerations.

The aim of this paper is to explore, through exploratory qualitative research, how perceptions of involvement and risk, for female consumers, influences their information search and product evaluation decision-making for OTC painkillers. Thereafter, a series of objectives sought to uncover the following phenomena:

To explore involvement and risk perceptions associated with OTC painkillers;

To probe the types and usage of sources accessed during the stage of information search;

To identify the relevance of different product evaluation dimensions.

OTC medicine sales have grown following their re-classification from prescription drugs. As well as these changing regulations, self-care information is more available (Westerlund *et al.*, 2001). Concerns over healthcare have resulted in greater consumer engagement and knowledge (Chewning & Sleath, 1996; Gould *et al.*, 1997; Prayle & Brazier, 1998). However, the inherent risk of medication together with the role of information in reducing risk perceptions exists alongside consumer empowerment (Bissell *et al.*, 2001). At the same juncture, the evolution of OTC positioning from a medicine to a readily available brand necessitates an exploration of where they lie in the low to high involvement continuum.

Within consumer decision-making, the alternatives identified during information search provide the basis for subsequent evaluation. Consequently, there is logic in examining these together. Underlying these are the related concepts of involvement and risk. Although risk has been considered as an antecedent to involvement (Chaffee & McLeod, 1973), a consumer's risk conceptualisation has been viewed as an inherent part of involvement (Laurent & Kapferer, 1985; Mitchell, 1999). Instead of being sequential, they coalesce. Risk is significant if consumers seek to avoid inappropriate choices instead of maximising their purchase's utility (Mitchell, 1999).

OTC purchasing occurs within a dynamic marketplace and these contextual developments have influenced the sector's evolution. First, regulators and suppliers

have shifted cost onto consumers (Creyer *et al.*, 2001; Keynote, 2004). Drug life cycles can be extended and pre-existing brand equity capitalised upon through OTC status (Blenkinsopp & Bradley, 1996; Keynote, 2002). Since generic drugs can erode the patent holder's market share, trading conditions have intensified. Secondly, segmentation has focused upon occasion-based differentiation with 15% of purchasers being defined as heavy users that take painkillers at least twice a week (Keynote, 2000). Whilst variant choice has been one outcome of competitive intensity, another influence is that OTCs have accounted for a substantial portion of pharmaceutical sector growth (Schmidt & Pioch, 2004).

Thirdly, consumer benefits associated with cost and convenience gives self-medication greater utility (Oster *et al*., 1990; Hughes *et al.*, 2001; Sleath *et al*., 2001). These trends exemplify heathcare's shifting emphasis from that of patient to customer (Sargeant, 1999). Popovich *et al.* (1992) predicted the emergence of self-care with Alberts *et al.* (1998) identifying an association between it and consumer empowerment. Marketing Week (2005) showed overwhelming consumer support (96%) for self-medication and empowerment. Painkillers are the most widely purchased OTC medicine with approximately ninety variants (CMP, 2002). Most adults experience ailments regularly with a substantial minority treating these with OTCs (Knapp & Knapp, 1972; Bissell *et al.*, 2001). Increases in painkiller usage have been attributed to lifestyle shifts militating against time being 'lost', thus creating a demand for immediate relief (Vuckovic & Nichter, 1997). Finally, retail pharmacists have evolved from being simply dispensers, with an operational focus, to having a more holistic management role that utilises their professional advice (NHS, 2000).

This paper seeks to address a number of inter-related theoretical, methodological and contextual gaps in the current literature. As noted, research on OTC medication has been concentrated in other disciplines, notably medical sociology, pharmacy practice and public policy. These disciplines lack a shared literature with consumer decision-making behaviour. Although consumer perceptions (Wazaify *et al.*, 1995) and usage patterns (Sinclair *et al.*, 2000) of OTC products have been researched, they were not conceptually grounded and did not look through the disciplinary lens of consumer behaviour.

Theoretically, this paper is situated within the domain of consumer involvement and risk. In developing this literature, albeit within a specific product category, this paper seeks to integrate involvement and risk, the relationship between which has been examined by Venkatraman (1989), with that of information search and product evaluation. Related OTC research has looked either at selected phenomena, such as the interplay between risk and information (Berry *et al.*, 2004), or, alternatively, at information routed through one source or else directed to a particular demographic group. With regard to the former, Nichol *et al.* (1992) focused on pharmacist consultations with Sleath *et al.* (2001) centring on doctors, whilst Minkus-McKenna (2006) has explored OTC communications amongst older consumers. In view of the role that better information could play in facilitating consumers self-care behaviour (Department of Health, 2005), there is value in qualitatively uncovering this decision-making process holistically. Grounding this paper within consumer behaviour not only helps to address the call by Ward & Tully (1998) for greater attention to be devoted to consumers views of OTC medication, but it also complements Lyon

(2001) who explored the strategic position of the OTC market from a managerial perspective.

