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User satisfaction with antenatal care in Norway

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Abstract

Background: In Norway, antenatal care is delivered free of charge in the municipality. Satisfaction with care is considered to be an important predictor of utilization of health care. The aim of this study was to examine women's satisfaction with antenatal care, and to identify factors that predict overall satisfaction with the service.

Methods: A total of 611 women completed a survey that collected information on demographic variables, pregnancy variables, and aspects of antenatal care; it also contained one open-ended question. A hierarchical multiple regression analysis was conducted to predict Overall Satisfaction with antenatal care based on four specific scales: User Participation, Accessibility, Information, and Midwife, adjusted for demographic variables.

Results: Survey responses showed that 95% of women were satisfied with antenatal care in general. The expectant mother's age, having Norwegian as the native language, and the scales User Participation, Information, and Midwife were all significant predictors of Overall Satisfaction with antenatal care. The open-ended user comments underlined the important role of midwifes in antenatal care.

Conclusions: The results of this study indicate that women who attended antenatal care in Norway were satisfied with the care they received. Midwives had an important role, and their relational and professional competence was highly valuated by expectant mothers. The findings also suggest that there are still opportunities to improve satisfaction with antenatal care, for example, by increasing the focus on mental health during antenatal consultations.

KEYWORDS
midwife, prenatal care, satisfaction, user survey

1 | INTRODUCTION

Antenatal care provides a foundation for important healthcare functions, including health promotion and disease prevention.[1] There is huge variation worldwide in the quality of care that pregnant women and newborns receive. The Nordic countries (i.e., Denmark, Sweden, Finland, Norway, and Iceland) have some of the lowest mortality rates for both mothers and newborns in the world[2] and share many similarities in terms of the services provided during pregnancy and early childhood.[3]

Norway provides universal health coverage and antenatal care is free of charge for all citizens. Antenatal care is voluntary and strongly recommended by the health authorities. A 2001 study found that around 0.1% gave birth in Norway without having attended antenatal care.[4] The Norwegian Directorate of Health has established national guidelines for antenatal care to ensure that services are high-quality, and equally accessible regardless of where you live in the country.[5] Women can choose to have their antenatal consultations with their primary doctor or with a midwife at the public health clinic in the municipality. The standard antenatal program consists of eight consultations, including an ultrasound in week 17 to 19. The consultations encompass different medical and screening tests, information, and counseling if needed. The guidelines emphasize assessing individual needs, and identifying women at risk of complications associated with alcohol use, drug use, depression, or exposure to violence.[5] One important principle outlined in the guidelines is that feedback from expectant mothers should be used to improve satisfaction with antenatal and post-pregnancy care and services. Recognizing that satisfaction with care is an important predictor of healthcare utilization, it becomes a modifiable risk factor for adverse outcomes.[6,7]

Several studies have examined maternal care in Norway,[7–10] but only a few have studied user satisfaction with antenatal care. In their hospital study, Bains et al.[7] found overall high satisfaction with maternal care among migrants. However, women who felt that their concerns were not taken seriously, for whom healthcare personnel did not spend enough time providing information, and who perceived prolonged waiting times, were more likely to be dissatisfied. High Norwegian language comprehension and higher education were also related to higher dissatisfaction with care. In their study, they asked the participants about their experiences with antenatal care 17 weeks after birth, increasing the risk of recall bias.

Sjetne and Iversen[10] found no systematic differences in experiences of maternal care in Norway based on geographical origin. However, it is important to note that their study assessed satisfaction shortly after birth, which may lead to an overestimation. To obtain more accurate results, it is recommended to assess satisfaction with antenatal care prepartum.[11]

1.1 | Study aim

The aim of this study was to examine women's satisfaction with antenatal care in Norway during the prepartum period, and to identify factors that contribute to overall satisfaction with the service. Based on previous studies on maternal care, we expected to see high levels of overall satisfaction. In addition, we hypothesized that demographic variables would not be a strong predictor of overall satisfaction.[7,10]

2 | METHODS

2.1 | Procedure and participants

This study is part of a longitudinal study called "Collaboration and service quality in municipal services for children, adolecents, and their families in Norwegian municipalities" (the SKO-study).[12,13] One specific aim of the SKO-study was to examine parent satisfaction with the services municipalities provide to their children and families. The current study used cross-sectional data from surveys completed by pregnant women from 21 participating municipalities across Norway, who attended antenatal care at a public health clinic in the municipality. The STROBE checklist for cross-sectional studies was followed.[14]

