



UNIVERSITY OF
GLOUCESTERSHIRE

This is a peer-reviewed, post-print (final draft post-refereeing) version of the following published document, © 2019 MA Healthcare Ltd This document is the Accepted Manuscript version of a Published Work that appeared in final form in International Paramedic Practice, copyright © MA Healthcare, after peer review and technical editing by the publisher. To access the final edited and published work see <https://doi-org.glos.idm.oclc.org/10.12968/ippr.2019.9.1.3> and is licensed under All Rights Reserved license:

**Perry, Matthew (2019) Global patient experience of paramedic practice.
International Paramedic Practice, 9 (1). pp. 24-33. ISSN 2052-4889**

Official URL: <https://doi-org.glos.idm.oclc.org/10.12968/ippr.2019.9.1.3>

DOI: 10.12968/ippr.2019.9.1.3

EPrint URI: <http://eprints.glos.ac.uk/id/eprint/6622>

Disclaimer

The University of Gloucestershire has obtained warranties from all depositors as to their title in the material deposited and as to their right to deposit such material.

The University of Gloucestershire makes no representation or warranties of commercial utility, title, or fitness for a particular purpose or any other warranty, express or implied in respect of any material deposited.

The University of Gloucestershire makes no representation that the use of the materials will not infringe any patent, copyright, trademark or other property or proprietary rights.

The University of Gloucestershire accepts no liability for any infringement of intellectual property rights in any material deposited but will remove such material from public view pending investigation in the event of an allegation of any such infringement.

PLEASE SCROLL DOWN FOR TEXT.

Global patient experience of paramedic practice

Matt Perry (Corresponding Author), Senior Lecturer and Academic Course Lead, Paramedic Programme, School of Health and Social Care, University of Gloucestershire; Kim Usher, School of Health University of New England Armidale, New South Wales, Australia; Debra Jackson, Faculty of Health, University of Technology, Sydney (UTS), Australia.

Email for correspondence: mperry4@glos.ac.uk

Abstract

Background: Paramedics occupy an ever-increasing role within healthcare and the development of this role should be informed by the voice of patients. This systematic literature review seeks to explore patient experience during a paramedic intervention. Methods: Using a 'state of the art' review style, a systematic search was conducted of the literature published between 2006 and 2018. Following PRISMA guidelines, a total of seven articles meeting the inclusion criteria were identified. A definition of experience which incorporates several dimensions was used to frame the search. Results: Three themes were identified, with the available literature focusing mainly on satisfaction. Satisfaction is improved through certainty and clarity of the progression through treatment and is high among patients of paramedics. Conclusion: Our understanding of patient experience in paramedic interventions is largely limited to an understanding of satisfaction. While this may provide some useful insights, other facets such as the lived experience and physiologic aspects are underrepresented in the current evidence base.

Keywords

Paramedic
Prehospital care
Patient experience
Patient satisfaction

Paramedic practice globally transects across primary, secondary and sometimes tertiary healthcare (Crilly et al, 2015). Although no globally accepted role accurately defines what or who a paramedic is, this role has established itself in most developed healthcare systems (particularly in the UK, commonwealth countries and parts of the US) (Tippett et al, 2008). Developing this role to recognise and respond to the needs of patients requires a deep understanding of what patients experience when being attended to by a paramedic.

The purpose of this systematic approach, undertaken using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al, 2009) and Critical Appraisal Skills Programme (CASP) tools (CASP, 2017), is to present current evidence related to the patient experience of paramedic care. This review was conducted with literature sourced globally, but limited to English language papers.

Patient experience is increasingly becoming an important measure of clinical excellence (Needham, 2012; Doyle et al, 2013). In the UK, Darzi (2008) defined the understanding of patient experience as one of the four pillars of high-quality care and Francis (2013) identified that when we fail to learn from it, there are serious consequences related to patient safety. Despite this, a good understanding of patient experience can remain elusive.

This elusiveness may result from the difficulty experienced by those researching the issues in defining what is meant by the term 'patient experience'. The Beryl Institute, supported by the work of Wolf et al (2014), provided a definition of patient experience as:

'The sum of all interactions, shaped by an organization's culture, that influence patient perceptions across the continuum of care.' (The Beryl Institute, 2019)

This definition suggests that contextualising the experience of patients within the care culture is not an additional part of the experience, but key to it. Building on this definition, Needham (2012) discussed the need for a deeper understanding of experience than that offered by measuring satisfaction alone. Shale (2013) subsequently offers an understanding of the concept of patient experience that encompasses three distinct but intersecting domains, which can be summarised as:

- The physiological, which considers the medical needs of patients
- The 'customer service' aspect of care (seemingly interpreted as satisfaction)
- The lived experience of patients.

