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Abstract

Background: Poverty and financial stress affect prenatal health and well-being as well as early childhood development. This study sought to examine interest in clinic-based financial services to address financial stress in low-income, Medicaid-enrolled prenatal patients and its relationship with self-reported social risks. **Methods:** We conducted a cross-sectional study of patients at a large safety-net prenatal clinic. Participants completed a written survey on interest in linkage to financial services, poverty-related financial stress, difficulty affording social needs, and interest in services to address material hardships. We compared interest in financial and social needs services by level of financial stress using multivariate regression. **Results:** Respondents (N = 108) were entirely Medicaid-enrolled, with a majority identifying as Hispanic/Latinx (57%) or Black/African American (20%). Sixty-four percent indicated interest in connection to any of the financial services surveyed. Interest was highest in employment (52%), savings and budgeting (49%), job training/adult education (49%), and financial counseling (48%) services. Individuals with high financial stress, compared to those with low financial stress, expressed a higher level of interest in financial services (aRR = 1.61 [95% CI 1.12-2.39]). Interest in financial services was associated with difficulty affording social needs (aRR = 2.24 [95% CI 1.33-4.43]) and interest in services addressing social needs (aRR = 1.45 [95% CI 1.13-1.92]). **Conclusion:** In this study of low-income, Medicaid-insured prenatal patients, there was a high degree of interest in clinic-based financial services. Integrating financial services into prenatal health care appears to be an approach that low-income patients would be interested in to directly address poverty and financial stress.

Keywords

community health, obstetrics, underserved communities, patientcenteredness, access to care

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Introduction

Exposure to prenatal psychosocial stressors increase the likelihood of complications during gestation, labor, and delivery.^{1,2} Poverty similarly well understood to be associated with an increased risk of pregnancy complications as well as adversely affect early childhood health and development.³⁻⁵ Emerging evidence suggests that chronic psychosocial stress associated with poverty—termed poverty-related financial stress—is a major mediator of poverty's effects on health and well-being.^{5,6} Recent studies attempting to characterize the direct effect of financial stress or strain on health outcomes have uncovered its

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associations with decreased birth weight,⁷ adverse impacts on the developing brain,⁵ and increased risk of postpartum depression.⁸

Regular prenatal screening for measures of psychosocial stressors and social risk factors are recommended by the American College of Obstetricians and Gynecologists (ACOG).⁹ Resultant linkages to services addressing social needs, such as food and housing insecurity, aim to minimize their effect on health and well-being.¹⁰ However, many of the screened social needs are downstream effects of poverty. Little published evidence exists on the extent to which prenatal patients are interested in being connected to services that prevent and ameliorate poverty more directly as part of healthcare delivery. There may be substantial interest in anti-poverty financial services in the prenatal setting, particularly given the increased financial hardship often encountered in pregnancy and early parenthood, and the potential for such interventions to address prenatal patients' psychosocial stressors, social needs, and health, along with the health of their children.

Our study aims to fill these gaps in the literature and has 3 main objectives: (1) to characterize interest in anti-poverty financial services among low-income prenatal patients at a large public hospital in Los Angeles County, (2) to assess the association between financial stress and interest in financial service interventions, and (3) to examine the associations between social needs and interest in financial services.

Materials and Methods

We conducted a cross-sectional survey of patients of the prenatal clinic at Harbor-UCLA Medical Center from November 13, 2019 to November 27, 2019. The clinic is an academically-affiliated safety net women's health clinic in Los Angeles County which serves predominantly low-income, Hispanic/Latinx and Black/African American patients that are entirely Medicaid-insured or -eligible.

On days in the study period where the clinic had new intakes, all patients attending prenatal care visits were approached and consented for the survey in the waiting area. Prior to patient clinical encounters, clinic clerical staff distributed the survey and explained its primary goals: to assess financial stress among clinic families and interest in financial and social needs services to help inform the development of new clinic-based services. Exclusion criteria included those unable to provide consent (eg, age less than 18), or with diminished capacity to consent, and those who did not speak English or Spanish. All eligible participants provided oral consent before completing the survey. The study was approved by the UCLA Institutional Review Board.

