

Primary Care Orientation in a Brazilian Private Family Medicine Clinic: A Cross Sectional PCATool Comparison with Public-Sector Studies

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Research Article

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Abstract

Background

Primary care expansion within Brazil's private health sector has been promoted as a strategy to improve quality and control costs, yet patient-reported evaluations of these models remain limited. This study assessed primary care orientation in a private family medicine clinic in São Paulo using the Primary Care Assessment Tool (PCATool-Brazil) and compared results with published Brazilian comparator studies.

Methods

A cross-sectional online survey was conducted between August 2025 and January 2026 among adult patients from a private clinic with two units in São Paulo. Eligible participants had attended at least two consultations in the preceding two years. Primary care quality was measured using the PCATool-Brazil short-form. Analyses were restricted to respondents reporting mostly or exclusively on-site care. Comparator data were derived from a targeted literature review of Brazilian adult PCATool studies (2017–2026). Weighted means and standard deviations were calculated, and independent-samples t-tests and Cohen's d were used to compare scores.

Results

Participants (N = 264) were predominantly female (75.4%), White (64.4%), and highly educated. Comparator data were derived from 18 studies conducted in public-sector settings across 13 Brazilian states. The study sample achieved higher scores than comparator data in 10 domains; e.g., General score of 6.42 versus 5.94. The largest differences were observed for comprehensiveness of provided services (d = 3.71), community orientation (d = 3.06), first-contact accessibility (d = 1.95), and family orientation (d = 1.68). No difference was found for first-contact utilization (d = 0.00). However, comparator studies scored higher for coordination–integration of care (d = -0.71) and coordination–information systems (d = -1.77).

Conclusions

This is the first study to compare the quality of primary care in private family medicine clinics in Brazil. Stronger patient-rated performance in private-sector clinics, particularly accessibility and comprehensiveness, suggests private primary care is functioning well. However, coordination represented a key weakness. Private-sector primary care models may benefit from trained family physicians, but stronger system integration and referral coordination appear necessary to achieve consistently high-performing primary care.

Introduction

Primary care is viewed as the foundation of most health care systems and is defined as the continuous, comprehensive, and coordinated care provided by a healthcare service [1]. Typically, this provider acts as the first contact and principal point of continuing care for patients within a healthcare system and coordinates other specialist care that the patient may need. In Brazil, the delivery of primary care (PC) services is characterized by a complex healthcare system with public and private providers. The public system, known as the National Health System (Sistema Único de Saúde - SUS), is one of the largest in the world, providing care for over 190 million individuals and it fulfills the Brazilian constitutional requirement that every Brazilian be provided with comprehensive healthcare services [2, 3].

However, local and national inequalities and disparities exist [4, 5] and a significant proportion of healthcare services is delivered through the private system [6], which relies on insurance companies. In the private system, citizens have the option to independently enroll in private health insurance plans or receive coverage through their employers. Private insurance companies typically have a greater presence in major cities and capitals, compared to less urban locations [2, 7]. The Brazilian Institute of Geography and Statistics (IBGE) conducted a nationwide health poll in 2019 on insurance coverage [8]. It found that almost 60 million individuals have some type of healthcare insurance plan (28.5% of the population). As would be expected, having private insurance is related to sociodemographic factors. Among individuals earning 1/4 of the minimum wage or less, just 2.2% had insurance. In contrast, of those earning at least 5 times the minimum wage, 90% had insurance. Similarly, the higher the level of education, the more likely it is for any individual to have an insurance healthcare plan. Of those without any formal education, only 16% had coverage, while 67% those with a college degree were insured. Finally, insurance coverage varies by race. Among white people, 40% have insurance; but among black/brown individuals, just over 20% have insurance [8, 9].