This definition enables an understanding of experience that encompasses all aspects; yet which can be separated into component parts. In seeking to understand the current literature surrounding the experience of patients of paramedics in

the emergency setting, this review has focused on the definition by Shale (2013). This allowed for an exploration of the three intersecting domains which, when integrated, may reveal a deeper understanding of patient experience.

What is the paramedic?

Despite the roles played by paramedics in healthcare systems globally, there is limited research into patients' experience during paramedic interventions. One reason may be the absence of a common global understanding or definition of the paramedic role. For the purpose of this study, a paramedic is assumed to be an allied health practitioner in the prehospital environment.

Describing paramedics as allied health practitioners differentiates them from nurses or doctors in the prehospital setting, and allows for different registration or recognition of the profession across different countries. Commonly, the paramedic role occurs within an ambulance service and as part of a government-mandated healthcare system. The exact nature and tasks of the paramedic role, education, registration and, often professional status, differs between healthcare systems, leading to the difficulty in providing a single definition for paramedic practice.

How is patient experience examined?

Irrespective of the global differences in the paramedic role, however, many governments set benchmarks for ambulance responses, which represent community expectations (Swain et al, 2012). These performance-indicating data generally lack a specific focus on the patients' own experience of treatment, and few academic studies have attempted to describe the ambulance experience from the point of view of the patient in their own words (Rantala et al, 2016). The resultant paucity of literature regarding experience leaves a potential gap in our understanding of what it means to be a patient during a paramedic intervention.

Where ambulance services globally examine patient experience, most, if not all, do so using largely quantitative satisfaction surveys with seemingly little focus on the definition of the concept they are attempting to describe. Without the use of a definition as a framework for investigating, our knowledge of patient experience may be limited.

The use of satisfaction surveys may risk masking the totality of patient experience within the quantity of data (Russell, 2013); their widespread use however does allow for comparison of data between studies. There is therefore some validity in using this approach. However, understanding patient experience only in terms of a satisfaction measure potentially leads to a lack of depth of understanding of the episode of care from the patient's perspective and silences their voice.

This systematic review aims to present the state of current knowledge of what patients experience when being treated by a paramedic. This review uses a global understanding of the paramedic role as an allied health prehospital care provider and the holistic definition of patient experience provided by Shale (2013) as a framework in order to avoid some of the issues with the current literature as discussed.

Systematic review methodology

A systematic search was conducted of the available research literature regarding the patient experience during a paramedic intervention. The literature reviewed had a publication date of no earlier than 2006 (10 years prior to the commencement of the literature search). The methodology consisted of a style of review described by Grant and Booth (2009) as a 'state of the art' review. This style of systematic review seeks to identify quantity and quality of the available literature and aims to establish the need (or otherwise) for further primary research (Grant and Booth, 2009). To ensure consideration of contemporary issues, the review focused on studies conducted within the last 10 years (dated from the start of the search).

Methods

This literature review followed the PRISMA guidelines (Moher et al, 2009) as described below and detailed in *Figure 1*. Starting in November 2016 and continuing until January 2018, a literature search of articles published in peer-reviewed journals since 2006 was undertaken. The question asked of the literature in this review was:

'What do patients experience during an intervention by a paramedic?'

This question was further expanded into the search strategy. *Table 1* outlines the development of the question used to establish the search strategy.

The search terms developed from the central question (as presented in *Table 1*) were further developed into a search strategy. As the term 'patient experience' lacks the specificity required to perform a robust literature search, the next stage in development of the search strategy required the use of a definition as a framework for the search.

Table 1. Development of search strategy

Question	Core questions and ideas	Search terms	Alternate search terms
What do patients experience during paramedic interventions?	Are patient experiences driven by expectation and satisfaction? What else influences their experience?	'Patient values AND prehospital care'	'patient needs', 'patient experience' 'ambulance OR EMT OR paramedic'
	Is there a trade-off between clinical and humanistic connection?	'Patient values AND acuity'	
	Does the evidence show any connection between patient experience and treatment options (do people want to stay at home if they are adequately treated?) What does adequate treatment mean as it relates to experience?	'Hospital at home' 'Home care'	
	Is there any evidence of differing cultural expectations in experience or satisfaction	'Cultural issues AND Prehospital care'	'paramedic', 'EMT', 'ambulance'
	Are there unmet expectations/needs in the literature?		'expectations' 'paramedic', 'EMT', 'ambulance'
	Does trust play a role in expectations and experience?	'Trust in clinical care'	'Patient expectations', 'knowledge, culture'

Part of the challenge of understanding patient experience is how to measure or define a quality experience (Boudreaux and O'Hea, 2004; Doyle et al, 2013). Complicating this are the overlapping, yet subtly different, definitions of key terms, such as 'experience' used in the literature (Russell, 2013). These challenges have contributed to an evidence base which is diverse in its approach and difficult to systematically examine (Russell, 2013).

