

An Exploration of Patient Decision Making regarding the use of analgesics after Day Case Surgery

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Abstract

Patients are experiencing unacceptable pain after day case surgery despite improvements in education and analgesia. It is proposed that pain may continue to prevail due to poor adherence by patients to analgesic regimens on return home. Twenty-one day case patients participated in telephone interviews exploring beliefs/attitudes regarding pain and

analgesics. Themes identified were: 'Pushing the Limits', 'Monitoring the Limits' and 'Setting the Limits/Stopping the Pain'. These illustrate how patients' beliefs may lead them to endure pain, using analgesics as a last resort. Interventions are needed to tackle beliefs held by patients to help increase adherence and ultimately to reduce pain after surgery.

Keywords: Day case surgery; ambulatory surgery; postoperative pain management; patient barriers to pain management; analgesics.

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Introduction

In recent years day case surgery has grown rapidly and is driving the way forward for planned surgical procedures in the western world. In the United Kingdom the National Health Service Plan aims to achieve a target of three quarters of all operations to be carried out as day surgery by the year 2010 [1]. This growth comes as the result of improvements in technology and brings several benefits; it is cost effective as there is no overnight stay, waiting lists are reduced, and patients prefer day surgery as they receive treatment sooner, recover at home, and experience fewer cancellations than inpatient surgery [2, 3, 4].

It is clear that the advantages of day case surgery are vast. However, evidence continues to show that patients are experiencing unacceptable levels of pain after their surgery. A review by Coll et al [5] identified twenty four papers published since 1983 which assessed the duration and level of pain experienced after day case surgery. Coll et al [5] argued that inconsistencies between studies make it impossible to gauge an exact level of pain experienced within and between different operative procedures and specialities. However, they concluded that severe pain can continue into the third postoperative day and beyond. Another systematic review by Wu et al [6] concluded that on average 45% of day case patients experienced pain after surgery and that pain could continue for sometime interfering with normal activities for up to seven days postoperatively [7]. There are many unwanted consequences associated with this unmanaged postoperative pain for both the patient and health care provider that are well documented in previous research [8, 9, 10].

If the full potential of day case surgery is to be reached, issues surrounding adequate pain control after surgery need to be addressed. Past research indicates a number of barriers to pain relief after surgery which, in the main, include barriers posed by healthcare providers in terms of pain assessment [9, 11, 12], adequate analgesics [9, 13, 14], and patient education and information [9, 12, 15, 16]. Despite information, education and appropriate analgesics, patients are continuing to report pain. Mackintosh and Bowles [17] created pre-assessment clinics, take home analgesic packs, and patient education regarding pain management, and were disappointed to find

that the changes they made had little impact on patients reported pain levels. It has been proposed by Huang et al [14] that the lack of success found by Mackintosh and Bowles [17] may be due to patient non compliance with their analgesic regimen.

It is difficult to imagine that patients may willingly decide not to take their analgesics despite being in pain. However, research has shown that adherence to analgesic regimes after day case surgery may be problematic. Beauregard et al [7] argued that medication use was overall low among patients with 32% of them failing to take any medication during the first twenty-four hours after day surgery. Watt-Watson et al [18] found 50% of patients stopped taking analgesics at 72 hours after surgery despite moderate pain. Research by Watkins [19] illustrated that patients clearly have the knowledge regarding pain management strategies after their surgery but this did not increase their utilisation of analgesics and pain control. It appears that despite pain, and the provision of analgesics, education and information, some patients choose not to follow the advice they receive.

It is proposed that patients are not merely forgetful or ignorant but make rational decisions regarding whether or not to utilise their medication [20], and key to this patient barrier appears to be the beliefs and attitudes they hold, particularly those surrounding their medication [21]. Relating this to pain and analgesics, previous research has shown that people hold a number of beliefs about pain and analgesics that may influence their adherence behaviour. Ward et al [22] identified patient related barriers to the management of cancer pain which included concerns about addiction, side effects, tolerance and fatalistic beliefs, and showed that increased concerns are related to an increase in pain and under medication. Members of the public also hold strong beliefs about pain and analgesics. For example, 66% of people surveyed in the USA stated that the last time they had severe pain they withstood it and did not take action [23]. They also hold beliefs regarding postoperative pain and its relief, with 39% of people surveyed in the UK believing that pain should not be taken away altogether after surgery, and 46% agreeing that you should put up with pain before complaining [24].

Such beliefs and barriers can be evidenced among day surgery patients. Beauregard et al [7] argued that day case patients who failed

to utilise their analgesics had concerns regarding addiction and side effects.