Although the SUS provides universal coverage, it appears that private insurance may create inequalities within the healthcare system. A survey conducted in 2021 by the IESS (Institute for Studies in the Private Healthcare System) revealed that healthcare insurance is the 3rd most desired item among the Brazilian population [10], ranking just below owning a house and education. A 2025 update on this study showed that it has dropped to the 8th place [9]. This study surveyed 3,200 people across 7 major capitals and their metropolitan regions, including both those with and without health insurance. Of the 1085 people with healthcare insurance, most complaints centered around difficulty in scheduling a consultation (26.5%), monthly costs (21.8%), waiting times in hospitals/practices (21.5%) and the quality of care delivered (10.7%) [9]. Though coveted by the general population, insurance companies have issues with delivering quality, timely and affordable healthcare [2, 11].

Rising costs in the private system have health managers searching for strategies to both improve the delivery of care and diminish costs [12, 13]. The attempt to orient it towards primary care was one such strategy [14], though almost 10 years have passed since its implementation, and it is yet to be evaluated [15].

The Healthcare System in Brazil and the role of Primary Care

In Brazil, the public system operates with clear pathways to care; individuals are expected to seek healthcare from primary care (PC) providers in public practices before accessing specialized care [3]. However, the private system does not prioritize primary care [3, 16] and patients have the freedom to directly seek consultations with any medical specialty, regardless of its relevance to their condition. This freedom is highly likely to increase costs as patients may seek specialists' services, often in situations where care could be provided by family physicians [17, 18].

Over the past few decades, the private system and insurance companies have encountered significant challenges. Costs in the private system have nearly tripled in the last 10 years, primarily driven by hospitalization and surgeries [19]. Except for the year 2020, health-related costs have consistently exceeded inflation rates over the past decade [20]. Interestingly enough, though 2020 was the first year of the COVID-19 pandemic and healthcare costs were expected to increase, costs in private system decreased; likely due to fewer elective procedures, exams and surgeries [21]. This rising trend in costs has raised concerns among insurance companies. Insurance companies have been searching for solutions to this problem, and one that has been implemented recently is greater importance on primary care in the private sector [13].

Consequently, the expansion of primary care in the private sector has been driven not only by evidence of better health outcomes, but also by expectations that a stronger primary care orientation may improve care coordination and help mitigate escalating healthcare costs [18, 22]. Various international studies have demonstrated a positive association between the presence of primary care and an overall better health system, including better health outcomes [18, 22].

Due to the distinct organization of the healthcare systems in Brazil, most studies that evaluated primary care practices were conducted in the public healthcare system [23]. As a result, there is a notable gap in research regarding private primary care practices within the Brazilian context. Starfield and colleagues have identified key components that constitute excellent primary care delivery and outline the clinical aspects that these practices should provide [24]. The clinical components considered the foundation of primary care are as follows: First Contact (Access): This refers to being the initial point of contact for patients whenever they require healthcare services, acting as a gateway to the broader health system [18, 24]; Comprehensiveness (Integral Care): Primary care providers should recognize and address all aspects of individuals' health needs, ensuring they are adequately prepared to handle a wide range of health concerns [24]; Continuity of Care (Longitudinality): Primary care should emphasize the delivery of ongoing, person-centered care over time, maintaining a consistent relationship between patients and their healthcare providers [24]; Care Coordination: This entails actively coordinating and managing a patient's healthcare experience, including their interactions with other healthcare services and providers. It involves considering a patient's medical history and experiences when making health-related decisions [24].

These components form the core pillars of high-quality primary care services and relate to optimal health outcomes and patient satisfaction. The Primary Care Assessment Tool (PCATool) [25] was developed to assess the four key components of quality care and will be the primary outcome in this study.

Quality of Healthcare in Brazil

Studies using the PCATool focusing on the evaluation of service quality in the Brazilian public healthcare system have yielded interesting findings regarding both staff and user perceptions. For example, Harzheim and Ferreira found that patients tend to provide relatively more positive evaluations of care coordination and continuity of care, compared to access and comprehensiveness [26, 27]. Van Stralen et al. found results consistent with international literature, showing that staff members tend to perceive the quality of their work more positively compared to patients [28].

