A SYSTEMATIC MIXED STUDIES REVIEW OF PATIENT EXPERIENCES IN THE EMERGENCY DEPARTMENT

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ABSTRACT

Background: Understanding patient experiences is crucial to evaluating care quality in Emergency Departments. However, while previous reviews describe the determinants of Emergency Department patient experiences (i.e. factors that influence patient experiences), few have described actual patient experiences. The aim of this systematic mixed studies review was to describe patient experiences in the Emergency Department from the patient's perspective.

Methods: EMBASE, MEDLINE, ProQuest Nursing and Allied Health, CINAHL and the Cochrane Library electronic databases were searched, with publication dates limited between January 1, 2001 – September 16, 2019. Studies describing adult patient experiences in the Emergency Department were included. Studies describing patient satisfaction, proxy-reported experiences or child/adolescent experiences were excluded. The quality of included studies was appraised using the Mixed Methods Appraisal Tool (2018 version). An inductive, convergent qualitative synthesis of the extracted data was undertaken following Thomas and Harden's (2008) methods.

Results: Fifty-four studies were included and of those, only five (9%) studies included a standardised definition of patient experience. Two inter-related themes emerged:

Relationships between Emergency Department patients and care providers; and Spending time in the Emergency Department environment. The first theme included four sub-themes regarding respect, communication, caring behaviours, and optimising patient confidence. A key finding related to the potential for power imbalances between patients and their care providers. The second theme included two sub-themes regarding physical aspects of the Emergency Department environment and patients' waiting experience. Patients attributed more importance to the waiting experience itself rather than the duration they had to wait.

Conclusions: Patients in the Emergency Department have unique and complex experiences. Greater research is needed to understand the relational and environmental factors that contribute to power imbalances between patients and care providers, how to support more positive waiting experiences, and developing a standardised definition of patient experience in the Emergency Department.

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WHAT IS KNOWN ON THIS SUBJECT:

- Optimising patient experiences is associated with improved patient safety and clinical outcomes, reduced health service utilisation, and is recognised as a critical measure of healthcare quality.
- Patient experiences in the Emergency Department (ED) are gaining interest as EDs often serve as the front door to other hospital services and are universally recognised for having a high workload.
- Patient experiences in the ED are poorly understood, impacting our ability to conceptualise and measure them.

WHAT THIS STUDY ADDS:

- Patient experiences in the ED are complex and best conceptualised by interplay between patients, care providers and the ED environment.
- Our findings reveal that power imbalances underscore some ED patient-care provider relationships, which may be exacerbated by the inherent complexities and fast-paced care delivered in ED environments.
- The psychological experience of waiting in the ED appears to be more important to patients than the duration of the wait itself.

INTRODUCTION

Patient experience in the Emergency Department (ED) is one area of patient-centred care provision that continues to garner attention. EDs are often the first point of contact for unwell patients entering hospital, and present unique challenges to providing optimal care experiences. This may be due to ED patients' heightened sense of fear and distress;[1] the anxiety associated with not knowing the type of treatment they may receive;[2] crowded and often chaotic environments;[3, 4] or a combination of these factors. ED staff also experience challenges associated with ambulance ramping (the inability of paramedics to transfer patients' clinical care to the ED),[5-7] delays in accessing in-patient beds,[8] ED overcrowding,[9, 10] and patient violence directed towards staff;[11] all of which can directly and indirectly impact on patient experiences. Given the unique complexities associated with providing and receiving ED care, measuring and optimising patient experiences is a priority for many health service managers and organisational leaders globally.[12-14]

A primary challenge associated with measuring patient experiences in the ED is that we currently do not have a robust understanding of the core themes of ED patient experiences. Poor conceptualisation has limited robust measurement of patient experience in the ED. Recent reviews have reported the common determinants of ED patient experiences,[12, 15] such as how wait time affects experiences of care. Yet, while existing reviews enable us to understand the factors that control or influence patient experiences in the ED, they do not describe actual experiences in the ED. This is a crucial and necessary step towards operationalising (measuring) a concept.[16]

There is also ongoing confusion related to the interchangeable use of 'patient experience' and 'patient satisfaction' in the literature.[13, 15, 17, 18] There is agreement that the 'patient experience' encompasses what happened during a care encounter and how it happened from

the patient's perspective.[19-25] Alternatively, 'patient satisfaction' can be defined as whether the care a patient received did or did not meet their expectations.[26, 27] These two concepts are also operationalised differently. Unlike satisfaction measures, patient experiences provide actionable feedback to health services about what can improve care experiences, thereby optimising the opportunity to provide patient-centred care.

Thus, given the limitations present in the ED patient experiences literature, the aim of this systematic mixed studies review was to describe patient experiences in the Emergency Department from the patient's perspective.

METHODS

Study design

This systematic mixed studies review followed the 7-step approach proposed by Pluye and Hong (2014).[28] Reporting was guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist,[29] and registered with the international prospective register of systematic reviews (PROSPERO) (ID: CRD42020150154).[30]

Patient and public involvement

No patient/public involvement.

Step 1: Formulate a review question

This SMSR has three research questions: (i) how has 'patient experience' been defined in the ED literature; (ii) how do patients describe their experiences in the ED; and (iii) what is the quality of studies reporting on patient experiences in the ED. We define 'patient experience' as what happened during a care encounter and how it was perceived by the patient.[19-25]

Step 2: Define eligibility criteria

Table 1 outlines the eligibility criteria applied to studies identified through electronic database searching.

TABLE 1: SMSR eligibility criteria for the inclusion and exclusion of studies

Studies were included if:	Studies were excluded if:
<ul style="list-style-type: none"> • Patient experiences in the ED were outlined in the study aims/ objectives (or) • Study authors distinguished between the concepts of patient experience and patient satisfaction, and identified that their focus was on patient experience (or) • Survey instruments were patient experience surveys or patient-reported experience measures (PREMs) (or) • Survey instruments were developed with the intention of capturing patient experiences • Participants were adults (the legal age of adulthood differs internationally and across contexts, so we accepted study authors' definition of adulthood) • Published between January 1st, 2001 (publication year of the Crossing the Quality Chasm report)[31] and September 16th, 2019 • Published in English • Published in peer-reviewed journals • Primary research 	<ul style="list-style-type: none"> • Patient satisfaction or patient expectation was outlined in the study aims/ objectives (or) • Survey instruments were developed with the intention of capturing patient satisfaction • Studies were conducted in settings other than the ED (e.g. inpatient, prehospital, outpatient) • Patients were children, adolescents or young adults (as defined by study authors) • Patient experience data was proxy-reported (e.g. carer on behalf of a patient) or was unable to be extracted independently of proxy-reported data • Presented literature reviews, meta-reviews or quality improvement (QI) activities
<p>SMSR = Systematic Mixed Studies Review; ED = Emergency Department; PREM = Patient-reported experience measure; QI = Quality Improvement</p>	

Step 3: Apply an extensive search strategy

The following electronic databases were systematically searched for studies published between January 1st, 2001 and September 16th, 2019: EMBASE (via Elsevier), MEDLINE (via Ovid), ProQuest Nursing and Allied Health, CINAHL (via EBSCOhost) and the Cochrane Library. Searches used Medical Subject Headings (MeSH) where appropriate, Boolean operators (AND, OR), and proximity searching in accordance with the specifications

of the databases. A university health librarian was consulted prior to undertaking the final database searches. Supplementary file 1 contains the full search strategy for all electronic databases.

Steps 4 and 5: Identify and select potentially relevant studies

In September 2019, one author (CB) performed electronic database searching. Search results were imported into EndNote (Version X9.2, Clarivate Analytics) and duplicates removed. Using the inclusion and exclusion criteria (step 2), two authors (CB, SL) undertook title and abstract screening independently. Articles that appeared to meet the eligibility criteria or were unable to be excluded based on title and abstract screening alone underwent independent full-text review (CB, SL). Discrepancies regarding the inclusion or exclusion of an article were discussed and adjudicated by a third author (BG), where necessary.

