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Characteristics of men aged 50 years or older who do not take up skin self-examination (SSE) following an educational intervention

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Men aged 50 years or older are at high risk of melanoma, and both incidence and mortality are increasing in this group¹. Skin self-examination (SSE) could be one avenue to improve outcomes from melanoma. Several recent intervention trials successfully increased SSE, but resistance to such interventions is less well studied. This posthoc secondary analysis of interventional study data aimed to identify characteristics of older men who did not take up SSE for the early signs of skin cancer, despite exposure to educational materials during a randomized intervention trial².

Men received SSE educational materials and were interviewed by telephone at baseline, 7 and 13 months. Information was collected on SSE behavior (using the question *“In the past 6 months, have you or someone who is not a doctor, such as your spouse or partner, deliberately checked any part of your skin for early signs of skin cancer?”*), skin cancer risk factors, and socio-demographic, health care, and attitudinal characteristics. Participants who had not performed SSE in the 12 months prior to baseline (n=380) were categorized as either having ‘taken up SSE’ (reported SSE at study end) or ‘resisting SSE’ (reported no SSE at study end). Multivariable logistic regression analyses were

performed to identify the independent associations between participant characteristics and resisting SSE.

Among those who did not report SSE at baseline, 54/177 (31%) men in the control group and 51/203 (25%) in the intervention group resisted SSE ($p=0.20$). Overall 105/380 men (27%) resisted SSE. Resisting SSE was independently associated with not intending to do SSE, lower SSE self-efficacy, not having had a doctor recommend SSE, more freckled skin, and intending to immediately visit a doctor if a suspicious lesion was noticed (Table 1).

Those who did not take up SSE had lower initial confidence in their ability to perform the behavior (self-efficacy). These findings are similar to those reported by Weinstock and colleagues in their intervention trial ³, which aimed to increase thorough SSE in the general population. Those with more negative pre-existing attitudes likely fall into the earliest 'stage' of behavior change ⁴, where taking up SSE is not yet being contemplated, and may need a more intensive or personalized intervention. In contrast, of men whose doctor had recommended SSE in the 12 months before the trial, only 10% did not take up SSE in the study period, indicating that doctors' advice may influence behavior change, similar to previous reports from cross-sectional studies ⁵. A single skin cancer risk factor (having many freckles) was found to be significantly associated with resisting SSE. One possible reason for this is that the presence of many freckles may increase the difficulty of observing changes in skin lesions. Another possibility is that those with more freckling had their skin more frequently examined by a doctor ⁶ and therefore saw less need for SSE. In future men with more negative pre-existing attitudes to SSE, those with many freckles making SSE more difficult, and those who have not previously received a doctor recommendation, could be targeted with a more intensive intervention.

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Table 1. *Multivariable relationships with resistance to SSE (n=380)**

Characteristic	OR	95%CI	p-value
Number of freckles at end of summer as an adult			0.024
None to few	1.00		
Some to many	2.87	1.15,7.17	
Intends to check skin in the next 12 months			0.009
Yes	1.00		
No/don't know	2.05	1.20,3.51	
Doctor showed and/or suggested SSE during last appointment			0.001
Yes	1.00		
No/did not see doctor in past 12 months	3.61	1.67,7.81	
If I saw something suspicious on my skin, I'd go to the doctor straight away			0.018
Strongly disagree/disagree	1.01	0.39,2.56	
Unsure	0.19	0.07,0.57	
Agree	0.97	0.56,1.70	
Strongly agree	1.00		
SSE self-efficacy	0.93	0.90,0.96	<0.001
Treatment group			0.065
Control	1.00		
Intervention	0.62	0.38,1.03	

*Multivariable model including all variables shown in table