Watt-Watson et al [18] suggested that previous adverse events such as nausea might explain why some day case patients discontinued using analgesics. Dewar et al [25] followed up 238 patients after their surgery and identified 'beliefs and misconceptions' held by patients, including fears regarding side effects, concerns that they would 'overdo it' if their pain was reduced, and the belief that pain is to be endured, all of which led to a reluctance to use analgesics.

Due to fast turn around times associated with day case surgery, patients are becoming increasingly responsible for their own recovery and self-management of pain. With the introduction of new multimodal analgesic regimes for patients to take home, combining opioids and non-opioids resulting in reduced side effects and increased pain relief [26, 27, 28] it is more than ever imperative that patients utilise their analgesics as recommended. It is clear that lack of adherence by patients may be a major barrier to effective pain relief after day case surgery, and patients beliefs regarding pain and pain medication may play a vital role. Interventions to improve adherence to medication in other areas (adherence to medication for chronic illness), have had limited success as they do not address patients beliefs and perceptions that result in intentional non adherence [29]. We need to know more about patient beliefs and perceptions that stand in the way of effective pain relief after day case surgery in order to provide interventions to combat these barriers.

Aim

To gain an insight into the patient experience after day case surgery, particularly focusing on patients actual analgesic practice, and factors influencing the use of a multimodal analgesic regime.

Methods

As little research has been carried out in this area previously an inductive qualitative method was employed to explore the area further and get an in-depth insight into the patient's experience. The qualitative methodology of Interpretative Phenomenological Analysis (IPA) was used to guide and inform this research. First introduced by Smith [30] IPA is derived from two theoretical perspectives; phenomenology and symbolic interactionism, and has grown to become a distinctive approach popular in the field of Health Psychology. IPA aims to gain an insight into the participant's life world by looking at how it is experienced from the participant's point of view in terms of how they understand and give meaning to their experiences, and argues insights can only be achieved through interaction between researcher and participant, along with a process of interpretation.

Setting

This research took place in a day case unit, in a large district general hospital in the south of England. This unit provides patients with a multimodal analgesic regime comprising of oral morphine (6 vials of 10mg), ibuprofen (9 tablets of 400mg), and paracetamol (available at home) and gave patients a standard information sheet explaining how to use their analgesics additively. Despite these practices they continued to find, through clinical audit, that patients were not using their analgesics appropriately, and pain was a problem for some patients.

Sample and Recruitment

The study was successfully reviewed by a Local Research Ethics Committee and the associated hospital. Patients, whose surgical procedure was associated with moderate to severe pain and if

they would receive a multimodal analgesic regime to take home with them, were invited to participate when they attended their preoperative assessment appointment. If patients were interested in taking part they left their telephone number with their assessment nurse. The main researcher then telephoned them to discuss the study and arrange an appropriate time on postoperative day four to carry out the interview. Written informed consent was obtained from all patients wanting to participate at the day case unit prior to their surgery.

Results

Thirteen women and eight men, aged between 23 and 67, were interviewed, eleven of whom underwent laparoscopy (gynaecological), nine hernia repair, one laparoscopic cholecystectomy and one removal of large metal work from the knee. Of these, for various reasons, 3 patients had an overnight stay and 2 were not provided with oral morphine to take home. Consequently these did not fulfil the recruitment criteria. However, they were included for a number of reasons: they were keen to participate, their experience of pain and feelings towards analgesics were consistent with those who fully met the inclusion criteria and they provided a good example of how day case surgery is not as straightforward as anticipated. There appears to be no such thing as a 'typical' day case patient.

Analysis revealed three main themes and eleven sub-themes that give an insight into factors influencing patients decisions about the analgesics they were prescribed (Table 1). Overarching this is the concept that patients seemed to want control over their own bodies and recovery, and felt that they knew what was best for themselves. Each theme and sub-theme will now be considered taking a narrative form.

Table 1 Themes and Sub-Themes from interviews following day case surgery.

Pushing the Limits	Monitoring the Limits	Setting the Limits/ Stopping the Pain
1. Stoicism and Pride	1. Pain as a measure	1. Type of Pain
2. Fitness	2. Contingency	2. Level of Pain
3. Individual Nature of Pain	3. Coping with Pain	
4. Importance		
5. Natural vs Unnatural		
6. Danger		

Pushing the limits

1. Stoicism and pride

Some patients were stoical in their response to pain and were willing to push their limit and endure as much pain as possible without complaining. They were also proud to tolerate their pain, and were pleased to get through their pain without using analgesics.