In order to overcome the challenge, this review relied on a holistic definition provided by Shale (2013) as previously described. With Shales' (2013) definition framing the question, the search strategy was developed into the following search terms: (expect* OR perception* OR experience* OR priorit* OR rate OR satisf* OR opinion*) AND (patient* OR customer* OR service user*) AND (paramedic* OR ambulance* OR prehospital OR pre-hospital OR emergency medical technician*). A search was made of the databases listed below with the limitation that articles must be research-based, published in English, and in peer-reviewed journals within 10 years of the start of the search (since 2006):

- Academic Search Complete
- AHFS Consumer Medication Information
- Applied Science & Technology Source
- Business Source Complete
- CINAHL Complete
- EconLit
- Education Source
- ERIC
- GreenFILE
- Health Business Elite
- Health Source—Consumer Edition
- Health Source: Nursing/Academic Edition
- Humanities Source
- Library, Information Science & Technology Abstracts
- MAS Ultra—School Edition
- MasterFILE Complete
- Newspaper Source Plus
- Newswires
- Psychology and Behavioral Sciences Collection
- Regional Business News

- Religion and Philosophy Collection
- SPORTDiscus with Full Text
- The Serials Directory
- Web News.

Results

A total of 4443 articles were identified. Google Scholar was then searched using the same search criteria, with a single additional article found. After initial manual screening and once duplicates were removed, 47 articles were included for review.

Exclusion of articles was based on the accuracy and validity within the context of the study being reviewed. Owing to what have been reported as issues of contextual inaccuracy (Bigham and Welsford, 2015) giving rise to concerns of validity, studies not undertaken outside of the hospital setting (commonly referred to as prehospital) or by paramedics (as defined previously, using a global understanding of the role) were considered contextually inappropriate and thus were excluded.