Step 6: Appraise the quality of included studies

The Mixed Methods Appraisal Tool (MMAT, 2018 version) was used to assess the methodological quality of the included studies.[32] The MMAT allows researchers to appraise five research designs (qualitative research, randomised controlled trials, non-randomised studies, quantitative descriptive studies, and mixed methods studies) based on whether design-specific criteria are met ('Yes', 'No' and 'Can't tell').[32] Two authors (CB, SL) independently appraised the quality of included studies using the MMAT. Discrepancies between scores were first discussed between the appraising authors, and where necessary, adjudicated by a third author (BG). An inter-rater reliability (Kappa) score was calculated to ascertain the strength of agreement between the two authors' ratings.[33]

Step 7: Synthesise included studies

Verbatim data extraction of the included studies was undertaken by one author (CB) into a standardised extraction template, and cross-checked by another author (SL, BG, JC);

ensuring data accuracy and enabling all authors the opportunity to develop a comprehensive understanding of the literature. An inductive, convergent qualitative synthesis approach was used to transform all data into qualitative findings.[28] One author (CB) led the results synthesis using Thomas and Harden's (2008) methods for thematic synthesis[34] by first undertaking line-by-line coding, organising codes into groups, and subsequently developing the initial descriptive sub-themes and themes. Throughout this process, the lead author (CB) maintained detailed analytical audit trails and met frequently with the research team (SL, JC and BG) to discuss the analysis. During these meetings, authors discussed revisions to codes and their groupings, and collectively developed the final sub-themes and themes. The development of the final sub-themes and themes involved abstracting concepts of patient experiences in the ED based on the findings of the primary studies.[34]

RESULTS

Summary of included studies

Fifty-four studies were included in this review (Figure 1), which are summarised in Table 2. Twenty-six (48%) were qualitative studies, 23 (43%) were quantitative studies and five (9%) were mixed-methods studies (Supplementary File 2). Most studies were conducted in the US (n=29; 35%) and half (50%) were published between January 2016 – September 2019.

Patient populations varied substantially in age and reason for ED presentation. MMAT scores are presented separately in Supplementary File 3 demonstrating how the included studies scored against established criterion for the different study designs. Inter-rater reliability for MMAT scoring was 0.78 (substantial agreement).[33]

[INSERT FIGURE 1 ABOUT HERE]

Definitions of 'patient experience'

Researchers in five (9%) of the 54 studies provided a definition of patient experience (Supplementary File 4).[35-39] Three studies defined patient experience in relation to why it is a preferable measure for quality improvement as opposed to patient satisfaction.[35, 36, 39] These definitions stated that patient experiences “*have shown to be more objective and to yield more detailed information for quality improvement*”[35, 36] as they “*provide information identifying where in the process problems may reside and what can be done to improve patient care*”.[39] In articulating the difference between patient experience and patient satisfaction, one study also stated that patient satisfaction is based on “*expectations (or ‘needs’) and experiences*” where “*expectations are related to personal preferences, which make quality of care difficult to measure*”.[35]

Another study proposed a patient experience definition based on the domains addressed by the patient experience survey they employed.[37] These domains included staff care, pain management, discharge communication, respect, medication communication, and wait time and crowding.[37] Another study defined the patient experience as a combination of “*‘functional’ aspects of care (such as arranging the transfer of patients to other services, administering medication and helping patients to manage and control pain), ‘transactional’ aspects of care (in which the individual is cared ‘for’, e.g., meeting the preferences of the patient as far as timings and locations of appointments are concerned) and ‘relational’ aspects of care (where the individual is cared ‘about’, e.g., care is approached as part of an ongoing relationship with the patient)*”.[38]

Thematic synthesis

Two overarching themes emerged: *Relationships between Emergency Department patients and care providers*, and *Spending time in the Emergency Department environment* (Table 2). There is overlap between these themes due to the complex interplay between patients, care

providers and the ED environment. The overlap contributes to a unified and holistic conceptualisation of patient experiences in the ED.

Theme 1: Relationships between Emergency Department patients and care providers

The theme *Relationships between Emergency Department patients and care providers* included four sub-themes: *Respecting patients*; *Communicating with patients to keep them informed*; *Caring for patients*; and *Building and maintaining patients' confidence* (Table 2).

The overarching theme describes the unique relationship dynamics between ED patients and care providers, and the perceived distribution of power. ED patients acknowledged that relational power exists between themselves and their care providers, who possessed valuable medical knowledge and determined the type and timing of their treatment. Furthermore, the actions of some care providers significantly influenced how patients felt about themselves, causing some to question the validity of their ED presentation. These ED patients reported feeling like a “burden”, [40] “dehumanised”, [41-43] and “powerless”, [41, 44] indicating that the relational power tipped in favour of care providers, and negatively impacted patient experiences. In turn, this influenced the behaviour patients exhibited toward their care providers with some becoming frustrated and angry. Other patients changed their behaviour so they could be viewed as the “best patient possible”, [45] “compliant”, [41] and avoid “adding to staff stress”. [46] Further, some patients welcomed the “passive” [46] patient role because of their presenting condition (e.g. trauma resuscitation). When an equal distribution of relational power existed between patients and care providers, the majority of patients felt included and treated like a “human being” instead of a “case” or “number”. [41, 43, 47, 48] Care providers use of inclusive language made patients feel valued and involved in their care, contributing to positive patient experiences. [41, 49, 50]

Subthemes

Respecting patients

Respect was described by patients as the behaviours exhibited by care providers that considered their feelings, wishes and rights. The degree of respect patients received impacted on their sense of worth, power and vulnerability,[41, 42, 49] which influenced their care experience in the ED. Respect was demonstrated on a spectrum, ranging from a lack of respect to a high level of respect. Positive experiences were associated with being listened to carefully and attentively,[35-37, 40, 46, 47, 50-60] having the opportunity to talk uninterrupted,[47, 50] being taken seriously,[36, 45, 49, 51, 61, 62] and feeling as though care providers had the time for them.[51, 53, 55, 59, 60, 63, 64] Similarly, care providers that were on the same level as patients (i.e. down-to-earth)[41, 47, 65] and established rapport with patients and their family[41, 47, 50, 66-70] also positively impacted patient experiences. However, when relational respect was minimal or absent, patients reported more negative experiences. This occurred when ED care providers talked in front of patients as if they were not there,[37, 58, 68, 70, 71] when patients felt they were not taken seriously,[45, 63, 65, 66, 72] were disregarded,[45, 73] treated with judgement or discrimination,[41, 42, 45, 68, 72, 74] or humiliated.[41, 45, 62, 74]

Communicating with patients to keep them informed

This sub-theme of patient experience involved the transfer or exchange of information between care providers and patients. Most communication was one-way where care providers would provide *instruction* to patients. Yet, there was also some evidence of *discussion*, suggesting patient involvement and partnership in their ED care. Patient experiences were optimised when care providers delivered the right amount of information in an understandable way,[35-37, 47, 50-55, 57, 58, 60-62, 65, 67, 69, 70, 75-78] when they communicated with empathy and compassion,[47, 49, 56, 68, 69, 79] when patients were

informed about care processes and treatment options,[46, 49, 52, 56, 62, 65, 68, 69, 72, 80] updated throughout their ED journey,[39, 66, 69] were able to discuss matters that were important to them,[35-37, 47, 52, 54, 67, 68] and were encouraged to talk and ask questions.[50, 65, 69] Generally, patients who felt informed by their care providers, reported better experiences characterised by feeling reassured, safe and confident.[46, 48, 49, 69, 72] Patients who felt uninformed however, reported poorer experiences characterised by anxiety, confusion and fear.[39, 40, 43, 63, 72] Patients described being uninformed as not being provided with sufficient verbal or written information about matters such as how long they might have to wait and what to do following discharge,[36, 39, 41, 46, 52, 56, 58, 60, 61, 63, 65, 72, 81-83] receiving information they could not understand,[46, 63, 68] when information was delivered abruptly,[68, 81, 82] when information from multiple care providers was inconsistent or contradictory,[36, 42, 58, 60, 78] and when they were asked to repeat themselves numerous times.[42, 45, 61, 66]

Caring for patients

Being cared for encompassed both routine/ functional aspects of care (e.g. tests, examinations and procedures; appropriate pain relief and management; and treatment or transfer),[35-42, 44-47, 49, 52, 54-56, 60, 63-65, 67, 68, 72, 74, 77, 80, 82, 84, 85] and emotional aspects of care. However, receiving either functional or emotional care in the absence of the other resulted in poorer patient experiences. Patients valued emotional aspects of care as it made them feel important and understood by their care providers,[40, 48, 49, 65, 81] such as when empathy and genuine concern was demonstrated.[38-40, 43, 45, 47, 49, 56, 60, 65, 81, 82, 86] This occurred when care providers used reassuring words, touch and body language,[40, 41, 47, 49, 68, 79] when they informed patients' family or friends that they were in the ED,[48, 49, 61, 68, 75, 82] and by ensuring patients did not feel lonely.[37, 40, 48, 49, 64, 68, 80-82] Receiving an inadequate level of emotional support[40, 43, 44, 49, 65, 72, 73] or

follow-up support (e.g. counselling, social work)[65, 67, 73, 82] had negative impacts on patient experiences.

