The Impact of Long Waiting Times on Patient Trust and Satisfaction in Public-Sector Primary Healthcare Facilities: A Scoping Review

Javairia Saleh[1], Muhammad Ishtiaq[1], Muhammad Uzair[1]

1 Health Services Academy HAS, Islamabad

** Corresponding author: Javairia Saleh — javairiasaleh3@gamil.com*

Abstract

Background. Long waiting times are among the most visible and most frequently reported problems in public-sector primary healthcare. Patients wait to register, to see a clinician, and to receive tests and medicines. Waiting is often assumed to reduce patient satisfaction and to erode trust in the health system, but the evidence on these two outcomes has not been mapped together, and trust in particular is studied far less than satisfaction.

Objective. To map what is known about (1) how waiting time relates to patient satisfaction and patient trust in public-sector primary care, (2) which factors lie behind long waiting times, and (3) which interventions have been tested, and to identify gaps for future research.

Methods. A scoping review guided by the Arksey and O'Malley framework, its later refinements, and the PRISMA-ScR reporting checklist. The Population-Concept-Context framework was used: patients using public-sector primary care (population); waiting time and its relationship to satisfaction or trust (concept); public primary healthcare facilities in any country (context). This version reports a targeted search of open-access sources. Sources that could be read in full were charted; sources identified but not accessible in full are listed separately and are not used for numerical claims. A full multi-database search strategy is provided so the review can be completed to registered scoping-review standard.

Results. [Insert final counts after the full search; see Section 4.1.] In the sources charted here, three patterns emerge. First, waiting time is consistently described as a problem in public facilities, and is statistically associated with satisfaction in at least one large Pakistani outpatient survey (850 respondents). Second, trust is conceptualised as a multidimensional construct (for example, eight dimensions in a Lao study) in which respectful, responsive care matters more than technical competence alone; qualitative work in Zambian primary health centres shows that repeated experiences of unresponsive care can undermine trust even where patients believe staff are clinically capable. Third, a systematic review of 11 studies of interventions to cut appointment wait times found reductions averaging 11.3 days, but satisfaction improved in only one of the three studies that measured it. No source charted here directly tested the pathway from waiting time to trust.

Conclusions. The link between waiting and satisfaction is plausible and partly supported, but the link between waiting and trust is largely inferred rather than measured. Future

studies should measure actual and perceived waiting time together with validated trust scales in public primary care, and evaluate waiting-time interventions against trust as well as satisfaction.

Keywords: waiting time; patient satisfaction; patient trust; primary health care; public sector; low- and middle-income countries; scoping review

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1. Introduction

Public-sector primary healthcare is the first point of contact for most people in low- and middle-income countries and a major point of contact in many high-income ones. It is intended to be accessible, affordable and continuous. In practice, many public facilities operate with more patients than staff and space can handle, and patients commonly spend hours in queues for registration, consultation, laboratory tests and pharmacy collection. A Pakistani study of outpatient departments in public hospitals in southern Punjab, for example, reported that patients have to wait a long time for examination, consultation and medical tests [1].

Waiting time matters to patients and to health systems for at least three reasons. First, it is a direct cost: lost income, lost time, and for some patients the difficulty of travelling again. Second, it shapes the experience of care and therefore **patient satisfaction**, which is widely used as a quality indicator. Third, and less often studied, it may shape **patient trust**: the confidence that the health system and its workers will act competently, honestly and in the patient's interest. Trust influences whether people return, follow advice and use the public system or bypass it for private or informal providers.

Satisfaction and trust are related but distinct. Satisfaction is typically a judgement about a particular encounter, while trust is a broader and more durable attitude toward providers and the system. A study from rural Lao PDR describes trust in primary healthcare as comprising eight dimensions: communication, respectful care, relationship, fairness, integrity, reputation, treatment assurance and competence [2]. A long wait could plausibly affect several of these dimensions, such as respect, fairness and integrity, but the question is empirical.

Existing reviews tend to examine either waiting times and how to reduce them [3], or satisfaction with services in general, and often focus on hospitals rather than primary care. To our knowledge, no existing work in the sources we could review maps waiting time, satisfaction and trust together in public primary care. A scoping review is the appropriate design: the topic is broad, the literature is heterogeneous (surveys, qualitative studies, health system analyses, intervention studies), and the aim is to map evidence and gaps rather than to pool effect sizes.

1.1 Objectives and review questions

1. What is known about the relationship between waiting time and patient satisfaction in public-sector primary care?
2. What is known about the relationship between waiting time and patient trust in the same settings?
3. What factors are reported to contribute to long waiting times?
4. What interventions have been tested to reduce waiting times, and what did they find for satisfaction or trust?
5. What are the main gaps in the evidence?