The public health clinics in the participating municipalities received the necessary materials to manage the surveys, such as prepared envelopes containing the survey and a prepaid envelope to return the survey, addressed to UiT The Arctic University of Norway.[12,13] Data collection took place from May 2015 to October 2019, and lasted 6 to 8 weeks in each municipality. All pregnant women who attended antenatal care at a public health clinic during the survey period were invited by their midwife to participate in the study. Eighteen of the 21 participating municipalities provided information about the response rate, which varied from 17% to 100%. The total number of questionnaires that were distributed in the different public health clinics were about 1421 (excluding the three municipalities who did not provide information about response rate), and 611 completed the survey (response rate approximately 42%).

2.2 | Ethical considerations

The SKO-study was approved by the Data Protection Official for Research, Norwegian Centre for Research Data (no. 39022). The participants were informed about the study, that their participation was voluntary and anonymous, and how the collected data would be handled. It is not known whether the questions used in the survey lead to any discomfort for the participants.

2.3 | Instrument

The survey items were adapted from the National Knowledge Center for the Health Service, an earlier user

satisfaction survey for open kindergartens,[15] and an online tool for municipalities on user satisfaction surveys developed by Kommuneforlaget and The Norwegian Association of Local and Regional Authorities. The survey was available in Norwegian and English. It collected information on demographic variables, including age (≤19, 20–30, 31–40, or ≥41 years), native language (Norwegian, other European language, and or non-European language), and highest completed educational level (primary and lower secondary school, upper secondary school, college/university 1–3 years, and college/university ≥4 years). Pregnancy variables asked whether the participant was a first-time mother (yes, no) and if she had experienced any pregnancy complications (yes, no). There were also two questions asking how many antenatal consultations the woman had attended (1, 2–4, 5–8, ≥9), and which practitioner they preferred to have at antenatal consultations (midwife at a public health clinic, primary doctor, a combination of a midwife at the public health clinic and their primary doctor, or private midwife).

The survey included another 25 questions that explored women's experiences with different aspects of antenatal care, which were grouped into the following scales: (1) User Participation, (2) Accessibility, (3) Information, (4) Midwife, and (5) Overall Satisfaction. An principal components analysis with varimax rotation was conducted and identified four factors that reproduced the scales User Participation, Accessibility, Information, and Midwife. The scale Overall Satisfaction consisted of three questions that loaded relatively low on multiple scales. The User Participation scale consisted of five items (e.g., "To what extent is the midwife receptive to your needs/wishes?"), the Accessibility scale consisted of five items (e.g., "To what extent are you satisfied with the opening hours in antenatal care?"), the Information scale consisted of four items (e.g., "To what extent are you satisfied with the written information you are given at the antenatal consultations?"), and the Midwife scale consisted of eight items (e.g., "To what extent do you feel that you are met with consideration and care by the midwife?"). Responses were given on a 5-point scale ranging from (1) "not at all" to (5) "to a very great extent."

The Overall Satisfaction scale consisted of three questions: "Overall, how dissatisfied or satisfied are you with the antenatal consultations with the midwives at the public health clinic," "Overall, how dissatisfied or satisfied are you with the antenatal consultations at the primary doctor?" and "Overall, how dissatisfied or satisfied are you with the antenatal care in general?" answered on a 5-point scale from (1) "very dissatisfied" to (5) "very satisfied."

Finally, the survey consisted of an open-ended question where the participants were asked to share their comments about antenatal care and the survey.

2.4 | Data analysis

Statistical analyses were conducted with SPSS (version 26) and included frequency distributions, descriptive statistics, correlations between variables, and Cronbach's alpha. Cronbach's alpha values of 0.70 or above were considered adequate.[16]

Hierarchical regression analysis was conducted to predict pregnant women's overall satisfaction with antenatal care. The interclass correlation coefficient was 0.10, indicating that a small proportion of the variance was explained by the grouping variable (i.e., municipality); thus, a multilevel approach was not necessary.[17] In Step 1, we entered age, being a first-time mother (0 = no and 1 = yes), pregnancy complications (0 = no and 1 = yes), completed educational level (0 = lower education and 1 = higher education), and native language (0 = other than Norwegian and 1 = Norwegian). In Step 2, we also entered four of the scales: User Participation, Accessibility, Information, and Midwife.

