

Recognition, Knowledge, and Attitudes Toward Labor Companionship: A Hospital-Based Prospective Study

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ABSTRACT

OBJECTIVE: To evaluate the recognition, knowledge, and attitudes toward labor companionship among pregnant women, their labor companions (LCs), and hospital personnel (HP).

METHODS: This cross-sectional survey included women who gave birth our hospital between October 2022 and April 2023. Their LCs and selected HP were also invited to participate. Data on personal demographics, recognition, knowledge (considered good if participants correctly answered ≥ 8 out of 10 questions), and attitudes (considered positive with scores ≥ 48 out of 60 on 12 questions) were collected through a self-answered questionnaire. Attitudes were assessed once for HP and twice (before and after delivery) for women and their LCs.

RESULTS: A total of 191 individuals participated, including 67 pregnant women, 106 LCs, and 18 HPs. The overall recognition rate was 20.4%, with rates of 50.0% among HP, 14.9% among women, and 18.9% among LCs. Good knowledge was found in 9.5% of pregnant women, 8.1% of spouses, and 33.3% of HP (p = 0.066). Positive attitudes were observed in 72.7% of HP. Among pregnant women, 84.4% had positive attitudes before delivery, and 81.3% maintained them afterward (p = 0.060). For LCs, positive attitudes were recorded in 69.8% before delivery and 81.4% after (p = 0.308).

CONCLUSION: The study found that recognition of labor companionship was low, and most participants lacked sufficient knowledge. However, nearly three-fourths exhibited positive attitudes. Notably, pregnant women's attitudes did not improve after having an LC, whereas LCs demonstrated more positive attitudes following their experience.

KEYWORDS:

attitudes, hospital personnel, labor companion, labor companionship, pregnant women

INTRODUCTION

Labor is the process of childbirth, during which pregnant women experience both physical and psychological stress, including fear and anxiety¹. A comprehensive approach from hospital personnel (HP), including obstetricians, nurses,

and midwives, is crucial to addressing not only the physical well-being of the mother and but also her psychological and emotional needs, ensuring the health of both the mother and the unborn child². Delivery room practices differ based on factors such as cultural backgrounds,



local healthcare protocols, patient load, and resource availability. In settings with limited medical staff, nonmedical personnel may play a vital role in supporting pregnant women.

The World Health Organization (WHO) recommends the presence of a companion during labor to enhance childbirth outcomes and increase women's satisfaction, emphasizing respectful care that protects their autonomy, decision-making ability, and right to choose³. National policies allowing a chosen labor companion (LC) exist in regions such as the Americas, Southeast Asia, and Europe but are not widely implemented in the Eastern Mediterranean, Africa, and the Western Pacific⁴. In 2018, the WHO highlighted global disparities in labor companionship policies and called for future research on effective implementation strategies⁴.

Several studies, including systematic reviews, have demonstrated that continuous labor companionship can improve childbirth outcomes for both mothers and infants without adverse effects^{2,5-6}. The presence of an LC has been associated with greater satisfaction with the birth experience, reduced anxiety through emotional support, decreased reliance on pain relief and medical interventions, and enhanced psychological comfort⁶⁻⁷.

Labor companionship remains uncommon in Thailand, with limited research available on the subject. An international qualitative study under the Quali-Dec project investigated factors influencing the implementation of labor companionship in Thailand as a strategy to reduce cesarean section rates8. This study revealed that LC, typically provided by a woman's husband or mother, is perceived as highly beneficial and acceptable within the Thai cultural context. The implementation of structured training programs for companions, focusing on appropriate support methods and collaboration with healthcare professionals during pregnancy, could enhance the overall benefits for expectant mothers⁸. Two quasi-experimental studies studied the effect of LC on Thai pregnant women.

Another study found that primiparous women who had trained female family members as LCs reported higher satisfaction compared to those who received standard care⁹. Other studies have reported that the presence of a LC may contribute to a reduced need for labor induction among women in the delivery room¹⁰. However, public hospitals currently lack formal policies to support the integration of companions during labor⁸.

Our hospital, a tertiary care facility in Thailand, has allowed LCs in the labor room since 2019. However, no assessment has been conducted on the fundamental aspects of labor companionship among those involved. This study aimed to evaluate the recognition, knowledge, and attitudes toward labor companionship among pregnant women who gave birth at the hospital, their companions, and HPs.