2. Methods

2.1 Framework and reporting

The review follows the five-stage scoping framework of Arksey and O'Malley (identifying the question, identifying relevant studies, selecting studies, charting the data, and collating and reporting results), with the refinements proposed by Levac and colleagues, and is reported against the PRISMA-ScR checklist (Tricco and colleagues, 2018) [4-6]. [Register the protocol on the Open Science Framework before the full search, and state the registration number here.]

2.2 Eligibility criteria (Population, Concept, Context)

Element	Include	Exclude
Population	Patients or caregivers using public-sector primary care; health workers and managers where they report on patient waiting	Studies of private-only providers
Concept	Waiting time (at registration, before consultation, for tests or medicines, or for an appointment) AND at least one of: patient satisfaction, patient trust, or interventions to reduce waiting	Waiting lists for elective surgery or specialist care only
Context	Public-sector primary healthcare facilities, including health centres, clinics and outpatient departments serving primary care functions, in any country	Tertiary hospital specialist clinics only
Sources	Peer-reviewed primary studies, systematic and scoping reviews, qualitative studies, grey literature from health ministries and international agencies	Opinion pieces without data
Language and dates	English; [2000 to 2026]	

Hospital outpatient department studies are flagged separately when the setting is not clearly primary care, because primary care functions and patient expectations differ.

2.3 Information sources and search strategy

Planned sources for the full review: MEDLINE (PubMed), Embase, CINAHL, Scopus, Web of Science, Global Health, the WHO Global Index Medicus, and Google Scholar, with grey literature from health ministries and the WHO. Reference lists of included reviews will be hand-searched.

Targeted search reported in this version. Targeted web searches were run on 3 October 2026 using combinations of: *waiting time*, *patient satisfaction*, *primary health care*, *public sector*, *trust*, *Pakistan*, *sub-Saharan Africa*, *low- and middle-income countries*, *interventions*, and *scoping review*. These searches returned titles and links, and full text was available for only a subset. Several PubMed Central pages could not be opened because of access checks, and several lookups were rate-limited, so those sources are listed in Section 4.3 as "identified, not charted" and are not used for numerical claims.

2.4 Selection of sources

In the full review, two reviewers will screen titles and abstracts, then full texts, against the criteria above, resolving disagreement by discussion with a third reviewer. Screening will be managed in [Rayyan / Covidence]. A PRISMA-ScR flow diagram will report numbers at each stage.

2.5 Data charting

A standard charting form (Appendix A) will be piloted on five sources and refined. Items include: author and year, country, setting, design, population and sample size, definition and measurement of waiting time (actual or perceived), definition and measurement of satisfaction and trust, main findings, interventions, and limitations.

2.6 Synthesis

Results are presented as a numerical summary of characteristics and a narrative thematic synthesis organised by the review questions. In keeping with scoping-review methodology, no formal risk-of-bias appraisal or meta-analysis was undertaken. Where evidence is limited, this is stated.

3. Conceptual Background

Three conceptual ideas organise the synthesis.

Waiting as a cost and as a signal. A wait is both a time cost and a signal about how the system values patients. A long wait can be read by patients as indifference or disorganisation, which may matter more for trust than for satisfaction with the clinical encounter itself. [This is an interpretive framing for the review, not a finding of the sources charted.]

Expectations. Satisfaction is commonly understood as a comparison between expectations and experience. Where long waits are normal, expectations may be low, which can weaken the link between measured waiting time and reported satisfaction. This predicts that perceived waiting, not only clock time, should be measured.

Dimensions of trust. Trust in primary care is not a single feeling. The Lao study identifies eight dimensions, and found reputation, competence, integrity and respectful care scored lowest among the participants surveyed [2]. The Zambian study separates trust in workers' clinical ability from trust in their service values and professionalism, and reports that patients can have the first while losing the second [7].

These ideas lead to the proposed conceptual model in Section 5.2.

4. Results

4.1Characteristics of sources charted in this version

Four sources were read in full and charted. They are not a complete sample of the literature; they illustrate the types of evidence available.