Only one study has evaluated patients' perspectives in the private sector of the Brazilian healthcare system [29]. Conducted between 2006 and 2007, this population-based cross-sectional study evaluated 2,404 adults aged 18 years and older who had been linked for at least 12 months to either public or private primary care services in Porto Alegre, Brazil. Public-sector participants (63% of the sample) were recruited from geographically defined areas covered by the municipal primary health care network, while the private-sector (37%) participants were drawn from insurance affiliated primary care practices or physician owned practices. Overall PCATool scores were significantly but only slightly higher in private services than in public ones in all domains. The highest overall score was observed in an insurance company-affiliated practice (5.50), whereas the lowest was found in traditional public practices (3.79). Given that much has changed within Brazilian healthcare in the past 20 years, we sought to examine the quality of private primary care services and compare them to public services, using previously published data.

Aim

Compare the quality of private primary care practice vs public practices in Brazil.

We hypothesized that the private primary care clinic would achieve higher PCATool scores than public primary care practices reported in Brazilian studies.

Methods

Design

A cross-sectional survey was used to assess the quality of primary care delivery within a private healthcare practice in São Paulo, Brazil. Data were collected through an online survey in Qualtrics. Comparison data were obtained from published studies that used the PCAT to assess quality of primary care in Brazilian samples.

Setting

The study was conducted in a private primary care practice with two units in São Paulo, Brazil—one in the central zone and one in the western region. The clinic operates under a family physician-based model, providing both in-person and virtual consultations. It employs 40 family physicians, along with 10 administrative support personnel. The clinic performs over 4,000 consultations per month and has cared for more than 100,000 patients in the past 3 years. Most consultations are funded through private health insurance, with a smaller proportion paid out of pocket.

Participants

Patients registered at the private primary care practice were identified through the clinic's electronic health records. Inclusion criteria: (a) At least two consultations within the 2 years preceding the survey; and (b) aged 18 years or older. Exclusion criteria: (a) inability to read, determined through a preliminary questionnaire screening question; or (b) no cell phone recorded in the administrative dataset.

Procedures

Data collection occurred between August 2025 and January 2026. Survey invitations were sent via WhatsApp to patients registered cell phone numbers, as per the standard method of contacting patients at the clinic. An initial message was sent requesting consent to receive the full survey invitation. Participants who responded affirmatively were then sent an anonymous survey link. Two reminder messages were subsequently sent on different days, including one on a weekend, at a 2–3-day interval [30, 31]. Responses were collected anonymously. It was not possible to determine which individuals completed the survey; therefore, reminders were sent to all invited participants. All participants provided electronic informed consent prior to beginning the survey. The study was approved by the Western University Health Science Research Ethics Board (HSREB # 25960).

Measures

Primary Outcome: PCATool-Brazil

The primary outcome was the assessment of primary care quality using the Brazilian version of the Primary Care Assessment Tool (PCATool-Brazil), shortform version (available in the supplementary materials) [32]. This instrument evaluates the extent to which health services are oriented toward primary care attributes. Response options are: 1 = "Definitely not", 2 = "Likely not", 3 = "Likely yes", 4 = "Definitely yes", 9 = "Don't know/ Don't remember". The questionnaire includes 3 questions on affiliation status (whether the patient identifies a specific primary care service or clinician as their usual source of care), and 23 on perceptions of primary care attributes. All participants are asked 19 items. Participants who endorsed having used specialist services were asked 4 additional items.

The PCATool-Brazil has established psychometric properties. The short-form and the original 77-item version are correlated $r = 0.58$ [29]. In a nationally representative Brazilian sample, internal consistency was high (Cronbach's $\alpha = 0.79$ total, domain scores $\alpha = 0.72$ – 0.78), and exploratory and confirmatory factor analyses supporting the expected 7-attribute structure (CFI = 0.980) [33]. Other studies have found that the PCAT short-form First-Contact Access subscale correlated moderately with other measures of access [34].