Building and maintaining patients' confidence

Patients described how their care providers instilled and preserved a sense of confidence in them and the care they provided. Patients who felt confident in their care providers reported feeling safer.[48, 68, 78] Confidence was instilled when care providers demonstrated competence, knowledge and skill,[36, 40, 41, 46, 47, 49, 52, 56, 60, 65, 68, 69, 78, 87] took responsibility for and control of patients' care,[39, 41, 49, 61, 88] were efficient and responsive,[37, 40, 41, 45, 48, 49, 56, 66, 68, 69, 73, 84, 87] and when care providers operated as a team.[38, 41, 43, 46, 48, 49, 68] Yet, when patient confidence in their care providers was challenged, they reported poorer experiences because they felt they could no longer trust their care providers.[41, 64] Patients' confidence diminished when care providers failed to demonstrate adequate competence, knowledge and skill,[42, 60, 65, 66, 68, 74] when care felt disjointed,[41, 46, 60, 61, 69] and when care providers failed to take responsibility for patients' care.[41, 46, 61, 88]

Theme 2: Spending time in the Emergency Department environment

The theme *Spending time in the Emergency Department environment* included two sub-themes: *Being aware of physical aspects of the Emergency Department environment*; and *Waiting in the Emergency Department environment* (Table 2).

The overarching theme describes patient experiences related to the physical attributes of the care environment (e.g. comfort and privacy), and the psychological experience of waiting in the ED. Patients experiencing long waiting times were more aware of their physical environment “because [they] ha[d] nothing else to do”.[80] Hence, characteristics such as equipment wear and tear,[80] cleanliness,[39, 48, 58, 80] noise,[48, 51, 65] and the health

condition of other patients[39, 87] were more noticeable. Patients who spent less time in the ED tended to report less about the physical aspects of the ED environment, instead focussing more on their relationships with care providers.[49, 68, 82] Some patients who experienced longer ED waiting times perceived that care providers had forgotten or abandoned them, especially if they received limited information regarding the reasons why they were waiting.[40, 43, 44, 46, 72] Thus, the ED environment influenced how patients perceived the humanistic characteristics of their care providers.

Subthemes

Being aware of physical aspects of the Emergency Department environment

Patients described how the physical (structural, spatial, and material) characteristics of the ED environment impacted their experience. Patients reported better experiences when the ED was clean and hygienic,[35, 36, 39, 48, 51, 52, 54, 58, 67, 80, 88] when they were physically comfortable (e.g. had comfortable seating, blankets),[37-39, 48, 68, 78, 80, 88] were able to access a range of amenities (e.g. bathroom, food, drink, TVs, and magazines),[36, 39, 42, 63, 67-69, 78, 80, 88] and received an adequate level of privacy during physical examinations, procedures and discussions in the ED.[35, 42, 52, 58, 63, 71, 86, 87] However, the physical ED environment could also negatively impact patient experiences, such as when patients reported feeling uncomfortable in the ED unrelated to pain (e.g. cold and draughty corridors, small beds),[80, 88] being surrounded by too many other people[37, 43, 49, 65, 68, 80, 83, 88] and a lot of noise,[48, 65, 88] not receiving an adequate level of privacy during physical examinations, procedures and discussions,[39, 42, 63-65, 73, 87] and being unable to access adequate amenities (e.g. bathrooms, food, drink, and wheelchairs).[39-41, 69, 74, 80]

Waiting in the Emergency Department environment

Patients acknowledged that ‘waiting’ would be an important part of their ED experience. However, some patients felt misled by the idea of a single “*designated*” waiting area,[56, 80] as waiting was not restricted to just the waiting room. They reported that having distractions (e.g. TVs, magazines, company) during long waits,[64, 80] and being informed about why they were waiting or the order in which they would be seen relative to other patients,[36, 49, 58, 64, 76] positively impacted their experience. Receiving care quickly was also associated with better patient experiences,[40, 51, 56, 63, 66, 69] however, it was relatively uncommon for patients to report short wait times. When this did occur, it came as a pleasant and unexpected surprise to patients.[56, 69] Patients who perceived that their wait was too long,[39, 42, 44-46, 56, 60, 62, 64-66, 72, 73, 80, 83, 84, 88] waited in areas other than the actual waiting room,[39, 40, 56, 60, 73, 80, 88] and waited without knowing why they were waiting,[39, 40, 43, 44, 46, 56, 63, 72, 83] reported worse experiences as they became frustrated and felt abandoned by their ED care providers.[43, 44, 56, 88]

TABLE 2: Quotes extracted from included studies representing the themes and sub-themes of patient experience in the ED

Themes and sub-themes	Quotes extracted from included studies
<i>Relationships between Emergency Department patients and care providers</i>	
Respecting patients	<ul style="list-style-type: none"> • “... He listened carefully to me. ... I was very happy he listened to me.” [47] • “What I liked about Dr. X was his kindness and his willingness to talk and to explain things—he was good like that.” [60] • “I felt like I was being taken seriously...” [36, 62] • “... the worst time of my life, is the time walking in the emergency door and [being] told I sought medication.” [45] • “... [the nurses said] things like how it [being transgender] was against God and just wasn’t right.” [74]
Communicating with patients to keep them informed	<ul style="list-style-type: none"> • “They explained to me in the plainest language that I could understand, what they were doing, what was wrong with me, what I was there for. I understood everything that they said to me.” [47] • “They explained to me what would happen, that I had three options, I could get the D&C, I could go home and just let it happen on its own, or I could have surgery.” [72] • “... the nurse encouraged me and supported me in telling about the act of violence.” [65] • “They didn’t tell me anything and they were really scaring me.” [72] • “You spend twelve hours saying the same thing.” [66]
Caring for patients	<ul style="list-style-type: none"> • “I was by myself in the emergency room so I just felt horrible and there was nobody there and you know it was really bad. You know, the nurse she was really nice and she showed a lot of empathy for me. She told me, ‘It’s going to be okay.’” [81] • ... a non-purposeful touch that conveyed caring and reassurance was an essential component of patients feeling an overriding sense of being safe.[49] • ... negative emotions associated with being alone were allayed if the patients saw staff present.[49] • “... I remember feeling like they understood that this was a dead baby for me even though it wasn’t. I think they at least understood that it was a loss. So I felt really like they got it.” [82] • “I was very disappointed that I was not offered to talk to someone, it just kind of disappeared. It would have been good if they had a few routines... after I had returned home [I] realized that I needed to talk.” [73]
Building and maintaining patients’ confidence	<ul style="list-style-type: none"> • “When [the team] took control ... I felt more safe...” [68] • “In ED they were all in harmony with each other... They all had a job to do and they did it, in sequence and sometimes in parallel, they just knew what to do and they did it.” [48] • ... feelings of being vulnerable can be minimized through the actions of staff that demonstrate they are in control and can be trusted.[49] • “The pain team said I need to get the depression addressed, and the CAT team said ‘you need to get your migraines fixed’ ... I just burst into tears and said I can’t connect up all the dots, I can’t connect you all up.” [41] • “The wait was so long. They [nurses] kept telling me tonight, this evening, no, no tomorrow morning ... I couldn’t believe them anymore. So finally when they came to bring me to the surgery room... I couldn’t trust them anymore.” [64]
<i>Spending time in the Emergency Department environment</i>	

Being aware of physical aspects of the Emergency Department environment	<ul style="list-style-type: none"> • <i>"Clean, comfortable... it made me feel safe."</i> [48] • <i>"I was taken to one of the assessment rooms and not to the main part of the emergency department but to a room which was a more private room that was walled rather than just curtains."</i> [63] • <i>"... I'm 6'3" and I'm in a 5 foot something bed. It's uncomfortable..."</i> [88] • <i>"The reason is that we didn't get sleep in the emergency because everybody was talking and there is no privacy."</i> [64] • <i>"Every single patient around the waiting room must have heard the doctor ask if my husband had punched me."</i> [65]
Waiting in the Emergency Department environment	<ul style="list-style-type: none"> • ... magazines or a television facilitating the waiting are largely appreciated. Without them, patients feel neglected.[80] • <i>"... Some people were sicker than I was and so I had to wait for my turn, and that was ok with me."</i> [64] • <i>"I was told how long I'd have to wait."</i> [61] • <i>"This is not the first time I've been here and was so ill and had to sit and wait. Then, when I get to the next spot, I have to sit and wait. Then they [the EM physicians] come in and out for a second, and then you have to wait again."</i> [60] • <i>"... A lady sitting in the waiting room looks dreadful from pain, she was given nothing ..."</i> [39]

ED = Emergency Department; D&C = Dilation and Curettage; IV = Intravenous; CAT = Crisis Assessment and Trauma

DISCUSSION

The aim of this systematic mixed studies review was to describe patient experiences in the Emergency Department from the patient's perspective based on the current literature. Our findings suggest that ED patient experiences can be described in terms of two overarching and interrelated themes: *Relationships between Emergency Department patients and care providers*, and *Spending time in the Emergency Department environment*. The overlap between these themes represents the interaction between patients, care providers and the ED environment that is central to patient experiences in the ED.

