Supplementary File 1: Formative survey questionnaire

A Bangla-language retrieval-augmented conversational agent for maternal health in a low-resource setting: design and formative evaluation

The 17-item instrument used in the formative requirements survey ($N = 72$) is reproduced in Table 1. Items 11 to 13 permitted selection of up to five options; percentages reported for these items are therefore expressed as a proportion of all selections rather than of participants. Item 1 collected respondent name during administration to permit de-duplication and to link initial-survey participants with later feedback respondents; this identifier was removed prior to analysis and no identifying information appears in the analyzed dataset. The age bands in item 2 are reproduced exactly as administered, including the boundary values 25 and 35 that appear in two adjacent categories; respondents selected a single band.

Table 1: Formative survey questionnaire items.

No	**Question**	**Response options**
1	Name	Short answer (removed prior to analysis)
2	Age	Under 18; 18–25; 25–35; 35–45; over 45
3	Education level	No formal education; primary; secondary; college; bachelor's; master's or higher
4	Occupation	Homemaker; service; business; student; daily wage labor; unemployed; other (specify)
5	Household location	Urban; semi-urban; village
6	Number of family members	Short answer
7	Annual household income	Less than 1 lakh; 1–5 lakh; 5–8 lakh; more than 8 lakh (BDT)
8	Internet or smartphone access	Personal smartphone and internet; shared access; does not have smartphone
9	Language comfort in app	Only Bangla; only English; both Bangla and English
10	Number of pregnancies	1; 2; 3; 4; 5; more than 5
11	Five main complications experienced during pregnancy (select up to five)	Morning sickness or nausea; back pain or body aches; fatigue or low energy; sleep difficulties; fear of miscarriage or complications; fear of childbirth or labor pain; financial stress or income insecurity; lack of support from partner or family; anxiety or depression; isolation or loneliness; hormonal mood swings; difficulty accessing health care services; negative experiences with doctors or hospitals; weight gain or body-image concerns; work-related stress; social pressure or cultural expectations; miscarriage or stillbirth in a previous pregnancy; concerns about the baby's health or development; domestic violence or verbal abuse; other (specify)

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Table 1: Formative survey questionnaire items. (Continued)

No	Question	Response options
12	Five main concerns during pregnancy (select up to five)	Baby's health and development; risk of miscarriage or complications; safe delivery and labor pain; physical changes and body image; whether I will be a good mother; financial stability and expenses; managing household responsibilities; balancing work and pregnancy; future of career after childbirth; quality of medical care; availability of emotional support; changes in relationship with partner; breastfeeding and baby-care knowledge; birth defects or genetic disorders; pre-existing health conditions affecting pregnancy; handling multiple children; whether my partner will be supportive during delivery; fear of C-section or surgery; impact of pregnancy on mental health; postpartum recovery and health; other (specify)
13	Five main positive moments during pregnancy (select up to five)	Feeling the baby's first kick; hearing the baby's heartbeat; seeing the baby in an ultrasound; receiving love and care from family; partner's support and involvement; preparing for the baby; bonding emotionally with the baby; receiving gifts or blessings; positive feedback from doctors or nurses; family excitement about the baby; taking maternity photos; talking to the baby or playing music; friends or community showing support; reading or learning about motherhood; reduced workload or time to rest; partner attending checkups or scans; reconnecting spiritually or religiously; sharing the pregnancy news; watching the belly grow; feeling proud of the journey as a mother; other (specify)
14	Mental health condition during pregnancy	Mostly stable and positive; occasional anxiety or stress; frequent sadness or mood swings; depression or serious emotional distress; other (specify)
15	Physical health condition during pregnancy	Very good; mostly okay with minor issues; had some physical complications; faced serious health challenges; other (specify)
16	Other diseases or medical conditions during pregnancy	Short answer
17	Who is reporting the survey	Self; assisted