Scoring was conducted as per the Brazilian Ministry of Health PCATool Manual [32]. Responses "Don't know/ Don't remember" are considered missing. Participants who had $\geq 50\%$ missing items were excluded. For all other participants, "Don't know or Don't remember" and missing responses were imputed as 2 = "Likely not". Negatively worded items were reverse coded such that higher values reflect better primary care orientation. Scores were linearly transformed to a 0–10 metric using the formula: $(\text{observed score} - 1)/3 \times 10$. By averaging items, scores on four essential Primary Care attribute subscales -First Contact Access, Longitudinality, Coordination, Comprehensiveness- and two derived attributes - Family Orientation and Community Orientation- are computed. The General Score is computed by averaging the essential and derived subscales items and the Essential Score is computed by averaging only the essential items (supplementary material Table 4) [35]. The Coordination - Integration of Care- subscale was calculated only for respondents who reported having used specialist services. For respondents who had not seen a specialist, items from this domain were considered not applicable and were excluded from the calculation of the General and Essential Scores.

Demographic Variables

Demographic data for the participant included gender, age, household income, ethnicity, marital status, health status, education attainment, and number of chronic conditions. Where possible, question wording was based on the Brazilian Institute of Geography and Statistics (IBGE) [8]. For race, the category "Brown" corresponds to the Portuguese term *pardo*, as defined by IBGE [8]. Other response options were White, Black, Yellow, Indigenous, Other and Rather not say.

Primary Care Use Variables.

Participants were asked additional questions regarding their use of clinic services, including care modality in the previous 12 months. Care modality was assessed with the item: *"Over the past 12 months, which of the following best describes the type of care you have received from the Family Practice Service?"* Response options were: exclusively virtual care, mostly virtual care, equal parts on-site and virtual care, mostly on-site care, and exclusively on-site care.

Comparison Dataset

Search Strategy

A targeted literature search was conducted in March 2026 to identify Brazilian studies that used the PCATool to assess primary care performance. The search was performed in PubMed using the keywords "PCATool" OR "Primary Care Assessment Tool." The search was restricted to studies published

between 2017 and 2026; this time frame was chosen to minimize potential differences due to secular trends. Titles and abstracts were screened for relevance, followed by full-text review to confirm eligibility and extract data.

Studies were included if they were conducted in Brazil and reported PCATool scores for adult users (i.e. > 17 years old). Only studies that presented sufficient quantitative data (mean and sample size) for at least one PCATool domain were eligible for inclusion. Studies were excluded if data could not be extracted for analysis. When more than one publication reported on the same dataset, such as the 2019 National Health Survey (Pesquisa Nacional de Saúde - PNS) [8], only one study was included.

The search identified a total of 472 studies in PubMed using the predefined search terms. After title and abstract screening, 425 studies were excluded, leaving 47 articles for full-text review (Fig. 1). Following full-text screening, an additional 29 studies were excluded due to not meeting inclusion criteria or lacking sufficient data for extraction. A final total of 18 studies were included in the analysis [27, 33, 36–51].

[Insert Fig. 1 here: Flowchart of study selection]

For descriptive purposes, the following details were abstracted for all studies: state where the study was conducted, practice type (UBS = *unidade básica de saúde* or traditional primary healthcare unit; ESF = *estratégia de saúde da família* or Family Health Strategy unit), and study setting/location (urban, rural, or riverside populations).

Weighted Mean Calculation.

The mean (M), standard deviation (SD), and sample size were extracted from each study. When studies reported multiple groups, the overall mean for the total sample was used. If an overall mean was not reported, we included each group mean when calculating the weighted mean. When authors combined domain scores, data were excluded. A weighted M and SD were calculated for each of the PCATool domains and general and essential scores.

Data Analyses

Since virtual consultations were only legally allowed in Brazil after 2020 [52], for the purpose of comparing this sample results with other Brazilian studies, we excluded survey cases that endorsed predominantly or exclusively virtual care. The study sample and Brazilian studies were compared using independent samples t-tests and magnitude of the difference was computed (Cohen's d) [53]. Normality of PCATool scores was assessed prior to analysis. Statistical significance was defined as $p < 0.05$. All analyses were conducted using IBM SPSS Statistics, V30.0.

Results

Sample

Of 35,000 invitations sent to potentially eligible patients, 936 responses were received. Of these, 226 cases who opened the survey link but did not respond to any PCATool items were excluded, leaving 710 responses with at least one valid PCATool item. After applying the $\geq 50\%$ valid response criterion, 586 responses were retained for analysis. Among these, 264 respondents reported mostly or exclusively in-person care and constituted the final analytical sample for this study (Fig. 2).