A key finding of this review was that the concept of patient experience was rarely defined in the included studies. Most definitions articulated how patient experience differs to patient satisfaction. Yet, while this contributes to clearer conceptual boundaries between the two concepts, it fails to clarify exactly what the ED patient experience *is*. The lack of a standardised patient experience definition has significant implications including making it difficult to compare and contrast research findings. This limits the effective measurement of patient experiences and provides limited foundation upon which to design future research and quality improvement activities that aim to optimise patient experiences. Previous research proposed that patient experiences (irrespective of the healthcare context) span across the continuum of care, go beyond survey results, align with patient-centred care principles and focus on individualised care.[89] However, while the authors suggested that patient experiences comprise “*more than satisfaction*”, [89] they also recommended that a definition of patient experience should focus on expectations; an inherent determinant of patient satisfaction.[90] Consequently, more comprehensive investigations are required to generate a standardised conceptual definition of patient experience. It will also be important to understand whether differences between healthcare settings impact how we conceptualise the patient experience.

The review findings also highlight the importance of patient-care provider relationships in the ED. This has been evidenced numerous times in the literature, particularly regarding the importance of effective communication.[91-94] However, our review revealed a novel insight into ED patient-care provider relationships – underlying many patient experiences in the ED are unequal distributions of power between patients and their care providers. Some patients felt they had to prove their worth and compete to gain ED care providers’ time by presenting themselves as the best possible patient, adopting passive and compliant behaviours, and not being burdensome by asking questions when the ED staff appeared busy. Relational power imbalances did not appear to be deliberate on the part of the care providers and arose due to the inherent complexities associated with EDs as healthcare services. Higher levels of patient anxiety,[95] more acute/ urgent patient conditions,[1] longer waiting times prior to receiving care,[96] and the escalating busyness of EDs[97] all contribute to patients having minimal control over their health and personal circumstances while in the ED. Moreover, many EDs are driven by organisational efficiency pressures (e.g. discharging ED patients within an allocated period of time) and the need to prioritise life-saving medical care in emergency situations.[98-100] These factors may momentarily override the ability of ED care providers to optimise a more patient-centred approach to care for some patients, and suggests that EDs are not conducive to maintaining equal power distributions.

Patient involvement in shared decision-making regarding their care was minimally discussed in the included studies, further evidencing ED patient-care provider power imbalances. It has been asserted that patients are more susceptible to a “doctor knows best” mentality in the ED because it is a high stakes care environment where decisions may have significant impacts on the patient’s health and wellbeing.[101] This is despite mounting evidence that shared-decision making can positively impact patient experiences of care and their overall health outcomes.[102] While support for shared-decision making initiatives in the ED

continues to grow,[103-112] the impact of shared-decision making on ED patient experiences is yet to be examined; warranting further research.

This review highlights that patients placed more importance on their psychological experience of waiting than the actual wait time. EDs globally are becoming increasingly busy. In Australia for example, the annual rate of ED presentations exceeds that of population growth (3.4% versus 1.4%, respectively).[113, 114] One explanation for this increase is that EDs in many countries serve as a safety net for low-income and socially disadvantaged citizens who are unable to afford or access community healthcare.[115] In turn, increased utilisation of ED services culminates in longer ED wait times. In our study, as in other studies, patients anticipated and accepted that an ED visit would involve a wait,[15] but that being provided information during the wait was crucial to mitigating patients' feelings of frustration, humiliation, and powerlessness.[116, 117] Yet, much of the research about ED waiting relates to differences between perceived and actual wait times.[39, 118-121] The patient's psychological experience of waiting has comparably received little attention, and warrants greater exploration. This finding also challenges the utility of capturing waiting times as part of patient experience evaluations.

Limitations

Like all reviews, this review has limitations. First, despite systematic and rigorous searching, articles may have been missed. However, the assistance of a qualified health librarian during the development of our database search strategy was sought to minimise this risk. Second, grey sources of literature were not considered for inclusion due to their questionable quality (i.e. not peer-reviewed) and potential risk of bias. Third, there was a paucity of literature pertaining to the ED experiences of culturally and linguistically diverse patients, indigenous peoples, and patients with mental health problems. These gaps suggest that our conceptual

understanding of ED patient experiences is not inclusive of all perspectives, and highlights areas of research that warrant greater attention. Finally, we excluded studies including proxy-reported experiences in the ED as this did not align with the review's aim of describing patient experiences in the ED. However, proxy-reported experiences may be the only accounts available for patients with disability and cognitive impairment. As such, while this was not within the scope of the current review, this is an area that warrants greater research.

CONCLUSION

A standardised conceptual definition of patient experience is needed. This review identifies two inter-related themes regarding patient experience in the ED: *Relationships between ED patients and care providers*, and *Spending time in the ED environment*. Circumstances inherent in the ED visit can contribute to power imbalances between ED patients and their care providers, which can affect patient experiences and behaviours. The waiting experience, rather than the length of the wait, can also contribute to the patient experience, particularly whether they feel valued and cared for. Understanding these issues can help to improve the patient experience in the ED.

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[Refer to Supplementary file 5 for additional references cited in-text]

FIGURE 1: PRISMA flow diagram of study identification and selection

FIGURE 1 legend: PRISMA flow diagram illustrating the electronic database searches and study selection for the systematic mixed studies review

Supplementary file 1: Database searches

EMBASE (via Elsevier) database search strategy – 16-09-2019

#	Search terms	Results
1	<p>'patient experience'/exp OR</p> <p>((patient* OR consumer* OR user*) NEXT/1 experience*):ab,ti OR</p> <p>((patient* OR consumer* OR user*) NEXT/1 report* NEXT/1 experience*):ab,ti OR</p> <p>(experience* NEAR/2 car*):ab,ti</p>	117,666
2	<p>'emergency ward'/exp OR</p> <p>(emergency NEXT/1 department*):ab,ti OR</p> <p>(emergency NEXT/1 unit*):ab,ti OR</p> <p>(emergency NEXT/1 service*):ab,ti OR</p> <p>(accident NEAR/2 emergency):ab,ti OR</p> <p>(emergency NEXT/1 ward*):ab,ti OR</p> <p>(emergency NEXT/1 room*):ab,ti OR</p> <p>(emergency NEAR/2 treat*):ab,ti OR</p> <p>(emergency NEAR/2 car*):ab,ti OR</p> <p>(urgent NEAR/2 car*):ab,ti OR</p> <p>(emergency NEAR/2 present*):ab,ti</p> <p>(emergency NEAR/2 medic*):ab,ti OR</p> <p>casualty:ab,ti</p>	257,085
#1 AND #2		
3	<p>Limited by: ([article]/lim OR [article in press]/lim OR [data papers]/lim OR [short survey]/lim); [English]/lim; Publication dates: 2001-current</p>	1,379

ab = limited to abstract; ti = limited to title; lim = limit

MEDLINE (via Ovid) database search strategy – 16-09-2019

#	Search terms	Results
	((patient* or consumer* or user*) adj1 experience*).ab,ti. OR	
1	(experience* adj2 car*).ab,ti. OR	67,983
	((patient* or consumer* or user*) adj1 report* adj1 experience*).ab,ti.	
	exp Emergency Service, Hospital/ OR	
	(emergency ADJ1 department*).ab,ti. OR	
	(emergency ADJ1 ward*).ab,ti. OR	
	(emergency ADJ1 unit*).ab,ti. OR	
	(emergency ADN1 service*).ab,ti. OR	
	(accident ADJ2 emergency).ab,ti. OR	
2	(emergency ADJ1 room*).ab,ti. OR	156,873
	(emergency ADJ2 treat*).ab,ti. OR	
	(emergency ADJ2 car*).ab,ti. OR	
	(urgent ADJ2 car*).ab,ti. OR	
	(emergency ADJ2 present*):ab,ti OR	
	(emergency adj2 medic*).ab,ti. OR	
	casualty.ab,ti.	
	#1 AND #2	
3	Limited by: (English language and yr="2001 -Current")	1,283

ab = limited to abstract; ti = limited to title; ADJn = search terms within *n* words of each other (proximity search strategy)

