Performance of the EQ-5D-5L from Conception to Postpartum among a National Sample of U.S. Adults

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ABSTRACT

Background: Pregnancy is a unique health state with significant physiological changes occurring from conception to birth. This study aims to assess the performance of the EQ-5D-5L in measuring HRQoL throughout pregnancy.

Methods: Between May and July 2021 (Wave 1) and December 2021 and April 2022 (Wave 2), we conducted a series of cross-sectional, national online surveys of 6,660 pregnant and postpartum adults. The survey included the EQ-5D-5L as well as items measuring respondents' sociodemographic and health information. We used segmented regression to estimate changes in HRQoL measures at different time points of the pregnancy and the nine months postpartum. We examined the distribution, reliability, and validity of the EQ5D-5L during pregnancy and postpartum. Cronbach's Alpha was used to assess internal consistency of the EQ-5D-5L dimensions. Known group validity was evaluated using chi-square tests to compare EQ-5D-5L dimensions for pregnant individuals with and without diagnosed medical conditions.

Results: The mean and median EQ-5D-5L utility values were lowest during the ninth month of pregnancy (Mean 0.70 [SE 0.29] and Median 0.78 [IQR 0.29]) and were highest during the eight and ninth postpartum months (Mean 0.90 [SE 0.09] and Median 0.94 (IQR 0.12)) between the second and ninth months postpartum. There was a steady decline in EQ-5D-5L utility values until the ninth month of pregnancy (β=0.21; SE 0.02, P<0.001), followed by a 0.10 (SE 0.02, P<0.001) unit increase in values during the first postpartum month and a stabilization during the rest of the postpartum period (β=0.02; SE 0.02, P=0.214). This pattern was not observed with EQ-VAS. Cronbach alpha values exceeded 0.70 throughout pregnancy and fell below 0.60 for most of the postpartum period. Consistent patterns were observed across both survey waves, indicating validation of results.

Conclusions: HRQoL as measured by EQ-5D-5L utilities varies across pregnancy, indicating progressive declines throughout pregnancy trimester and a return to first trimester values during the first month postpartum. The internal consistency of the EQ-5D-5L was highest during the later stages of pregnancy and performs less consistently during the postpartum period.

INTRODUCTION

Pregnancy is a unique health state with significant multi-factored physiological, mental, and social functional changes from conception to birth and postpartum. Understanding the impact of pregnancy on the health-related quality-of-life (HRQoL) of the pregnant persons throughout the pregnancy journey is imperative for providing effective care for this unique cohort. At the same time, despite ubiquitous applications of the EuroQol EQ-5D-5L in assessing HRQoL in different populations and disease cohorts around world, there remains a gap of understanding in the utilization of the EQ-5D-5L in pregnant persons in the US.

A recent study by Wu et al., (2021) observed the HRQoL of pregnant women in China using the EQ-5D-5L and reported a bell-shaped HRQoL curve during the 3 trimesters, suggesting that pregnant women may adapt the early impact of the pregnancy from the 1st trimester, with an increased HRQoL in the 2nd trimester, then deteriorated significant to the lowest during the 3rd trimester (1). There has been some application of the EQ-5D-5L in pregnancy women with different diseases. For example, pregnancy persons with HIV in China (2), pregnant women with uterine fibroids in China (3), or pregnant women with depression in England (4). These recent applications have highlighted the importance of gaining greater appreciation of the HRQoL of the pregnant persons in those countries.

To date, there is still a limited understanding of HRQoL measurement during pregnancy and how measures like EQ-5D-5L perform in pregnant persons in the US. This study aims to assess the performance of the EQ-5D-5L in measuring HRQoL throughout pregnancy using a US national pregnant cohort.

METHODS

Study Design & Data Collection

Between May and July 2021 (Wave 1) and December 2021 and April 2022 (Wave 2), we conducted a series of cross-sectional, national online surveys of pregnant and postpartum adults residing in the U.S. We used intercept recruitment on social media sites, including Facebook, Instagram, and Twitter, to advertise our survey to pregnant and recently pregnant adults. Eligible participants included adults who were: (1) ≥18 years old, (2) residing in the U.S. or a U.S. territory, and 3) had a pregnancy ending after March 2020. The survey could be taken in English or Spanish and could be completed over multiple sessions (but could only be submitted once).

Following informed consent, participants were asked to complete a 30-minute online survey, which included the EQ-5D-5L instrument, the Patient Health Questionnaire-4 (PHQ-4) and the Generalized Anxiety Disorder-7 questionnaire (GAD-7), and survey items on sociodemographic factors, diagnosed medical conditions, experiences with prenatal care, COVID-19 illness, and vaccination.

HRQoL was measured using the EQ-5D-5L, a standardized instrument used to assess an individual's health status across five dimensions describing health in terms of mobility, self-care, usual activities, pain/discomfort, and anxiety/depression (5, 6). Respondents are asked to rate each dimension using a five-point Likert scale, as having (1) no problems, (2) slight problems, (3) moderate problems, (4) severe problems, and (5) extreme problems. Utility values are assigned based on responses to the five items (6). In addition to five item responses and EQ-5D-5L utility values, participants were asked to rate their overall health status today using a Visual Analogue Scale (VAS, or EQ-VAS). The EQ-VAS scores range from 0 (the worst health imagined) to 100 (the best health imagined). EQ-5D-5L utility values and EQ-

5D-5L VAS scores were analyzed as non-parametric continuous variables. Separately for the five EQ-5D-5L items, we estimated the percent of respondents reporting any problems on each item.

Statistical Analysis

To examine the performance of the EQ-5D-5L across gestational age through the postpartum period, we assessed the metrics related to the EQ-5D-5L administered to pregnant and postpartum individuals as shown in Table 1.

Table 1. Description of planned analyses of EQ-5D-5L metrics from conception to postpartum.

Performance Metric	**Description of Analysis**
Distribution characteristics	Distribution of frequency of EQ-5D-5L dimension scores, utility values and VAS scores.
Internal consistency	Cronbach's Alpha values
Known-group validity	Comparison of EQ-5D-5L dimension scores, utility values and VAS scores for respondents diagnosed with pre-eclampsia or gestational diabetes to pregnancies without diagnosed conditions using Chi-squared tests and one-way ANOVA tests.
Performance by stage of pregnancy or postpartum at the time of survey	Segmented regression of VAS and utility values by month of pregnancy or postpartum at the time of survey.