Table 1. Sources charted

Source	Country / setting	Design and sample	Waiting-related content	Satisfaction / trust content
Hussain et al., 2019 [1]	Pakistan; outpatient departments of public hospitals, Bahawalpur division (not strictly primary care)	Cross-sectional survey; 850 completed of 1,000 invited (85%); 5-point Likert scales; interviewer-administered in the local language	3-item waiting-time scale; mean waiting-time score 2.85 (SD 0.82); patients reported long waits for examination, consultation and tests	Waiting-time dimension had a statistically significant positive effect on satisfaction (beta = 0.091, p = 0.03)
Ansell et al., 2017 [3]	Setting mix of included studies not confirmed in the summary read (to be checked)	Systematic review; 11 studies	Interventions to reduce primary care appointment waits; mean reduction 11.3 days	No-show rates fell by a mean of 2.78%; satisfaction improved in only 1 of 3 studies measuring it
Topp and Chipukuma, 2016 [7]	Zambia; four primary health centres (urban, peri-urban, rural)	Multi-case qualitative; 60 provider and 180 patient interviews, 14 key informant interviews, observation	Not specific to waiting time; examines responsiveness and respectful care	Patients trusted workers' clinical ability, but repeated disrespectful or unresponsive care undermined trust in their service values; poor resourcing and leadership were root causes
Lao PDR trust study, BMJ Global Health, 2024 [2]	Rural Lao PDR; 14 villages in four provinces	Mixed methods; 25 interviews and 17 focus groups (120 participants), then census survey of 1,838 people	Not specific to waiting time	Eight trust dimensions; reputation, competence, integrity and respectful care scored lowest; trust showed limited behavioural impact (modest association with antenatal care uptake)

4.2Sources identified but not charted

The following titles were identified in the targeted search but their full text could not be read in this session. They are relevant to the review questions and **must be charted before the review is finalised**. No findings from them are reported here.

Title (as identified)	Why relevant
Mapping evidence on the factors contributing to long waiting times and interventions to reduce waiting times within primary health care facilities in South Africa: a scoping review (PMC11338458) [8]	Direct overlap with questions 3 and 4; a prior scoping review in a public primary care system
Willing to wait?: the influence of patient wait time on satisfaction with primary care (PMC1810532) [9]	Primary care; actual versus perceived wait and satisfaction

Title (as identified)	Why relevant
Waiting time and its associated factors in patients presenting to outpatient departments at public hospitals of Jimma Zone, southwest Ethiopia (PMC8790858) [10]	Factors associated with long waits in public facilities
Overall time spent by clients from entry to exit in outpatient departments in public hospitals of Jimma Zone, southwest Ethiopia (PMC10919670) [11]	Patient flow and time spent in public facilities
A critical literature review on the impact of waiting time on patient satisfaction in Saudi Arabian hospitals [12]	Review linking waiting and satisfaction (hospital setting)

4.3 Findings by review question

RQ1. Waiting time and patient satisfaction

In the Pakistani survey of 850 outpatients, the waiting-time dimension was significantly and positively associated with satisfaction (beta = 0.091, p = 0.03), and the mean score for waiting-time items (2.85 on a 5-point scale) sat below the scale midpoint, in a setting where patients reported long waits for examination, consultation and tests [1]. The magnitude of the association was small, which suggests that waiting time is one among several drivers of satisfaction, alongside doctor, nurse and registration services that the same study measured [1]. The setting was hospital outpatient departments, so transfer to primary health centres should be made cautiously.

The intervention review adds an important caution. Even when appointment waits were cut by an average of 11.3 days, satisfaction improved in only one of the three studies that measured it [3]. That is consistent with the idea that shorter waits are necessary but not sufficient for higher satisfaction, and that satisfaction depends on other aspects of the visit.

RQ2. Waiting time and patient trust

None of the four sources charted directly tested whether waiting time affects trust. What the sources do show is the content of trust and what undermines it. The Lao study found respectful care, integrity, competence and reputation to be the weakest dimensions of trust in the surveyed villages, and found that trust predicted limited behavioural change [2]. The Zambian study found that repeated experiences of disrespectful or unresponsive care eroded trust in service values and professionalism, even when patients trusted workers' clinical skills, and linked this to poor resourcing, low pay and weak management [7]. A long, unexplained wait is plausibly one form of unresponsive care, but this is an inference and not a finding of either study.

This is the central gap of the review: trust is conceptually plausible as an outcome of waiting, but we found no charted study that measured both.

RQ3. Factors contributing to long waiting times

The Zambian study points to the upstream conditions that shape responsiveness in public primary health centres: poor resourcing, inadequate leadership, and weak workplace trust among health workers, driven by working conditions and perceptions of low pay and inequitable management [7]. These are system-level drivers and not queue mechanics. The South African scoping review and the Jimma Zone studies identified in Section 4.3 are likely to provide direct evidence on patient-flow and staffing factors, and should be charted before this question is answered fully [8, 10, 11].

RQ4. Interventions

The systematic review of interventions to reduce primary care appointment waits reported that open access scheduling was effective, and that other effective approaches included dedicated telephone consultations for follow-up, nurse practitioners on staff, nurse and general practitioner triage, and email consultations [3]. The review also reported a mean reduction in no-shows of 2.78% and found satisfaction improved in only one of three studies that measured it [3]. Its limitations include no search of grey literature, restriction to English and French publications, and the absence of meta-analysis because of heterogeneity [3]. The settings of the included studies were not confirmed from the material read here, so transferability to low-resource public facilities should be checked against the full paper. No charted source evaluated waiting-time interventions against trust.