METHODS

This cross-sectional survey study was approved by the Institutional Review Board (COA 006/2022). The sample size was determined using Cochran's Formula¹¹ (N = $Z^2P(1-p)/e^2$) for an unknown population size of LC in our hospital in 2023. However, the population proportion was known, as approximately 95% of pregnant women were accompanied by their husbands, other family members, or friends during the delivery period. The population proportion was 0.95 (p = 0.95), the reliability level of this study was 95% (Z = 1.96), and acceptable sampling error was 0.05 (e = 0.05); therefore, a minimum of 73 LC participants were required. After adding an attrition rate of 10%, at least 80 LC participants were required.

This study focuses on LC; people who came to the hospital with pregnant women were included. For pregnant women and HP, the convenience sampling method was used to recruit. The inclusion criteria comprised Thai pregnant women over 18 years old who gave birth at the hospital between October 2022 and April 2023, one of their accompanying persons who acted as an LC, and HP. HP included nurses

from the delivery or operating room, obstetrics ward, administrative nurses, and hospital policymakers. Exclusion criteria included women who gave birth before arrival or outside the delivery or operating rooms, those whose infants or themselves required special medical care, and individuals who declined participation.

Eligible participants received an information sheet and a verbal explanation from a research assistant. Participation was voluntary, with assurance that their decision would not impact their medical care. They had the option to skip any question or withdraw from the study at any time. The questionnaire, divided into four sections, was completed at their convenience.

Part 1: Collected personal data, including age, gender, marital status, education level, monthly family income, and the LC's relationship to the pregnant woman.

Part 2: Assessed recognition of LC (yes or no), prior experience as an LC (yes or no), and the preferred individual to serve as an LC.

Part 3: Evaluated knowledge of labor companionship through 10 questions with response options of "correct," "incorrect," or "not sure" (with "not sure" classified as incorrect). Scores ranged from 0 (all incorrect) to 10 (all correct).

Part 4: Measured attitudes toward labor companionship using 12 statements rated on a scale from 1 (strongly disagree) to 5 (strongly agree), with total scores ranging from 12 (all strongly disagree) to 60 (all strongly agree). Pregnant women and their LCs responded to the same attitude questions before (predelivery attitudes) and after (postdelivery attitudes) the experience of having or being an LC.

Before the study, the Thai version of the Part 3 (knowledge) and Part 4 (attitudes) questionnaires was reviewed, discussed, and revised until the researchers reached a consensus. Three independent experts—an obstetrician, an anesthesiologist, and a nurse—validated the final version. Reliability testing was conducted on 30 individuals with similar characteristics to

the study participants, yielding Cronbach's alpha coefficients of 0.819 for the knowledge questionnaire and 0.907 for the attitude questionnaire.

All questionnaire data were de-identified and analyzed anonymously. Statistical analysis was performed using IBM SPSS Statistics for Windows, Version 28.0 (IBM Corporation, Armonk, NY, USA). Continuous variables are reported as mean ± standard deviation for normally distributed data or as median with interquartile range (IQR) for non-normally distributed data. Categorical variables are presented as frequency and percentage.

Knowledge was classified as "good" if participants answered at least 8 out of 10 questions correctly (≥ 80%). Attitudes were considered "good" with scores exceeding 48 out of 60 (≥ 80%). The pre- and postdelivery attitudes of pregnant women and their LCs were compared. Univariate analysis was performed to identify factors associated with good knowledge or good predelivery attitudes, using the Chi-square or Fisher's exact test as appropriate. Data were stratified by education level (bachelor's degree or lower vs. higher than a bachelor's degree) and monthly family income (more than 2,700 USD or less). A p-value < 0.05 was considered statistically significant.

RESULTS

Among the 717 pregnant women who gave birth at our hospital during the study period, 611 women or their LCs declined participation. A total of 191 participants were included: 67 pregnant women, 106 LCs (all spouses), and 18 HPs.

The mean age of all participants was 36.4 ± 6.4 years. Among pregnant women, 85.1% were experiencing childbirth for the first time, while 77.4% of their spouses were first-time fathers. In contrast, half of the HPs had at least one child. Additional participant characteristics are presented in Table 1.