'I am very much sort of grin and bear it'

'It makes me feel like a bit of a warrior. It's maybe a sort of macho thing but I am pleased when I can say to people I don't need all these

things’

This is further evidenced by one patient who seemed somewhat ashamed of taking his analgesics when he said ‘to be honest’, it was as if he is telling me a secret or confessing a sin.

‘I am still dosed up on plenty of painkillers to be honest’

Fitness

One reason some patients felt they were able to tolerate their pain and push their limits was because they thought they were physically fit and should feel less pain, and should therefore be able to endure more pain than the average person and need fewer analgesics.

‘I pride myself in being able to tolerate things being a fairly fit person’

Interpreting this further, in society today fitness is something to be embraced and proud of, and if fitness is linked with feeling less pain then some patients may feel that by admitting that they have pain, and taking analgesics, that they are not as fit and healthy as they would like to be. Also analgesics may be seen as detrimental and something that diminishes their fitness and health and should therefore be avoided.

‘I just don’t like taking tablets. I try, and want to be, a fit and healthy man’

Individual nature of pain

It was also felt that pain is a very individual experience, and that some people could tolerate it more than others. If patients felt they had a ‘high pain threshold’ then they could tolerate more pain and take less pain relief.

‘Well I know for a fact that I have got a fairly high pain threshold so maybe I can put up with a bit more than other people can’

Importance

The aim of IPA is not only to give an account of shared experiences but also give a closer insight into individual experiences. Consequently the concept of ‘importance’ of pain has been built around the narrative given by one patient. Here this patient argues that his operation and the pain that followed is insignificant, especially compared to those in a worse situation than himself. His pain should therefore be tolerated and endured, it is not worthy of fuss or treatment.

‘I consider this a silly little operation I have had compared with what a lot of other people have got to go through.’

Pain is Natural and Medication Unnatural

Another reason why some patients wanted to tolerate their pain and push their limit was that they felt that pain was natural and something that should be embraced, and that medication is something unnatural and should be avoided.

‘I like the body to heal itself naturally I suppose... this is part of the healing process’

‘I just don’t really feel that I want what I consider to be almost like pollutants in the body’

Some patients tried to alleviate their pain without taking analgesics prescribed to them. Again I feel this highlights the way in which it was felt that it is better to combat pain naturally rather than taking painkillers that are seen as unnatural.

‘I don’t like taking tablets and I would rather sort of sit and relax and see if it goes on its own’

Danger

Another reason why a number of patients may have wanted to avoid analgesics and endure as much pain as possible without resorting to them is that they were worried or concerned about using them. Many

patients expressed that they did not use them in their everyday lives and may have been concerned about trying something new.

‘I don’t take them during my usual life. I very rarely have a headache tablet or anything like that so its not something I am used to taking. Some people take them for any sort of pain’

Patients were advised by the day case unit to use their analgesics additively, however some patients appeared to believe that this may be unsafe (particularly taking the ibuprofen and paracetamol together) as they had never been advised to do this before and the idea was unfamiliar to them. Consequently patients may have been reluctant to utilise their analgesics in this way.

‘It does seem a lot of painkillers to take with ibuprofen and paracetamol and something else. You wouldn’t normally dream of taking a mixture of pills like that if you just had a headache. You just go for the paracetamol - you don’t take a bit of both do you?’

On the other hand, in some instances when patients were familiar with their painkillers and knew what to expect then they seemed to be happier following the analgesic regime.

‘They gave me some in the hospital when I came around, so it isn’t an unknown item, I would recognise them and know what to expect’

Some patients had negative perceptions of the painkillers they were prescribed. In particular the oral morphine evoked a number of negative views and concerns. It appears that these concerns may have been the result of past experiences, and the meaning morphine had for them. They also expressed fears regarding the possibility of addiction.

‘Because my husband’s grandfathers had some very bad experiences on morphine as a painkiller, I suppose in my mind I am aware of that’

‘I do have a partner that took it when he came out of hospital after keyhole surgery. He took it for much longer than he was requested to and I just felt that it kind of got a hold of him... he didn’t feel as though he could cope without it and that concerned me a little bit. When stuff like that happens I think its best to stay away from it’

However, patient concerns regarding addiction seem to be reduced if the patient trusts the healthcare provider that their analgesics are safe to take.

