

Empowering Massage Therapists in Rural South Dakota

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Introduction

Prevalence of skin cancer:

- Leading malignancy in the US¹
- Over 5 million cases diagnosed annually¹

Rural healthcare challenges:

- Limited number of dermatological specialists
- Barrier to timely diagnosis and treatment

Role of Licensed Massage Therapists:

- Underutilized resource in rural areas
- Frequent patient interactions
- Identify suspicious skin lesions and refer

Current gaps and study objectives:

- Lack of formal training in recognizing skin cancer signs among massage therapists and students
- Need for targeted educational initiatives

Hypothesis

Providing targeted educational interventions on skin cancer identification and prevention to Licensed Massage Therapists in rural South Dakota will improve their knowledge, confidence, and practices related to early detection of suspicious skin lesions.

Alerting/Advising Clients on Suspicious Skin Lesions

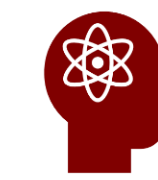
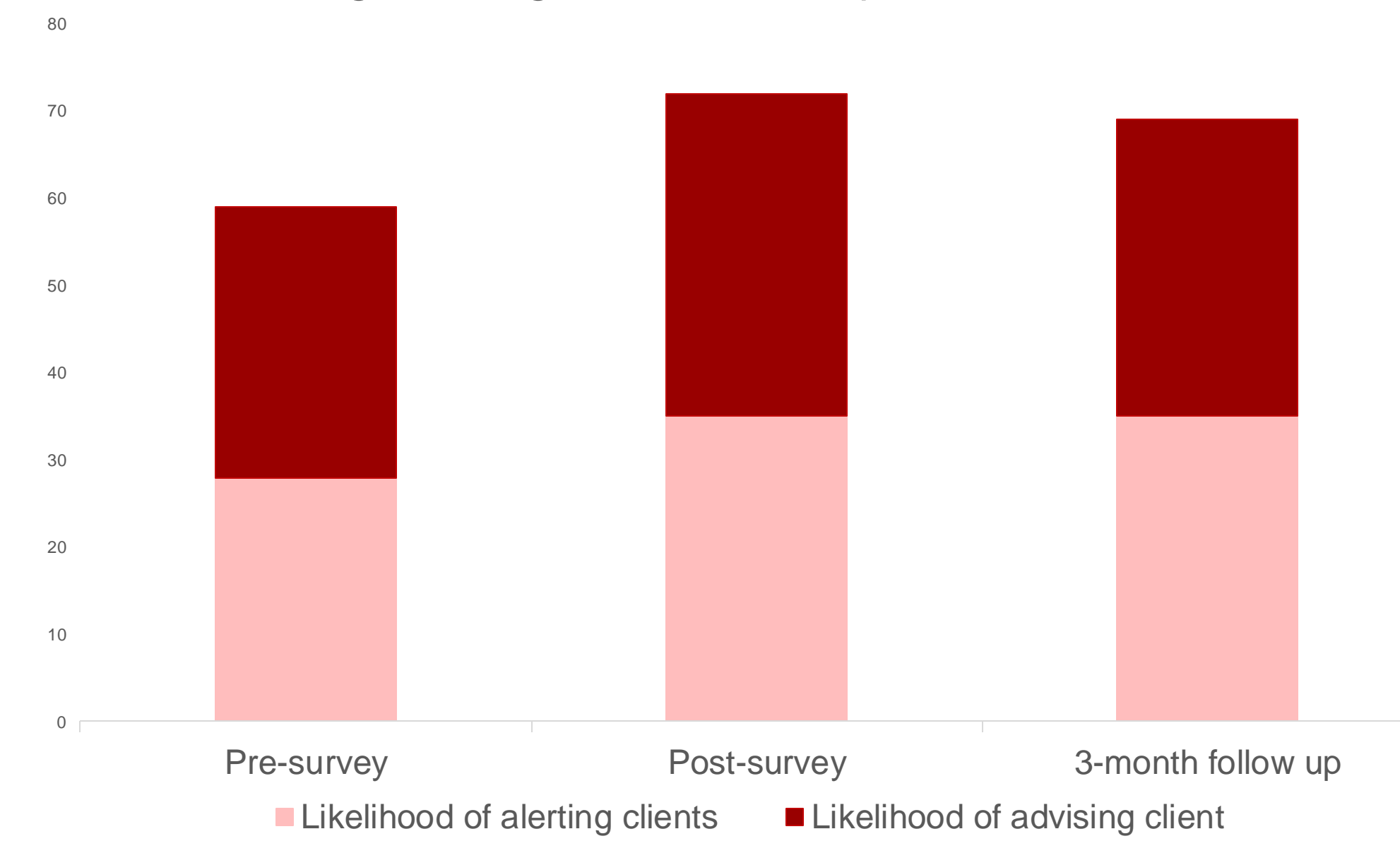


Figure 2. Participant responses on comfortability identifying suspicious skin lesions on patients and providing skin cancer prevention information to patients: Pre- and post-educational intervention.