Table 1 Characteristics of participants

Characteristics	eristics N = 191		Spouses N = 106	Hospital personnel N = 18	
Age, mean SD (year),	36.4 ± 6.4	34.3 ± 4.2	37.2 ± 4.8	31 (IQR 26, 45.5)	
Gender					
Male	108	-	106 (100)	4 (22.2)	
Female	83	67 (100.0)	-	14 (77.8)	
Marital status, N = 177					
Married	182	67 (100.0)	106 (100.0)	9 (50.0)	
Single	9	-	-	9 (50.0)	
Number of children					
0	9	-	-	9 (50.0)	
1	141	57 (85.1)	82 (77.4)	2 (11.1)	
>1	41	10 (14.9)	24 (22.6)	7 (38.9)	
Education					
Higher than bachelor	102	38 (56.7)	57 (53.8)	7 (38.9)	
Bachelor or lower	89	29 (43.3)	49 (46.2)	11 (61.1)	
Family income					
≤ 2,700 USD	64	25 (37.3)	28 (26.4)	11 (61.1)	
> 2,700 USD	127	42 (62.7)	78 (73.6)	7 (38.9)	

Abbreviations: IQR, interquartile range; N, number; SD, standard deviation; USD, The United States dollar

Regarding recognition, 20.4% were aware of LC, with the highest rate among HPs (50.0%). Recognition was similar between pregnant women (14.9%) and their spouses (18.9%). A total of 90.1% had no prior experience of having or being an LC, including 98.5% of pregnant women, 83.0% of spouses, and all HPs. Recognition and experience data are detailed in Table 2.

Among the 52 pregnant women who answered the question about their preferred LC, the majority (94.2%) chose their spouses, while

the remaining respondents preferred a nurse as their LC.

Fewer participants completed the section on knowledge and the role of LCs (Table 3). The overall mean knowledge score was 5.6 ± 1.8 out of 10, with pregnant women scoring 5.5 ± 1.8 , spouses 5.4 ± 1.7 , and HPs 5.9 ± 2.1 . Good knowledge, defined as answering more than 8 out of 10 questions correctly, was observed in 9.5% of pregnant women, 8.1% of spouses, and 33.3% of HPs (p = 0.066).

 Table 2
 Recognition and experience about labor companionship

	Overall N = 191	Mother N = 67	Spouse N = 106	Hospital personnel N = 18	
Ever heard about labor companion					
Yes	39 (20.4)	10 (14.9)	20 (18.9)	9 (50.0)	
No	152 (79.6)	57 (85.1)	86 (81.1)	9 (50.0)	
Experience as a labor companion					
Yes	19 (9.9)	1 (1.5)	18 (17.O)	-	
No	172 (90.1)	66 (98.5)	88 (83.0)	18 (100.0)	

Abbreviation: N, number

Table 3 Knowledge about labor companionship

Labor companion	Correct answ	Correct answer			
	Mother N = 21	Spouse N = 37	Hospital personnel N =12		
1. Is generally accepted in Western countries	6 (28.6)	8 (21.6)	5 (41.7)		
2. One benefit is a prompt call for help if needed	17 (81.0)	22 (59.5)	8 (66.7)		
3. Maybe her spouse, pregnant woman's relative or friend	18 (85.7)	32 (86.5)	12 (100.0)		
4. A female who has had delivered her own child will serve well	9 (42.9)	10 (27.0)	5 (41.7)		
5. Maybe present during the whole process of labor	2 (9.5)	4 (10.8)	1 (8.3)		
6. May also take care of other women in labor at the same time	6 (28.6)	17 (45.9)	6 (50.0)		
7. Will comfort a pregnant woman leading to less stress	19 (90.5)	35 (94.6)	9 (75.0)		
8. Having husband as a labor companion will strengthen their relationship and bonding with their newborn	17 (81.0)	36 (97.3)	11 (91.7)		
9. Will decrease postpartum blue/ depression	12 (57.1)	25 (67.6)	9 (75.0)		
10. Can reduce maternal and perinatal (baby) mortality	9 (42.9)	12 (32.4)	5 (41.7)		

Abbreviation: N, number

When analyzing each question, the percentage of correct responses ranged from 9.5% to 90.5% among pregnant women, 10.8% to 97.3% among spouses, and 8.3% to 100.0% among HPs. Five statements consistently received low scores across all groups: "LCs can stay throughout the entire labor process," "Labor companionship is widely accepted in Western countries," "Female LCs perform better," "LCs can assist other women in labor," and "Labor companionship can reduce maternal and perinatal mortality."