CINAHL (via EBSCOhost) database search strategy – 16-09-2019

#	Search terms	Results
	TI (((patient* or consumer* or user*) w1 experience*)) OR AB (((patient* or consumer* or user*) w1 experience*)) OR	
1	TI (((patient* or consumer* or user*) w1 report* w1 experience*)) OR AB (((patient* or consumer* or user*) w1 report* w1 experience*)) OR TI (experienc* N2 car*) OR AB (experienc* N2 car*)	45,638
	(MH "Emergency Service+") OR	
	TI (emergency w1 department*) AND AB (emergency w1 department*) OR	
	TI (emergency w1 unit*) AND AB (emergency w1 unit*) OR	
	TI (emergency w1 service*) AND AB (emergency w1 service*) OR	
	TI (accident n2 emergency) AND AB (accident n2 emergency) OR	
	TI (emergency w1 ward*) AND AB (emergency w1 ward*) OR	
2	TI (emergency w1 room*) AND AB (emergency w1 room*) OR TI (emergency n2 treat*) AND AB (emergency n2 treat*) OR TI (emergency n2 car*) AND AB (emergency n2 car*) OR TI (urgent n2 car*) AND AB (urgent n2 car*) OR TI (emergency n2 present*) AND AB (emergency n2 present*) OR TI (emergency n2 medic*) AND AB (emergency n2 medic*) OR TI casualty AND AB casualty	59,707
	#1 AND #2	
3	Limited by: Published Date: 01/01/2001 – 31/10/2019; English Language; Peer Reviewed	747

TI = limited to title; w = within *n* words of each other; AB = limited to abstract; N = *n* words apart from one another

Nursing and Allied Health Database (ProQuest) database search strategy – 20-09-2019

#	Search terms	Results
1	<p>ab(((patient* OR consumer* OR user*) PRE/1 experience*)) OR ti(((patient* OR consumer* OR user*) PRE/1 experience*)) OR</p> <p>ab(((patient* OR consumer* OR user*) PRE/1 report* PRE/1 experience*)) OR</p> <p>ti(((patient* OR consumer* OR user*) PRE/1 report* PRE/1 experience*)) OR</p> <p>ab(((patient* OR consumer* OR user*) NEAR/2 car*)) OR ti(((patient* OR consumer* OR user*) NEAR/2 car*))</p>	121,453
2	<p>mesh(emergency service, hospital) OR</p> <p>ab((emergency PRE/1 department*)) OR ti((emergency PRE/1 department*)) OR</p> <p>ab((emergency PRE/1 unit*)) OR ti((emergency PRE/1 unit*)) OR</p> <p>ab((emergency PRE/1 service*)) OR ti((emergency PRE/1 service*)) OR</p> <p>ab((accident NEAR/2 emergency)) OR ti((accident NEAR/2 emergency)) OR</p> <p>ab((emergency PRE/1 ward*)) OR ti((emergency PRE/1 ward*)) OR</p> <p>ab((emergency PRE/1 room*)) OR ti((emergency PRE/1 room*)) OR</p> <p>ab((emergency NEAR/2 treat*)) OR ti((emergency NEAR/2 treat*)) OR</p> <p>ab((emergency NEAR/2 car*)) OR ti((emergency NEAR/2 car*)) OR</p> <p>ab((urgent NEAR/2 car*)) OR ti((urgent NEAR/2 car*)) OR</p> <p>ab((emergency NEAR/2 present*)) OR ti((emergency NEAR/2 present*)) OR</p> <p>ab((emergency NEAR/2 medic*)) OR ti((emergency NEAR/2 medic*)) OR</p> <p>ab(casualty) OR ti(casualty)</p>	59,865
	#1 AND #2	
3	Limited by: Full-text publication; Peer-reviewed; Publication dates: 01/01/2001 – 31/10/2019; English language	2,243

ab = limited to abstract; ti = limited to title; PRE = separated by up to *n* words of each other in the specified order; NEAR = separated by up to *n* words of each other in any order

Cochrane Library database search strategy – 20-09-2019

#	Search terms	Results
	(((patient* OR consumer* OR user*) NEXT experience*)):ti,ab,kw OR	
1	(((patient* OR consumer* OR user*) NEXT report* NEXT experience*)):ti,ab,kw OR (((patient* OR consumer* OR user*) NEAR/2 car*)):ti,ab,kw	54,194
	MeSH descriptor: [Emergency Service, Hospital] explode all trees OR ((emergency NEXT department*)):ti,ab,kw OR ((emergency NEXT unit*)):ti,ab,kw OR ((emergency NEXT service*)):ti,ab,kw OR ((accident NEAR/2 emergency)):ti,ab,kw OR ((accident NEAR/2 emergency)):ti,ab,kw OR 2 ((accident NEAR/2 emergency)):ti,ab,kw OR ((accident NEAR/2 emergency)):ti,ab,kw OR ((accident NEAR/2 emergency)):ti,ab,kw OR ((accident NEAR/2 emergency)):ti,ab,kw OR ((accident NEAR/2 emergency)):ti,ab,kw OR ((accident NEAR/2 emergency)):ti,ab,kw	24,024
	#1 AND #2	
3	Limited by: Cochrane Library publication date from Jan 2001 to Oct 2019, in Trials, Clinical Answers and Special collections	2,447

NEXT = words are adjacent to one another in-text; ab = limited to abstract; ti = limited to title; kw = keyword;

NEAR = within *n* words of each other

Supplementary File 2: Summary of the included studies (n=54)

Author (Year) Country	Study design	ED Patient Population	Patient Experience Outcomes
QUALITATIVE STUDIES			
Annemans et al (2018) Belgium	Ethnographic study: face-to-face interviews, supporting video and photographic materials	Adult patients – unspecified (n=22)	Themes: Material aspects; Social aspects; Time-related aspects
Arnaert & Schaack (2006) Canada	Grounded theory study: face-to-face semi-structured interviews	Adult patients – Inuit people (Aboriginal people of Canada) (n=4)	Theme: Rationalising the care ▪ Sub-themes: First impressions of Enrolled Nurse; Perceiving the realities of the Enrolled Nurse; Appreciating Enrolled Nurse care
Arslanian-Engoren & Scott (2016) USA	Descriptive study: semi-structured focus groups	Adult patients – female, acute Myocardial infarction (n=14)	Theme: Triage experience ▪ Sub-themes: Arrival mode, ED personnel encounters, follow-up evaluation and treatment Theme: Barriers / supports to prompt and accurate recognition of cardiac symptoms ▪ Sub-themes: Barriers: time delays, communication issues, age bias, gender bias; Supports: ED providers, ED status Theme: Perceptions of disparate treatment ▪ Sub-themes: No disparate treatment; Disparate treatment; Age; Gender; Professional/ employment status
Baird et al (2018) USA	Descriptive study: telephone semi-structured interviews	Adult patients – female, early pregnancy loss (EPL) (n=10)	Theme: Experience in the ER ▪ Sub-themes: Lack of information and poor communication; Chaotic and unfriendly environment; Lack of emotional support; Positive aspects of the ER experience Theme: Experience after leaving the ER
Blackburn et al (2019) UK (England)	Action research study: face-to-face interviews	Adult patients – unspecified (n=15)	Theme: Communication ▪ Sub-themes: Feeling informed; How long will I have to wait? Theme: Explanations of treatment and care ▪ Sub-themes: Explanations of treatment; Explanations of triage Theme: Written communication
Blockley (2003) New Zealand	Narrative descriptive study: face-to-face interviews	Adult patients – unspecified (n=12)	Themes: Feeling powerless; Considerable wait times; Unclear reasons for the wait time; Anxiety; Inactive involvement
Chilsom-Straker et al (2017) USA	Descriptive study: Thematic analysis of open-ended responses to survey questions	Adult patients – trans-gender/ gender-non-conforming-experienced (n=240)	Theme: Self-efficacy Theme: Power inequality ▪ Sub-themes: Systems issues; Provider behaviour; Patient-provider encounter