Methodologically, the qualitative focus helped to address a lacuna in how this subject area has been investigated. Chapple & Rogers's (1999) observation that there were few self-care qualitative studies reiterated Vuckovic & Nichter (1997) in their view that the research base - where the 'whats' have been the focus rather than exploring the 'whys' - has been overly descriptive. Dill *et al.* (1995) noted that the preponderance of quantitative studies limited one's ability to derive rich insights from the research subjects. In short, there was a rationale for this paper to employ an explicitly qualitative focus. Irrespective of the approach, the focus on female consumers - as a research subject - could be rationalised on several bases. Not only do women discuss their health more candidly than men (Ganther *et al.*, 2001), but they are also more likely to use medication (Dean, 1989). They are also more likely to report an ailment (Anson *et al.*, 1993) and they are more involved in purchasing medicine than men (Vuckovic, 1999). Instead of exploring the entire OTC market, there was a rationale for focusing on painkillers. In addition to its market dynamics and gender significance, the process of researching painkillers can be less embarrassing.

Contextually, the dynamic and evolving nature of the UK's OTC market warrants contemporary research given that a number of related articles could now be deemed to be historical. Gore *et al.* (1994) assessed, quantitatively, the relationship between involvement and information for OTC purchasing, although this is now relatively dated and is American, rather than British, in origin. British research (Rodway, 1995)

suggested that the market was characterised by a lack of consumer understanding. As the OTC market has become more fully embedded, there is a rationale for exploring the nature of the decision-making process.

This paper is divided into four sections. In the first section, the relevance of involvement and risk for information search together with product evaluation, as applied to OTC purchasing, is established. Thereafter, the qualitative research methodology is detailed. Thirdly, the qualitative analysis explores the phenomena underpinning involvement and risk of OTC purchasing together with the influence on information search and product evaluation decision-making. Finally, the theoretical conclusion highlights the importance of involvement and risk in this context, whilst pointing to ways in which this evolving sector's challenges can be better addressed.

Involvement and Risk: Information Search and Product Evaluation

Involvement and Risk

Changes in OTC purchasing have been accompanied by greater consumer involvement. Alongside this evolution, though, medication purchasing still involves risk with Cox & Rich (1964) defining risk as the consumer's willingness to increase their vulnerability or likelihood to potential failure when purchasing. Risk influences the extent and nature of information search that occurs (Urbany *et al.*, 1989) with Bissell *et al.* (2001) suggesting that information can ease the risk perceptions associated with medication.

Purchasing is influenced by how information searching filters through to evaluation. In order to avoid inappropriate choices that pose greater risk, a consumer may place less prioritisation on maximising their purchase's utility (Mitchell, 1999). Consequently, risk minimisation may be given precedence over brand optimisation. Instead of involvement and risk existing discretely, Mitchell (1999) argues that they are integral whilst Laurent & Kapferer (1985) suggested that risk is embedded within involvement. In addition, Laaksonen (1994) suggested that risk influenced involvement. Involvement and risk signify the product's 'importance' and salience (Bloch & Richins, 1983).

Involvement has been defined as 'the arousal, interest and drive evoked by a product class' (Dholakia, 2000); in turn, this reflects the product's relevance (Zaichkowsky, 1985). Involvement results in search and evaluation (Antil, 1984) with these activities being 'measured' along a spectrum from high to low involvement. Highly involved consumers have a greater propensity to be engaged in more extensive evaluative

processes (Zaichkowsky, 1985). Since OTCs have a low monetary value and are habitually purchased, low involvement is more likely (Rodway, 1995). In a low involvement scenario, an awareness, trial and repeat purchase (ATR) model (Ehrenberg & Goodhart, 1980) indicates simple rather than extensive decision-making. Active information seeking may be absent if consumers are passive and satisfied. More specifically, Brades (1990) outlined a 'pain, medication, relief' model for consumers that consider painkillers to be of low interest.

Generic categorisations of perceived risk (Jacoby & Kaplan, 1972; Dholakia, 2000) exist alongside specific self-treatment risks (Charupatanapong, 1994). First, there is financial risk. With the exception of heavy users, OTC consumers are unlikely to experience significant financial risk. Low financial risk is associated with a correspondingly low level of social risk with the latter cited as the least influential for OTC medication. Therefore, there are parallels with typical low involvement purchases. In contrast, there are identifiable psychological risks with the potentially harmful effects of medication causing unease. In this respect, OTC consumption corresponds to a high involvement context. Temporal and psychological risks are allied. Since a determination of risk is the immediacy and duration of relief, the time risk is influential in stimulating product use. Finally, there are physical risks: performance and safety. Performance relates to the degree of effectiveness and efficacy, whilst safety centres on the possible dangers of misapplication.

Information Search

When purchasing OTC painkillers, a consumer's information originates from their existing knowledge or experience (internal sources) and from a variety of external

sources: pharmacists, interpersonal communication, advertising and the media (Strutton & Pelton, 1992). Although some consumers rely on their own experience (Morrow *et al.*, 1993), pharmacists may occupy an important role in providing not only advice (Bissell *et al.*, 2000) but also a level of information that is sufficient for product use (Tully *et al.*, 1997).

Pharmacists can be pivotal in ensuring consumer safety together with product efficacy (Prayle & Brazier, 1998). Nichol *et al.* (1992) demonstrated that a significant minority of consumers, following the pharmacist's intervention, purchased a different OTC than intended. Pharmacists have simultaneous roles; subjectively, they have commercial interests in selling and more objectively, they provide impartial advice. Whilst conflict may exist between commercial roles and professional duties (Pioch & Schmidt, 2004), Blenkinsopp & Bradley (1996) argued that these could be reconciled.