‘There was always the thought in the back of my mind knowing what it is and knowing that it can be addictive and all that. But I was thinking I am sure whatever I have been given here is not going to be a problem’

Patients were also concerned about taking the morphine because of its side effects. The feeling of being out of control was a particular worry.

‘The effects that morphine had on me ... I would probably be less inclined to take it because it makes me really drowsy and sort of spaced out and not in control of anything’

As well as this some patients were worried about the volume of painkillers they were prescribed and this may have contributed to their willingness to endure their pain and push their limits.

‘Well there were quite a lot of pills. When I saw them in front of me I thought I really don’t want to take all of them because I will make myself ill’

‘I guess you don’t want the body to have to cope with too much’

A few patients felt that they did not have enough information to make an informed decision about their painkillers, and perhaps avoided taking them because they did not know what could happen and were frightened. It would appear that more detailed information about the mechanisms of analgesics may be appropriate for particular patients.

'You don't have enough information in your little booklet. It doesn't actually tell you what it actually does to the body. Yes it gives you the side effects but what about what is happening inside. That's what I would like to know... how does it actually reach the pain'

However, it was felt by the same individuals that although the use of multimodal analgesics were safe for others it may not be for them, which may render extra information useless. They believed that everyone is individual and they might react differently to the drugs than others. This fear that they may have a dangerous unpredictable reaction to their painkillers may have prevented these patients from taking them.

'I know obviously the people who have given it to me have said that it is going to be fine - absolutely no problems whatsoever. But everyone is different aren't they and you don't know how everyone is going to react so I would rather not have it if I don't need to'

Monitoring the Limits

1. Pain as a measure

Patients consistently monitored their pain which seemed to act as a coping strategy in order to allow them to push their limit and endure as much pain as possible, and resulted in patients reducing or avoiding their analgesics. For example, some patients did not like to take their painkillers as they block the pain and they could therefore do themselves further damage by overexerting themselves. This could be viewed as a coping strategy as these patients may have used pain to measure what activities may have been harmful and adjusted them accordingly, allowing them to endure as much pain as possible without using analgesics.

'So I have been using pain and twinges as a sort of measure. that allowed me to keep on going'

'If you dull the pain you might actually do yourself some more mischief'

Another coping strategy some patients used was to stop taking their painkillers or reduce their dose in order to see if they had pain, again using pain as a measure to find out if they were recovering well, and to monitor if their pain warranted taking analgesics.

'I like to know what's going on because if you dull the pain then sometimes its like false information. If you don't know whether you have got any pain then how are you supposed to know if you are actually getting better or worse'

2. Contingency

Some patients' coping strategy involved keeping a portion of analgesic aside as a contingency in case their pain worsened and they needed more painkillers or something stronger. These patients were not utilising all the analgesics prescribed. This exhibited a way in which some patients coped with their pain and perhaps helped them to push their limits further.

'I kept one just in case I did something stupid and hurt myself'

Setting the Limits Stopping the Pain

1. Type of pain

Patients will put up with their pain and push their limits as far as they can by monitoring their pain and coping with it. However, there comes a point when they give in or draw the line. There are a number of factors that determines when this happens. Firstly the type of pain they are experiencing influences whether the patient feels it is

necessary to take analgesics. For example, one patient said that the pain he had following his surgery did not stop him functioning and therefore did not necessitate taking medication. However, a headache would stop him functioning so he would take analgesics for this. The type of pain experienced may also determine how long the patient feels their pain will last, which then influences whether analgesics are felt necessary. For example, because postoperative pain is acute and precipitated by tissue damage the patient may think that the pain experienced will soon decrease as the body heals. They may be prepared to endure pain avoiding analgesics as they believe their pain will not last forever.

'I just don't like headaches or anything that is going to actually stop me from functioning. You cannot think straight where you have got a cracking headache'

'It's just a case of I know this will be gone by tomorrow'

2. Level of pain

When pain reaches a certain level and it goes on for sometime patients will then draw the line and use their analgesics. Painkillers really were seen as the last resort. This attitude was adopted by many participants and goes directly against advice given to them in the hospital which encourages pre-emptive pain relief.

'I don't mind taking them if I feel that the time has come when I really want to be more comfortable but it's just a question of biding my time'

Morphine seemed to be a concern for some patients as they felt that their pain needed to be 'excruciating' for some period of time to necessitate taking it and putting a stop to their pain.

'I would say that I would have to be in tears and not be able to move before I would take it (morphine)'

3. Coping with pain

An important, and perhaps commonsense, factor that motivates patients to take their analgesics and stop their pain is to prevent or cope with their pain so that they can get on with their normal day to day activities. The extract below illustrates how one patient took painkillers in order to comfortably have a shower in the morning and sleep at night. It seems she was willing to endure pain for the rest of the day.