The survey assessed demographic characteristics, interest in financial services for low-income individuals and families, perceived financial stress, social needs, and interest in social services. Participants were queried on their

interest in common financial services ("How interested are you in these financial services?"), including general financial counseling, free tax preparation for low-income households, employment, job training/adult education, debt consolidation, credit counseling, savings and budgeting, and legal advice. Responses were scored using a 5-point Likert scale ("Not interested," "A little interested," "Somewhat interested," "Very interested," "Extremely interested") and dichotomized to any interest ("A little interested" and above) versus no interest ("Not interested"). Participants were additionally queried on difficulty affording social needs ("How hard is it for you to afford these basic living costs?") including rent, utilities, food, medical care, transportation, child care, and child care supplies (ie, diapers, formula). Responses were scored using a 5-point Likert scale ("Not hard at all," "A little hard," "Somewhat hard," "Very hard," "Extremely hard") and dichotomized to any difficulty ("A little hard" and above) versus no difficulty ("Not hard at all"). Participants were asked whether or not they would be interested in connection to services addressing the above social needs domains (binary measure) ("Would you be interested in services to help with these basic living costs?").

Perceived financial stress was assessed using the Federal Consumer Financial Protection Bureau's Financial Well-Being Scale (CFPB-FWBS) short form.¹¹ The 5-item scale has been validated against other measures of financial hardship, common indicators of socioeconomic status, and it is strongly associated with overall psychosocial stress. We utilized the CFPB-FWBS as it directly measures a person's experience of financial strain, its extensive validation, and its widespread use in financial services. Per technical guidelines, questions were scored on a 5-point Likert scale, totaled, and scaled to a total financial well-being score (range 19 and 82).¹¹ Individuals with scores equal to or less than 49 were categorized as having "high financial stress," a threshold previously used in literature.¹² This coincides with CFPB-FWBS published score ranges of very low (19–29), low (30–37), and medium low (38–49) financial well-being.¹¹ We compare to individuals with scores equal to or greater than 58, which we identify as having "low financial stress," coinciding with CFPB-FWBS score ranges of high (58–67) and very high (68–82) financial well-being.

Statistical Analysis

Interest in financial services was evaluated as a composite of interest in any services, as well as for each service individually. Differences in the proportion of individuals interested in financial services by level of financial stress were compared using Chi-squared test of proportions. Two-sided *P*-values of <.05 were considered statistically significant.

Multivariate log-binomial regressions were constructed to determine the adjusted risk ratio (aRR) and their 95% confidence intervals of individuals with high financial

Table 1. Unadjusted Characteristics of Participants, Overall and by Interest in Financial Services.

Characteristic	All respondents, N = 108	Any interest in financial services, N = 69*	No interest, N = 39*	P-value [‡]
Age, % (no.)				.2
18-21	12% (13)	77% (10)	23% (3)	
22-31	55% (57)	58% (33)	42% (24)	
32+	33% (34)	76% (26)	24% (8)	
Race/ethnicity, % (no.)				.3 [‡]
Black/African American, non-Hispanic	20% (20)	65% (13)	35% (7)	
Hispanic/Latinx	57% (57)	63% (36)	37% (21)	
Asian, non-Hispanic	7.0% (7)	71% (5)	29% (2)	
White, non-Hispanic	8.0% (8)	75% (6)	25% (2)	
Other	8.0% (8)	100% (8)	0% (0)	
Preferred language, % (no.)				.3
English	91% (98)	62% (61)	38% (37)	
Spanish	9.3% (10)	80% (8)	20% (2)	
Average financial well-being score, mean \pm SD ⁺	57.3 \pm 12.6	53.9 \pm 12.2	63.3 \pm 11.1	<.001
Financial stress level, % (no.)				.007
Low financial stress (FWB \geq 58)	41% (44)	48% (21)	52% (23)	
High financial stress (FWB \leq 49)	23% (25)	84% (21)	16% (4)	
Any difficulty affording social needs, % (no.)	76% (82)	74% (61)	26% (21)	<.001
Any interest in social needs services, % (no.)	60% (65)	85% (55)	15% (10)	<.001

⁺Mean score calculated among N=99 individuals with complete responses to the CFPB-FWBS components.

[‡]Comparing individuals with any interest in financial services with those with no interest.