Regarding attitudes toward LC, nearly all of the 12 attitude statements received scores above 4 on a scale of 60. The analysis included predelivery attitude scores and the percentage of participants with good attitudes (scores \geq 48). The mean attitude score was 52.2 \pm 5.5 for HPs, with 72.7% classified as having good attitudes. Among pregnant women, the mean score was 51.4 \pm 6.2, with 75.8% demonstrating good attitudes, while spouses had a mean score of 50.4 \pm 7.4, with 62.7% showing good attitudes.

We further analyzed the attitudes of pregnant women and spouses who completed both pre- and postdelivery assessments. Among 32 pregnant women, the mean attitude score was 52.5 ± 5.4 predelivery (84.4% with good attitudes) compared to 51.4 ± 5.6 postdelivery (81.3% with good attitudes) (p = 0.060). For 43 spouses, the pre- and postdelivery scores were 51.4 ± 6.0

(69.8% with good attitudes) and 52.5 ± 8.7 (81.4% with good attitudes), respectively (p = 0.308).

The pre- and postdelivery attitudes of pregnant women and their spouses were analyzed, revealing that most attitude items improved after firsthand experience. The greatest improvements were seen in "strengthening the bond between pregnant women and their LC" (+0.31) for pregnant women and "strengthening the bond between the LC and newborn" (+0.52) for spouses. However, pregnant women showed a slight decline in agreement with the statement "having an LC will comfort the pregnant women during labor both physically and emotionally" (-0.06). Table 4 presents the attitudes of HPs toward labor companionship, as well as the pre- and postdelivery attitudes of pregnant women and their spouses.

We also examined factors that might influence the knowledge and postdelivery attitudes of pregnant women and their spouses. Younger HPs demonstrated better knowledge compared to older HPs (100% vs. 28.6%, p = 0.028). Additionally, pregnant women from lower-income families had better attitudes than those from higher-income families (75.0% vs. 47.2%, p = 0.033). Other factors, including gender, parity, education level, recognition, or prior experience with LC, were not significantly associated with knowledge or attitudes (data not shown).

Table 4 Attitudes about labor companionship

Issue about the practice of labor companion		Positive attitude responses (agree to strongly agree), mean \pm SD						
		Hospital	Women			Spouses		
		personnel (N = 18)	Pre-labor (N = 62)	Post-labor (N = 32)	Difference	Pre-labor (N = 102)	Post-labor (N = 43)	Difference
1.	The hospital should support this as a part of maternal healthcare.	4.39 (0.61)	4.37 ± 0.71	4.44 ± 0.61	0.07	4.37 ± 0.69	4.55 ± 0.55	0.18
2.	The mother may select anybody as her labor companion.	4.28 (0.67)	4.39 ± 0.75	4.65 ± 0.54	0.26	4.34 ± 0.79	4.41 ± 0.82	0.07
3.	Labor companion should be a one-to-one manner to support the mother during labor.	4.28 (0.75)	4.32 ± 0.83	4.41 ± 0.74	0.09	4.20 ± 0.78	4.45 ± 0.66	0.25
4.	It will comfort the mother during labor both physically & emotionally.	4.56 (0.51)	4.58 ± 0.62	4.52 ± 0.57	- 0.06	4.51 ± 0.63	4.72 ± 0.50	0.21
5.	The mother's wishes can be relayed to medical personnel.	4.33 (0.77)	4.31 ± 0.78	4.36 ± 0.65	0.05	4.07 ± 0.88	4.28 ± 0.91	0.21
6.	It may comfort the mother by gentle touch or massages.	3.94 (0.87)	4.10 ± 0.82	4.27 ± 0.76	0.17	4.14 ± 0.90	4.53 ± 0.63	0.39
7.	Mother will be less stressed.	4.44 (0.62)	4.44 ± 0.64	4.58 ± 0.56	0.14	4.38 ± 0.72	4.65 ± 0.48	0.27
8.	The mother can receive empathy & admiration of her patience & strength.	4.33 (0.59)	4.39 ± 0.71	4.45 ± 0.62	0.06	4.31 ± 0.72	4.53 ± 0.55	0.22
9.	It will strengthen bonding between mother and her labor companion.	4.28 (0.90)	4.27 ± 0.77	4.58 ± 0.50	0.31	4.13 ± 0.82	4.33 ± 0.78	0.20
10.	It will build a bonding between a labor companion with the newborn.	4.22 (0.88)	4.13 ± 0.84	4.39 ± 0.79	0.26	3.95 ± 0.97	4.47 ± 0.67	0.52
11.	The personnel can provide their usual medical service without difficulty.	4.06 (0.80)	4.32 ± 0.79	4.39 ± 0.61	0.07	4.21 ± 0.77	4.35 ± 0.69	0.14
12.	This serves as a holistic obstetrical care.	4.41 (0.62)	4.25 ± 0.72	4.42 ± 0.71	0.17	4.08 ± 0.73	4.42 ± 0.66	0.34