[Insert Fig. 2 here: Flowchart of participant selection and exclusion in the study]

The majority were female (75.4%) and identified as White (64.4%), followed by Brown (25.8%) and Black (7.2%). Participants were predominantly adults in mid-life, between age 35 and 54 years (Table 1); The majority were married (44.5%) or in a common-law relationship (15.6%). Most participants reported relatively high socioeconomic status; with 26.5% having a household income of BRL 5,001–10,000 and 19.8% BRL 10,001–20,000. A high percentage (64.0%) had completed an undergraduate degree, and 12.5% held a master's or doctoral degree. Nearly all participants were born in Brazil (99.2%). Regarding health status, a third rated their health very good or excellent (32.5%) and only 7 (2.7%) rated it as poor. Almost 80% had at least one chronic condition. Travel time to the practice was under 1 hour for the majority of participants (71.8%). Most respondents had been using the clinic for 1 to 3 years (58.8%).

Table 1
Demographic variables

	Category	n	%
Sex	Male	65	24.6
	Female	199	75.4
Race/Ethnicity	White	170	64.4
	Black	19	7.2
	Brown	68	25.8
	Asian	5	1.9
	Indigenous	1	0.4
	Prefer not to answer	1	0.4
Age group (years)	18–19	1	0.4
	20–24	6	2.3
	25–29	19	7.2
	30–34	22	8.3
	35–39	39	14.8
	40–44	40	15.2
	45–49	47	17.8
	50–54	32	12.1
	55–59	19	7.2
	60–64	12	4.5
	65–69	10	3.8
	70–74	7	2.7
	75 or older	10	3.8
Monthly household income (BRL)	1–500	2	0.8
	501–1,000	3	1.2
	1,001–2,000	21	8.2
	2,001–3,000	37	14.4
	3,001–4,000	27	10.5
	4,001–5,000	35	13.6
	5,001–10,000	68	26.5
	10,001–20,000	51	19.8
	20,001–100,000	13	5.1
	Missing	7	2.7
Education	Adult literacy	2	0.8
	Old primary education	7	2.7
	Old secondary education	2	0.8
	Old classical/scientific/tertiary	1	0.4
	High school	49	18.6
	Undergraduate degree	169	64
	Master's/PhD	33	12.5
	None	1	0.4
Note. Values are presented as n (%). Percentages are calculated using the total sample N = 264			
Comparison dataset			

	Missing	0	0
Marital status	Single	72	27.4
	Common-law marriage	41	15.6
	Married	117	44.5
	Divorced	28	10.6
	Widowed	5	1.9
	Missing	1	0.4
Born in Brazil	Yes	262	99.2
	No	2	0.8
Travel time to clinic	Less than 30 minutes	89	33.8
	30 minutes to 1 hour	100	38
	1 to 1.5 hours	51	19.4
	1.5 to 2 hours	19	7.2
	More than 2 hours	4	1.5
	Missing	1	0.4
Self-rated health (general)	Excellent	12	4.6
	Very good	73	27.9
	Good	114	43.5
	Fair	56	21.4
	Poor	7	2.7
	Missing	2	0.8
Number of chronic conditions	0	57	21.6
	1	102	38.6
	2	54	20.5
	3	31	11.7
	4	15	5.7
	5	4	1.5
	6	1	0.4
Length of time using clinic	Less than 6 months	11	4.2
	6–12 months	55	21
	1–2 years	93	35.5
	2–3 years	61	23.3
	3–4 years	26	9.9
	More than 4 years	16	6.1
	Missing	2	0.8
Note. Values are presented as n (%). Percentages are calculated using the total sample N = 264			
Comparison dataset			

In the comparison dataset of 18 studies, 14 studies were conducted in urban populations and 2 in riverside populations, across 13 Brazilian states (supplementary materials Tables 3 and 5).