*Percentages reflect row-wise proportions for each group.

stress for expressing interest in financial services, overall and by service type. Models were adjusted for participant characteristics including race/ethnicity, age, and preferred language. Associations between any difficulty affording social needs and overall interest in social needs linkages were assessed with multivariate log-binomial regressions adjusting for race/ethnicity, age, and preferred language, estimating adjusted risk ratios (aRR) and their 95% confidence intervals. All analyses were performed in R version 4.0.1.

Results

Of 139 scheduled visits during the days of recruitment, 108 individuals attended their visit in the clinic, and no individuals met the exclusion criteria. All 108 individuals were approached and completed the survey (response rate 100%, Table 1). Most participants identified as Hispanic/Latinx (57%) and 20% identified as Black/African American. A majority were 22 to 31 years old (55%), and 33% were 32-years or older. A 10th of the participants spoke Spanish as their preferred language.

Overall, 64% of individuals indicated interest in any financial services (Table 1). Interest was similar by type of service, with interest in employment assistance (52%), savings and budgeting help (49%), job training/adult education (49%), and financial counseling (48%) being the most

commonly endorsed (Figure 1). Interest in services was high across demographic subgroups, with no statistically significant differences in interest by participant race/ethnicity, age, or primary language (Table 1).

The CFPB-FWBS was calculated to examine the degree of financial stress for the 99 participants (92%) who completed all of the component questions. There was wide variation in financial stress scores spanning nearly the whole range of the CFPB-FWBS scale (25-82), with a mean score of 57.3 (95% CI 54.7-59.9) (Table 1). Eighty-four percent of individuals identified as having high financial stress (CFPB-FWBS less than or equal to 49) indicated interest in any financial services compared to 48% with low financial stress (CFPB-FWBS greater than or equal to 58, $P < .01$; Figure 2). There was a significantly higher interest in financial services observed across service type between high versus low financial stress, including employment assistance (83% vs 26%, $P < .001$), savings and budgeting help (71% vs 35%, $P < .05$), job training/adult education (67% vs 29%, $P < .01$), financial counseling (71% vs 24%, $P < .001$), tax preparation (67% vs 23%, $P < .01$), debt consolidation (63% vs 23%, $P < .01$) (Figure 2). There was no significant difference observed in the interest in credit counseling or legal advice. Controlling for age, race/ethnicity, and preferred language, we found a significantly higher likelihood of interest in any financial services among individuals with high financial stress (aRR=1.61 [95% CI 1.13-2.39]; Figure 3). Similar significant associations were