Whilst pharmacists influence OTC decision-making at the point of purchase, Rodway (1995) noted that consumers often deem interpersonal communication from family, friends and colleagues to be significant on account of their own relative lack of engagement with this category. For consumers whose superficial knowledge is reliant on emotive appeals, interpersonal communication can be instrumental as a substitute if it is deemed trustworthy.

Thirdly, brand choice can be determined by packaging and retailer information. This can ameliorate for a consumer's inability to interpret information where a plethora of brands exists (Kavanoor *et al.*, 1997). Brands with identikit perceptions can be difficult to distinguish if consumers lack specialist knowledge. Consumers may fail to

optimise their brand choice due to variety and ambiguity (Mitchell & Papavassiliou, 1999). In particular, the elderly may be disadvantaged by poor leaflet clarity (Wogalter & Dietrich, 1995). This affects information assimilation and transparency.

Finally, consumers acquire information through media sources (Gray *et al.*, 1998). Direct advertising impacts upon symptom awareness and pertinent treatments (Creyer *et al.*, 2001) with comparative adverts being the most persuasive (Kavanoor *et al.*, 1997). Web information allows consumers to acquire medication knowledge through dialogue with health professionals (Cohen *et al.*, 2001). Manufacturers have responded to this growing consumer advocacy by publishing advertorial web pages that fulfil dual roles by fusing information with advertising (Spain *et al.*, 2001).

Product Evaluation

Sequentially, product evaluation follows information search. There are a number of evaluative influences: product qualities and attributes, a consumer's loyalty and knowledge, demographic factors and finally, temporal pressures induced by symptom immediacy.

When viewed subjectively, the majority of consumers perceive painkillers to be safe and risk free (Bissell *et al.*, 2001) with the promotional language used by manufacturers reinforcing this through reassuring associations. Price differentials exist with the cheapest being a fraction of the most expensive. This affects consumers with limited finances or heavy usage. Brand proliferation has resulted in segments being targeted with different positioning strategies. Altering the formulation is a differentiating tool that can warrant a price premium on account of supposed

superiority. Despite it being difficult to objectively evaluate any benefits, these formulations appeal to consumers (Hardcastle, 2001). Since this market is characterised by ingrained brand loyalty (PAGB, 2005c) together with entrenched buying patterns (Rodway, 1995), there is a rationale for this form of marketing.

Physical characteristics of OTC medication can make them difficult to consume and the ease of consumption is a consideration. Easier oral administration has been used as a differentiating tool (Hardcastle, 2001). Since these qualities are transparent, consumers can be willing to pay the premium. Perceived or assumed strength relative to other OTCs is a criterion, although the reclassification in status of many drugs from prescription to OTC has not been accompanied by a corresponding realignment of perceptions. Compared to medications that have only enjoyed OTC status, the perceptions for reclassified medications are more powerful. Impressions of strength can be conveyed through manufacturers deploying terms such as ‘combat’ or ‘attack’ on the packaging and promotion (Rodway, 1995). If consumer knowledge of product attributes is scant, their evaluation may be more emotional or ‘irrational’.

Demographic factors have an impact on OTC evaluation (Schufeldt *et al.*, 1998). Despite some OTCs being deemed as ineffective or inappropriate (Nichol *et al.*, 1992), a more adept consumer can deviate from the pharmacist’s advice. Older segments have greater faith in doctors and are less sceptical towards healthcare (Ganther *et al.*, 2001). Elderly consumers use OTCs in preference to prescriptions and they are more engaged in purchase deliberations than their younger counterparts (Sansgiry & Cady, 1996). Finally, temporal factors centring on the immediate symptoms are significant. Since the nature and immediacy may preclude rational

thought, the consumer is spurred on by emotional and physiological triggers (Lees, 1995).

Methodology

Exploratory qualitative research was conducted amongst female OTC painkiller purchasers in an independently owned pharmacy outlet rather than a multiple. Bissell *et al.* (2001) contended that qualitative research encourages consumers to interpret and analyse their reasoning for self-medication. In designing the research, an interpretative approach applied in a particular social context (VanMaanen, 1979), which was framed and focused around a 'unit of one' (Wolcott, 1990), sought to discover phenomena through an in-depth exploration of what was happening (Robson, 1993).

Structurally, a hybrid of deductive and inductive approaches was employed. Notwithstanding the exploratory focus, which places stress on generating new insights (Kent, 1999) rather than testing existing concepts, a degree of deductive structure was applied. As existing concepts were used as an initial basis and perspective (Cresswell, 1993) that provided an underpinning (Fetterman, 1989), the study was not situated within a theoretical vacuum. Prior theory guided the research in that deductive pre-specification was blended with inductive reasoning rather than the process being dichotomous. Induction allowed for new or unsuspected phenomena (Miles & Huberman, 1984), which can be interpreted as themes, to emerge (Flick, 1998) and for the analysis to uncover these (O'Leary, 2004).

There were two sampling stages. Criterion sampling (Patton, 1990) was used with female purchasers of OTC painkillers. Thereafter, purposive sampling that entailed the deliberate selection of research subjects (Mason, 1996), together with convenience sampling, was used. Respondents were screened on the basis of staff asking female

customers, who were purchasing that product category, for their participation in an in-depth interview. This had several benefits: their perceptions would help to illuminate the process under study (Denzin & Lincoln, 1994); these phenomena would be nested and situated in a distinct location, and, finally, there was a degree of 'local groundedness' (Silverman, 1993). Situating the interviews in close physical proximity (Rossman & Rallis, 1998) and time span to the specific context helped to better ensure validity, as the depth and richness that was derived contributed to the data's 'goodness' (Sykes, 1990).