Parameters such as self-reported information on last menstrual period (LMP), estimated date of delivery (from ultrasound), or actual date of delivery were used to determine the month of pregnancy or month postpartum at the time of survey, self-reported diagnoses of pre-eclampsia and gestational diabetes were included in the analysis to classify participants as having select pregnancy complications or not.

We used segmented regression to model EQ-5D-5L utility values and EQ-5D-5L VAS scores as a function of month of pregnancy or postpartum. Month of pregnancy/postpartum was fit as a cubic spline term. For the purpose of validation, we performed analyses separately by wave of data collection, and where appropriate, aggregated across waves. Because data were collected during different stages of the

COVID-19 pandemic, we performed additional comparisons by quarter and year of conception of the pregnancy in order to evaluate the potential influence of calendar time on our results.

Cronbach's Alpha with bootstrapped 95% confidence intervals was used to assess how the EQ-5D-5L dimensions measure the construct of HRQoL.

Ethical Review & Approval

The study protocol was reviewed and approved by the University of San Francisco Institutional Review Board (#USFCAIRB 1542).

RESULTS

Of the 12,733 individuals who responded to the survey invitation, 6,660 (52.3%) U.S. adults ≥18 years of age who were either pregnant at the time of survey (n=4,057) or recently pregnant (n=2,603) completed the survey. Amongst respondents, 70.1% were ≥30 years old, 14.2% were Latina/x, 3.6% Black, and 77.6% were white; 85.3% resided in a metropolitan area, 90.4% were in a partnership, 13.1% were born overseas, and 92.0% identified as heterosexual (**Table 2**). In addition, 15.0% of respondents had a pre-existing health condition prior to pregnancy and 16.6% were diagnosed with a pregnancy complication.

Based on EQ-5D-5L item measures, problems with anxiety/depression were most commonly reported by pregnant and postpartum participants (60.6%), followed by problems with pain or discomfort (59.9%), Problems with self-care (11.6%) were least commonly reported. The percent of participants reporting problems with mobility increased from 8.3% during the first month of pregnancy to 44.2% during the ninth month of pregnancy (late 3rd trimester). This percentage declined to 11.3% during the first month postpartum and remained below 6% throughout the remainder of the postpartum period (**Figure 2**). The

percent of participants reporting problems with self-care increased from 5.3% during the first month of pregnancy (early 1st trimester) to 34.2% during the ninth month of pregnancy and then declined to 5.1% during the first month postpartum. Problems with self-care remained below 4% throughout the remainder of the postpartum period (**Figure 2**). The percent of participants reporting problems engaging in usual activities increased from 36.8% during the first month of pregnancy to 57.5% during the ninth month of pregnancy. This percentage declined to 30.6%% during the first month postpartum and remained below 17% throughout the remainder of the postpartum period (**Figure 2**). The percent of participants reporting problems with pain/discomfort increased from 59.6% during the first month of pregnancy to 82.5% during the ninth month of pregnancy. This percentage declined to 55.8% during the first month postpartum to 37.9% during the second month postpartum and then remained below 40% throughout the remainder of the postpartum period (**Figure 2**). The percentage of participants reporting problems with anxiety/depression remained, consistently, above 50% for the entirety of pregnancy and the postpartum period (range: 50% during the second month postpartum to 67% at the seventh month postpartum).

The mean and median EQ-5D-5L utility values were lowest during the ninth month of pregnancy (Mean 0.70 [SE 0.29] and Median 0.78 [IQR 0.29]) and were highest during the eight and ninth postpartum months (Mean 0.90 [SE 0.09] and Median 0.94 (IQR 0.12)) between the second and ninth months postpartum (**Figure 1**, **Table S1**). There was a steady decline in EQ-5D-5L utility values until the ninth month of pregnancy (β=0.21; SE 0.02, P<0.001), followed by a 0.10 (SE 0.02, P<0.001) unit increase in values during the first postpartum month and a stabilization during the rest of the postpartum period (β=0.02; SE 0.02, P=0.214). In contrast to EQ-5D-5L utility values, we observed little variability in EQ-5D-5L VAS scores by month of pregnancy or postpartum, and no significant difference through the ninth month of pregnancy (β=-1.1; SE 2.1, P=0.59), during the first postpartum month (β=0.02; SE 0.02,

P=0.54) or throughout the postpartum period (β=1.1; SE=1.4; P=0.41) for EQ-5D-5L VAS scores. In general, EQ-5D-5L utility values and EQ-5D-5L VAS scores were similar across survey waves (**Figure S2**), with slightly lower values during the ninth month of pregnancy for wave 1 participants compared to wave 2. The distribution of EQ-5D-5L utility values and EQ-5D-5L VAS scores was lower for those with a diagnosis of preeclampsia compared to those without (**Figure 3**). While we observed lower EQ-5D-5L utility values for those diagnosed with gestational diabetes during pregnancy, these differences did not persist during the postpartum period (**Figure 3**).

Overall, Cronbach alpha values exceeded 0.70 throughout pregnancy, but remained below 0.60 for most of the postpartum period (**Figure 4**). Cronbach alpha values were lowest during the ninth postpartum month (Cronbach alpha: 0.35; 95% CI 0.34, 0.37). In general, Cronbach alpha values were similar across waves, with exception to the first and second month of pregnancy which was lower for wave 2 participants compared to wave 1.

When we examined EQ-5D-5L utility values and EQ-5D-5L VAS scores by quarter and year of conception, we observed no significant variation (**Figure S3**). The percent of respondents reporting problems with pain/discomfort increased from 46.6% in Q2 of 2020 (pre-pandemic period) to 59.0% in Q3 of 2020 (pandemic period), which may suggest that pregnancies coinciding with peak pandemic time periods reported higher EQ-5D-5L values, regardless of month of pregnancy or postpartum (**Figure S4**). However, these effects were not observed for problems with anxiety/depression and were less common for problems with mobility and self-care.