The study sample has significantly higher scores than the Brazilian comparison sample for 7 out of 10 domains (see Table 2) and both general (6.42 vs 5.94 $d = 0.76$) and essential scores (6.42 vs 5.93 $d = 0.69$). The largest differences were observed in comprehensiveness of provided services ($d = 3.71$), family orientation ($d = 1.68$), accessibility ($d = 1.95$) and community orientation ($d = 3.06$). The other domains had smaller differences: affiliation ($d = 0.42$), available services ($d = 0.63$) and longitudinality ($d = 0.91$).

There were no significant differences on first contact – utilization. The coordination – information systems were rated more favorably in the Brazilian comparison sample than in the study sample ($d = -1.77$). Among respondents who reported having seen a specialist ($n = 172$), they reported poorer integration of care vs the comparison sample ($d = -0.19$); however, the difference was not statistically significant.

Discussion

This study evaluated patient-reported primary care orientation in a private family medicine clinic in São Paulo compared to public primary care samples using the PCATool-Brazil. The clinic achieved higher general and essential scores than the Brazilian comparison data. Despite this relative advantage, the general score remained below the 6.6 benchmark commonly used to indicate strong primary care orientation [54]. Comparison data were also below this benchmark, indicating the need for improvement in all types of primary care services in Brazil. The only other study we found that surveyed private practices in Brazil reported a general score of 5.5, lower than our sample's result of 6.42 [29]. However, the authors did not report subscale scores for a deeper comparison.

The higher performance in accessibility and comprehensiveness of provided services provides insight into private sector advantages. Private clinics may offer shorter wait times, digital communication tools like WhatsApp, and more flexible hours, whereas administrative barriers often reduce access ratings in public systems. Recent public-sector initiatives implemented in 2020 [52, 55], including digital scheduling channels, may begin to change this. Comparison studies were conducted between the years of 2010 and 2022, when booking a consultation commonly still required in-person attendance at a public practice, which may have contributed to lower scores.

Higher comprehensiveness of provided services in the private clinic may be due to the clinic's workforce consisting exclusively of residency-trained family physicians, which supports a broader scope of practice and procedural capability. In comparison, the majority of doctors in the public system do not have any formal training in family medicine or any other specialty [56]. This interpretation is consistent with broader national and international evidence showing that physician training in primary care is associated with better system performance and patient outcomes [18].

Table 2
PCATool-Brazil scores for study sample vs Brazilian studies

Domains	Study *		Brazilian Dataset		Data Comparison				95% CI		
	Mean	SD	Weighted Mean	Weighted SD	N	Mean Difference	t – test	p	Lower limit	Upper limit	Cohen's d
General Score	6.42	1.73	5.94	0.60	25,310	0.48	4.47	< 0.01	0.27	0.69	0.76
Essential Score	6.42	1.72	5.93	0.64	7,967	0.49	4.58	< 0.01	0.28	0.69	0.69
Affiliation	5.23	3.81	3.82	3.32	17,928	1.41	6.00	< 0.01	0.95	1.88	0.42
First Contact – Utilization	5.91	2.85	5.91	1.63	23,702	0.00	0.01	0.99	-0.34	0.35	0.00
– Accessibility	6.19	2.55	4.56	0.80	24,352	1.63	10.41	< 0.01	1.33	1.94	1.95
Longitudinality	7.32	2.06	6.76	0.58	25,425	0.56	4.40	< 0.01	0.31	0.81	0.91
Coordination – Integration of Care**	5.65	2.88	5.93	1.45	5,417	-0.28	-1.28	0.20	-0.72	0.15	-0.19
– Information Systems	5.19	2.64	6.84	0.82	8,059	-1.65	-10.15	< 0.01	-1.97	-1.33	-1.77
Comprehensiveness – Available Services	6.12	2.35	5.43	0.86	7,683	0.69	4.78	< 0.01	0.41	0.98	0.73
– Provided Services	7.01	2.32	4.23	0.63	7,946	2.78	19.44	< 0.01	2.50	3.06	3.71
Family Orientation	6.45	2.54	5.11	0.74	18,152	1.34	8.58	< 0.01	1.03	1.65	1.68
Community Orientation	6.34	3.07	4.32	0.55	17,344	2.02	10.68	< 0.01	1.65	2.39	3.06
* Note n = 264; **n = 172; 95% CI = mean difference 95% confidence interval; Cohen's d = standardized difference for study sample vs pooled Brazilian studies											

