



Community Forum



Evaluating the impact of remote monitoring
devices on chronic health conditions in the
African American community in Northern
Milwaukee

**Marquette University, Walnut Way Conservation Corp.,
Bread of Healing Clinic**

Tuesday, November 18, 2025

Team Members



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Telehealth



Telehealth: The delivery of health care, health education, and health information services via remote technologies.

Project Objectives

This pilot study assessed the effectiveness of wearable remote health monitoring devices combined with community-based education in improving chronic disease management among African American residents of Milwaukee's Lindsay Heights neighborhood.

Participation

Table 1: Demographic data from control and test group participants.
Total participants = 33.

Category	Male	Female	Age	Education	Employment
Control group	6	12	24-83	GED - Master's	Unemployed, full-time, retired
Test Group	4	11	43-76	GED - Doctoral	Unemployed, full-time, retired

Fitbit and Glucose Monitor Intervention

Test Group					
Participants	Sleep Quality	Activity Rate	Glucose Level	Heart Rate*	Sleep Hours
Overall outcome	Good (75.44%)	Very active (40.35%)	75 – 119 (61.41%)	60 – 99 (88.46%)	6 – 8 hrs. (82.46%)
Medium outcome	Fair (21.05%)	Moderately active (38.60%)	134 – 167 (33.33%)	103 – 115 (3.85%)	5 hrs. (7.02%)
Rare outcome	Not the best (3.51%)	Slightly active (21.05%)	189 – 506 (5.26%)	150 – 160 (7.69%)	9 hrs. (8.77%), 10 hrs. (1.75%)

*= 5 responses missing for the Test group.

Control Group			
Participants	Sleep Quality	Activity Rate	Sleep Hours
Overall outcome	Good (54.16%)	Very active (34.74%)	6 – 8 hrs. (62.5%)
Medium outcome	Fair (36.11%)	Moderately active (18.05%)	5 hrs. (6.94%)
Rare outcome	Not the best (9.73%)	Slightly active (38.88%), Inactive (8.33%)	9 hrs. (18.06%), No record (12.5%)

Behavioral Assessment

Behavioral Assessment Questions	Test Group	
	Yes	No
1. Keeping track of steps	37 (64.91%)	20 (35.09%)
2. Keeping track of sleep	41 (73.21%)*	15 (26.79%)*
3. Taking any measurement for blood glucose change	32 (56.14%)	25 (43.86%)
4. Planning to visit a doctor/ clinic	41 (71.93%)	16 (28.07%)
5. Concern about health	43 (75.44%)	14 (24.56%)
6. Concern about food security		
7. Willing to use remote health monitoring devices		

*= 1 response missing for the Test group

Behavioral Assessment Questions	Control Group	
	Yes	No
1. Keeping track of steps	28 (39.44%)*	43 (60.56%)*
2. Keeping track of sleep	47 (65.28%)	25 (34.72%)
3. Taking any measurement for blood glucose change		72 (100%)
4. Planning to visit a doctor/ clinic	38 (54.29%)@	32 (45.71%)@
5. Concern about health	30 (41.67%)	42 (58.33%)
6. Concern about food security	4 (5.56%)	68 (94.44%)
7. Willing to use remote health monitoring devices	50 (70.42%)\$	21 (29.58%)\$

*= 1 response missing for the Control group.

@= 2 responses missing for the Control group.

\$= 1 response missing for the Control group.

Mental Health Assessment

Test Group Mental Health Assessment Questions	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	50 (89.29%)	6 (10.71%)		
2. Feeling down, depressed, or hopeless	52 (92.86%)	4 (7.14%)		
3. Trouble falling or staying asleep or sleeping too much	40 (71.43%)	15 (26.79%)	1 (1.78%)	
4. Feeling tired or having little energy	42 (73.21%)	15 (26.79%)		
5. Poor appetite or overeating	54 (96.43%)	2 (3.57%)		
6. Trouble concentrating on things, such as reading the newspaper or watching television	52 (92.86%)			
7. Feeling bad about yourself or that you are a failure or have let yourself or your family down	51 (91.07%)			
8. Moving or speaking so slowly that other people could have noticed.	54 (96.43%)			
9. Being so fidgety or restless that you have been moving around more than usual.	54 (96.43%)			
Control Group Mental Health Assessment Questions	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	66 (92.96%)	4 (5.63%)		1 (1.41%)
2. Feeling down, depressed, or hopeless	69 (97.16%)	2 (2.84%)		
3. Trouble falling or staying asleep or sleeping too much	56 (78.87%)	14 (19.72%)	1 (1.41%)	
4. Feeling tired or having little energy	56 (78.87%)	15 (21.13%)		
5. Poor appetite or overeating	64 (90.14%)	3 (4.23%)		4 (5.63%)
6. Trouble concentrating on things, such as reading the newspaper or watching television	69 (97.16%)	2 (2.84%)		
7. Feeling bad about yourself or that you are a failure or have let yourself or your family down	71 (100%)			
8. Moving or speaking so slowly that other people could have noticed.	70 (98.59%)	1 (1.9%)		
9. Being so fidgety or restless that you have been moving around more than usual.	68 (97.14%)*	2 (2.86%)*		

*= 1 response missing for the Control group.

Outcome

The potential of combining wearable technology, health education, and trusted community institutions to address chronic disease health disparities and promote health equity in African American communities

