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Remote partner assisted skin self-examination skills training of melanoma survivors and their partners

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Introduction

A structured partner assisted skin self-examination (SSE) training program delivered in the office to melanoma survivors and their partners (pairs) demonstrated greater knowledge, skills, and accuracy among trained pairs than controls.^{1,2} While previous research supported this promising training program, the real-world constraints on delivering office-based education may diminish sustainability due to interruption in clinical workflow and cost of health care professionals providing training. This randomized clinical trial evaluated the effect of remote training on knowledge, attitudes and performance of SSE in comparison with controls. The secondary outcome was identification of concerning moles by pairs and whether these moles were biopsied (indicating consistency between physicians' and pairs' assessment of the mole).

Materials and Methods

Pairs were randomized to control or mailed the MoleScore™ Workbook, Scorecard for Moles (a diary)³, and Body Map booklet. The melanoma survivor and the partner separately answered previously reported online surveys¹ prior to randomization and 9 months later. Skin biopsy of a concerning mole was confirmed by review of the electronic medical record. Participants provided written informed consent and each received \$25 to complete each online assessment.

Results

Description of the population

Forty-six percent of melanoma survivors enrolled (Fig 1). There were no significant demographic differences between the controls and those receiving remote training. (Table 1)

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No differences were found between the controls recruited for the study and the “active controls” retained from the original study on demographics or study outcome variables (e.g., knowledge, confidence, SSEs). Thus, these groups were combined into a single control group for the remainder of the analyses.

Confidence and Performance of PASE

Intervention pairs ($n=63$) increased their confidence in how to perform PASE [mixed measures ANOVA, $F(1,192) = 22.16$, $p < .001$] (Fig 2), ability to perform PASE [mixed measures ANOVA, $F(1,193) = 18.37$, $p < .001$] (Fig 3), and skin check partners' ability [$F(1,191) = 3.55$, $p = .05$] in comparison with controls ($n=144$). Intervention groups examined three areas: scalp [$F(1,189) = 12.60$, $p < .001$], soles of feet [$F(1,188) = 7.07$, $p < .01$], and buttocks [$F(1,190) = 5.21$, $p < .05$] more than controls. More melanoma survivors in the intervention group had the concerning mole biopsied compared to control melanoma survivors [$\chi^2(1) = 8.58$, $p < .01$].

Concerning Mole

Trained patients had higher reports of their partner finding a concerning mole compared to patients in the control group $\chi^2(1) = 4.82$, $p < .05$. Among the moles that dermatologists decided to biopsy ($n=63$ moles) or not to biopsy ($n=36$ moles), significantly more melanoma survivors in the intervention group had the concerning mole biopsied compared to controls $\chi^2(1) = 8.58$, $p < .01$.

Discussion

Remote skills training of pairs improved confidence in knowing how to perform SSE, evaluate and track moles. Trained partners became engaged in checking body sites that were difficult for the melanoma survivor to see for themselves (e.g. scalp, soles of feet and buttocks). Trained pairs were more likely to perform SSE on difficult to see areas (i.e., scalp, soles of feet, buttocks) and partners in the intervention group were more likely to find concerning moles compared to control group partners. Finally, accuracy of SSE by trained pairs was confirmed by dermatologists choosing to biopsy concerning moles more often among those trained than among controls.

The gains in confidence may be attributed to the pair supporting one another as they perform SSE. Our previous studies demonstrated the mediating effect of partners, who serve to encourage SSE performance, help to check hard-to-see areas, provide reassurance, and assist with decisions about seeking an appointment with a dermatologist for a concerning lesion.^{4,5} The partner provides practical SSE support, which is the form of social support associated with adherence to medical treatment.⁶ Clinician skin examination and SSE operate in synergy with the physician encouraging SSE and if something suspicious results from the SSE the patient returns to the physician.

A limitation of the current study is the short-term follow-up of our remote skills training. The long-term benefits of remote training of pairs needs further evaluation to determine if SSE is sustained, the rate of biopsy of concerning moles, and the results of those biopsies.

While other studies have included partners in an educational session and found social support of the partner was a strong predictor of SSE self-efficacy,⁷ our group differs in providing a structured skills training program in partner assisted skin self-examination with longitudinal assessment of a range of outcomes.¹ Our findings support integration of structured evidence-based SSE training of at-risk patients into the fabric of clinical care.

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Fig 1.
CONSORT Diagram

Fig 2.
Confidence in knowledge of how to perform SSE

Fig 3.
Confidence in ability to evaluate and track moles

Table 1

Melanoma survivor demographic characteristics at baseline

	Control (n = 144)	Intervention (n = 63)	Total (n = 207)	Chi square analysis
Sex				$\chi^2(1)=3.12, p>.05$
Male	67 (46.5%)	21 (33.3%)	88 (42.5%)	
Female	77 (53.5%)	42 (66.7%)	119 (57.5%)	
Age (years)				$\chi^2(5)=4.02, p>.05$
18–29	4 (2.7%)	4 (6.33%)	8 (3.9%)	
30–39	18 (12.5%)	12 (19.0%)	30 (14.5%)	
40–49	27 (18.8%)	12 (19.0%)	39 (18.8%)	
50–59	31 (21.5%)	12 (19.0%)	43 (20.8%)	
60–69	42 (29.2%)	17 (27.0%)	59 (28.5%)	
70 +	22 (15.3%)	6 (9.5%)	28 (13.5%)	
Education				$\chi^2(4)=1.98, p>.05$
Some High School	1 (0.7%)	0 (0.0%)	1 (0.5%)	
High School Graduate	5 (3.5%)	1 (1.6%)	6 (2.9%)	
Some Post-High School Education	14 (9.7%)	9 (14.3%)	23 (11.1%)	
College Graduate	59 (41%)	27 (42.9%)	86 (41.5%)	
Graduate Degree	65 (45.1%)	26 (41.3%)	91 (44.0%)	