DISCUSSION

Based on data from this large, national U.S. survey of pregnant and postpartum individuals, we observed significant variation across the five health items of the EQ-5D-5L at different gestational and postpartum time points. Pregnant persons reported increasing health-related problems, such as pain/discomfort, throughout pregnancy, and the proportion of respondents reporting these problems peaked at the ninth (and final) month of pregnancy. The proportion of individuals reporting health-related problems declined during the postpartum period, although with considerable variability across individuals and poor internal consistency. In addition, the EQ-5D-5L was able to ascertain the HRQoL differences in different disease cohorts. Pregnant persons with or without preeclampsia or gestational diabetes showed different HRQoL measured by the EQ-5D-5L. These findings suggest that HRQoL varies over the course of the pregnancy and postpartum period and while EQ-5D-5L could be a useful tool for monitoring HRQoL during pregnancy, this instrument may not perform optimally during the postpartum period.

This observed pattern is similar to what was reported by Wu et al., (2021) who observed a bell-shaped curve of EQ-5D-5L utilities among Chinese pregnant persons. Unlike our study, the EQ-VAS scores reported by Wu et al. showed a wider range in scores correlated with trimester of pregnancy. We showed no association with EQ-VAS scores and pregnancy or postpartum; however, it is important to note that we evaluated month of pregnancy rather than trimester – and important difference which allowed us to more finely evaluate changes over time within trimesters of pregnancy.

Our study provides evidence on the usefulness of the EQ-5D-5L in pregnant population. As such application is relatively recent, based on the existing literature, the values reported herein could be used for future references. Without an understanding of HRQoL measurement around the time of pregnancy,

it is challenging to perform valid evaluation of the impacts of environmental, medical, and individual-level factors and events on maternal HRQoL. The ongoing COVID-19 pandemic serves as a recent example of clinical interest in monitoring HRQoL around the time of pregnancy. The global COVID-19 pandemic and the corresponding mitigation policies in different countries around world imposed additional and significant impact on those who were either planning pregnancy, already pregnant or had recently given birth. Pregnant persons are more likely than non-pregnant persons to experience severe COVID-19, including higher rates of admission to intensive care unit, requirement for invasive mechanical ventilation or extracorporeal membrane oxygenation, and death (7-11). As a result, pregnant and recently pregnant persons are considered a high-risk group for COVID-19 by the US Centers for Disease Control and Prevention (CDC) and vaccination is recommended as the best means of prevention (12).

Previous studies have sought to evaluate the direct and indirect impacts of the pandemic on perinatal health. For example, researchers have evaluated the impact of COVID-19 illness (13, 14) and pandemic-related confinement on the lifestyle and psychological wellbeing of pregnant persons (15) – all using the EQ-5D-5L instrument. More recently, there has been interest in estimating the effect of adverse events following COVID-19 immunization during pregnancy (16).

Strengths & Limitations

Our study draws from a large, national sample of pregnant and recently pregnant individuals, with representation from all U.S. states and two U.S. territories. In comparison the U.S. birth statistics, the sample was representative of pregnancies in terms of residence, but under-represented certain minority groups – most notably Black pregnant persons. This may limit the generalizability of our findings to some

extent. Additional limitations include the fact that these data are observational and rely on self-reported information. As a result, we cannot discount the potential influence of reporting and recall bias. Another limitation is in the cross-sectional nature of the data collection. Because we did not perform longitudinal follow-up of participants, we could not perform any retest and cannot make conclusions regarding test-retest reliability as a result. However, in this population, re-test is challenging given the respondent will be at different stages of pregnancy – and potentially different health states. Longitudinal follow-up would allow for evaluation of HRQoL trajectories within individuals, and future research should consider this. Finally, it is difficult to disentangle how the pandemic may have influenced our findings, since month of pregnancy/postpartum is also linked with calendar time; however, our findings are fairly consistent with the pre-pandemic literature (1) and we did not observe consistent correlations between pandemic and HRQoL indicating it is more likely that our observed variations in HRQoL was due to gestational age rather than exposure to the COVID-19 pandemic.

Conclusions

HRQoL, as measured by the EQ-5D-5L instrument, varies based on the gestational age of pregnant persons and length of time since birth among postpartum adults. Based on our results of internal consistency and known group validity, the EQ-5D-5L instrument could be a sensitive and valid tool for monitoring HRQoL during pregnancy. However, internal consistency was poor during the postpartum period, suggesting the EQ-5D-5L instrument may perform more poorly during the first nine months after birth. Although further research is needed, this information can be used to inform HRQoL measurement among pregnant and recently pregnant adults.

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Table 2. Characteristics of survey participants, overall and by study wave – United States, May 2021 – April 2022.