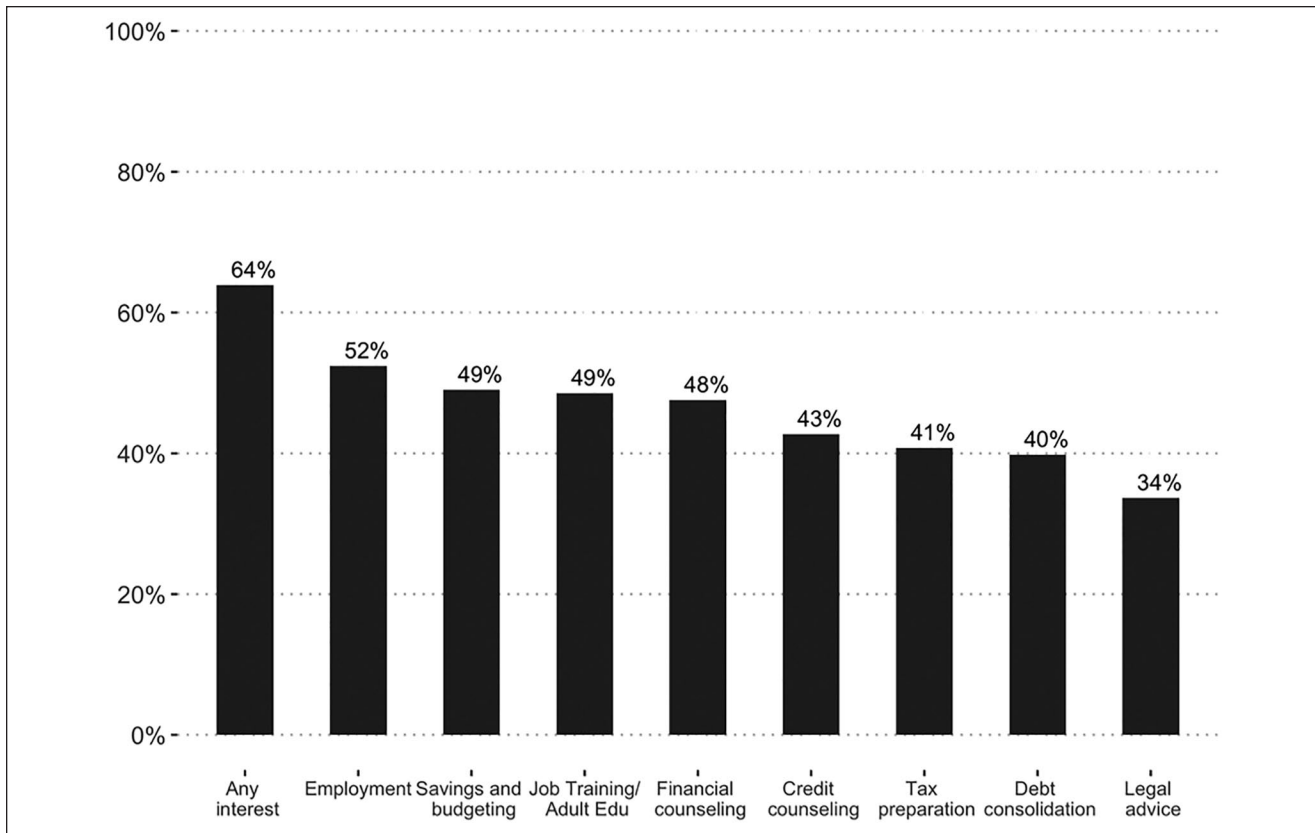


Figure 1. Proportion of respondents (N=108) interested in financial services, overall and by service type.

observed for specific services with the exception of credit counseling and legal advice.

The majority of participants indicated at least some difficulty affording social needs (76%) (Table 1), with most common difficulties including paying for rent/housing (60%), utilities (51%), and food (50%). A smaller subset of participants indicated interest in referral to social needs services (60%), with most commonly reported referral interest to services to help with rent (34%), child supplies (25%), and food (23%). Reported difficulty affording social needs was associated with interest in any anti-poverty financial services (aRR=2.24 [95% CI 1.33-4.43]) as well as interest in any financial services (aRR=2.15 [95% CI 1.46-3.55]) (Figure 4).

Discussion

In this study of interest in clinic-based financial services among low-income, Medicaid-insured prenatal patients, we found that nearly two thirds of participants were interested in connecting with financial services in the clinical setting. Interest spanned the spectrum of financial capability services, with the highest degree of interest in services for employment assistance, job training/adult education, and

savings/budgeting help. We additionally find that those with higher degrees of financial stress were more likely to report interest in services. However, nearly half of those with low financial stress were interested in financial services, suggesting a broad range of interest. These findings suggest that clinic-based financial services are desired by low-income, publicly insured prenatal patients and there is an opportunity to support their health and well-being.

There is growing interest in how clinically-integrated programs can address barriers to access and improve continuity of care. Such interventions targeting poverty and financial stress—termed Medical-Financial Partnerships (MFPs)—exist in pediatric and adult primary care settings. This care model physically linking financial services organizations with the health system has demonstrated improvement in children’s overall subjective health status and increased family financial well-being.¹³⁻¹⁵ Moreover, previous studies have found that such services are highly desirable by pediatric caregivers.¹⁴ To our knowledge, similar models of care have not yet been explored in the prenatal context. This study highlights that prenatal patients share a similarly high degree of interest in clinically-integrated financial services. There is a potential for such services to directly target upstream psychosocial stress during pregnancy, particularly at a time when

