



Patient-Provider Satisfaction and Communication in U.S. Prenatal Care: A Systematic Review

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INTRODUCTION

- Systematic reviews are a growing essential resource in health care. They are often read by clinicians in order to stay up to date on topics in their field and can be utilized as a source for establishing clinical practice guidelines (Moher et al., 2009). Thus, it is important to produce a proper report.
- As adopted by the PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) Statement, a systematic review can be defined as, "a review of a clearly formulated question that uses systematic and explicit methods to identify, select, and critically evaluate relevant research, and to collect and analyze data from the studies that are included in the review" (Green 2005 as cited in Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009, pg. 1).
- In order to help authors improve the reporting quality of systematic reviews, the PRISMA Statement has developed guidelines that consist of a 27-item checklist and a four-phase flow diagram.
- Although there exists an integrative review of women's experience of prenatal care as a whole (Novick, 2009), there is no systematic review that focuses specifically on the components of patient satisfaction and patient-provider communication.
- Knowing women's perceptions of patient-provider communication and their satisfaction with care contributes to a patient-centered model of care, which is essential in order to provide quality treatment, and improve adherence to provider recommendations and follow-up care.

OBJECTIVE

The objective of this study is to conduct a rigorous systematic review on the theme of patient-provider satisfaction and communication in U.S. prenatal care by addressing the following research question: What factors influence patient-provider satisfaction during prenatal care?

METHODS

- From February-September of 2018, a systematic search was conducted using 36 online databases with a combination of 10 key terms for research published in English between the years 1993-2018 on the topic of U.S. women's perceptions of provider communication skills, and patient satisfaction in the prenatal context.
 - Online databases:** EBSCOHOST, Family Studies Abstracts, EBSCO Academic Search Complete, Alt HealthWatch, CINAHL, Health Source: Nursing/Academic Edition, MEDLINE, PsycARTICLES, PsycBOOKS, Psychology and Behavioral Sciences Collection, PsycINFO, (ISI) Web of Science, Journals@OVID, JSTOR, LexisNexis Academic, Periodicals Archive Online (PAO), PubMed, SAGE Journals, ScienceDirect, Sociological Abstracts, SpringerLink, Wiley Online Library, Wiley InterScience, AccessMedicine, AnthroSource, BioMed Central, Cambridge Journals, Cochrane Library, Contemporary Women's Issues (GALE), DARTS, DCT-Doody's Core Titles, Embase, Emerald, ERIC, Health Reference Center (GALE), and MEDLINE (OVID).
 - Key terms used:** patient-provider, provider-patient, communication, relationship, interaction, maternity, prenatal, perception, experience, and quality.

METHODS

- A record was kept of the number of records initially identified, screened, assessed, and found through other sources through the use of the flow diagram provided by the PRISMA Statement (**Figure 1**).
- To ensure a proper systematic review reporting process, PRISMA Statement guidelines were followed by using their 27-item checklist (**Table 1**).
- Articles deemed eligible were reviewed for their research results, implications, and overall themes.
- Data reported in each of the studies included for qualitative synthesis (content analysis) were entered into an Excel spreadsheet.
- Each article was read by two people- the professor and one research assistant. Discussions on what to enter for data and how to interpret the results were discussed for inter-rater reliability.

Section/Topic	#	Checklist Item	Reported on Page #
TITLE	1	Identify the report as a systematic review, meta-analysis, or both.	
ABSTRACT	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria; participants; and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	
INTRODUCTION	3	Describe the rationale for the review in the context of what is already known.	
OBJECTIVES	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	
METHODS	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level, and how this information is to be used in any data synthesis).	
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I ²) for each meta-analysis.	
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	
RESULTS	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome-level assessment (see Item 12).	
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study, (a) simple summary data for each intervention group and (b) effect estimates and confidence intervals, ideally with a forest plot.	
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression (see Item 16)).	
DISCUSSION	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., health care providers, users, and policy makers).	
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review level (e.g., incomplete retrieval of identified research, reporting bias).	
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	
FUNDING	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	

Figure 1: Checklist of items to include when producing a Systematic Review, provided by the PRISMA Statement.