Characteristic	U.S. Population (2016-2020)*	Total (n=6,660)	Wave 1 May – Jul 2021 (n=3,392)	Wave 2 Dec 2021 – Apr 2022 (n=3,268)
	Percent	N (%)	n (%)	N (%)
Maternal age				
18-24 years	22.0%	530 (8.0%)	432 (12.7%)	98 (3.0%)
24-29 years	28.7%	1,423 (21.4%)	981 (28.9%)	442 (13.5%)
30-34 years	29.9%	2,330 (35.0%)	1,055 (31.1%)	1,275 (39.0%)
35-39 years	15.8%	1,881 (28.2%)	716 (21.1%)	1,165 (35.6%)
≥40 years	3.6%	457 (6.9%)	172 (5.1%)	285 (8.7%)
Maternal race/ethnicity				
Latina/x or Hispanic	24.2%	948 (14.2%)	349 (10.3%)	599 (18.3%)
Black	14.8%	241 (3.6%)	213 (6.3%)	28 (0.9%)
White	51.5%	5,171 (77.6%)	2,628 (77.5%)	2,543 (77.8%)
Asian	6.1%	220 (3.3%)	135 (4.0%)	85 (2.6%)
American Indian, Alaskan Native, or Pacific Islander	1.0%	29 (0.4%)	22 (0.7%)	7 (0.3%)
Multiple races	2.3%	12 (0.2%)	9 (0.3%)	3 (0.1%)
Educational attainment				
≤High school	38.4%	662 (9.4%)	346 (10.3%)	276 (8.5%)
Some college	27.6%	991 (15.0%)	561 (16.8%)	430 (13.2%)
College graduate	21.1%	2,275 (34.4%)	1,180 (35.2%)	1,095 (33.5%)
Graduate degree	12.8%	2,725 (41.2%)	1,261 (37.7%)	1,464 (44.8%)
Region of residence				
Midwest	20.9%	1,690 (25.4%)	813 (24.0%)	877 (26.8%)
Northeast	15.9%	1,174 (17.6%)	490 (14.4%)	684 (20.9%)
South	39.7%	2,168 (32.6%)	1,281 (37.8%)	887 (27.1%)
West	23.4%	1,576 (23.7%)	764 (22.5%)	812 (24.8%)
U.S. Territory	--	13 (0.2%)	8 (0.2%)	5 (0.2%)
Metropolitan residence	86.4%	5,545 (85.3%)	2,698 (82.2%)	2,847 (88.5%)
Employed				
Employed	---	4,315 (64.8%)	2,342 (69.8%)	1,973 (60.5%)
Maternity leave	---	1,646 (24.7%)	822 (24.5%)	824 (25.3%)
Unemployed	---	655 (9.8%)	189 (5.6%)	466 (14.3%)
Insured	---	6,422 (97.7%)	3,263 (98.0%)	3,159 (97.4%)
Married or in a partnership	---	5,981 (90.4%)	2,903 (86.7%)	3,078 (94.3%)
Sexual orientation				
Homosexual/Gay	---	68 (1.0%)	30 (0.9%)	38 (1.2%)
Bisexual	---	381 (5.9%)	225 (6.8%)	156 (4.9%)
Heterosexual	---	5,983 (92.0%)	3,007 (91.0%)	2,976 (93.1%)
Something else	---	69 (1.1%)	43 (1.3%)	26 (0.8%)
Born overseas	21.2%	872 (13.1%)	321 (9.6%)	551 (16.9%)
Pre-existing health condition	---	959 (15.0%)	500 (15.5%)	459 (14.4%)
Diagnosed pregnancy complication	---	1,052 (16.6%)	582 (18.0%)	470 (15.0%)
Intended pregnancy	---	4,798 (72.5%)	2,413 (71.9%)	2,385 (73.0%)
Parity				

0	38.8%	1,786 (27.0%)	667 (20.2%)	1,109 (34.0%)
1	31.6%	2,732 (41.3%)	1,487 (44.3%)	1,245 (38.1%)
≥2	29.6%	2,12 (31.8%)	1,191 (35.5%)	911 (27.9%)

* Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Natality on CDC WONDER Online Database. Data are from the Natality Records 2016-2020, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at http://wonder.cdc.gov/natality-expanded-current.html on Jun 17, 2022 4:46:17 PM

Figure 1. Percent of participants reporting problems with mobility, self-care, engaging in usual activities, pain or discomfort, and anxiety and depression (EQ-5D-5L), by the month of pregnancy or postpartum at the time of survey – United State, May 2021 to April 2022.

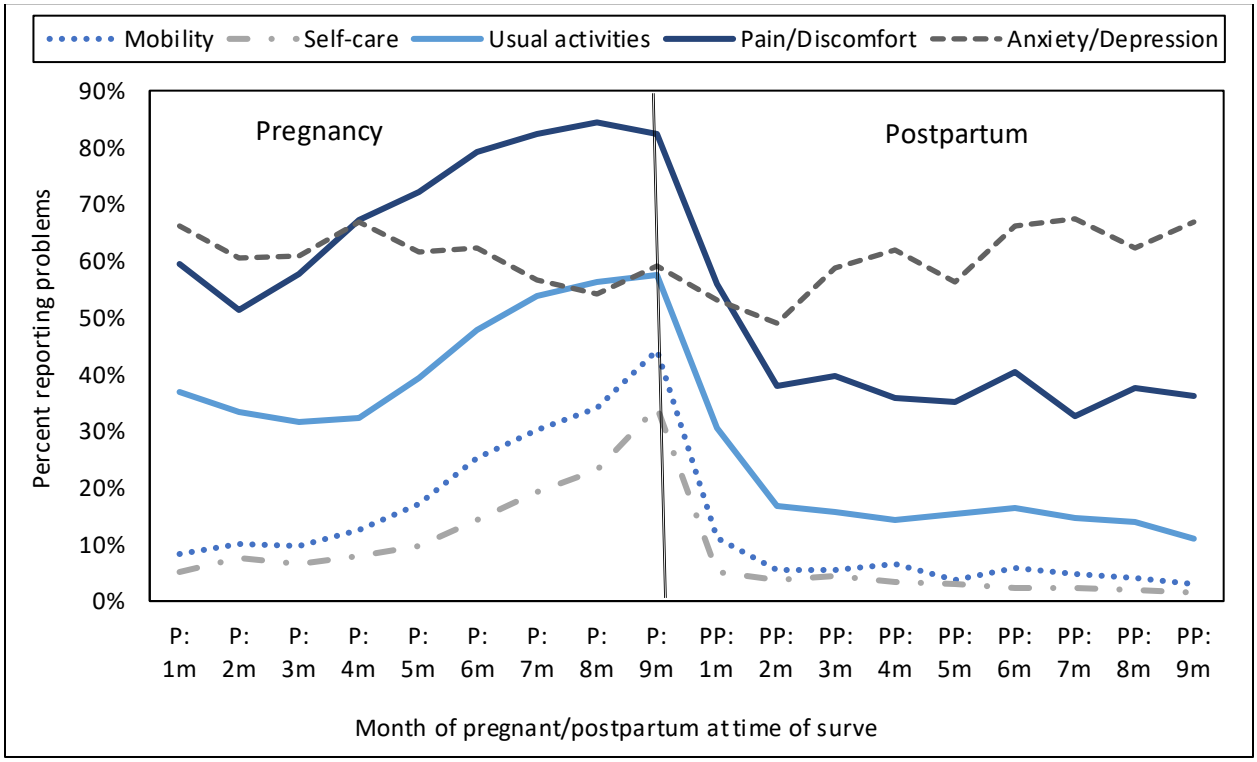

Figure 2. Mean EQ-5D-5L utility values (a) and EQ-5D-5L VAS scores (b), by the month of pregnancy or postpartum at the time of survey – United States, May 2021 to April 2022.