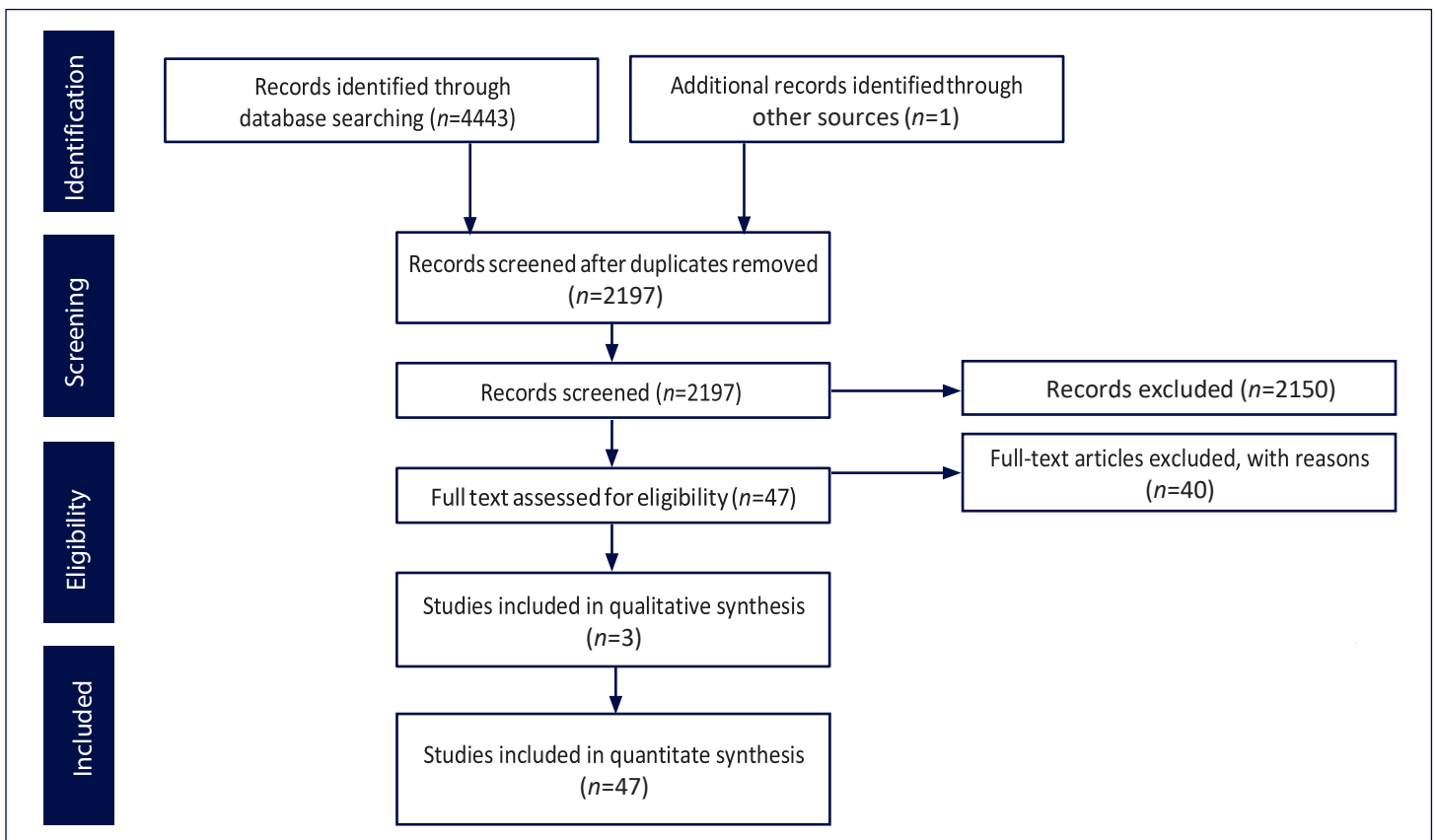


Figure 1. PRISMA flow chart

The articles were then read in detail and the references hand searched for any additional relevant literature. No further articles were located. Seven relevant studies remained (four quantitative and three qualitative). The resultant PRISMA flowchart (Moher et al, 2009) is detailed in *Figure 1*.

The remaining studies were all included in this review, despite some significant shortcomings in the research as will be discussed. As can be seen from the evidence in *Table 2*, there was a range of research questions under study. For each included study, an appraisal was conducted using the appropriate CASP (2017) appraisal tool (*Table 3*).

Synthesis of research

Studies that addressed the central question of patients' experience during a paramedic intervention were largely absent from the literature, when considering 'experience' in holistic terms only. By making use of Shales' (2013) definition of patient experience and examining individual domains (physiological, customer service and lived experience), insights can be gained from the existing evidence and are presented in this review.

Owing mainly to differences in methodology as well as data collection, as evidenced in *Table 2*, it was not possible to conduct a meaningful meta-analysis or true synthesis of either the qualitative or quantitative research separately. Instead, outcomes were combined, as presented in *Table 3*. A further thematic analysis was then conducted and is described in the upcoming section.

The low number of quality studies further weakened the literature base. Each included study was appraised using the appropriate CASP (2017) appraisal tool as detailed in *Table 3*. Only two were found to be sufficiently robust to be considered high quality. *Table 3* outlines each study, as well as its outcomes and limitations.

Themes

The research studies identified have varying levels of quality, although all studies were of sufficient quality to enable meaningful themes to be drawn from their conclusions. The quality issues reported in *Table 3* highlight the paucity of high-quality research around the topic of patient experience in paramedic practice.

The themes discussed in this review have a logical basis, which adds a level of credibility to the topic despite some issues with the quality of individual studies. *Table 4* outlines the development of themes from the available research.

Table 2. Table of evidence				
Study	Methodology and method	Sample	Issue/question	Aims
Halter et al (2007)	Telephone survey	174. 81 respondents	Patient satisfaction and compliance with ECP treatment	To evaluate patient satisfaction and compliance with ECP treatment
Isaksson et al (2011)	Although not stated by the authors, it appears to be a phenomenological study	20 semi-structured interviews	Experience of first myocardial infarction in the prehospital setting	To explore older men's experiences with a first myocardial infarction
Kietzmann et al (2016)	Inductive design inspired by phenomenological hermeneutics	12 patients interviewed	What meaning do patients ascribe to being triaged below the level of care of emergency departments?	Exploration of the meaning of care for patients who had been triaged below the level of care of emergency departments
Knowles et al (2012)	Telephone survey. Could be described as a cohort study	1000 people from general population, from 11 604 calls	Patient experience of emergency and urgent care system	To describe patients' experiences and views of an emergency and urgent care system in England
Rantala et al (2016)	Descriptive-analytical (survey)	Convenience sample of 218 people surveyed	How do sociodemographic factors influence satisfaction with prehospital care in Germany?	To establish the determinants of satisfaction as they relate to sociodemographic factors
Shaw et al (2006)	Authors stated qualitative and later in the article mixed methods. However, they did not fully explain. The study also presented some results in % terms. Appears to be a type of audit or observational study using quantitative content analysis	397 patient records examined	Why do people choose not to go to hospital when attended by an emergency ambulance?	To develop a greater understanding of the reasons behind the coding of 'refusal to go to hospital'
Swain et al (2012)	Survey. Either telephone or in-person interview	100; 50 treated by ECP, 50 by standard ambulance	Comparison of patient satisfaction and outcome ECP vs standard emergency ambulance	To ascertain patients' experiences and opinions of New Zealand's first ECP programme