Collection of the data involved twenty-five in-depth interviews conducted in a separate room in the pharmacy where co-operation had been secured. As the granting of interviews by respondents was ultimately dependent on them volunteering, purposive techniques were accompanied with convenience sampling (DePoy & Gitlin, 1994).

All interviewees were customers of that pharmacy, the choice of which was influenced by its profile of OTC and prescription customers. In contrast, pharmacies dependent upon prescription handling were a less viable target. Profile information on the interviewees can be found in Table I. Semi-structured in-depth interviews offered a degree of latitude (May, 1997) that allowed for perceptions to be generated (Miller, 1997) of that individual's perspective (Fontana & Frey, 1994). Applying a mixed process of deduction and induction tallied with the use of in-depth interviews (O'Leary, 2004) with this method lying equidistant between a purely positivistic as opposed to a wholly interpretative approach (Carson *et al.*, 2001). As such, the division of the interviews into three sections reconciled inductive flexibility with the

need for being methodical in a deductive manner. First, involvement and risk perceptions were explored. Secondly, the types and usage of information search were probed and, finally, the relevance of different evaluation dimensions was sought.

Take in Table I

Analysis of the interviews was achieved through, firstly, transcribing the tape-recordings. The data was analysed in accordance with the components of Miles & Huberman (1994): data reduction, data display, and drawing and verifying conclusions. Applying a qualitative software package (WinMax) allowed the data to be, firstly, coded. As the initial stage in qualitative analysis (Bryman, 2001), which attaches meaning to the pieces of raw data, the resultant conceptualisation (Strauss, 1988) allowed for the subsequent development of categories. Once the material had been reduced after having been coded, organised into themes and then categorised, the process of drawing conclusions was undertaken.

Utilising a hybrid of deductive and inductive approaches required a degree of comparison with previous work. Consequently, the consistencies drawn out from the categories were used in a comparative manner against relevant theory (Gray, 2004) with this tallying with one of the tactics advocated as part of the Miles & Huberman framework. However, applying the latter authors stress on making comparisons existed alongside a concurrent need for the material to be interpreted in relation to the contextual parameters (Dunne *et al.*, 2005). By doing so, deductive logic together with inductive reasoning was better blended with this allowing for both parallels and contrasts.

Displaying the data allowed for consumer perceptions to be explored and unpacked. A number of quotes were incorporated which enabled the phenomena in question to be displayed as a 'picture' (Buchanan, 1992) that illuminated the research by adding 'colour' (Green & Thorogood, 2004).

Employing a partially inductive approach lessened the need for generalisation as greater significance was attached to the understanding of what was occurring contextually (Saunders *et al.*, 2000). Through being attuned and sensitive to the contextual nuances, the emergent data revealed complexity and detail, and, as such, its validity was enhanced through the accurate representation of the social phenomena which it was depicting (Hammersley, 1990). Since the research was contextually specific, in terms of how a product category was perceived by a particular gender group, the extent to which the phenomena can be generalised are limited.

Despite the contextual specificity, there was a rationale for studying female consumers through interpretative research around a bounded purchasing situation of one gender group. In their medicine purchasing and usage they are deemed to be more proactive than men (Vuckovic, 1999). Deciding whether to apply focus groups or, alternatively, in-depth interviews was influenced by a number of considerations. Independently of any gender related factors, the scheduling of focus groups can be problematic. In relation to gender, the advantages that focus groups afford compared to in-depth interviews, in the sense of the group interaction and insight generation, could be counteracted with several downsides. Notwithstanding that painkiller discussion is less sensitive than for other medications, the lack of privacy in a focus group might result in some insights being lost. In short, the research subjects would be

more forthcoming in an in-depth interview situation that capitalised on their insights in a more discrete manner.

One limitation of focusing on females was to limit the generalising of these findings to men. In common with previous research, such as Vuckovic (1999) and Sinclair *et al.* (2000), the female consumers in this study were similarly proactive with this being in a context of females having to juggle multiple roles. Although the focus was solely on the respondents, rather than on their broader purchasing and subsequent usage in relation to other parties, the probing and inquisitive nature of qualitative research means that one has to be mindful of this more encompassing role that they may perform compared to men. Due to the complexity and subjectivity of pain from a gender perspective (Melton, 2002), the ability to simply extrapolate these findings to a male decision-making environment may be problematic. Adapting the findings and implications for male consumers would need to accommodate their more disengaged behaviour and, consequently, caution needs to be exercised in merely transferring the phenomena that relate to generally more proactive female consumers.

Irrespective of the paper's gender focus, the ability to apply the findings elsewhere, in the sense of progressing from a distinct case to a whole population (Silverman, 2000), may be problematic as it is difficult to 'freeze' or contain a particular setting in order to allow replication (LeCompte & Goetz, 1982). Even if replication is sought, merely applying principles of generalisation universally can be flawed as local conditions can militate against any ability to generalise (Lincoln & Guba, 1985). More specifically, it has been suggested that in-depth interviews, as a chosen research method, cannot be reconciled with generalisation (Carson *et al.*, 2001).