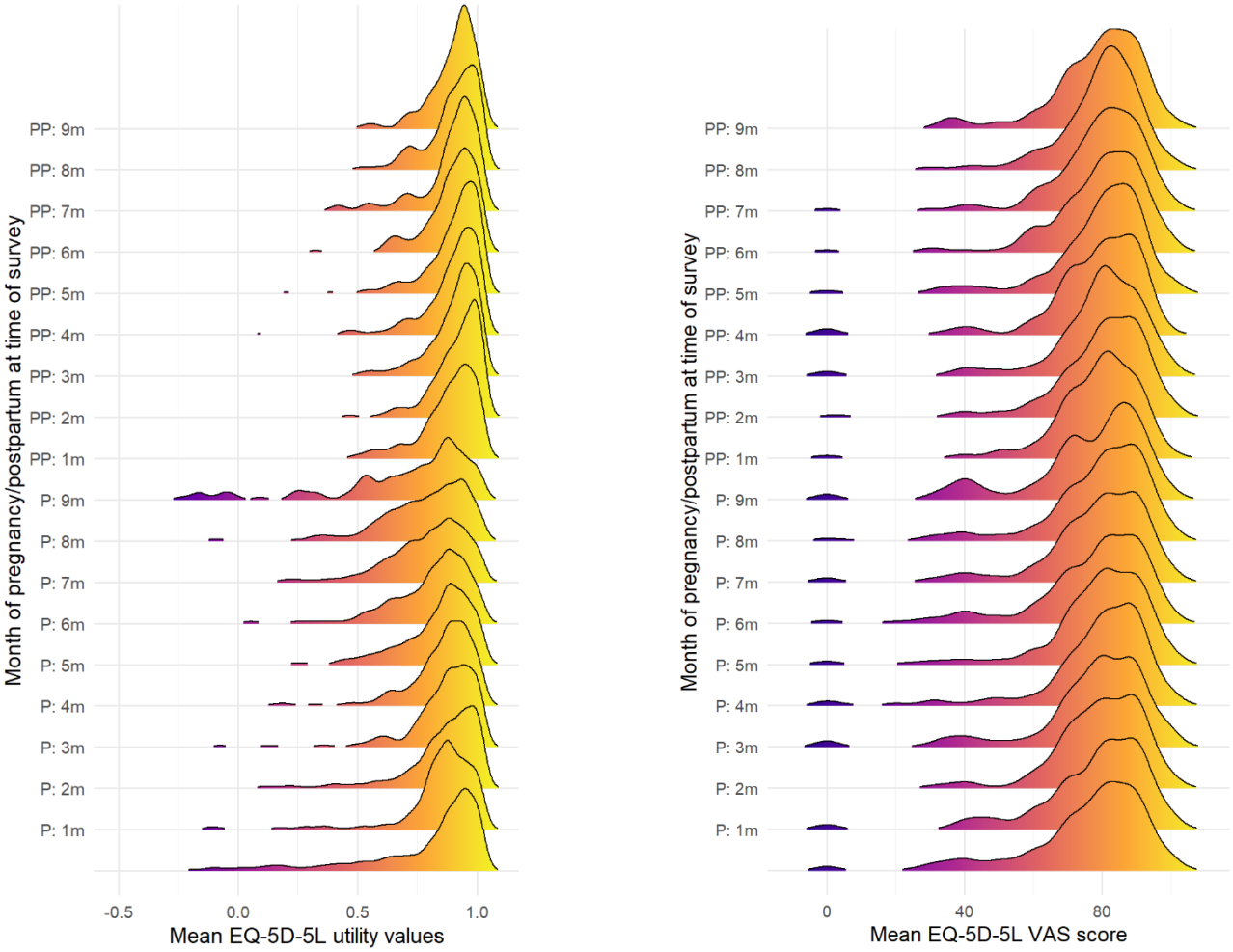

Figure 3. Distribution of EQ-5D-5L VAS scores and EQ-5D-5L utility values, by diagnosis with pre-eclampsia or gestational diabetes and the month of pregnancy or postpartum at the time of survey – United States, May 2021 to April 2022.