Christopoulos et al (2013) USA	Grounded theory study: in-depth, face-to-face interviews	Adult patients – HIV (n=24)	Themes: Physical discomfort/ limited functionality and co-morbid diagnoses; A wide spectrum of HIV risk perception – shock, betrayal, and guilt; Anxiety and isolation; Compassionate disclosure with some logistic hurdles; Continuity between the ED/ Urgent Care (UC) testing site and HIV clinic
Considine et al (2010) Australia	Descriptive study: face-to-face interviews	Adult patients – ≥65 years old (n=27)	Themes: Mixed experiences of waiting; Perceived factors influencing access to emergency care
Doohan & Saveman (2015) Sweden	Descriptive study: telephone interviews	Adult patients – major bus crash survivors (n=54)	Theme: Lack of compassionate care ▪ Sub-themes: Feeling mistreated; Being left for oneself Theme: Dissatisfaction with crisis support Theme: Satisfactory initial care and support
Graham J (2002) UK (England)	Descriptive study: face-to-face interviews	Adult patients – unspecified (n=18)	Themes: Pain assessment and management; The need for pain management
Harding et al (2015) Australia	Descriptive study: telephone interviews	Adult patients – isolated musculoskeletal conditions (n=25)	Themes: Process and level of service provided by the extended scope of practice (ESOP) physiotherapist; Value of personal attributes of staff; Confidence in the skills and attributes of ESOP physiotherapist; Timing and efficiency of the ESOP physiotherapist service; Advice on follow-up care; Referrals provided if needed; Negative impressions
Hermann (2019) USA	Descriptive study: telephone interviews	Adult patients – unspecified (n=30)	Themes: Nonverbal body language; Courtesy and politeness; Reassurance; Humanism; Attentiveness; Explaining
Kaufman (2017) USA	Descriptive study: face-to-face interviews; observations	Adult patients – trauma resuscitation (n[interviews]=30; n[observations]=20)	Theme: Internal experience ▪ Sub-themes: Emotional responses; Physical experience; Nonclinical concerns Theme: Interactions with the trauma team ▪ Sub-themes: Clinical care; Trauma team members; Communication
Kilaru et al (2016) USA	Descriptive study: Framework and grounded theory analysis of publicly accessible reviews posted on Yelp	Adult patients – unspecified (n=533)	Themes: Communication with nurses; Communication with doctors; Pain control; Waiting and efficiency; Decisions to seek care in the emergency department
Liu et al (2015) USA	Grounded theory study: face-to-face interviews	Adult patients – boarding (n=18)	Themes: Awaiting admission to the ED; Comparison with inpatient care; Who is responsible for patient care; Communication about care; Delay in transfer to inpatient ward; How to improve boarding experience
MacWilliams et al (2016) Canada	Interpretive phenomenology study: face-to-face interviews	Adult patients – female, actively miscarrying (n=8)	Themes: Not an illness: A different kind of trauma; Need for acknowledgement; Leaving the emergency department: What now?
Moss et al (2014) New Zealand	Descriptive study: face-to-face and telephone interviews	Adult patients – frequent presenters (n=34)	Themes: Sustained and enmeshed ethic and duty of care; Consistent duty of care; Interrupted or mixed duty and ethic of care; Care in breach of both ethic and duty of care

O'Brien et al (2004) Canada	Interpretive phenomenology study: face-to-face interviews	Adult patients – trauma resuscitation (n=7)	<p>Theme: I remember</p> <ul style="list-style-type: none"> Sub-themes: Being frustrated <p>Theme: I was scared</p> <ul style="list-style-type: none"> Sub-themes: Living through the shock and pain; Feeling alone; Not knowing <p>Theme: I felt safe</p> <ul style="list-style-type: none"> Sub-themes: They were efficient; Everything went so quick; They gave me confidence; They were always checking; They were organised; You know what's going on; They cared about me; It was how they talked; Letting family friends know I was there; Staff was always there; Touch made me feel better <p>Theme: Perceptions of vulnerability</p>
Olofsson et al (2012) Sweden	Descriptive phenomenology study: face-to-face interviews	Adult patients – ≥70 years old with comorbid chronic conditions (n=14)	<p>Theme: During the triage encounter</p> <ul style="list-style-type: none"> Sub-themes: Prompt and competent care establish confidence; A personal touch and sincere interest contributes to a feeling of being at the centre of attention; Attentive listening to the patient established a respectful relationship <p>Theme: Beyond the triage encounter</p> <ul style="list-style-type: none"> Sub-themes: Inattentive attitude and indifferent behaviour causes a feeling of exclusion; Lack of interest in the patient contributes to a feeling of being neglected and ignored; Failure to listen contributes to frustration and disappointment in the patients
Samuels et al (2018) USA	Grounded theory study: focus groups	Adult patients – trans- gender (n=32)	<p>Themes: System structure; Care competency; Discrimination and trauma; Avoidance of emergency care</p>
Shoqirat et al (2019) Jordan	Descriptive study: face-to-face interviews	Adult patients – unspecified (n=15)	<p>Theme: Being on ED bed</p>
Skene et al (2017) UK (England)	Descriptive study: face-to-face interviews	Adult patients – traumatic injury (n=13)	<p>Theme: Environmental factors</p> <ul style="list-style-type: none"> Sub-themes: Perspectives on the physical environment; Atmosphere within the ED; Witnessing the trauma team at work <p>Theme: Communication styles</p> <ul style="list-style-type: none"> Sub-themes: Informal – humour; Pastoral – reassurance; Formal – information giving
Swallmeh et al (2018) Republic of Ireland	Descriptive study: focus groups	Adult patients – unspecified (n=32)	<p>Themes: Reliability; Information; Assurance; Responsiveness; Tangibles; Empathy</p>
Warner et al (2012) Australia	Descriptive study: face-to-face interviews	Adult patients – female, EPL (n=16)	<p>Themes: Staff attitudes and behaviours; Privacy and dignity; Information provision; Waiting times; Counselling and follow-up</p>
Yap et al (2017) Australia	Phenomenology study: face-to- face interviews	Adult patients – behavioural emergency (n=13)	<p>Theme: Trusting relationships</p> <ul style="list-style-type: none"> Sub-themes: Confidence in care; Sedation as an appropriate treatment; Insight into own behaviour; Humane treatment

			Theme: Needs and wants following sedation ▪ Sub-themes: Empathy; Debrief; Addressing concerns; Follow-up
QUANTITATIVE STUDIES			
Bobrovitz et al (2016) UK (England)	Cross-sectional study: using the Quality of Trauma Care Patient-Reported Experience Measure (QTAC-PREM) (2012 version)	Adult patients – primary diagnosis of ‘injury’ (n=607)	Themes: Information and communication; Information regarding recovery; Clinical and ancillary care; Discharge preparedness; Clinical follow-up care
Bos et al (2013) The Netherlands	Cross-sectional study: using the National Health Service Accident and Emergency Department Questionnaire (NHS AEDQ) (2008 version)	Adult patients – unspecified (n=49,646)	Themes: Waiting time; Doctors and nurses; Your care and treatment; Hygiene; Information before discharge; Overall
Bos et al (2015a) The Netherlands	Cross-sectional study: using the Care Quality Index Accident and Emergency (CQI A&E) (2012 version)	Adult patients – unspecified (n=3,483)	Themes: Waiting (triage); Waiting (treatment); Problems with the total waiting time; Perceived acuity; Pain; Referral; Information
Bos et al (2015b) UK (England)	Cross-sectional study: using the CQI A&E (2012 version)	Adult patients – unspecified (n=4,883)	Themes: Information before treatment; Timeliness; Attitude of healthcare professionals; Professionalism of received care; Information during treatment; Environment and facilities; Discharge management
Bos et al (2016) The Netherlands and UK (England)	Cross-sectional study: using the CQI A&E (2008 version) and NHS AEDQ (2008 version)	Adult patients – unspecified (n[England]=43,892; n[Netherlands]=1,865)	Themes: Waiting time; Doctors and nurses; Your care and treatment; Hygiene; Information before discharge
Cambria et al (2019) USA	Cross-sectional study: using the Press Ganey Associates (PGA) Survey (version not reported)	Adult patients – unspecified (n=3,429)	Themes: Courtesy of the doctor; Degree to which the doctor took the time to listen to you; Doctor’s concern to keep you informed about your treatment; Doctor’s concern for your comfort while treating you
Foley et al (2017) Republic of Ireland	Cross-sectional study: using the adapted Urgent Care Services Questionnaire (UCSQ) (version not reported)	Adult patients – unspecified (n=1,205)	Themes: Entry into the system; Progress through the system; Patient convenience of the system
Graham C (2018) UK (England)	Cross-sectional study: using the NHS AEDQ (2014 version)	Adult patients – unspecified (n=39,320)	Themes: Waiting time; Doctors and nurses; Your care and treatment; Hygiene; Information before discharge
Hartigan et al (2018) Republic of Ireland	Pre-post intervention study: using the Privacy, Dignity and Confidentiality in the Emergency Room survey (2018 version)	Adult patients – female, pregnant, postnatal and gynaecological (n[pre]=75; n[post]=82)	Theme: Before refurbishment took place ▪ Sub-themes: Disappointment; Disgust; Invasion of privacy; Loss of dignity Theme: After refurbishment took place ▪ Appreciation; Positive patient experience; The importance of discretion at all times when caring for patients