Coordination represented the principal area of weakness for the study clinic in both integration of care and information systems. Information systems were rated poorer in the study sample vs the Brazilian comparison sample; integration of care was also lower but not significantly different. This finding is somewhat unexpected, given that primary care within the SUS operates through formal referral networks and gatekeeping mechanisms intended to enhance

coordination [57, 58], whereas private-sector patients often access specialists directly across fragmented networks. The absence of meaningful differences suggests that formal referral pathways alone may not translate into better patient-perceived coordination, as it depends not only on access to specialists, but also on timely communication, information exchange, and continuity across providers. These challenges may persist across both public and private sectors despite their different organizational models. Although this finding requires replication, future studies involving private primary care settings are warranted to determine whether similar patterns persist and, if so, to better understand the extent to which gatekeeping structures translate into meaningful patient-perceived coordination benefits.

Current policy and market interest often emphasize primary care as a mechanism to improve quality and reduce costs in the private system [18, 22, 59]. The present findings suggest that gains may be achievable in access and service breadth, particularly when clinics adopt physician-led family medicine models. However, without robust coordination systems, referral governance, and communication across the care network, these models may fail to deliver one of the defining functions of primary care: integrating fragmented healthcare experiences into coherent longitudinal care.

Limitations

This study has several limitations. The research focused on a single private clinic in São Paulo, which limits the generalizability of the results to other regions or service models. Cross-sectional design means that causal relationships cannot be inferred. The weighted mean comparison used for the Brazilian sample is not equivalent to a matched control group. Undocumented differences in sociodemographic and/or clinical characteristics between the study sample and the comparator data may have influenced the observed differences. The respondent sample may have had biases. Participants were relatively high-income and highly educated, with 64 percent having completed an undergraduate degree, which may influence their expectations and ratings of care. There is also a possibility of nonresponse bias due to the survey methodology.

Conclusion

This private family medicine clinic demonstrated stronger patient-rated performance than Brazilian comparator studies in several domains, particularly accessibility and comprehensiveness. However, the overall results remained below the benchmark for high primary care orientation, and information systems emerged as an important area for improvement. The findings suggest that improvements to the workforce model, such as hiring trained family physicians, though vital, may not be sufficient on their own. Notably, despite substantial differences in healthcare organization between the public and private sectors, integration of care did not differ significantly from the Brazilian comparison sample. Future research should include multi-site studies and direct matched comparisons between public and private sectors to determine whether this finding is reproducible and to better understand how different organizational models influence patient-perceived care coordination.

Declarations

Ethics approval and consent to participate:

The study was approved by the Western University Health Science Research Ethics Board (HSREB # 25960) and was conducted in accordance with the Canadian Tri-Council Policy Statement. All participants provided electronic informed consent prior to beginning the survey.

Consent for publication:

Not applicable.

Declarations

Competing Interests

GJR is an editor at BMC Primary Care

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Author Contribution

PHM and GJR contributed to the design and conception of the study, data analysis, and the writing and editing of this manuscript. Both authors read and approved the final manuscript.

Acknowledgements:

Data Availability

The datasets generated and analysed during the current study are not publicly available due to privacy and confidentiality considerations and the terms of informed consent under which the data were collected. The PCATool survey data supporting the findings of this study are available from the corresponding author on reasonable request, subject to applicable ethical, privacy, and consent restrictions.