Despite the high degree of local grounding lending the research validity, with this being a function of the immediacy of the interviews relative to the purchasing context, a number of research limitations were inherent. Compared to a triangulated approach that uncovers a true 'fix' on a situation by using multiple sources of data (Denzin, 1970), which allows for a degree of corroboration (Mason, 1996), the uni-dimensional nature of the in-depth interviews was a limitation. There are a number of research directions that could attend to this by illuminating the subject from multiple perspectives. This could be achieved by researching the same subjects differently and more extensively or, alternatively or in addition to, by researching the input of related parties, such as pharmacists. Any subsequent research would seek to substantiate and confirm the exploratory work.

Notwithstanding the use of in-depth interviews in a 'local' setting, a rationale exists for extending the scope of the interview process in terms of the time span and the level of interactivity. Phenomenological research, in the form of studying the 'lifeworld' experience of individuals (Tesch, 1994), permits a fuller understanding of their 'lived experiences' (Moustakas, 1994) with the investigation being able to glean this over an extended time period rather than on one occasion.

Analysis

The first part of the analysis explores involvement and risk when purchasing painkillers. Table II summarises the qualitative phenomena from the interviews together with implications. Thereafter, the sections are structured according to the literature review: information search and product evaluation. Tables III and IV summarise, respectively, the significance of internal and external information sources, and the evaluative dimensions, as revealed by interviewees.

Involvement and Risk

Overall, painkillers were purchased in order to ensure a continual supply. Younger interviewees, in particular, maintained supplies to alleviate the onset of pain. Anticipated pain was addressed through having a continual supply. Significantly, light users and those with heavier usage patterns had an equal propensity to stock painkillers. Consequently, there was a base level of involvement with all the interviewees noting that they had a stock of painkillers at home as well as carrying a supply outwith their house. Ensuring an available supply denoted anticipated purchasing patterns with appropriate contingencies being made for sudden pain:

'When I take them, yes. When I buy them…Maybe not then. I don't think so much about taking them…I just want to have them in the house. There is a difference, see?' (interviewee 19).

Whilst having a continual supply was important, these base levels of involvement did not equate into interest. Ingrained on-going interest was of minor importance. Crucially, painkillers did not exhibit low involvement characteristics. Rather, the pain

together with medication was highly situational and transient. Involvement receded in parallel with symptom relief with base levels of interest being evoked by temporal conditions. Any emerging involvement in painkillers corresponded to the product's immediate relevance and urgency engendering strong emotions:

'Generally I don't think or care about painkillers unless I have a headache, then I'm like, oh my god there's no painkillers here, what can I do? Otherwise, I don't really think about them, only when I'm in pain' (interviewee 2).

As previously outlined, the coalescence of risk and involvement are signifiers of product 'importance'. Perceptions of risk and actual behaviour were highly situational. Risk perceptions were influenced by the continuity of use engendering greater reassurance and lessening safety concerns. However, there were feelings that manufacturers were abdicating their onus of responsibility. One manifestation of this transference of responsibility onto consumers was the unease generated by side-effects. Ironically, perceived risk and uncertainty was exacerbated by greater transparency:

'Sometimes they tell you the great things that the drug does and then list the side-effects. And you're like oh my gosh. Then you have this decision to make and that's the scary bit. You're like, shall I take it? You say to yourself, how am I supposed to know if these things are going to happen or not? They push the responsibility to the consumer and advise you on the things that might happen' (interviewee 8).

Despite this information being objective rather than subjective, there were finite limits to consumer assimilation. The inability to ascertain the likelihood of side-effects created dissonance. Two compensatory mechanisms were used. First, emotive reasoning took precedence if it was difficult to interpret objective information. Significantly, knowledgeable interviewees were as equally reliant on this as less informed consumers, which differs from previous research (Rodway, 1995). Secondly, obtaining advice from multiple sources ameliorated this increased risk.

Interviewees with more complex medication patterns applied different painkillers according to symptom. However, complexity was not equated with greater knowledge. Interviewees with rudimentary knowledge were more rigid in their perceptions of what variant suited particular symptoms:

'I have developed in my mind, aspirin for long-term relief, but slowly affecting your system, and paracetamol is fast acting, but for short term, and Mezulid (a prescription painkiller) is for severe pain. It's how I've categorised them in my mind and it's how I use them' (interviewee 3).

In contrast, knowledgeable consumers used the same painkiller irrespective of symptom, which suggests a willingness to use 'substitutes'. Those with less extensive knowledge viewed this as an improvisation. Consequently, knowledgeable consumers were more sceptical of, and resistant to, the idea of real differences existing between painkillers. Greater knowledge was equated with simpler medication patterns that used these 'substitutes' and, concomitantly, a highly involved consumer with a more complex medication pattern did not necessarily possess the greatest knowledge.

Take in Table II

Information Search

Internalised sources were significant. This encapsulated painkiller cognisance, but also prior usage. Recounting previous consumption had a significant impact with particular painkillers being preferred due to the feeling of family tradition that it evoked and conjured up:

'My mother bought this painkiller when I was sick as a child, so I feel close to them, very used to them. And I will not stop using them probably because they are effective. It's a family thing. My mother was hunting me around the house with the painkillers saying 'do you feel bad' and then giving them to me. That was nice' (interviewee 3).