Responses to the open-ended question were analyzed by NVivo (release 1.5) using a thematic analysis.[18] The analytical process was data-driven, dynamic, and discussed in the research group. Users' comments were read repeatedly, and preliminary themes were identified. Data were then sorted and synthesized by theme, and similar concepts were combined.

3 | RESULTS

Most participants were between 20 and 40 years of age ($n = 585$; 98%), 50% were first-time mothers ($n = 295$), 81% reported no pregnancy complications ($n = 486$), and 71% reported attending five or more antenatal consultations ($n = 428$). Most participants preferred having all antenatal consultations with a midwife at a public health clinic ($n = 323$; 56%), or having some consultations with a midwife at a public health clinic and some with their primary doctor ($n = 248$; 43%; Table 1).

3.1 | Satisfaction with different aspects of antenatal care

Nearly all participants reported that their midwife treated them with courtesy and respect (99%; Table 2) and that the information they received at the antenatal

TABLE 1 Characteristics of the study sample ($N = 606–597$).

	n	%
Age		
≤19 years	7	1
20–30 years	332	55
31–40 years	255	43
≥41 years	8	1
Native language		
Norwegian	529	87
Other European language	58	10
Other non-European language	19	3
Highest completed educational level		
Primary and lower secondary school	21	3
Upper secondary school	170	28
College/university 1–3 years	181	30
College/university ≥4 years	233	39
First-time mother		
Yes	299	50
No	298	50
Pregnancy complications		
Yes	108	18
No	489	82
Number of antenatal consultations		
1	14	3
2–4	157	26
5–8	277	46
≥9	151	25

consultations was easy to understand (98%). Most of the participants were satisfied with the time set aside for consultations (95%) and reported that the midwife was receptive to their needs (94%). Some of the survey items had a lower rating compared to the overall results. Only 54% reported that they had received information about their right to either accept or refuse a test, and 61% reported that they had the opportunity to influence where they would give birth. The three questions about the overall satisfaction with antenatal care showed that 97% of participants were satisfied with the consultations with midwives at the public health clinic, 64% were satisfied with the consultations with their primary doctor, and a total of 95% reported that they were satisfied with antenatal care in general (Table 2).

The mean scores for the five user scales were mostly high; the lowest score was observed for the User Participation scale ($M = 3.88$; SD = 0.84) and the highest for the Midwife scale ($M = 4.65$; SD = 0.44). The user scales correlated significantly and positively with each other. Cronbach's alpha values for the different user scales ranged from 0.63 (Overall Satisfaction) to 0.90 (Midwife; Table 3).

3.2 | Predicting overall satisfaction with antenatal care

When the variables included in Step 1 were included in the hierarchical regression model, results were significant and explained a total of 4% of the variance. Older mothers and having Norwegian as the native language were significant predictors of higher satisfaction. The variables included in Step 2 were also significant and explained 22% of the variance in Overall Satisfaction. The User Participation, Information, and Midwife scales were all significant predictors (Table 4).

3.3 | The users' free-text comments

Of the 611 women who participated in the survey, 99 responded to the open-ended question about antenatal care and the survey. The analysis of these responses resulted in three themes: (1) opinions and additional information about the survey, (2) positive experiences with antenatal care, and (3) shortcomings and suggestions for improvement of antenatal care. The first theme consisted of general comments about the survey and additional information about the participant (e.g., occupational status or due date), and was not relevant for further analysis.

The user comments about positive experiences with antenatal care highlighted satisfaction with health professionals and overall positive experiences with antenatal care. Several of the participants highlighted their satisfaction with the midwife, and pointed to high levels of relational and professional competence:

> The midwife at the public health clinic is amazing! She sets aside plenty of time for the consultations, explains along the way, is good at informing, and takes you seriously if you feel that something is wrong.

In the theme shortcomings and suggestions for improvement of antenatal care, the comments included negative experiences with health professionals, lack of information, and lack of accessibility. About accessibility, one participant wrote:

> My primary doctor was often unavailable, and I met a new substitute doctor at almost every consultation.