Satisfaction with paramedic care

Four studies located by the present review commented on satisfaction in general terms and consistently reported high satisfaction (Halter et al, 2007; Knowles et al, 2012; Swain et al, 2012; Kietzmann et al, 2016). This is not an uncommon phenomenon in healthcare, where higher satisfaction levels are reported with elderly patients and those in acute distress (Boudreaux and O’Hea, 2004; Russell, 2013; Kietzmann et al. 2016). One factor specific to paramedic care that may have an impact on patient satisfaction is how patients define or perceive the role of paramedics during interventions. The current public perception of paramedic practice may be informed by an outdated understanding of the role, given how recently developments in the profession have taken place (Crilly et al, 2015). It would, therefore, be unsurprising if the public in general did not fully understand the role of the modern paramedic. Patients may actually be expecting little and receiving care beyond their expectations. As a result, it is a logical conclusion that they would be highly satisfied with the care received.

Table 3. Outcomes and limitations of studies

Study	Themes/outcomes	Limitations (identified via CASP (2017) appraisal tool)
Halter et al (2007)	Most patients satisfied with ECP care. Sizable minority not satisfied when unclear about assessment	Appraisal tool used: Cohort Appraisal Tool Study examined a specialist role and not non-specialist paramedic care. Little exploration of why people were satisfied. Limited sample and not representative. Self-reported
Isaksson et al (2011)	From uncertainty to conviction. An effort to maintain an ordinary life. A negotiation with concepts and expectations	Appraisal tool used: Qualitative Research Limited to older men in Sweden (where a physician-led prehospital care system exists). Little discussion of rigour by the authors
Kietzmann et al (2016)	Sociodemographic factors seem to be largely unrelated to satisfaction with prehospital care	Appraisal tool used: Cohort Appraisal Tool This research was well presented with statistics appropriately reported. Convenience sampling meant there may be some issues with the representation, as reported by the authors
Knowles et al (2012)	15% of population reported using emergency and urgent care in 3 months. 68% use more than one. When four or more services were involved, satisfaction reduced Longer pathways resulted in reduced satisfaction	Appraisal tool used: Cohort Appraisal Tool This was a whole-population survey. There was little mention of power in determining a sufficient sample size and statistical significance reported in the study
Rantala et al (2016)	Patients feel a need to be taken seriously and when this is not respected, it results in feelings of incompetence. Participation in decision making is key	Appraisal tool used: Qualitative Research The authors have appropriately chosen the methodology and explained the question well. Use of methods is consistent and detailed, as is the outlining of limitations. A discussion of researcher influence was missing, which may impact on questions of rigour
Shaw et al (2006)	The authors identified ‘12 main themes’ but do not clearly state what these are. 1/3 was a negotiated or shared decision. 8% refused treatment against advice	Appraisal tool used: Qualitative Research Authors did not explain methodology or methods adequately, leading to questions of rigour. They seemed to offer several different methodologies and did not provide enough detail to confirm that the study was sufficiently robust. Claimed to consider from the patients’ point of view but did use clinician notes written by paramedics only
Swain et al (2012)	Very satisfied with treatment from both groups. Expressed a desire to be treated at home	Appraisal tool used: Cohort Appraisal Tool Comparison of emergency ambulance and ECP. This may not be a ‘fair’ comparison as the roles, training and experience can be quite different — not identified by the authors as a limitation

The idea that patients deem paramedic care to be satisfying may be attractive to services that use this as a measure of quality. However, as demonstrated, the use of satisfaction measures alone to describe experience may not reflect the totality of patient experience. The role of this literature in describing patient experience as a whole appears to be limited, and the definitions of patient experience used, somewhat variable. Considering this in the light of Shales' (2013) definition, this theme provides some useful insights into a portion of the overall experience of patients.

Negotiating complexity

The creation of some sense of order from what is undoubtedly a chaotic time (an emergency) for the patient can have an important impact on their experience. The current review has found that the successful negotiation of complex needs within the paramedic intervention aids in improving the satisfaction of patients.

Once again, the literature discusses patient satisfaction alone; however, when viewed as a component of the totality of experience (Shale, 2013), some conclusions can be drawn. The relationship between satisfaction and progression through a clinical journey may be a complex one. However, there appears to be some suggestion of a causal relationship.