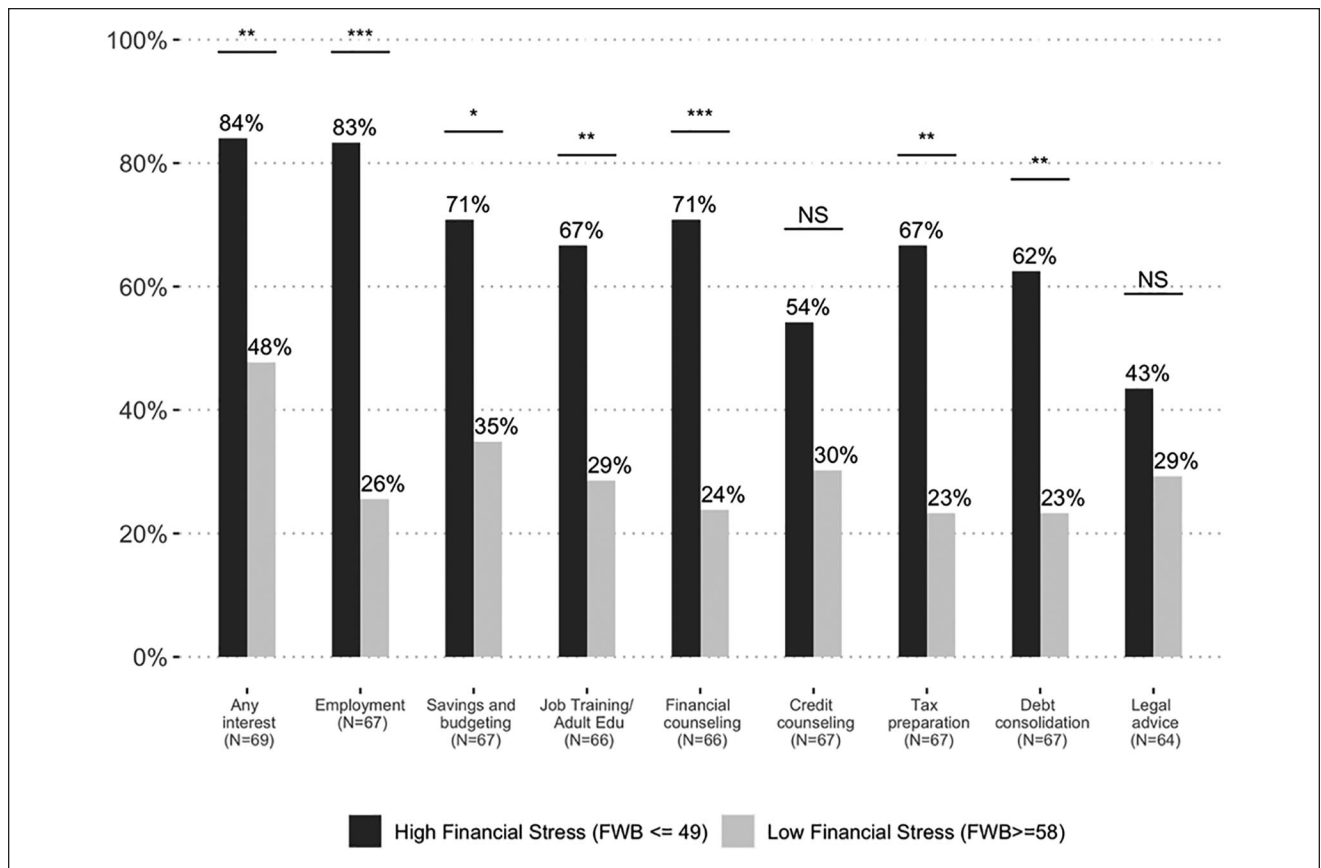


Figure 2. Proportion of respondents interested in financial services by degree of financial stress. Differences between groups were evaluated using chi-squared tests of proportions. Sample sizes per group are provided in parentheses below. Significant differences by degree of financial stress are indicated above each category (***) indicates $P < .001$, ** indicates $P < .01$, * indicates $P < .05$, NS indicates no statistical significance).

expectant individuals have frequent contact with the health system.

Integration of financial services into a prenatal clinic shares similar advantages of other clinically-integrated resources such as Medical-Legal Partnerships (MLP).¹⁶ Co-location of services aligns system and patient priorities, reducing logistical barriers to connection and avoid waiting times to access community-located services. Moreover, they may operate in a space of already established trust between patients and the provider or clinic. Given the frequency of prenatal care visits during pregnancy, there is opportunity for a similar cadence of follow-up with financial services. Such services may help directly address poverty and financial stress at a time and place convenient to patients.

Our study finds that both difficulty in affording any social need and overall interest in social needs services was significantly associated with interest in financial services. Many prenatal clinics already integrate nonfinancial social resources and care coordination programs such as those addressing food and housing insecurity.^{17,18} Clinics may

already be identifying individuals who would be interested in financial services. Coordination across services could help patients simultaneously address more immediate social needs with interventions that build resilience against their more upstream causes.