TABLE 2 Frequency distribution of responses to survey items by user scales.

	Min-max	*M*	SD	Not at all/to a minor extent	To some extent	To a great extent/to a very great extent
User participation (*N* = 581–606)						
Midwife receptive to your needs	1–5	4.55	0.65	1%	5%	94%
Influence the type of support you receive	1–5	4.17	0.94	5%	16%	79%
Information about your right to either accept or refuse a test	1–5	3.39	1.45	29%	17%	54%
Influence where the antenatal consultations take place	1–5	3.64	1.37	23%	14%	63%
Influence where you will give birth	1–5	3.63	1.41	24%	15%	61%
Accessibility (*N* = 439–585)						
Getting in contact with the clinic by means of telephone, e-mail, etc.	1–5	4.36	0.82	4%	8%	88%
Making appointments outside fixed consultations	1–5	4.26	0.95	6%	10%	84%
Physical accessibility of the clinic (e.g., stairs and lift)	1–5	4.40	0.83	4%	9%	87%
Time set aside for consultation	1–5	4.63	0.64	1%	4%	95%
Opening hours of the clinic	1–5	4.40	0.81	3%	9%	88%
Information (*N* = 597–601)						
Easy to understand	1–5	4.68	0.53	1%	1%	98%
Adequate	1–5	4.54	0.62	1%	5%	94%
Satisfied with the written information	1–5	4.30	0.81	3%	11%	86%
Find information you need about the service on the internet, etc.	1–5	4.17	0.88	4%	17%	79%
Midwife (*N* = 600–606)						
Cares and shows consideration toward you	1–5	4.68	0.56	1%	1%	98%
Understands your situation	1–5	4.60	0.64	1%	5%	94%
Meets you with courtesy and respect	1–5	4.76	0.47	0.5%	0.5%	99%
Cooperates well with you	1–5	4.71	0.53	1%	1%	98%
Follows up on what you agreed	1–5	4.60	0.59	0.5%	2.5%	97%
Trust in advice about child's health and development	1–5	4.66	0.55	0.2%	3%	97%
Trust to detect whether child is not developing normally	1–5	4.42	0.73	1%	10%	89%
Meet the same midwife each time	1–5	4.81	0.50	1%	1%	98%
Overall satisfaction (*N* = 537–598)						
Overall, how dissatisfied or satisfied are you with the antenatal consultations with the midwives at the public health clinic[a]	1–5	4.71	0.56	1%	2%	97%
Overall, how dissatisfied or satisfied are you with the antenatal consultations at the primary doctor (fastlege)?[a]	1–5	3.80	1.07	10%	26%	64%
Overall, how dissatisfied or satisfied are you with the antenatal care in general?[a]	1–5	4.52	0.62	1%	4%	95%

Note: Answer categories 1 = *not at all* and 2 = *to a minor extent*, and 4 = *to a great extent* and 5 = *to a very great extent*, were combined.

[a]1 = *very dissatisfied* to 5 = *very satisfied*.

TABLE 3 Means, standard deviations, and correlations for user scales ($N = 578–606$).

	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Demographic characteristics												
1. Age	–	–	–									
2. First-time mother[a]	–	–	−0.20***	–								
3. Complications in pregnancy[b]	–	–	0.05	−0.11**	–							
4. Higher education[c]	–	–	0.30***	0.07	−0.03	–						
5. Norwegian language[d]	–	–	−0.07	0.01	−0.06	−0.05	–					
User scales												
6. User participation	3.88	0.84	−0.02	−0.08*	−0.00	−0.11**	0.11**	*0.74*				
7. Accessibility	4.40	0.64	−0.05	−0.01	−0.06	−0.13***	0.12**	0.48***	*0.80*			
8. Information	4.42	0.58	−0.01	−0.01	−0.03	−0.09*	0.06	0.57***	0.49***	*0.82*		
9. Midwife	4.65	0.44	−0.01	−0.06	−0.00	−0.07	0.06	0.57***	0.57***	0.67***	*0.90*	
10. Overall satisfaction	4.37	0.60	0.12**	−0.09*	−0.01	−0.02	0.11**	0.36***	0.34***	0.38***	0.43***	*0.63*

Note: Cronbach's alpha is presented in italics in the diagonal above the correlation coefficients. *$p < 0.05$; **$p < 0.001$; ***$p < 0.001$ (two-tailed).