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Figures

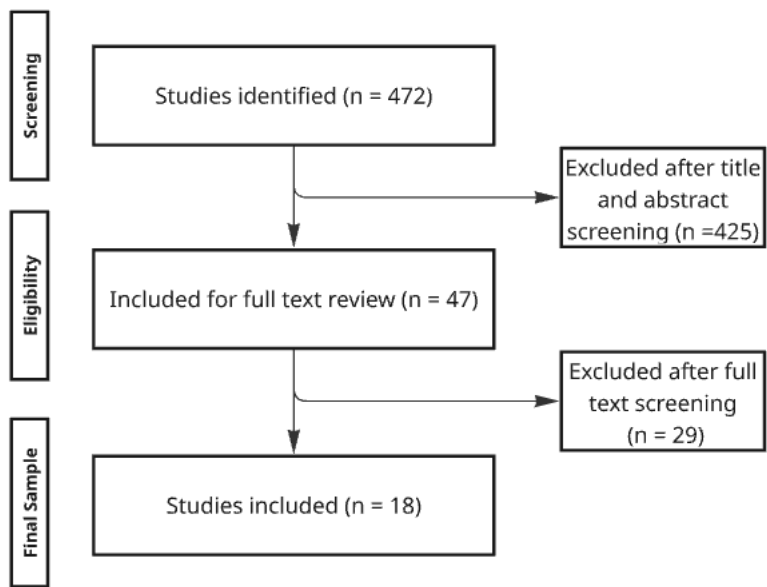


Figure 1

[Flowchart of study selection] - Note. Flow diagram for the inclusion and exclusion of Brazilian studies reporting on PCATool-Brazil findings

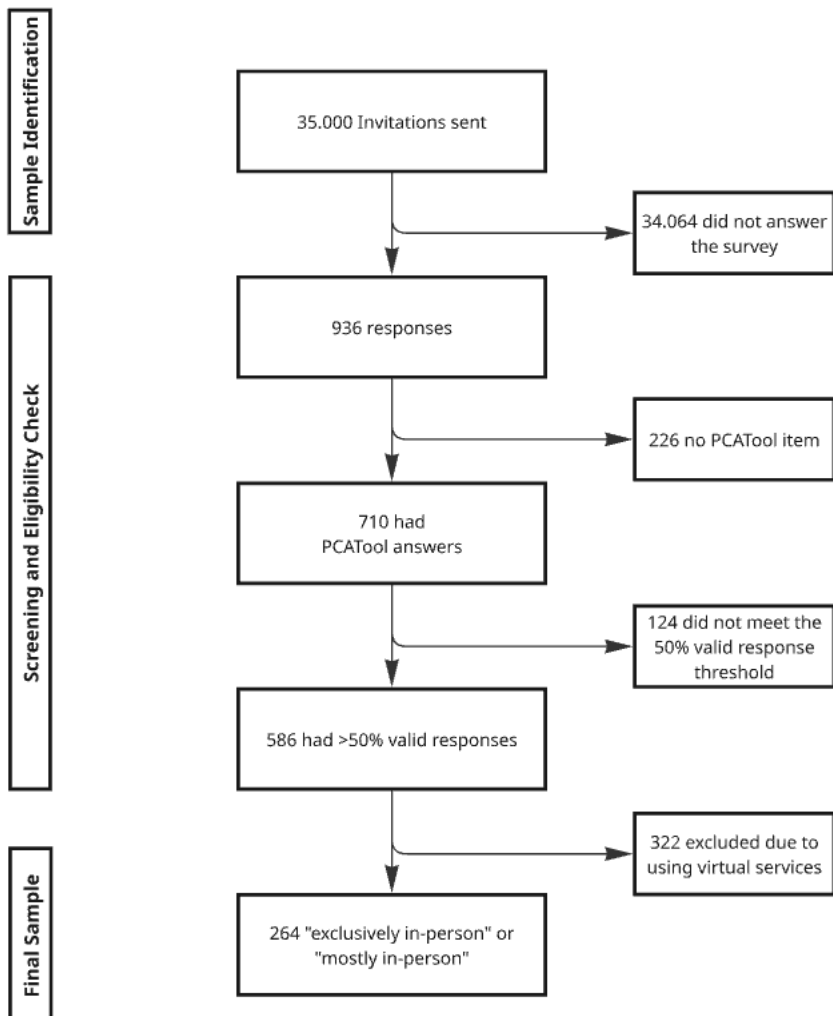


Figure 2

[Flowchart of participant selection and exclusion in the study] - Note. Flow diagram for the inclusion and exclusion of participants, detailing the different steps for identification, screening and eligibility check.

Supplementary Files

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