Limitations

Our study has limitations. First, these findings may not generalize beyond the study's low-income, Medicaid-insured prenatal clinic sample and may not reflect the degree of interest and needs in other populations. Second, the smaller sample size may decrease the precision of the estimated associations presented. The present study gives way to future studies that assess prenatal patient interest in clinic-based financial services with larger samples and in more varied patient populations (eg, by geography, insurance status). Third, participants were surveyed through November 2019, reflecting a period prior to the devastating economic consequences of COVID-19, which has significantly increased the degree financial stress

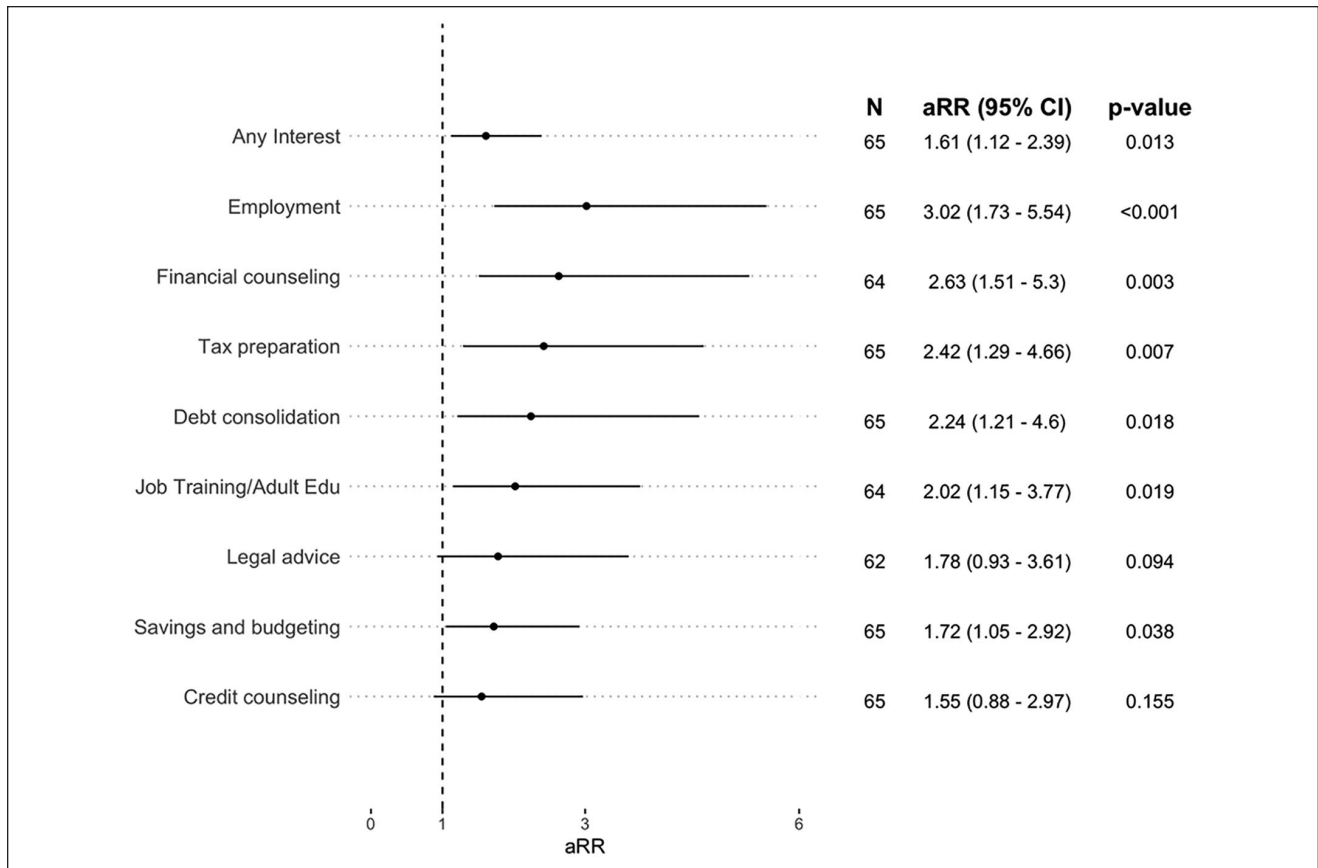


Figure 3. Adjusted risk-ratios (aRR) from multivariate log-binomial regressions for the increased likelihood of expressing interest in financial services overall and by service type for individuals with high financial stress (CFPB-FWBS score ≤ 49), compared to those with low financially stress (CFPB-FWBS score ≥ 58). Estimates control for respondent age, sex, race/ethnicity, and preferred language. Error bars represent the 95% confidence interval. Abbreviations: aRR, adjusted risk ratio; CI, confidence interval; N, number of observations.

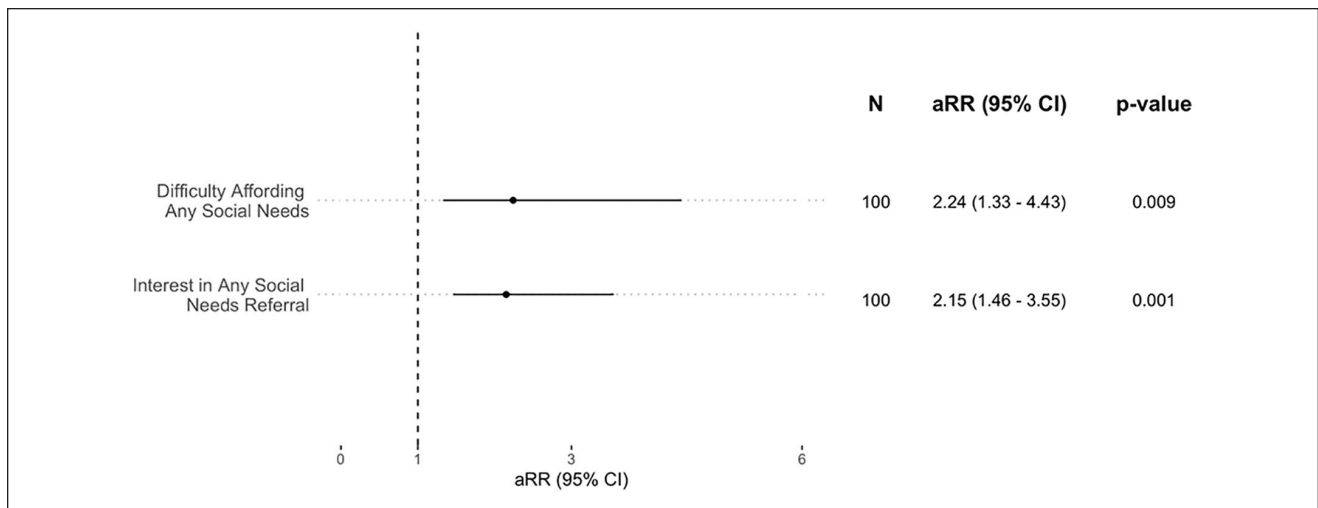