[a]1 = *First-time mother* and 0 = *Not a first-time mother*.

[b]1 = *Complications in the pregnancy and* 0 = *No complications in pregnancy*.

[c]0 = *Lower education* and 1 = *Higher education*.

[d]0 = *Language other than Norwegian* and 1 = *Norwegian language*.

TABLE 4 Hierarchical regression analysis results for predicting overall satisfaction with antenatal care ($N = 578$).

	Overall satisfaction	
Variable	**ΔR^2**	**β**
Demographic characteristics		
Age	0.04***	0.11*
First-time mother[a]		−0.05
Complications in pregnancy[b]		−0.01
Higher education[c]		0.05
Norwegian language[d]		0.08*
User scales		
User participation	0.22***	0.10*
Accesibility		0.08
Information		0.12*
Midwife		0.23***
R^2	0.26***	

Note: *b*-values were taken from the last step of the model. *$p < 0.05$; ***$p < 0.001$.

[a]1 = *First-time mother* and 0 = *Not a first-time mother*.

[b]1 = *Complications in the pregnancy and* 0 = *No complications in pregnancy*.

[c]0 = *Lower education* and 1 = *Higher education*.

[d]0 = *Language other than Norwegian* and 1 = *Norwegian language*.

Some of the comments about lack of information involved the subject of mental health:

> I received very good information from my primary doctor and the midwife about my physical health, but the focus on mental health was not good enough.

Some participants highlighted the lack of relational continuity in maternal care in Norway, as they had different midwives during the antenatal consultations and during labor:

> I am really satisfied with my midwife at the public health clinic. She is really nice, I get good information and guidance. I wish that she could also be my midwife during labor, because I would feel safer.

Some participants expressed the desire for multiple ultrasound examinations in the antenatal care program in Norway, particularly emphasizing the need for an early ultrasound examination during the first trimester:

> I wish that an early ultrasound would be included in the standard antenatal program in Norway. If you wish to get an early ultrasound today, you have to do it at a private healthcare company.

4 | DISCUSSION

Most of the participants were between 20 and 40 years old and had no pregnancy complications, which is in line with existing trends in Norway.[19] Overall, expectant mothers were satisfied with the antenatal care they received, with 95% reporting that they were satisfied with antenatal care in general. These results are comparable with findings from other studies showing overall high levels of satisfaction with maternal care in Norway.[7,10]

The observed scores for the scales User Participation, Accessibility, Information, and Midwife were generally high, with the highest result for the Midwife scale. The overall high levels of satisfaction with midwives at public health clinics were also frequently expressed in the user comments, which highlighted midwives' high levels of relational and professional competence, as well as their good accessibility. In total, 97% of participants were satisfied with their consultations with midwives at the public health clinic.

Only 64% of participants were satisfied with the antenatal consultations with their primary doctor. Some of the user comments pointed to a lack of accessibility of primary doctors (e.g., long wait times), which could partly explain the discrepancy in our results for primary doctors and midwives. A lack of accessibility of primary doctors was also reported by all patient groups in a report by The Norwegian Institute of Public Health.[20] However, it is also possible that this result would have been different if the survey had been distributed at the offices of primary doctors. It should be noted that a slightly higher percentage of expectant mothers preferred having all their antenatal consultations with a midwife at a public health clinic (56%), but many (43%) preferred to have a combination of consultations: some with a midwife and some with their primary doctor.

Although we observed an overall high score for the Information scale, some of the user comments reflected a desire for more information and a focus on the subject of mental health during antenatal consultations. While Norwegian guidelines[5] do recommend inquiring about the mental health of pregnant women, it is important to note that this is not mandatory. Furthermore, the guidelines lack specific instructions on how midwives or primary doctors should identify mental health issues.

Some of the survey items in the User Participation scale had a lower rating compared with the other survey items. Only 54% of the participants reported that they had received information about their right to either accept

or refuse a test. A possible explanation for this might be that the tests included in the antenatal care program are noninvasive and recommended to secure the health of the expectant mother and her baby. Consequently, women may perceive the act of refusing a test as an invalid option, leading to the lower ratings observed.