'I have been taking them first thing in the morning when I get up so I have no pain so I can have a shower and get dressed and do my stuff and then last thing at night'

Finally, as expected, some patients do not fit neatly into this model. These patients utilised their analgesics as prescribed and reported that they accurately followed the advice given to them. The patient provider relationship seemed to play a strong roll in this. A trusting relationship between the healthcare provider and the patient helped the patient to feel that the advice given to them was correct, and that it was safe to take the analgesics given.

'The nurses and the doctors told me - I trust what they have got to say.'

One patient said that both the surgeon and anaesthetist told him to take his analgesics regularly, and because of this he did. In this case it seems that the authority of the healthcare professional influenced the patients use of his analgesics, especially considering the extract below in which this patient states that he took his analgesics out of respect for those who helped him.

'Both the surgeon and the anaesthetist said it very definitely with conviction'

'I think it is respect for the people who have helped you through the operation'

Discussion

The findings suggest that the management of pain in day case surgery is not as straightforward as at first it might appear. Patients do not always follow their analgesic regime as provided and maximise their pain relief. The reasons for this have not previously been explored in detail with day case patients. This study illustrates that patients bring with them a number of beliefs surrounding pain and analgesics and make rational decisions as to whether they utilise their medication. This is consistent with previous research with other patient groups arguing that patients beliefs and attitudes may be one of the key factors contributing to medication adherence [29, 33, 34].

Pushing the Limits

Patients appeared to believe that pain is something to be endured and wanted to 'push their limits' withstanding as much pain as they could before resorting to analgesics, believing that pain should be endured without complaint. Such stoical beliefs have previously been identified among day case patients [25], and are reflected in the general public of the UK and USA [23, 24, 35]. Such beliefs have also been recognized in other patient groups; Ward et al [22] argued that not wanting to complain about pain was a significant barrier to pain management in cancer patients, and Townsend et al [36] found that patients with long term multiple morbidity struggled with the need to take drugs in order to be pain free, but also wanted to take as few as possible. Townsend et al [36] argued that research illustrates a common cultural belief that drugs should be used as little as possible which is something that definitely resonates among some of the day case patients interviewed in this study.

This research provides insight into what motivated these patients to tolerate their pain. Firstly patients gained a sense of pride and achievement when pain was successfully endured without using analgesics. If, as research suggests, stoical beliefs regarding pain, along with the attitude that drugs should be used as little as possible, are ingrained in our culture, then this may explain the sense of pride patients felt when carrying out a behaviour which is accepted and encouraged by society. This is supported by Scherman and Löwhagen [34] who argued that medication use is fraught with meaning for the patient which is context specific. 'Taking medicine is a social act, defining us not only in our immediate social world but giving us a role – perhaps unwanted – in a larger social context' [37]

Another reason patients may have wanted to, and thought they could, tolerate pain was that they saw themselves as physically fit and perhaps more capable of withstanding pain than the average person. Analgesics were seen as a weakness: something that threatened their sense of fitness and health. Similarly Scherman and Löwhagen [34] argued that one reason participants in their research did not adhere to a medication regime (for asthma/allergy) was because taking medication threatened their perception of themselves as healthy. The social context could also play a role here, as health and fitness are valued and encouraged in society.

Some patients felt that pain was natural and something to be embraced, and that the body should be left to heal by itself. This is consistent with other research that suggests some patients held the belief that pain serves a purpose for recovery and that patients avoided their medication in their research because they believed that by taking it the ability of the body to heal itself would be weakened [14,34].

This research also shows that medication was seen as unnatural and some patients sought alternatives in order to relieve their pain. This finding is reflected in previous research, where patients tried to minimise the use of drugs and maximise other strategies [36]. Members of the public also say they would prefer to use alternatives

to medication in order to overcome pain. Fins [38] speculated that this may be because they want to maintain personal control and avoid giving control to practitioners. However, Horne [29] argued that the belief that medications are unnatural and made of harmful chemicals leads to the perception of medications as dangerous which then influences treatment decisions

Patients in this research also had worries about the dangers of analgesics. Some said that they did not use them in their day to day lives and thus were concerned about using them after surgery. The idea of taking analgesics additively was something unfamiliar which they were reluctant to try. Some patients were also concerned about addiction, particularly regarding the oral morphine; a barrier to pain management which has previously featured in a number of studies [22, 23, 38, 39, 40, 41]. They were also reluctant to use the oral morphine as it evoked a number of negative perceptions gleaned from past experiences. Side effects experienced after taking the oral morphine were also noted as a concern. 'Feeling out of control' was a particular worry especially for one patient who had young children to care for. Other research has argued that unwanted side effects influence analgesic use [7, 18, 22, 33, 35, 40] with patients in research by Donovan and Blake [20] stating that they would rather have pain than side effects.