However, there were doubts as to whether their knowledge was meaningful. Consequently, this lack of understanding exacerbated the problems of consumers being exposed to risk (Sansgiry & Cady, 1996). Guilt was experienced if information could not be comprehended, thus suggesting that in their quest to be more informed they felt thwarted. Concomitantly, though, they were not prepared to invest effort. Facilitating the process of acquiring information could ease this.

Externalised information searching was initiated by symptom onset or brand unavailability. Differences were noted between the importance ascribed to particular sources, as opposed to the level of reference attached to them. Despite GP or pharmacist advice being seen as important, these sentiments did not always translate

into experience. Therefore, a disparity appeared between ‘what you should do’, as opposed to ‘what I really do’. However, trust was vested in pharmacists:

‘If I have a good impression about the person behind the counter, then I will believe it (their advice)’ (interviewee 15).

Pioch & Schmidt (2004) considered these to be instrumental qualities. One manifestation was that a select number of pharmacists, who had established credibility and rapport, were consulted. However, there were caveats since recommending a substitute brand was felt to constitute an invasion of privacy. However, this dubiety was not attributed to a conflict of interest or a lack of impartiality as suggested by Prayle & Brazier (1998). Concerns centred on expertise and competence, which suggests that pharmacists need to surmount perceptual barriers. Although older interviewees were self-assured in managing their symptoms, there were differing patterns from Sansgiry & Cady (1996) in that they did not request more advice from pharmacists than younger segments.

GP advice was less significant than that of pharmacists with the latter being seen as more trustworthy. This echoes Williams & Calnan’s (1996) discussion of consumers questioning of doctors, although Bradley *et al.* (1998) pointed towards more favourable attitudes. In interpreting GP advice, the need for a minimum level of knowledge was an impediment. Less proficient consumers were disadvantaged and this was compounded by patronising advice. Consequently, there was a perception that decisions were foisted upon consumers rather than the process incorporating them:

'You must have a certain..what shall I call it..level of knowledge before you are able to make any decision. That is why I don't think I have the information that I need. At the end of the day, the doctor makes the decision. But he does not make me feel like I am part of that decision..just a patient to be talked down to' (interviewee 19).

These perceptual barriers limited the ability of consumers to apply advice. This differs from more proactive approaches to healthcare (Sargeant, 1999). Interviewees who actively sought information from their doctor were more involved in their health.

Interpersonal communication from family and friends was crucial due to its credibility and empathy. In contrast to other external sources, product packaging was viewed as supplementary rather than pivotal. Information was felt to be regulatory-driven rather than being disseminated for the consumer's benefit; consequently, it was not transparent and did not perform the role of 'solution to problem'. A consequence of this was the anxiety rather than reassurance created by the lack of clarity:

'I think the instruction leaflet tends to be a bit vague, especially with the side effects. The information about side-effects can be a bit off putting. It could be off putting because you see the side-effects and then say 'I'm not going to take it' and you will not take the medication because of the side-effects. But you're not guaranteed to get the side-effects. You might and you might not get them' (interviewee 21).

Interviewees claimed that advertising did not influence their painkiller choice with its role being one of reinforcement rather than conversion. However, younger interviewees showed a greater likelihood to recount adverts. In contrast, Kavanoor *et*

al. (1997) outlined the value of them for information acquisition, although there are parallels with Sinclair *et al.* (2000) who established that they reinforced rather than contributed to knowledge. Finally, interviewees who accessed relevant industry web sites had initiated their search due to a perceived lack of confidence with existing information. However, consumers found the information difficult to absorb and interpret, whilst there were doubts as to its impartiality. Consequently, these phenomena suggest that the potential for web information capitalising upon an increasingly consumer-driven healthcare sector, as noted by Maddox (1999), was not being fully harnessed.

Take in Table III

Product Evaluation

Safety was considered to be a crucial evaluative dimension. However, interviewees with greater knowledge distinguished safe and normal use from misuse. Whilst the risk of side-effects increases with usage, less knowledgeable interviewees were not as recognisant of risk:

'What does safety mean to me? It means…it means that…I don't understand that. That it doesn't make me feel bad, sick or something? Like side effects? Or that it's long term things…how dangerous do we think they are? They are just…painkillers. It's not like with laser surgery for your eyes, then you have to think about the long-term consequences, like, am I going to be blind? I mean, it's drugs! Safe, if you ask me, what safe means to me, it means…that I will still be alive after taking it' (interviewee 15).

When evaluating safety, risk minimisation existed alongside risk avoidance. Emotive feelings could counteract logical decision-making and rational evaluations; the spectre of side effects inhibited consumers from taking medication:

'The doctor…he recently explained a pill that I was advised to take, and I decided not to, after he read what the side effects were. I decided that I'd rather have the symptoms than take the pill. It could have been scary, the side effects' (interviewee 9).

Compared to safety, price lacked equivalence and significance. However, this did not preclude interviewees from purchasing a cheaper generic brand in preference to named brands. Although interviewees did not trust generic brands to be 'as good', they conceded that there were no tangible differences:

'I'd rather pay more for something I know is a quality tablet than pay less for something that I believe isn't as good as something you pay more for, I know that's stupid, because they're not that special by design' (interviewee 2).