Honeyford et al (2017) UK (England)	Cross-sectional study: using the NHS AEDQ (2003, 2008 and 2014 versions)	Adult patients – unspecified (n[total]=249,734)	Themes: Access and waiting; Safe, high quality, coordinated care; Better information, more choice; Building closer relationships; Clean, friendly, comfortable place to be
Hoonpongsimanont et al (2019) USA	Cross-sectional study: using the PGA Survey (version not reported) and a shortened institutional version of the Emergency Department Patient Experience of Care (EDPEC) survey 2.0 (2013 version)	Adult patients – unspecified (n[PGA]=289; n[EDPEC]=234)	Themes: Courtesy of doctor; Degree to which the doctor took the time to listen to you; Doctors concern to keep you informed about your treatment; Doctors concern for your comfort while treating you; How well pain was controlled
Hwang et al (2015) USA	Pre-post intervention study: using the PGA Survey (version not reported)	Adult patients – low acuity (n[pre]=140; n[post]=85)	Themes: Wait times; Nurse courtesy; Doctor courtesy; Being kept informed about delays; Staff caring; Pain control
Lenz et al (2017) Canada	Cross-sectional study: using the Health Quality Council of Alberta (HQCA) ED Patient Experience Survey (2007 version)	Adult patients – unspecified (n=3,794)	Themes: Staff care; Pain management; Discharge communication; Respect; Medication communication; Wait time and crowding
Mercer et al (2008) USA	Cross-sectional pilot study: using an adapted Communication Assessment Tool – Team (CAT-T) (version 2008)	Adult patients – unspecified (n=81)	Theme: Communication <ul style="list-style-type: none"> Items: Greeted me in a way that made me feel comfortable; Treated me with respect; Showed interest in my ideas about my health; Understood my main health concerns; Paid attention to me (looked at me, listened carefully; Let me talk without interruptions; Gave me as much information as I wanted; Talked in terms I could understand; Checked to be sure I understood everything; Encouraged me to ask questions; Involved me in decisions as much as I wanted; Discussed next steps, including any follow-up plans; Showed care and concern; Spent the right amount of time with me
Murrells et al (2013) UK (England)	Cross-sectional study: using the Patient Evaluation of Emotional Care during Hospitalisation (PEECH) (2008 version)	Adult patients – unspecified (n=159)	Themes: Feeling informed; Treated as an individual; Personal interactions; Feeling valued
Olsen & Sabin (2003) USA	Cross-sectional study: using an unnamed 7-item questionnaire (2003 version)	Adult and paediatric† patients – unspecified (n=440)	Themes: Privacy; Confidentiality
Parast et al (2019) USA	Cross-sectional study: using the EDPEC Discharged to Community Survey (2018 version)	Adult patients – not admitted (n=3,122)	Themes: Getting timely care; How well nurses and doctors communicate; Communication about medications; Global measures

Porter et al (2012) USA	Multisite prospective longitudinal cohort study: using a structured medical record review and an unnamed telephone survey (2012 version)	Adult patients – Sickie Cell Disease (n=98)	Themes: Trust; Respect; Pain management
Raleigh (2012) UK (England)	Cross-sectional study: using the NHS AEDQ (2008 version)	Adult patients – unspecified (n=97,580)	Themes: Cleanliness; Dignity and respect; Consistency of communication; Involvement in decisions; Information provision; Confidence in staff
Schwappach et al (2003) Switzerland	Cross-sectional study: using an unnamed 22-item questionnaire (2003 version)	Adult and paediatric† patients – unspecified (n[cycle 1]=2,916; n[cycle 2]=3,370)	Themes: Patient perceptions of safety and staff technical skills; Aspects of the ED care structure; Communication; Care and support
Sharp et al (2019) USA	Retrospective cohort study: using the PGA Survey (version not reported)	Adult patients – unspecified (n=1,012)	Themes: Courtesy of doctors who cared for you; Degree to which these doctors took the time to listen to you; Concern these doctors showed to keep you informed about your treatment; Concern these doctors showed for your comfort while treating you; Degree to which these doctors advocated for you care
Todd et al (2010) USA	Cross-sectional study: using an unnamed 22-item telephone survey measure (2010 version)	Adult patients – chronic or recurrent pain (n=500)	Themes: Wait time; Pain management; Dignity and respect; Feeling understood; Being taken seriously; Information and explanations
Yarney & Atinga (2017) Ghana	Cross-sectional study: using the Emergency care quality structured questionnaire (2017 version)	Adult patients – unspecified (n=379)	Themes: Social and relational care; Attentive pre-hospitalised care; Ward quality and privacy; Medical supplies
MIXED METHODS STUDIES			
Bos et al (2012) The Netherlands	Cross-sectional study: survey instrument development and psychometric evaluation using the CQI A&E (2012 version)	Adult patients – unspecified (n[QUAL]=17; n[QUANT]=304)	Themes: Attitude of healthcare professionals; Information and explanation; Environment of the Accident and Emergency (A&E); Leaving the A&E; General information and rapidity of care
Glynn et al (2019) Canada	Cross-sectional study: survey instrument administration and semi-structured interviews	Adult patients – Chronic-pain (defined as pain lasting for longer than 12-weeks) (n=12)	<p>Theme: Validating experiences</p> <ul style="list-style-type: none"> Sub-themes: Needs were met; Acknowledgement; Compassion; Confidence <p>Theme: Invalidating experiences</p> <ul style="list-style-type: none"> Sub-themes: Unmet needs; Unacknowledged; Lack of compassion; Judgement from others; Judgement of self; Waiting; ED lacking medical information; Inquiry into drug seeking <p>Theme: Behaviour and attitude management</p> <p>Theme: Outcomes from ED experiences</p> <ul style="list-style-type: none"> Sub-themes: Admitted; Medical treatment; Pain relief
Leppäkoski et al (2011) Finland	Cross-sectional study: multi-centre survey instrument	Adult patients – female, acute physical Intimate	Themes: Physical care environment; Medical treatment; Emotional and practical support

	administration and semi-structured interviews	Partner Violence (IPV) (n=35)	
McCusker et al (2018) Canada	Cross-sectional study: survey instrument development and psychometric evaluation	Adult patients – ≥ 75 years old (n=481)	Themes: Interpersonal care; Communication; Wait times; Family needs; Transitional care
Wild et al (2011) USA	Cross-sectional study: survey instrument administration using the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) (version not reported) and face-to-face semi-structured interviews	Adult patients – not admitted (n[survey]=96; n[interviews]=30)	Themes: Physician behaviours; Team communication; System issues

†Parents were asked to report on behalf of paediatric patients in this study, but because proxy-reporters were not involved in the development of the measure and only items were extracted for the purposes of analysis, this study was retained in the review. ED = Emergency Department; EN = Emergency Nursing; USA = United States of America; EPL = Early Pregnancy Loss; ER = Emergency Room; UK = United Kingdom; HIV = Human Immunodeficiency Virus; UC = Urgent Care; ESOP = Extended Scope of Practice; QTAC-PREM = Quality of Trauma Care Patient-Reported Experience Measure; NHS = National Health Service; AEDQ = Accident and Emergency Department Questionnaire; CQI = Care Quality Index; A&E = Accident and Emergency; PGA = Press Ganey Associates; UCSQ = Urgent Care Services Questionnaire; EDPEC = Emergency Department Patient Experiences of Care; HQCA = Health Quality Council of Alberta; CAT-T = Communication Assessment Tool – Team; PEECH = Patient Evaluation of Emotional Care during Hospitalisation; IPV = Intimate Partner Violence; HCAHPS = Hospital Consumer Assessment of Healthcare Providers and Systems.