Identifying Suspicious Skin Lesions and Providing Counsel

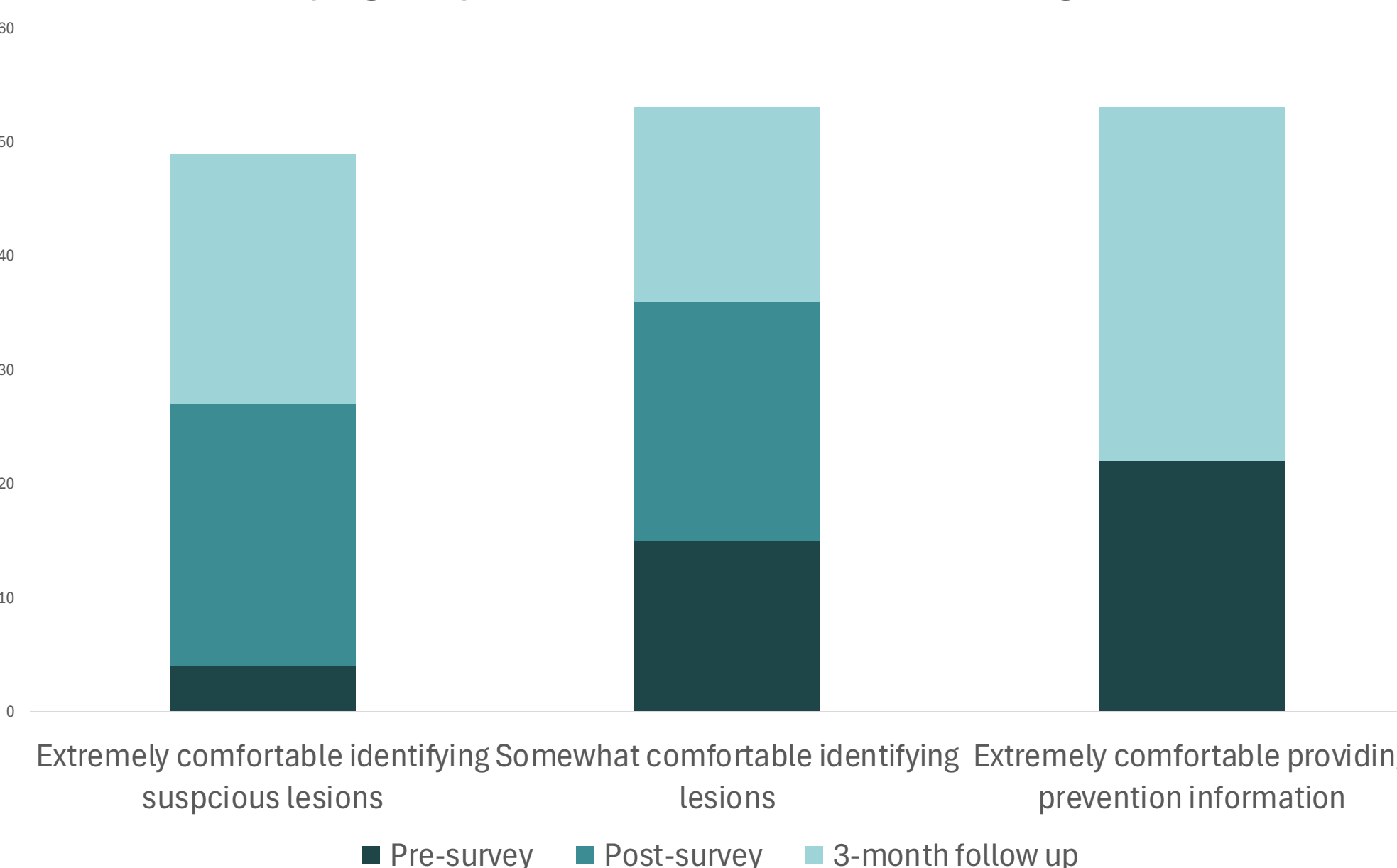


Figure 3. Participant responses on likelihood of alerting patients of suspicious skin lesions and advising them to see a physician: Pre- and post-educational intervention.

Results

- 46 Licensed Massage Therapists
- Average age of participants: 35.38 years
- Average experience: 9 years
- 23.91% had previous education on skin cancer, with 4 having more than 10 hours
- 47.71% increase in comfortability identifying suspicious lesions (Fig 2)
- 31.66% increase likelihood of sharing skin cancer prevention information (Fig 2)
- 28.87% increase in likelihood of alerting clients about a suspicious lesion (Fig 3)
- 19.78% increase likelihood of advising clients to see a physician about a suspicious skin lesion (Fig 3)

Conclusions

51/66 counties in SD are "medical care shortage areas"²

Skin cancers commonly present on face, arms, legs, and back³

- Difficult areas to self-examine
- Massage therapists able to visualize

Licensed Massage Therapists can:

- Identify skin lesions and educate patients
- Mitigate healthcare disparities in rural SD

Limitations:

- Small sample size
- Self-selection bias
- Loss of follow-up

Number of Clients Alerted

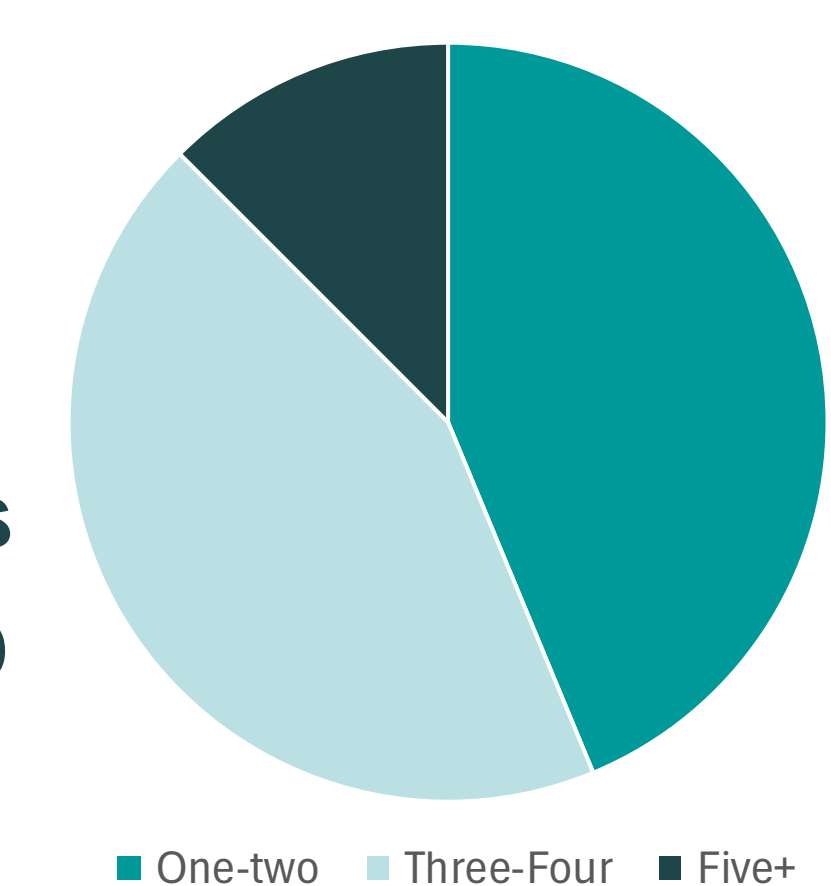


Figure 4. Participant responses on number of clients alerted of suspicious skin lesions 3 months post-education intervention

Methods

USD IRB approval obtained

Study period: July 2023- Jan 2024

Participants: Licensed Massage Therapists and students

Recruitment: In-person and zoom sessions facilitated by a medical student

Pre-survey:

- 12-item anonymous survey assessing:
 - Previous education on skin cancer
 - Current practices in identifying lesions
 - Comfort level in discussing prevention

Educational intervention: 45-min PowerPoint presentation on skin cancer prevention and identification

Post-survey: 4-item anonymous survey to measure immediate impact

3-month follow-up survey:

- 8-item anonymous survey

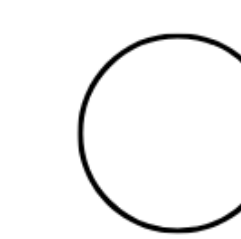
Supplemental materials provided:

- ABCs of melanoma business card (Fig 1)
- Access to American Academy of Dermatology resources

Mole Check Card

Using the ABCDE Method

- **Asymmetry**
 - Does one half of the mole look like the other?
- **Borders**
 - Are the borders irregular, jagged, or blurred?
- **Color**
 - Unevenly colored, patches of black, blue, red, white, and pink
- **Diameter**
 - is it greater than 6mm
- **Evolution**
 - has it changed over time?



Use the circle to measure the size, borders, and symmetry of your mole. Then take a photo of your mole every 6 months to analyze the color and evolution of each mole

Keep track of your findings in a notebook to be able to track if your mole changes



Figure 1. ABCs of melanoma mole check card.

References

1. American Cancer Society. Cancer Facts & Figures 2018. Atlanta: American Cancer Society; 2018.
2. Gerlach, E. Agriculture is no.1 in South Dakota. U.S. Department of Agriculture; 2019.
3. Mayo Foundation for Medical Education and Research. Melanoma. Mayo Clinic; 2023.
4. Bahnson AB, Kondratuk KE, Anderson SM. Skin Cancer Education in the Rural Salon. S D Med. 2019;72(6):267-271.
5. Loescher LJ, Heslin KM, Szalacha LA, Silva GE, Muramoto ML. Web-Based Skin Cancer Prevention Training for Massage Therapists: Protocol for the Massage Therapists Skin Health Awareness, Referral, and Education Study. JMIR Res Protoc. 2019;8(5).