Essentially, there was recognition that subjective, rather than more objective, reasoning took precedence. There was a dichotomy, though, between brand-loyal as opposed to ingredient-loyal consumers with greater expertise and knowledge. The latter were more willing to countenance the substitution of their regular brand if the 'substitute' had identical ingredients.

To escape pain, interviewees considered the rapidity of painkiller diffusion as pertinent. There was a divergence of opinion in how one defined 'fast' with pain

alleviation ranging from twenty minutes to one hour. Accompanying the rapidity of relief, the painkiller's perceived strength was crucial. Overall, potent drugs were equated with faster diffusion, but also correspondingly higher side-effects. Ultimately, there were finite limits to perceived strength with interviewees avoiding painkillers that were considered too powerful.

Brand familiarity was pivotal; essentially, there were entrenched beliefs centred on positive associations: 'I've used it before and I trust it'. Interviewees loyal to select brands would only direct attention to alternatives if the current brand ceased to be effective, which reflects earlier discussion on the focus of advertising centring primarily on reinforcement. If brand switching did occur, the evaluation was driven by the situational need for a more potent product.

Take in Table IV

Conclusion

Involvement and Risk

Table V summarises the theoretical implications. These insights together with the managerial implications are modelled (Figure 1) in the form of a representation (Kent, 2007) that is organised through a sequential flow diagram (Carson *et al.*, 2001). Contextually, this study was situated in a market where not only are these products more readily available, but where this has been accompanied by an increase in self-care information together with awareness. Overall, involvement and risk, as applied to OTC purchasing, intertwined and coalesced. Self-medication was indicative of a base level of involvement with consumers possessing an available stock. Amongst light and heavy users, an impending need was anticipated and there were strong motivations to prevent pain. Although need recognition did stimulate replenishment, the process of search and evaluation could occur prior to need recognition. Despite the greater availability and awareness of OTC medicines, the purchasing process is still underpinned by the inherent risk associated with this product category.

Risk and unease during usage was correspondingly high. Consumers could be highly involved and experience a high degree of risk, and this was encapsulated by the situational ‘importance’. A dichotomy existed between the low levels of involvement during purchase, as compared to the higher distress levels during usage. Compared to existing involvement theory, the qualitative phenomena did not correspond to either low or high involvement as a distinction existed between involvement levels in purchase as opposed to usage. Categorising OTC painkiller purchasing as one of low involvement, as suggested by Rodway (1995), does not capture the full spectrum of emotions.

Information Search

During information search, a number of challenges became apparent. Although consumers made recourse to a range of sources, there were perceptible feelings that they felt unsure as to the worth of this knowledge and this uncertainty sowed doubts. Compounding this, the perceived lack of clarity of packaging information generated anxiety rather than reassurance. Whereas Bissell *et al.* (2001) highlighted the contribution of information in reducing risk, this study has identified that there are perceptual barriers to surmount when gathering information. Consumer anxiety as to whether they had sufficient proficiency to process information limited the extent of search activities. Consequently, information needs to be physically and perceptually accessible so that it is not seen as counterproductive. Instead of encouraging proper usage, though, objective information could convey a message of 'danger' that could lead to consumer avoidance.

Capitalising upon purchasing continuity and family history could also facilitate information searching as interpersonal sources were deemed to be credible and empathetic. The significance attached to this social element, together with its value in reducing risk perceptions, contrasts with Charupatanapong (1994).

Product Evaluation

When evaluating painkillers, two distinct yet interlinked phenomena emerged: the risk of side-effects and the relative importance of subjective as opposed to objective reasoning. The scope for consumers suffering from the side-effects generated by painkiller usage could dissuade them from using these products and, as such, these phenomena differ from Creyer *et al.* (2001) in their view that consumers saw OTCs as

risk-free. In instances where emotive and subjective reasoning took precedence, the supposed side-effects inhibited consumers from applying a painkiller. As subjective beliefs often assumed greater precedence over objective dimensions, neither Ehrenberg & Goodhart's (1980) generic ATR model nor the more specific 'pain, medication, relief' model (Brades, 1990) fully capture this subjectivity.

Difficulties in absorbing objective information exacerbated these phenomena. Where consumers sought to not only avoid risk, but also to minimise it, the provision of transparent information could potentially ameliorate these concerns and thereby benefit the evaluative process. In striving for this, though, there needs to be due acknowledgment given to the need to manage a consumer's limits and willingness to assimilate new information.

Take in Table V

Managerial Implications

For marketers, the theoretical insights have managerial implications (Figure 1). The contemporary painkiller market has been characterised by rapid growth accompanied with increasing sophistication. Sustaining this momentum, by capitalising on the sector's continued opportunities, necessitates that future marketing efforts facilitate the decision-making process. In identifying the needs of, and subsequently reaching out to, the relevant segments, the following have been seen, respectively, as relevant: a broadening of consumer choice (PAGB, 2005a) together with the recognition of the benefits of properly communicated information (Department of Health, 2005). Within this rapidly evolving market, and in spite of it, there is still a degree of inherent risk

associated with using these products; allied to this is a base level of involvement. Working in tandem, a strategy that successfully harnesses this involvement also needs to take account of the risk that consumers experience.