Supplementary File 3: Quality appraisal of included studies using the Mixed Methods Appraisal Tool (MMAT) version 2018 (n=54)

Authors (year), country	QUALITATIVE				
	<i>Is the qualitative approach appropriate to answer the research question?</i>	<i>Are the qualitative data collection methods adequate to address the research question?</i>	<i>Are the findings adequately derived from the data?</i>	<i>Is the interpretation of results sufficiently substantiated by data?</i>	<i>Is there coherence between qualitative data sources, collection, analysis and interpretation?</i>
Annemans et al (2018) Belgium	Y	Y	Y	Y	Y
Arnaert & Schaack (2006) Canada	Y	Y	Y	CT	Y
Arslanian-Engoren & Scott (2016) USA	Y	Y	Y	Y	Y
Baird et al (2018) USA	Y	Y	Y	CT	Y
Blackburn et al (2019) UK (England)	Y	Y	Y	Y	Y
Blockley (2003) New Zealand	Y	Y	Y	Y	Y
Chilsom-Straker et al (2017) USA	Y	Y	Y	Y	Y
Christopoulos et al (2013) USA	Y	Y	Y	Y	Y
Considine et al (2010) Australia	Y	Y	Y	Y	Y
Dooohan & Saveman (2015) Sweden	Y	Y	Y	Y	Y
Graham J (2002) UK (England)	Y	Y	Y	Y	Y
Harding et al (2015) Australia	Y	Y	Y	Y	Y
Hermann et al (2019) USA	Y	Y	Y	Y	Y
Kaufman et al (2017) USA	Y	Y	Y	Y	Y
Kilaru et al (2016) USA	Y	Y	Y	Y	Y

Liu et al (2015) USA	Y	Y	Y	Y	Y
MacWilliams et al (2016) Canada	Y	Y	Y	Y	Y
Moss et al (2014) New Zealand	Y	Y	Y	Y	Y
O'Brien et al (2004) Canada	Y	Y	Y	Y	Y
Olofsson et al (2012) Sweden	Y	Y	Y	Y	Y
Samuels et al (2018) USA	Y	Y	Y	Y	Y
Shoqirat et al (2019) Jordan	Y	Y	Y	Y	Y
Skene et al (2017) UK (England)	Y	Y	Y	Y	Y
Swallmeh et al (2018) Republic of Ireland	Y	Y	Y	Y	Y
Warner et al (2012) Australia	Y	Y	Y	Y	Y
Yap et al (2017) Australia	Y	Y	Y	Y	Y
QUANTITATIVE DESCRIPTIVE					
	<i>Is the sampling strategy relevant to address the research question?</i>	<i>Is the sample representative of the target population?</i>	<i>Are the measurements appropriate?</i>	<i>Is the risk of nonresponse bias low?</i>	<i>Is the statistical analysis appropriate to answer the research question?</i>
Bobrovitz et al (2016) UK (England)	Y	CT	Y	Y	Y
Bos et al (2013) The Netherlands	Y	Y	Y	Y	Y
Bos et al (2015a) The Netherlands	Y	Y	Y	Y	Y
Bos et al (2015b) UK (England)	Y	Y	Y	Y	Y
Bos et al (2016) The Netherlands and UK (England)	Y	Y	Y	Y	Y
Cambria et al (2019) USA	Y	N	Y	N	Y

Foley et al (2017) Republic of Ireland	Y	Y	Y	CT	Y
Graham C (2018) UK (England)	Y	Y	Y	Y	Y
Hartigan et al (2018) Republic of Ireland	Y	Y	N	CT	Y
Honeyford et al (2017) UK (England)	Y	Y	Y	Y	Y
Hoonpongsimanont et al (2019) USA	Y	Y	CT	CT	CT
Hwang et al (2015) USA	Y	Y	Y	N	Y
Lenz et al (2017) Canada	Y	CT	Y	Y	Y
Mercer et al (2008) USA	Y	N	Y	Y	CT
Murrells et al (2013) UK (England)	Y	CT	N	N	Y
Olsen & Sabin (2003) USA	Y	N	N	Y	Y
Parast et al (2019) USA	Y	N	Y	N	Y
Porter et al (2012) USA	Y	CT	CT	CT	Y
Raleigh et al (2012) UK (England)	Y	Y	Y	CT	Y
Schwappach et al (2003) Switzerland	Y	Y	Y	N	Y
Sharp et al (2019) USA	Y	N	Y	N	Y
Todd et al (2010) USA	Y	CT	CT	N	Y
Yarney & Atinga (2017) Ghana	Y	CT	Y	CT	Y
MIXED METHODS					
	<i>Is there an adequate rationale for using a mixed methods design to</i>	<i>Are the different components of the study effectively</i>	<i>Are the outputs of the integration of qualitative and</i>	<i>Are divergences and inconsistencies between quantitative</i>	<i>Do the different components of the study adhere to the quality</i>

	<i>address the research question?</i>	<i>integrated to answer the research question?</i>	<i>quantitative components adequately interpreted?</i>	<i>and qualitative results adequately addressed?</i>	<i>criteria of each tradition of the methods involved?</i>
Bos et al (2012) The Netherlands	Y	CT	CT	Y	Y
Glynn et al (2019) Canada	N	CT	CT	Y	N
Leppäkoski et al (2011) Finland	N	CT	CT	Y	CT
McCusker et al (2018) Canada	N	CT	CT	Y	Y
Wild et al (2011) USA	CT	CT	CT	Y	Y

Y = Yes; N = No; CT = Can't tell

Supplementary File 4: Patient experience defined by included studies

Author (year) Country	Patient experience definition
Bos et al (2012) The Netherlands	<i>It is preferable to measure patients' experiences rather than their satisfaction, as they have shown to be more objective and to yield more detailed information for quality improvement. One theory is that satisfaction is a multi-dimensional concept, partly based on expectations and personal preferences. (pg 2)[58]</i>
Bos et al (2016) The Netherlands and UK (England)	<i>The questionnaire seeks to measure patients' experiences rather than their satisfaction. Satisfaction is based on two components: expectations (or 'needs') and experiences. Expectations are related to personal preferences, which make quality of care difficult to measure. Therefore, it is preferable to measure experiences, which have been shown to be more objective and to yield more detailed information for quality improvement. (pg 774)[61]</i>
Lenz et al (2017) Canada	<p>Authors defined the domains addressed by the HQCA ED patient experience survey:</p> <ol style="list-style-type: none"> 1. <i>Staff Care: how well ED staff discussed and explained a patient's medical condition, plan, and results. How well they listened to patients' concerns. How much did patients trust their physicians and feel that they were involved in decision-making.</i> 2. <i>Pain Management: how effectively and efficiently pain was managed by ED staff.</i> 3. <i>Discharge Communication: how well staff discussed discharge plans, follow-up care, danger signs to be aware of, and how well they addressed any concerns prior to discharge.</i> 4. <i>Respect: how respectful were staff of patients and their families.</i> 5. <i>Medication Communication: how effectively medication use, and side effects were explained to patients.</i> 6. <i>Wait Time and Crowding: how did wait time and crowding influence the patient experience. (pg 374)[66]</i>
Murrells et al (2013) UK (England)	<p><i>...patient experience is commonly considered to be shaped by the behaviours and actions of healthcare staff including showing compassion, empathy and responsiveness to a patient's needs, values and preferences. It is also seen to relate to aspects of patient's physical needs and comfort, as well as emotional support, such as relieving fear and anxiety. A further aspect is 'seeing the patient as an individual person' and involving them and their families or carers in decisions about their own treatment or care. A patient's experience has also been linked to organisational factors, including service co-ordination and integration of care.</i></p> <p><i>A good patient experience is therefore multidimensional concerning first, 'functional' aspects of care (such as arranging the transfer of patients to other services, administering medication and helping patients to manage and control pain), 'transactional' aspects of care (in which the individual is cared 'for', e.g., meeting the preferences of the patient as far as timings and locations of appointments are concerned) and 'relational' aspects of care (where the individual is cared 'about', e.g., care is approached as part of an ongoing relationship with the patient). (pg 2)[97]</i></p>
Swallmeh et al (2018) Republic of Ireland	<i>Surveying patient experience identifies service improvement, an activity that requires specific data about what happened, not just data on whether patients were satisfied with what happened... patient experience surveys ask patients questions about what occurred during their healthcare experience ... examples include: 'When you had important questions to ask a doctor, did you get answers you could understand?' ... questions can elicit responses that provide information identifying where in the process problems may reside and what can be done to improve patient care. (pg 3)[86]</i>

HQCA = Health Quality Council of Alberta; ED = Emergency Department

Supplementary file 5: Additional references cited in-text

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