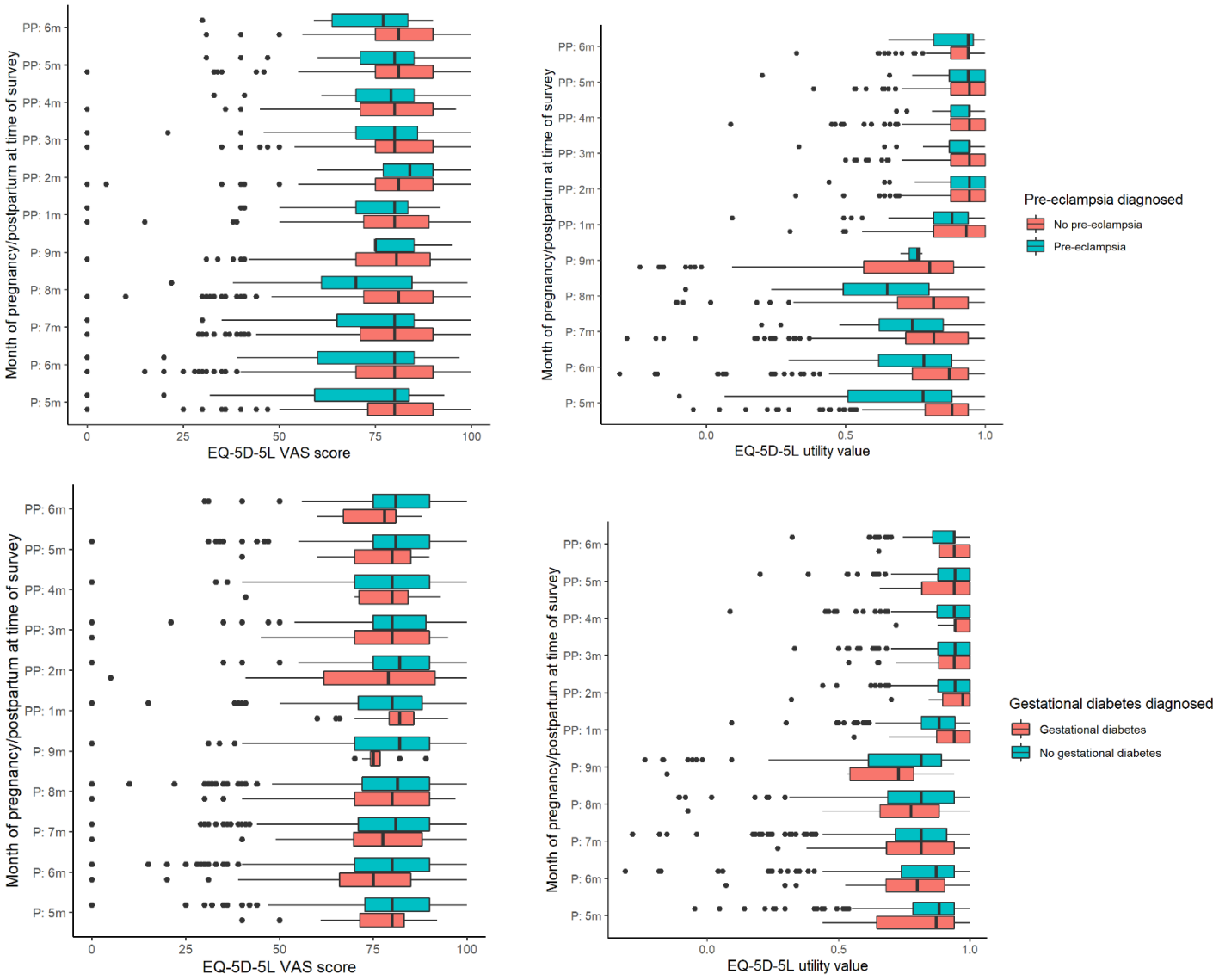

Figure 4. Cronbach alpha values and 95% confidence intervals (CIs) for EQ-5D-5L instrument, by month of pregnancy or postpartum at the time of survey – United States, May 2021 – April 2022

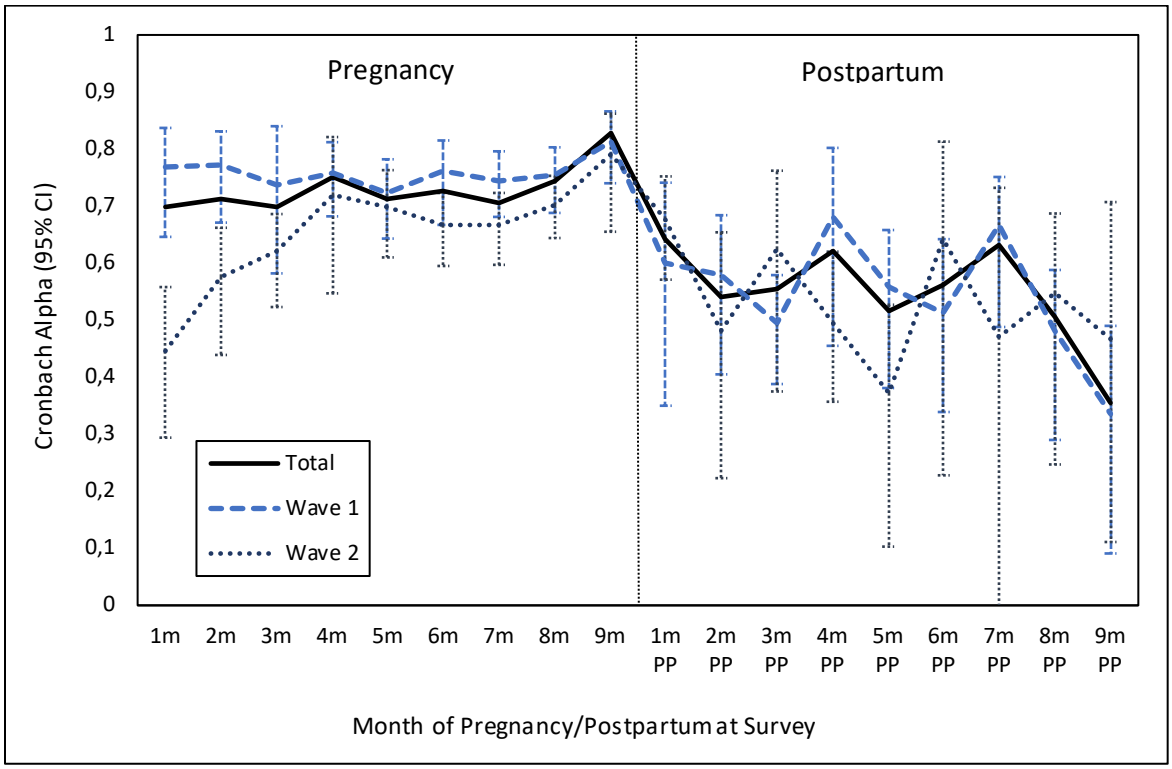

Table S1. Health-related quality of life measures recorded by the EQ-5D-5L instrument, by gestational age and months since birth (postpartum) as reported by U.S. pregnant persons – United States, May 2021 – April 2022.