The concept of satisfaction reducing as clinical pathways become longer and more complex appears to be more than a simple linear relationship. This is evidenced by research in a related medical field (an ambulatory medical clinic), conducted in the 1980s and supported by more contemporary work (Johnson et al, 1988; Ogden et al, 2002). This

Table 4. Themes derived from the literature

Theme	Subtheme	Study outcome	Study
Patients find paramedic care satisfying	Satisfaction is tied with returning to 'normality'	Most patients satisfied with ECP care	Halter et al (2007)
		Expressed a desire to be treated at home	Swain et al (2012)
		Very satisfied with treatment from both ECPs and paramedics in study	Swain et al (2012)
		Sizable minority not satisfied when unclear about assessment	Halter et al (2007)
		Satisfaction does not change with sociodemographic factors	Kietzmann et al (2016)
Negotiating complexity aids satisfaction		Care is a negotiation with concepts and expectations	Isaksson et al (2011)
		Care is an effort to maintain an ordinary life	Isaksson et al (2011)
		Patients expressed a desire to be treated at home	Swain et al (2012)
		Care is a movement from uncertainty to conviction	Isaksson et al (2011)
		Patients seek to be listened to /involved in care	Rantala et al (2016)
	Longer care pathways result in reduced satisfaction	Knowles et al (2012)	
	When four or more care services were involved, satisfaction reduced	Knowles et al (2012)	
Clarity and certainty sought by most	A sizable minority of patients were not satisfied when unclear about assessment	Halter et al (2007)	
	Care is a negotiation with concepts and expectations	Isaksson et al (2011)	
	1/3 of decisions to discharge care at home were a negotiated or shared decision	Shaw et al (2006)	
	Satisfaction is increased when care is discussed	Rantala et al (2016)	

research suggested that if medical professionals gave the impression of uncertainty in their assessment, patients tended to be less satisfied.

Two studies related to paramedic practice identified by this review highlighted a link between how satisfied a patient felt and their progression through clinical pathways. Those studies indicate that increased complexity leads to decreased satisfaction (Isaksson et al, 2011; Knowles et al, 2012). This may be a mix of the patients' perception of their medical needs and subsequent perception of those needs being met. This may mean that if, for example, a patient has an unrealistic understanding of their medical needs, this could result in being left dissatisfied by the response.

The link between complexity and satisfaction does make cognitive sense and this could have implications for paramedic practice as a result of the uncertain and uncontrolled environment in which it occurs (Tippett et al, 2008). That uncontrolled environment could easily result in reduced satisfaction and yet, as evidenced by Halter et al (2007), Swain et al (2012) and Keitzmann et al (2016), there are high levels of satisfaction in paramedic care (*Table 4*). One explanation for this could be that effective communication and trust-building strategies by paramedics influence patient satisfaction with their overall experience, particularly when the patient feels they are being listened to and believed (Rantala et al, 2016).

It is plausible that the negotiation of complexity may have other, less overt, implications for paramedic practice. Currently, paramedic practice is undergoing a period of expansion, with the profession redefining what it can contribute to the care environment (Raven et al, 2006; Crilly et al, 2015; O'Meara et al, 2015). As the profession continues to develop, it is likely that more clinical roles will increase the complexity of care during paramedic interventions. As paramedics move further away from the service delivery models of yesteryear, which primarily involved transport to hospital (O'Meara et al. 2015), it is likely that the complexity of their role that results may have a negative impact upon satisfaction.

Clarity and certainty

As patients experience long, complex pathways of care, satisfaction reduces (Knowles et al, 2012). This may be as a result of complex medical needs not being met. However, Halter et al (2007) found that patient satisfaction with ECPs, while generally high, suffered from a drop where patients were uncertain about the assessment undertaken. It could be reasonably assumed therefore that patients with lengthy pathways have uncertainty over the progression of their care and when that uncertainty arises, their satisfaction with the care delivered falls.

There remains some question regarding the comparison of the specialist practice of the ECP role with the non-specialist paramedics and the impact of that on the outcome of the study by Halter et al (2007) as mentioned. However, the link between satisfaction and uncertainty has been discussed elsewhere in the literature, and similar findings appear in other studies in this review (Isaksson et al, 2011; Knowles et al, 2012).

There is a place for communicating clinical uncertainty with patients, as Parascandola et al (2002) discuss, and this can improve trust in the longer term. It appears that trust plays a significant role in the medical relationship. It may be that the issue of trust is at the core of the reported reduction in satisfaction as the clinical pathways become long, complex, and uncertain (Halter et al, 2007; Isaksson et al, 2011; Knowles et al, 2012).