Figure 4. Adjusted risk-ratios (aRR) from multivariate log-binomial regressions for the increased likelihood of expressing interest in any clinic-based financial services for individuals expressing difficulty affording any social needs or interest in any social needs referral. Estimates control for respondent age, sex, race/ethnicity, and preferred language. Error bars represent the 95% confidence interval. Abbreviations: aRR, adjusted risk ratio; CI, confidence interval; N, number of observations.

experienced among low-income populations across the United States.¹⁹⁻²¹ Further analyses are needed to elucidate the current degree of financial stress and interest in financial services in the prenatal population. Fourth, while we find that there is a high level of interest, our study does not assess the implementation or impact of clinic-based financial services in the prenatal setting. Prospective studies are needed to assess the efficacy of clinically-integrated financial services in addressing financial stress and related health outcomes for prenatal patients.

Conclusion

We find in a sample of low-income, Medicaid enrolled prenatal patients that there is a high level of interest for health systems to actively address economic and social determinants of health as a component of health care delivery. Integrating financial services into prenatal health care appears to be an approach that a strong majority of these low-income patients would be interested in to directly address poverty and financial stress as drivers of adverse perinatal and life course health outcomes.

Author Disclosure Statement

The authors have no financial relationships relevant to this abstract to disclose.

Declaration of Conflicting Interests

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