Time of Survey		n	EQ-5D-5L Utility			EQ-5D-5L VAS		
			Range (min, max)	Median (IQR)	Mean (SE)	Range (min, max)	Median (IQR)	Mean (SE)
Pregnancy	1 month	266	-0.24, 1.00	0.88 (0.23)	0.84 (0.19)	0, 100	80 (20)	78 (18)
	2 months	260	-0.21, 1.00	0.88 (0.13)	0.85 (0.18)	0, 100	80 (18)	79 (17)
	3 months	311	-0.38, 1.00	0.88 (0.13)	0.85 (0.17)	0, 100	80 (18)	77 (14)
	4 months	411	-0.43, 1.00	0.88 (0.13)	0.84 (0.18)	0, 100	81 (16)	78 (18)
	5 months	493	-0.10, 1.00	0.88 (0.13)	0.83 (0.16)	0, 100	80 (16)	79 (17)
	6 months	556	-0.31, 1.00	0.85 (0.22)	0.80 (0.18)	0, 100	80 (20)	77 (15)
	7 months	611	-0.28, 1.00	0.81 (0.22)	0.79 (0.18)	0, 100	80 (20)	78 (17)
	8 months	553	-0.11, 1.00	0.81 (0.25)	0.78 (0.18)	0, 100	81 (18)	78 (16)
	9 months	120	-0.24, 1.00	0.78 (0.29)	0.70 (0.29)	0, 100	81 (19)	75 (16)
Postpartum	1 month postpartum	337	0.09, 1.00	0.90 (0.13)	0.88 (0.13)	0, 100	80 (16)	78 (19)
	2 months postpartum	253	0.32, 1.00	0.94 (0.12)	0.91 (0.11)	0, 100	81 (15)	80 (14)
	3 months postpartum	285	0.33, 1.00	0.94 (0.12)	0.90 (0.11)	0, 100	80 (14)	79 (16)
	4 months postpartum	218	0.09, 1.00	0.94 (0.12)	0.90 (0.12)	0, 100	80 (19)	78 (16)
	5 months postpartum	208	0.20, 1.00	0.94 (0.12)	0.90 (0.12)	0, 100	81 (15)	79 (15)
	6 months postpartum	153	0.32, 1.00	0.94 (0.07)	0.89 (0.11)	0, 100	81 (15)	79 (14)
	7 months postpartum	144	0.41, 1.00	0.94 (0.07)	0.89 (0.13)	0, 100	81 (15)	79 (14)
	8 months postpartum	122	0.51, 1.00	0.94 (0.12)	0.90 (0.10)	30, 100	81 (11)	80 (17)
	9 months postpartum	100	0.53, 1.00	0.94 (0.07)	0.90 (0.09)	35, 100	80 (17)	79 (13)

Optional alternative to Figure 1. Distribution of (a) EQ-5D-5L utility values and EQ-5D-5L VAS scores, by the month of pregnancy or postpartum at the time of survey – United States, May 2021 – April 2022.

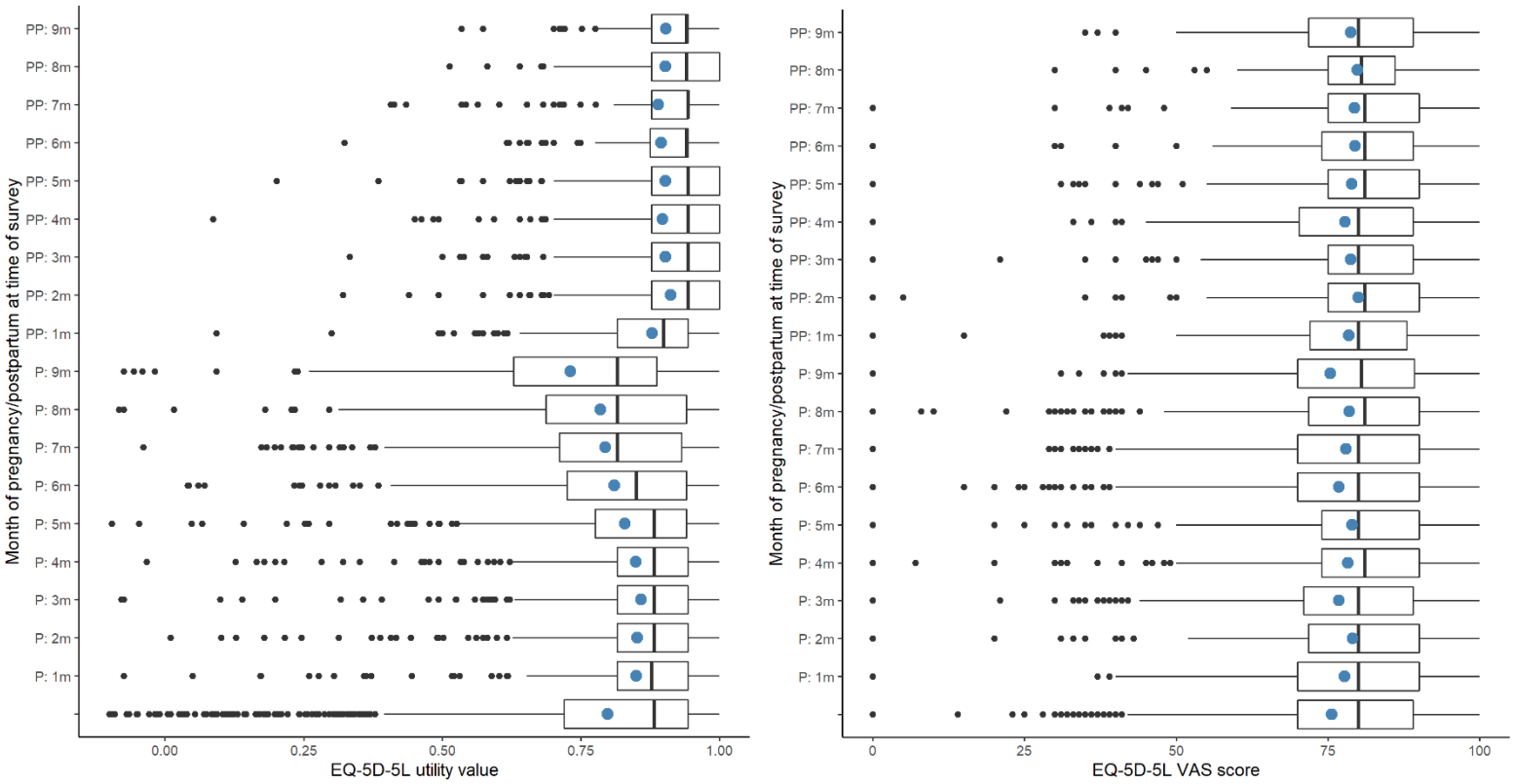

Figure S2. Distribution of EQ-5D-5L utility values and EQ-5D-5L VAS scores, by survey wave and the month of pregnancy or postpartum at the time of survey – United States, May 2021 – April 2022.