RESULTS

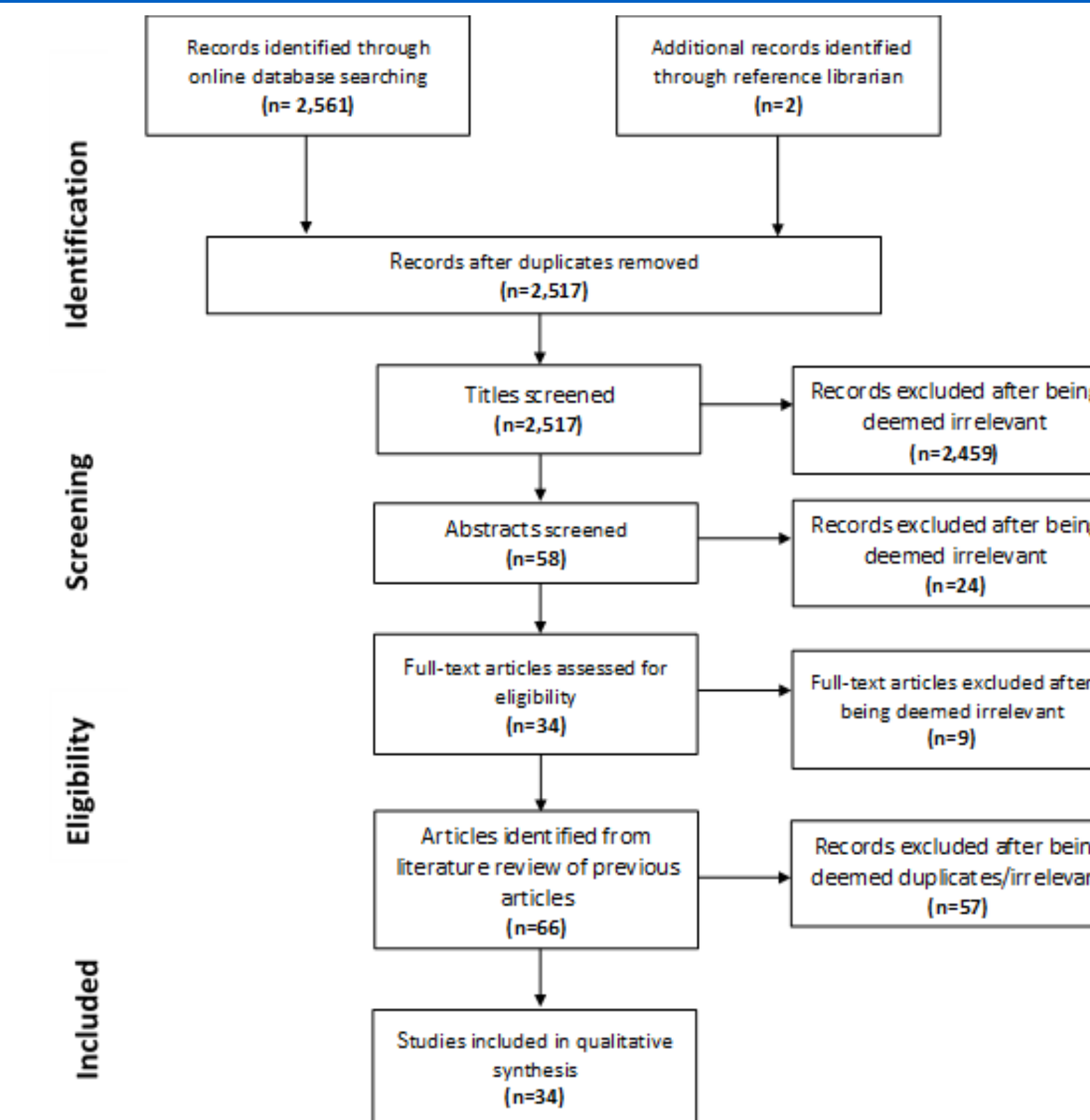


Figure 2: Flow diagram of the review process, provided by the PRISMA Statement.

Consistent variables reported in articles:

- Relatively equal amount of qualitative (n=23) and quantitative (n=18) studies, sample sizes ranging from 16-2,400.
- Race/ethnicity (n=34), age (n=33), type of provider (n=30), state of pregnancy during study (n=28), parity (n=24), insurance status (n=18), education (n=17), income (n=15), type of prenatal care received (n=15), number of prenatal appointments (n=15), and marital status (n=14), employment status (n=10), weight (n=9), primary language spoken (n=9), and when the individual initiated prenatal care (n=8).
- Common variables that were focused on women's perceptions included waiting time (n=13), ease of asking questions (n=10), and continuity of care (n=9).
- Practitioner demographics consisted of gender (n=9) and race/ethnicity (n=8).

Analysis of Patient Satisfaction & Communication

Articles reported analysis of: Patient centered decision making, providers providing a comfortable space for patients to ask questions, helpful explanations and information, respect, and emotional support.

Overarching themes found:

- Patients unsatisfied with information received from providers led to barriers of trust and communication (Dahlem et al. 2014, Handler et al. 1998, Leiferman et al. 2014).
- Patients expressed need for providers to be more culturally competent in order to provide patient-centered care (Attanasio et al. 2015, Agista et al. 2018, Coley et al. 2018, Lindsay et al. 2017, O'Hearn et al. 2006, Tandon et al. 2005).
- Midwives fared better than physicians in regards to communication (Kozhimannil et al. 2015, Weisband et al. 2018, Wheatley et al. 2008).
- Hispanic patients less likely than non-Hispanic patients to feel respected by providers (Tandon et al. 2015).
- Patients unsatisfied with limited information received regarding gestational weight gain, nutrition, and physical activity (Duthie et al. 2013, Lindsay et al. 2017).

DISCUSSION

- We hope to aid practitioners to further understand women's needs and implement a more patient-centered model of care which affects patient adherence and positive health outcomes in prenatal care.
- We found that patients have a need for more information on a plethora of topics, and that Hispanic and African American women reported less satisfaction with provider communication.
- There are many suggested guidelines and potential screenings in medical care. Almost a third of the articles in our study focused on being overweight. We are curious about why these guidelines were the focus. How do providers prioritize their attention to guidelines?

FUTURE WORK AND LIMITATIONS

- We recommend future studies look at understudied variables discovered in our results such as practitioner race, mothers under 18 years of age, Native American, Asian Americans, religious minorities, and disabled women.
- Future studies should also investigate how provider variables have an effect on patient communication and satisfaction.
- With secondary analysis, we were limited by the quality and content of the studies we analyzed, but we only chose peer-review studies and systematic reviews can reveal trends not apparent in individual studies

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