Uncertainty amongst consumers regarding their knowledge levels allied with the perceived lack of informational clarity needs to be understood. If risk amongst consumers is still experienced, there is a heightened need for this to be eased through information being made more accessible. The communication of this, though, should reconcile transparency with the need to ensure that consumers do not reject, or actively avoid, information that is perceived to be either negative or 'dangerous' when they are evaluating products. More positively, the diffusion of marketing communications could harness the credibility of interpersonal sources and family history. By harnessing and extolling these social associations, the absorption of information could benefit.

Rather than applying these marketing tactics universally, the more disengaged behaviour of male consumers would suggest that these tactics would need to be intensified in an adapted fashion in order to reach them most effectively.

Take in Figure 1

Future Research

Given the evolving nature of the OTC market, future research should adopt both a comparative and longitudinal dimension. Since this study was framed around female consumers and painkillers, a comparative approach could be structured on both intra-

and inter-OTC bases. At an intra-OTC level, the methodology could be replicated amongst male consumers, whilst another study could seek to unpack the differences between brands. In researching men, their differing perspectives from female consumers would need to be acknowledged and, as such, a replicated study could not seek generalisation. Additional work on an intra-OTC basis could seek to establish a degree of triangulation by researching the perceptions and insights of the various parties, such as pharmacists, that provide information. By researching their input, this would build upon the exploratory nature of this study. Inter-OTC comparisons could seek to explore these phenomena amongst other OTC medicines. Finally, longitudinal work that was truly immersed could explore, in depth, the degree of engagement that female consumers have with respect to OTC painkillers with there being the scope to track the extent of change over an extended time period.

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Table I: Interviewee characteristics

Geographic origin: Scotland – 17; England – 2; Europe – 5; Non-Europe - 1
Educational attainment: Undergraduate – 7; Postgraduate – 8; School-leaving certificate - 10
Age distribution*: 18-29 – 11; 30-45 – 7; 46 and over – 7

*Age of interviewees varied from 21 to 82 with an average age of 38.

Source: authors data.

Table II: Involvement and Risk in Painkiller Purchasing

Phenomena	**Implications**
Interviewees had continual and accessible supply for anticipated pain	Sudden onset of pain alleviated
Light users as likely to have stocks as heavier users	Base level of involvement amongst users
Continual supply, but not a high degree of interest	Base level of involvement does not equate into actual interest
Experienced pain and application of medication situational	Base level of interest evoked by transient conditions and immediate relevance
Continuance and continuity of usage engendered reassurance	Safety concerns were lessened
Perception that manufacturers were abdicating onus of responsibility	Uncertainty and unease amongst consumers
Emotive reasoning took precedence if objective factors were difficult to interpret	Insight and advice from multiple sources ameliorated this risk
Consumers with complex medication patterns did not necessarily have greater knowledge levels	This group had rigid perceptions of what variant alleviated particular symptoms; consumers with greater knowledge levels used same painkiller irrespective of symptom

Source: analysis of interviewee responses.

Table III: Painkiller Purchasing and Information Search

Information source and search	Significance
Internal sources – prior knowledge and experience	Recounting painkiller usage evoked family tradition Doubts and lack of confidence as to whether their knowledge was meaningful
External sources:	Information seeking initiated by regular brand being unavailable and/or onset of new symptoms
Pharmacists	Phamacists merited trust vested in them; pharmacists with credibility were consulted
Doctors	Doctors perceived as less trustworthy than pharmacists; perception that decisions are foisted upon consumers instead of process incorporating them
Interpersonal sources – family/friends	Credibility and empathy was considered crucial
Product packaging information	Supplementary rather than central; lack of informational clarity and readability created anxiety
Adverts	Adverts did not influence painkiller choice; tool for reinforcement rather than conversion
Pharmaceutical websites	Lack of confidence with existing information initiated search; information difficult to interpret and doubts as to impartiality

Source: analysis of interviewee responses.

Table IV: Painkiller Purchasing and Product Evaluation

Evaluative dimension	Importance
Safety	Crucially important; greater knowledge levels allowed safe use to be distinguished from misuse; simultaneous processes of risk minimisation together with risk avoidance
Price	Relatively insignificant as an evaluative dimension
Speed of painkiller diffusion and effect	Considered to be pertinent dimension; divergence of opinion as to how one defined 'fast'
Perceived strength	Crucial dimension; more potent painkillers equated with faster diffusion and higher side-effects
Familiarity with brand	Pivotal importance in shaping final evaluation; entrenched beliefs centring on positive associations

Source: analysis of interviewee responses.

Table V: Painkiller Purchasing: theoretical implications

Involvement and Risk	Involvement and risk coalesced Self-medication indicative of base level of consumer involvement Purchasing process underpinned by inherent risk Low involvement during purchase, but higher distress levels during usage
Information Search	Doubts and uncertainty amongst consumers as to worth of their knowledge; compounded by lack of clarity on packaging information Perceptual barriers in gathering information need to be overcome; information needs to be perceived as accessible Credibility of interpersonal sources creates scope to capitalise upon purchasing continuity and family history
Product Evaluation	Risk of side-effects could dissuade consumers from using painkillers Subjective beliefs and reasoning often assumed greater precedence over objective dimensions

Source: based on analysis of interviewee responses.

Figure 1: Painkiller Purchasing - Theoretical Insights & Managerial Implications