Abbreviation: N, number

DISCUSSION

Only 20.4% of participants in this study were aware of labor companionship, despite most having higher education. Recognition was highest among HPs (50.0%), but remained lower than the 93% reported in a previous study from India¹². In contrast, recognition rates were lower among pregnant women (14.9%) and spouses (18.9%). These differences may be attributed to the varying prevalence of labor companionship across countries, with the practice being more common in regions where medical services are limited.

All LCs in this study were the women's spouses, aligning with prior research findings. Additionally, 94.2% of participants preferred their spouses as their LC¹³⁻¹⁵, as they sought both physical and emotional support during labor, aimed to strengthen parental bonding, and wished to share the emotional experience of childbirth^{8,16-17}. However, studies from Asia^{12,18} and Africa¹³ have reported different preferences, including mothers¹², other family members^{13,18}, nurses, doctors^{12,19}, or female companions^{14,19}. Women may

prefer non-spousal LCs due to expectations of better support from individuals with labor experience^{12,14,18-19} or cultural norms that discourage male presence during childbirth¹⁶. Some women prioritize choosing a compassionate individual who can remain with them throughout labor⁶.

The low response rate to the knowledge questions—only one-third of women and spouses and two-thirds of HPs-may be due to a lack of recognition or knowledge, leading participants to skip this section. This was reflected in the modest mean scores and the overall low percentage of participants demonstrating good knowledge. Our findings, which showed slightly higher mean scores and better knowledge among HPs compared to other participants, were consistent with a previous study in India, where nurses had good knowledge while pregnant women had only fair knowledge²⁰. However, the 33% rate of good knowledge among our HPs was lower than the 44%-53% reported in previous studies²⁰⁻²¹. This difference may be due to labor companionship being more commonly practiced in those countries compared to ours.

The low level of knowledge among pregnant women and spouses in our study was unexpected, especially given their high education levels, which have been linked to better knowledge in previous studies^{13,21}. This may be due to labor companionship being uncommon in our country. Additionally, many couples in our study viewed labor companionship primarily as psychological support rather than a source of medical or nursing care, possibly causing them to overlook its other benefits. Previous studies have also identified factors contributing to inadequate knowledge, such as unawareness of global or WHO guidelines¹⁵, lack of information from healthcare providers about the right to have an LC15, hospital policies or restrictions related to infection control, overcrowding, privacy concerns, and costs¹².

The positive predelivery attitudes observed in 75.8% of pregnant women in our study were similar to the 82% reported in previous studies^{20,22}. Research from Thailand has also highlighted positive attitudes and higher satisfaction among those with LCs⁸⁻⁹. These favorable perspectives may be due to the increased confidence provided by emotional and physical support, strengthened family relationships, and improved adherence to midwives' instructions²⁰⁻²¹. However, some studies, including ours, found that certain pregnant women were less optimistic, believing that no one could truly relieve their pain or address their physical needs¹⁹⁻²⁰. This was reflected in our study by the low score on the belief that LCs could provide comfort through gentle touch or massages. The reason may be data in our study were from pregnant women in the delivery room or during childbirth, a period of physical and emotional stress²³, which can contribute to negative feelings toward the birth process, including fear, and adverse emotional responses²⁴ of our pregnant women. Different findings between our study which could not positive attitude towards LC of women and previous reports showing positive might be due to cultural difference or approach of the healthcare providers to women in each hospital.