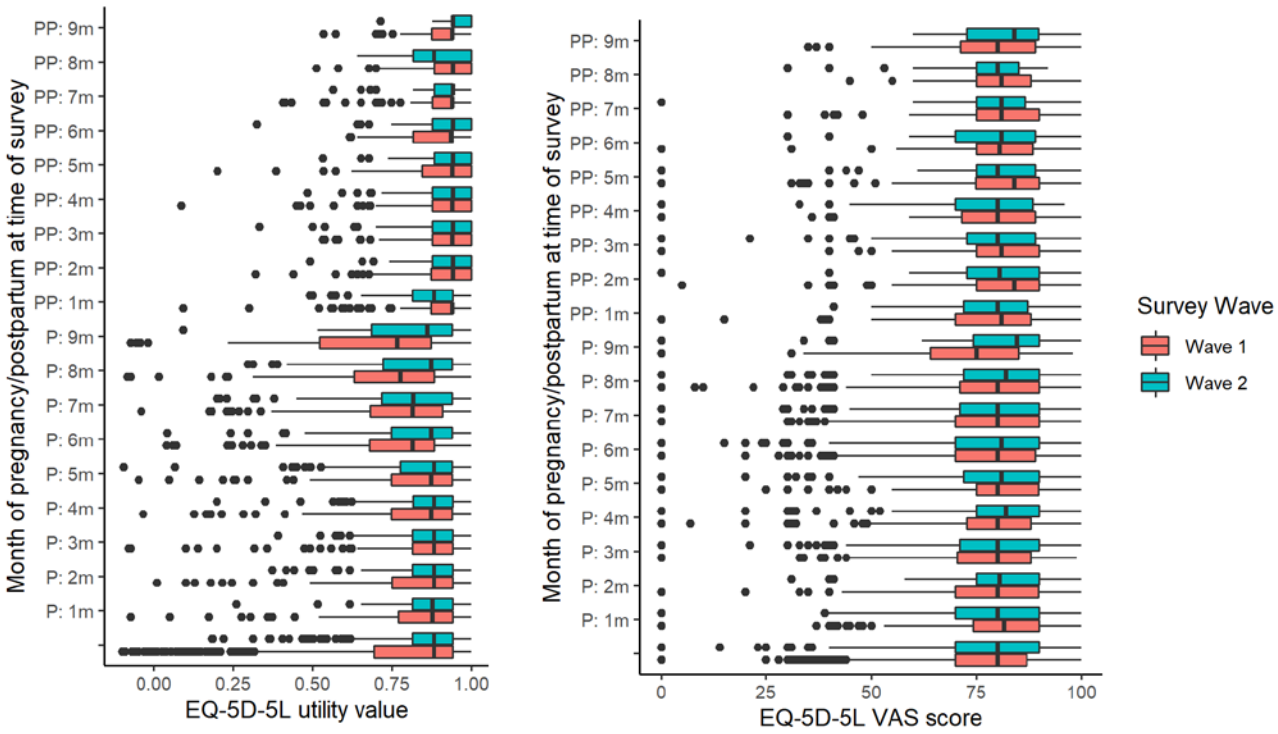

Figure S3. Mean EQ-5D-5L utility values (a) and EQ-5D-5L VAS scores (b), by year and quarter of conception – United States, May 2021 to April 2022.

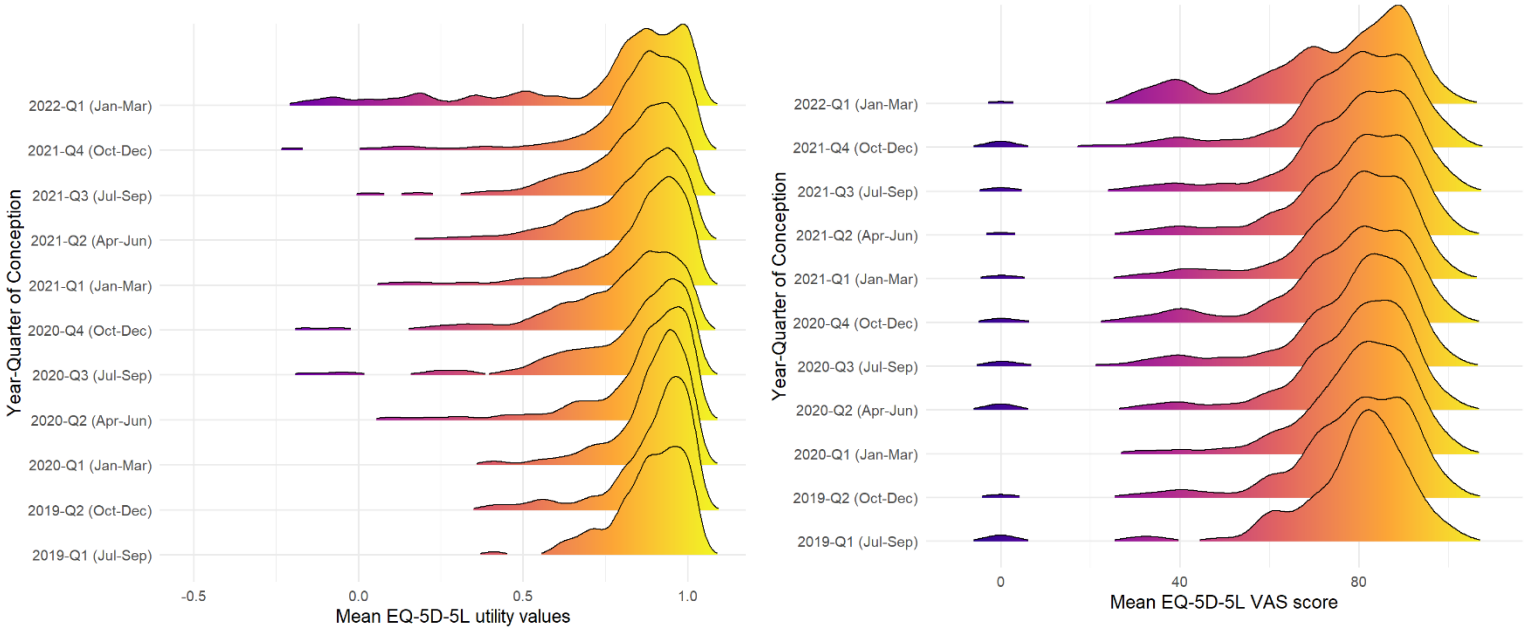

Figure S4. Percent of participants reporting problems with mobility, self-care, engaging in usual activities, pain or discomfort, and anxiety and depression (EQ-5D-5L), by the year and quarter of conception – United States, May 2021 to April 2022.