RQ5. Gaps

Table 2 summarises the main gaps.

Table 2. Evidence gaps

Gap	Evidence from charted sources
Trust as an outcome of waiting	Not directly tested [1, 2, 3, 7]
Actual versus perceived waiting time	Waiting time measured as a perception scale in the Pakistani survey [1]; actual (clock) time not linked to satisfaction in charted sources
Primary care specifically	The Pakistani study was in hospital outpatient departments [1]
Satisfaction effect of interventions	Improved in 1 of 3 studies [3]
Low- and middle-income country interventions	Whether the intervention evidence in [3] applies to low-resource public facilities was not confirmed; to be checked in the full review
Behavioural consequences	Trust had limited behavioural impact in rural Lao PDR [2]; effect of waiting on attendance, bypassing and adherence not charted

5. Discussion

5.1 Summary

This scoping review maps the evidence on waiting time, satisfaction and trust in public primary care. Waiting time is a recognised problem in public facilities and shows a statistical association with satisfaction in a large Pakistani survey [1]. Trust is a richer construct than satisfaction, depends strongly on respect and responsiveness [2, 7], and has not been measured against waiting time in the sources we could chart. Interventions can shorten appointment waits, but shorter waits did not reliably improve satisfaction [3].

5.2 Proposed conceptual model

```
SYSTEM CONDITIONS                    PATIENT EXPERIENCE
(staffing, resourcing,               (actual wait, perceived wait,
 leadership, scheduling,   ------>    explanation given, respect,
 patient flow)                         comfort while waiting)
                                              |
                        +-------------------+-------------------+
                        v                                       v
                 SATISFACTION                              TRUST
                 (encounter-level)                 (respect, fairness,
                                                    integrity, reputation,
                                                    competence)
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                    |                                   |
                    +-------------------+-------------------+
                                        v
                              BEHAVIOUR / USE
                    (return visits, bypassing to private or
                     informal care, adherence, attendance)
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The model is a hypothesis for testing, informed by the dimensions reported in the Lao and Zambian studies [2, 7]. It proposes that waiting affects satisfaction more directly and trust more gradually, through repeated experiences, and that how the wait is handled (explanation, respect, comfort) may matter as much as its length.

5.3 Implications for practice

- **Measure waiting at each stage** (registration, consultation, tests, pharmacy), not only total time, so that bottlenecks can be targeted.
- **Pair time reduction with responsiveness.** Because shorter waits did not reliably raise satisfaction [3], and because trust depends on respectful care [2, 7], interventions should also address communication and respect, for example by informing waiting patients of the expected delay.
- **Match interventions to resources.** Appointment systems and telephone or email consultation [3] may need adaptation where phone coverage, scheduling software or staff numbers are limited. Triage by nurses and staffing changes are reported as effective approaches [3].
- **Address upstream causes.** Poor resourcing, inadequate leadership and weak workplace trust drive unresponsive care [7], so queue management alone may not be enough.

5.4 Implications for research

6. Measure actual and perceived waiting time in the same sample.
7. Use a validated multidimensional trust measure, such as the eight-item scale proposed in the Lao study [2], alongside satisfaction scales.
8. Study primary care facilities directly, rather than hospital outpatient departments.
9. Evaluate waiting-time interventions with trust and satisfaction as pre-specified outcomes, with follow-up long enough to detect change in trust.
10. Examine behavioural consequences: return visits, bypassing, and adherence.

5.5 Strengths and limitations

The review applies a recognised scoping framework, uses a clear Population-Concept-Context definition, separates what was charted from what was only identified, and provides a ready search strategy. Its limitations are substantial and should be read as limits on the strength of the conclusions: this version reports a targeted search, not a full multi-database search; only four sources were charted in full; several relevant sources could not be accessed and are listed for charting [8-12]; the Pakistani study is from hospital outpatient departments; one charted source is a review whose included-study settings were not confirmed; and no quality appraisal was done, as is usual for scoping reviews. The conclusions are therefore provisional pending the full search.

6. Conclusion

Long waiting times are a plausible threat to patient satisfaction and trust in public primary care, and the evidence mapped here supports a modest association with satisfaction. The pathway to trust has not been directly tested. Shorter waits, where achieved, did not consistently raise satisfaction, so reducing time should be combined with respectful, communicative care. A full search that charts the South African scoping review, the Ethiopian and other low- and middle-income country studies, and primary care studies from South Asia is the next step, along with new studies that measure waiting and trust together.

Declarations

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- **Ethics:** Not applicable; the review used published sources only.
- **Author contributions**: All authors has contribute in it**.**
- **Use of AI assistance:** [Disclose according to the target journal's policy; drafting and targeted searching were AI-assisted and require human verification of every source.]

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