Among spouses, 62.8% had positive predelivery attitudes. However, some negative views were associated with concerns about LC's role in relaying maternal messages to medical personnel. A study from Thailand also reported negative attitudes among spouses, including beliefs that their wives should be solely cared by medical professionals, fears of witnessing their wives' pain, and feelings that their presence was not beneficial⁸.

The experience of having or being an LC can positively impact attitudes. In our study, both pregnant women and their spouses showed slightly more positive attitudes postdelivery. The most notable improvement was in the perception of "strengthening the bond between pregnant women and LC," likely due to the comfort and pain relief provided by the LC, which facilitated closer connections²⁵⁻²⁷. Another area of improvement was "strengthening the bond between the LC and newborn." Previous studies have suggested that when fathers serve as LCs, their first contact with the newborn fosters positive emotions and strengthens their bond with baby, reinforcing family relationships^{6,28}. Unexpectedly, the attitude score decreased for the belief that "having an LC will comfort the pregnant women during labor both physically and emotionally." This may be due to LC's performance or the availability of abundant resources and skilled healthcare personnel in our hospital, where physical and emotional support from an LC may be perceived as less essential.

Our study found that 72.7% of HPs had a positive attitude toward labor companionship, a relatively high rate compared to the 51%–73% reported in previous studies^{20,29-30}. These favorable attitudes may stem from the perceived benefits of labor companionship, such as reducing women's dependence on medical staff, easing workload, providing emotional support, and enhancing pain management, which can contribute to shorter labor durations and fewer cesarean deliveries. However, some HPs held negative attitudes due to concerns about privacy, distrust,

uncertainty regarding the role of LCs, and potential disruptions in communication between women and staff^{7,31}. These negative perceptions were more common among older, more experienced HPs, who may be more familiar with practices that conflict with hospital policies, potentially creating obstacles to implementing labor companionship^{15,29}.

Regarding factors associated with good knowledge and positive attitudes, our study found that younger healthcare professionals had significantly better knowledge (100% vs. 28.6%) than their older counterparts. This may be due to greater awareness of labor companionship, a concept emphasized by the WHO in 2018⁴. However, this finding contrasts with a previous study that reported higher knowledge levels among older professionals³⁰.

Additionally, we observed significantly more positive attitudes toward labor companionship among women with lower family incomes (75.0% vs. 47.4%). This contrasts with a previous study that found better attitudes among those with higher incomes¹⁹. Economic status, personal experiences, or social backgrounds may influence these differences. Women with higher incomes, as seen in our study, may have greater self-confidence or control in difficult situations, potentially affecting their perceptions of labor companionship.

Our study has several limitations. First, it was conducted in a tertiary hospital with a well-developed medical care system, where emotional support may have been emphasized over physical support. Second, the study took place around the delivery time, which may have affected participants' focus due to medical preparations and excitement, leading to fewer responses, especially postdelivery. Third, the random selection of a limited number of HPs may have influenced the findings due to differences in service roles and responsibilities.

Despite these limitations, our study has notable strengths. It is one of the few studies on labor companionship in our country. Aside from a qualitative study exploring perspectives on LC⁹ and a Quali-Dec policy suggesting it as a strategy to reduce cesarean section rates³², research on this topic remains scarce. Additionally, our survey included pregnant women and their spouses who had firsthand experience with labor companionship, ensuring the reliability of the data. Lastly, we compared overall and specific pre- and post-labor attitudes to highlight key areas for consideration.

CONCLUSION

Our study revealed low recognition and knowledge of labor companionship among participants, underscoring the need for national advocacy, particularly in areas with limited medical personnel. The intangible benefits of labor companionship—such as strengthening the bond between women and their spouses, as well as between spouses and newborns—can encourage pregnant women, their spouses, and hospital policymakers to adopt this practice. The low scores on knowledge-related items, including labor processes and benefits like reduced perinatal mortality, highlight the need for educational initiatives before women and their LCs take part in childbirth. Future studies should investigate this issue in different settings, such as public hospitals or various regions, and assess the longterm impact on family well-being.

CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

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DATA AVAILABILITY STATEMENT

Please contact the corresponding author for data availability.

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