Discussion: drawing the evidence together

The present review identified three themes from the available, limited, literature regarding the experience of patients during a paramedic intervention. They have been extracted as unique phenomena in their own right; however, they can also be merged in a meaningful way. This synthesis of the themes provides a succinct understanding of what the current evidence is saying about the experience of patients in a paramedic intervention.

Starting with the concept that paramedic care generally satisfies patients' needs, (Halter et al, 2007; Isaksson et al, 2011; Knowles et al, 2012), the evidence then suggests this only remains if the paramedic successfully negotiates the complex needs of care (Isaksson et al, 2011; Knowles et al, 2012). This apparent need to assist in managing complexity appears to be related to the patients' desire to create (or perhaps return) to a place of clarity and certainty about their future in a time of uncertainty (Halter et al, 2007; Isaksson et al, 2011; Knowles et al, 2012).

This understanding is valuable in what it tells us, but also in what it fails to tell us. Using the definition of patient experience by Shale (2013), the findings of this systematic review are able to inform the customer service (satisfaction) aspect and only seem to hint at an aspect of the lived experiences of patients, which is the desire for clarity and certainty. With a limited pool of evidence, this is an area in need of further exploration.

The exceptions to the focus on satisfaction found by this review were Isaksson et al (2011) and Kietzmann et al (2016), whose studies provide a more holistic account of patient experience in specific settings. These two studies in particular allow an insight into the lived experience aspect of patient experience.

Key points

- Little is known about the experience of patients during paramedic intervention and what we do understand stems from evaluations of patient satisfaction
- In this article, the authors contend that satisfaction is a component of experience, and not the totality of experience
- Understanding the issues involved requires a wider view, which is largely absent in the research to date
- The current view of the experience of patients of paramedics does, however, tell us that clarity, certainty and a clear pathway through treatment are valued

Limitations of this review

A significant limitation of the present review is the quality of patient experience research in paramedic practice. This may, in part, be owing to the relatively recent development of the paramedic profession as it undertakes new and unique healthcare roles (Raven et al, 2006; Crilly et al, 2015; O'Meara et al, 2015). Until the profession has developed to a point of self-determination and self-definition, it is likely that paramedics will continue to rely on research conducted in other settings or research which is of lower quality, likely conducted by inexperienced researchers.

The difficulty in defining paramedic practice globally also leads to a limitation of this review. Without a globally accurate definition, any search of the literature risks eliminating relevant research. However, narrowing the search to a specific country in order to accurately define paramedic practice would have excluded nearly all studies.

This literature review took the practical approach and considered a paramedic to be an allied health prehospital care practitioner so that the widest possible inclusions could be made.

This literature review is limited to recent studies, i.e. research that is less than 10 years old on publication. This ensured that the findings presented can be considered in the context of current practice. There is however little evidence, other than convention, to support the 10-year time frame, and there is the possibility that older relevant studies were excluded. Likewise, research conducted within the 10 years may be outdated due to the rapid development of paramedic practice.

Conclusion

It is evident from the results of this systematic review that the analysis of patient experience of paramedic care is generally limited to an understanding of patient satisfaction. This restricts the profession's knowledge of patient experience to something that has been criticised for being simply a measure of happiness (Manary et al, 2013), seemingly ignoring a majority of what constitutes experience under Shales' (2013) definition.

The understanding of satisfaction alone is not sufficient to comprehensively understand the paramedic interaction from the patients' perspective. Concepts of satisfaction and experience are different, and understanding that experience when viewed from the patients' perspective assists in the development of practice.

Despite the shortcomings of the literature, there are some important lessons to be drawn from it. Satisfaction, while only a component of experience, is nonetheless an important factor to understand in greater depth. The understanding that high satisfaction (Halter et al, 2007; Knowles et al, 2012; Swain et al, 2012) appears to rely on assisting the patient to create some sense of order out of chaos (Isaksson et al, 2011; Knowles et al, 2012) and, therefore a sense of certainty (Halter et al, 2007; Knowles et al, 2012), is the key finding of the present review.

Further research into the experience of patients during a paramedic intervention is required. Gaining an understanding of this phenomenon would allow for an informed debate on the role of patient experience in quality service provision as well as an improved evidence base for education.