According to Norwegian guidelines, the midwife or primary doctor is responsible for informing expectant mothers about their childbirth options and assisting with the application process.[5] However, only 61% of participants reported having the opportunity to influence their choice of childbirth institution. This could be attributed to the long distances between the different childbirth institutions in Norway, and the preference of women to give birth close to their home.

Several of the user comments expressed a desire for an ultrasound examination during the first trimester. In 2019, the Norwegian Government decided to include an early ultrasound in the antenatal program, but it has yet to be implemented for all pregnant woman due to insufficient competence and infrastructure in the healthcare system.[21]

The results showed high levels of relational continuity in antenatal consultations at the public healthcare centers, with 98% of participants meeting the same midwife at every consultation. User comments expressed a desire for increased relational continuity of care from the prepartum to the postpartum period, including having the same midwife present during labor. A Swedish study[22] showed that around 50% of pregnant women desired the same midwife throughout the prepartum, intrapartum, and the postpartum period, especially those with birth-related fear and challenging life situations. In a qualitative study by Aune et al.,[8] some midwives stated that they wanted to follow women from the prepartum through the postpartum period, but experienced this as unrealistic because of the two-part nature of the current healthcare system in Norway.

Another aim of the present study was to identify predictors of Overall Satisfaction with antenatal care. Of the demographic variables included, expectant mother's age and having Norwegian as the native language were significant predictors of overall satisfaction. The latter finding is in line with the results from another study on a municipal service for children and families in Norway, where parents with Norwegian as a their native language found the service to be more beneficial compared with parents who did not have Norwegian as their native language.[12] Native Norwegian speakers may experience higher satisfaction with antenatal care in Norway compared with non-native speakers due to factors such as greater language proficiency, cultural familiarity, easier access to information, and improved communication with healthcare providers.

The User Participation, Information, and Midwife scales were all significant predictors of Overall Satisfaction, and the strongest relationship was found for the Midwife scale. This also supports the important role of the midwives in antenatal care. Satisfaction with staff was also found to be the strongest predictor of overall satisfaction with other municipal services for children and their families in Norway.[12,13]

4.1 | Limitations

This study employed a cross-sectional design, which limits the ability to draw causal conclusions about the predictors of women's satisfaction with antenatal care.[23] The average response rate was 42%, which is lower than desired, but comparable with the response rates found in other user surveys from healthcare settings.[24] Furthermore, we observed variations in response rates among the participating municipalities in the study. However, it is essential to acknowledge that we lack specific information about the reasons for these variations. Nonetheless, there was no significant correlation between response rate and overall satisfaction level. Another limitation is related to recruitment bias. The questionnaire was only available in Norwegian and English; thus, a smaller number of participants may have been excluded from participation in the study. Indeed, expectant mothers can choose where they attend antenatal consultations, and the survey was distributed at public health clinics only, not at the offices of primary doctors. Therefore, we did not get answers from women who chose to only attend antenatal consultations with their primary doctor, among whom we might expect levels of satisfaction with antenatal consultations with primary doctors to be higher. Cronbach's alpha values for the different user satisfaction scales were adequate, except for the Overall Satisfaction scale, which was slightly below the recommended minimum of 0.70.[16] This may be because there were only three items included in the scale.

4.2 | Conclusion

The results of this study indicate that women who attended antenatal care on a municipal level in Norway were satisfied with the care they received. Midwives had an important role, and their relational and professional competence was highly valuated by expectant mothers. Opportunities for enhancing satisfaction exist, with native Norwegian speakers demonstrating higher levels of satisfaction compared with non-native speakers. Further research is needed to understand the factors contributing

to this disparity and highlight the importance of cultural competence in the service. In addition, improving the accessibility of primary doctors and placing a greater focus on mental health during antenatal consultations could be valuable areas of improvement. Mental health issues during pregnancy can have a severe influence on the mother and her child's health and well-being during pregnancy and postpartum. Thus, it is imperative for future studies to delve deeper into how mental health and other risk factors such as alcohol use and family violence are comprehensively assessed and followed up during antenatal care in Norway.

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DATA AVAILABILITY STATEMENT

The data are not publicly available due to privacy and ethical restrictions.

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