All patients were given information about their analgesics. A few stated that they would like to know more about how the analgesics actually worked to stop pain in order to allay their fears. The importance of patient information is well documented (9,12,15,16), but giving information on the mechanisms of analgesics may be too complex and inappropriate for many patients. The participants who wanted further information later stated that they were concerned that although their analgesics had been tested and taken by others in the past, that everyone is individual and that they might react differently to them. Consequently, if they feel this way then would further information be redundant? Taking the concept of 'individuality' further, Horne [42] argued that some people feel they are more sensitive or susceptible to the adverse effects of medication than others, and such people may see medicines as harmful and over-prescribed.

Monitoring the Limits

Patients continually monitored their pain and used it as a guide telling them what activities they could perform, which in turn helped them to cope and perhaps endure their pain. Consequently patients were reluctant to utilise their analgesics as they would block their pain and it could no longer be used as a monitor. Other research has noted that fear of analgesics, because they impair the ability to monitor illness symptoms, is a significant barrier to pain management amongst cancer patients [43], that patients believed that medication may camouflage their bodies own signals [34], and that patients followed up after day case surgery felt worried that they may accidentally 'over do it' if pain is reduced with analgesics [25].

Other coping strategies used were to keep some of the analgesics aside in case pain got worse and something stronger was needed. Similar beliefs are held by the general public, with people not wanting to take too many analgesics in case they are not effective with continued use [23]. Fear of tolerance is also an important barrier to pain management in patients with cancer [22, 39].

Setting the Limits/Stopping the Pain

The type of pain experienced, and how long they thought the pain would last, influenced when the patients felt their analgesics were necessary. Because their pain was precipitated by tissue damage patients thought that it would not last forever, and were prepared to endure pain. This is reflected by Fins [38] who argued that members of the public were willing to tolerate pain more if it was part of the

recovery process, and may crudely relate to three illness beliefs important in self regulatory theory [44]; cause, consequence and timeline.

However, when pain reached a certain level or went on too long, patients drew the line and took their analgesics, using them to cope with their pain and get on with day to day activities. Likewise Scherman and Löwhagen [34] argued their patients waited until they absolutely had to before using their asthma / allergy medication. This may also relate to Horne et al [29] who suggested beliefs about medicines can be grouped under two core themes; necessity of prescribed medication and concerns about adverse effects. If necessity outweighs concerns, then patients will use their medication: if concerns are more important, then a lack of adherence will be seen.

Of those patients who utilised all their analgesics as prescribed the patient provider relationship played a strong role, with respectful and trusting relationships having an important influence. This reflects much previous research on the importance of building concordant relationships between the healthcare provider and patient [45].

Limitations

Participants in this research were all white with a European cultural background. Those from other cultural groups may report a different experience. For example, Horne [46] argued that those with an Asian cultural background are more likely to report medicines as being harmful, addictive substances that should be avoided, than those with a European cultural background. This research has also taken a rather broad snapshot of the patients experiences after day case surgery using 15-20 minute interviews with twenty-one patients, and further research is required in order to explore this area further and make more general claims [47].

Moving forward, it is proposed that subsequent research will be undertaken in order to investigate some of these findings in greater depth, and to consider further the source of patients beliefs and attitudes.

Conclusion

As the government pushes to increase day case surgery in order to reduce waiting lists and make savings, it is clear from a number of studies that the incidence of pain after day case surgery has also grown. Due to fast turn around times patients are becoming increasingly responsible for their own recovery and self management of pain. Many patients are failing to utilise their analgesics as prescribed. Findings from this study have illustrated that day case surgery is more complex than it may first appear, and that patients beliefs play an important role in the decisions they make about taking analgesics. Simple interventions such as 'patient information' often fail to take into account the complexity of decisions and further work is needed to understand this more fully. As this research progresses it is anticipated to provide further insight into patient beliefs and how these beliefs come to exist. This insight into this relatively unexplored area may provide foundations upon which future interventions aiming to increase patient analgesic use are based thus improving patient care and ultimately reducing the incidence of pain after day case surgery.

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