Conflict of interest: None

References

- Bigham B, Welsford M. Applying hospital evidence to paramedicine: Issues of indirectness, validity and knowledge translation. *Can J Emerg Med.* 2015; 17(3):281–285
- Boudreaux ED, O'Hea EL. Patient satisfaction in the emergency department: A review of the literature and implications for practice. *J Emerg Med.* 2004; 26(1):13–26
- Critical Appraisal Skills Programme. CASP Checklists. 2017. [http:// www.casp-uk.net/checklists](http://www.casp-uk.net/checklists) (accessed 7 March 2019)
- Crilly J, Keijzers G, Tippett V et al. Improved outcomes for emergency department patients whose ambulance off-stretcher time is not delayed. *Emerg Med Australasia.* 2015; 27(3):216–224
- Darzi A. High quality care for all. London: Department of Health and Social Care; 2008
- Doyle C, Lennox L, Bell D. A systematic review of evidence on the links between patient experience and clinical safety and effectiveness. *BMJ Open.* 2013; 3(1)

- Francis R. Report of the mid staffordshire nhs foundation trust public inquiry: Executive summary. London: The Stationery Office; 2013
- Grant MJ, Booth A. A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Inform Librar J.* 2009; 26(2):91–108
- Halter M, Marlow T, Mohammed D, Ellison GT. A patient survey of out-of-hours care provided by emergency care practitioners. *BMC Emerg Med.* 2007; 7(1):1
- Isaksson RM, Brulin C, Eliasson M, Näslund U, Zingmark K. Prehospital experiences of older men with a first myocardial infarction: A qualitative analysis within the northern sweden monica study. *Scandinav J Caring Sci.* 2011; 25(4):787–797
- Johnson CG, Levenkron JC, Suchman AL, Manchester R. Does physician uncertainty affect patient satisfaction? *J Gen Intern Med.* 1988; 3(2):144–149
- Kietzmann D, Wiehn S, Kehl D, Knuth D, Schmidt S. Migration background and overall satisfaction with pre-hospital emergency care. *Appl Nurs Res.* 2016; 29(1):96–100
- Knowles E, O’Cathain A, Nicholl J. Patients’ experiences and views of an emergency and urgent care system. *Health Expect.* 2012; 15(1):78–86
- Manary MP, Boulding W, Staelin R, Glickman SW. The patient experience and health outcomes. *New Engl J Med.* 2013; 368(3):201–203
- Moher D, Liberati A, Tetzlaff J, Altman DG, The PG. Preferred reporting items for systematic reviews and meta-analyses: The prisma statement. *PLOS Med.* 2009; 6(7):e1000097
- Needham BR. The truth about patient experience: What we can learn from other industries, and how three ps can improve health outcomes, strengthen brands, and delight customers. *J Healthcare Manag.* 2012; 57(4):255–263
- O’Meara P, Stirling C, Ruest M, Martin A. Community paramedicine model of care: An observational, ethnographic case study. *BMC Health Serv Res.* 2015; 16(1):39
- Ogden J, Fuks K, Gardner M et al. Doctors expressions of uncertainty and patient confidence. *Patient Educ Counsel.* 2002; 48(2):171–176
- Parascandola M, Hawkins JS, Danis M. Patient autonomy and the challenge of clinical uncertainty. *Kennedy Institut Ethics J.* 2002; 12(3):245–264
- Rantala A, Ekwall A, Forsberg A. The meaning of being triaged to non-emergency ambulance care as experienced by patients. *Int Emerg Nurs.* 2016; 25:65–70
- Raven S, Tippett V, Ferguson J, Smith S. An exploration of expanded paramedic healthcare roles for queensland. Brisbane: State of Queensland (Department of Emergency Services), Queensland Ambulance Service; 2006
- Russell S. Patients’ experience: Top heavy with research. *Medicare Local (Australia) & Research Matters;* 2013
- Shale S. Patient experience as an indicator of clinical quality in emergency care. *Clin Gov: Int J.* 2013; 18(4):285–292
- Shaw D, Dyas JV, Middlemass J, Spaight A, Briggs M, Christopher S, Siriwardena AN. Are they really refusing to travel? A qualitative study of prehospital records. *BMC Emerg Med.* 2006; 6(1):1
- Swain AH, Al-Salami M, Hoyle SR, Larsen PD. Patient satisfaction and outcome using emergency care practitioners in New Zealand. *Emerg Med Australas.* 2012; 24(2):175–180
- The Beryl Institute. Defining patient experience. 2019. <https://tinyurl.com/y3ckgcoq> (accessed 7 March 2019)
- Tippett V, Coory M, Burkle F et al. The Australian prehospital pandemic risk perception study and an examination of new public health roles in pandemic response for ambulance services. Brisbane: University of Queensland and Monash University. Australian Centre for Prehospital Research, Queensland Ambulance Service; 2008
- Wolf JA, Niederhauser V, Marshburn D, LaVela S. Defining patient experience. *Patient Exper J.* 2014; 1(1):7–19

CPD Reflective Questions

- What do you use in your own practice to gain an understanding of the experience of your patients?
- How might the lessons learned from patient experience in this article impact upon your practice?
- Why is there so little literature available on this topic?