

Preventing Skin Cancer: Primary and Middle School-Based Interventions

Summary Evidence Table for Updated Search Period (June 2000 - May 2011)

Study Details	Population characteristics	Intervention Characteristics	Outcome measures	Results: Effect Estimate (95% CI/ P-value)												
<p>Author, Year: Kimlin & Parisi 2001</p> <p>Title: Usage of real-time ultraviolet radiation data to modify the daily erythema exposure of primary schoolchildren;</p> <p>Study Design: Greatest (Group RCT)</p> <p>Quality of Execution: Fair</p> <p>Location: Australia, south east Queensland</p>	<p>Target population: 8-year-old school children;</p> <p>Setting (School level): Primary school;</p> <p>Demographics: Gender: NR Age: 8 yrs. Grade: NR Skin type: NR Race/Ethnicity: NR SES: NR</p>	<p>Intervention: UVGUIDE software (provision of information)</p> <p>Intervention implementation period: 3 days (Feb. 28-March, 1)</p> <p>Intervention components: <u>Educational:</u> Provided with education program (computer software-online current UV data and were able to use data to see UV exposure distribution on face)</p> <p>Intervention for Control group: No intervention</p> <p>Setting: At school</p> <p>Intensity: One class/day for 15 minutes before the recess and PE class x 3 days;</p> <p>Parental involvement: No</p>	<p>Follow-up period: Baseline: Immediately before; FU: After the intervention;</p> <p>Outcomes of Interest</p> <p><u>Protective behaviors:</u> (observed by teachers)</p> <p>1. Use of sunscreen</p> <p>2. Use of hat (Broad brimmed)</p> <p><u>UV exposure</u> (observed)- Minimal Erythema Dose by polysulphone badges worn on the left shoulder</p>	<p>Population size(n): I= class of 25 students; C= group of 23 students</p> <p>Protective behaviors: (proportion of children)</p> <p>1. Use of sunscreen: Post: Intervention =90% Control= 40% Absolute pct pt change: 50.0%, 95% CI:(26.8, 73.2)</p> <p>2. Use of hat (Broad brimmed) Post: Intervention =100% Control= 95% Absolute pct pt change: 5.0, 95% CI(-3.9,13.2)</p> <p>UV exposure (Minimal Erythema Dose (MED) measured by polysulphone badges worn on the left shoulder)</p> <table> <thead> <tr> <th></th> <th>Intervention</th> <th>Control</th> </tr> </thead> <tbody> <tr> <td>BL:</td> <td>1.0±0.02</td> <td>1.4±0.03</td> </tr> <tr> <td>FU1:</td> <td>1.4±0.03</td> <td>2.1±0.07</td> </tr> <tr> <td>FU2:</td> <td>1.1±0.05</td> <td>1.7±0.07</td> </tr> </tbody> </table> <p>Relative mean change: -9.41 P<0.05 (FU1: Feb.28; FU2: March1)</p>		Intervention	Control	BL:	1.0±0.02	1.4±0.03	FU1:	1.4±0.03	2.1±0.07	FU2:	1.1±0.05	1.7±0.07
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<p>Author, Year: Geller et al., 2002</p> <p>Title: The Environmental Protection Agency's National SunWise School Program: Sun protection education in US schools (1999-2000);</p> <p>Study Design: Greatest (Group NRT)</p> <p>Quality of Execution: Fair</p> <p>Location: USA (across the nation)</p>	<p>Target population: K-8 grade students;</p> <p>Setting (School level): Primary and secondary schools;</p> <p>Demographics: Gender: NR Age: median age, 10 years (range 5-10 years) Grade: K-8 Skin type: NR Race/Ethnicity: NR SES: NR</p>	<p>Intervention: SunWise School Program- National program;</p> <p>Intervention implementation period: September 1999 - June 2000</p> <p>Intervention components: <u>Educational:</u> Group level EPA's Sunwise School Program for sunsafety included classroom lessons on sun protection education and UV environment/ reporting. Guidelines for policy changes and sunwise toolkit provided to the schools;</p> <p>Intervention for Control group: No intervention</p> <p>Setting: At school by teachers</p> <p>Intensity: ToolKit: 1- to 2-hour core sun safety unit. Classroom lessons: 1 hour core class;</p> <p>Parental involvement: No</p>	<p>Follow-up period: BL: September 1999 FU: Spring of 2000(6-7 months)</p> <p>Outcomes of Interest</p> <p><u>Protective behaviors:</u></p> <ol style="list-style-type: none"> 1. Use of sunscreen 2. Use of Hat 3. Use of clothing (Wear long-sleeved shirt) 4. Use of sunglasses 	<p>Population size(n): I: Pre: 1894; Post: 1815 C: Pre: 1285; Post: 1001</p> <p>Protective behaviors: (Proportion of children)</p> <p>1. Use of sunscreen:</p> <table border="0"> <tr> <td></td> <td>Intervention</td> <td>Control</td> </tr> <tr> <td>BL:</td> <td>29%</td> <td>22.6%</td> </tr> <tr> <td>FU:</td> <td>27.6%</td> <td>21.3%</td> </tr> </table> <p>Absolute pct pt change: -0.1, 95% CI(-3.4, 3.2)</p> <p>2. Use of Hat</p> <table border="0"> <tr> <td></td> <td>Intervention</td> <td>Control</td> </tr> <tr> <td>BL:</td> <td>16.8%</td> <td>14.8%</td> </tr> <tr> <td>FU:</td> <td>19.0%</td> <td>15.0%</td> </tr> </table> <p>Absolute pct pt change: 2.0, 95% CI(-0.9, 4.9)</p> <p>3. Use of clothing (Wear long-sleeved shirt)</p> <table border="0"> <tr> <td></td> <td>Intervention</td> <td>Control</td> </tr> <tr> <td>BL:</td> <td>20.4%</td> <td>20.1%</td> </tr> <tr> <td>FU:</td> <td>25.6%</td> <td>14.7%</td> </tr> </table> <p>Absolute pct pt change: 10.6, 95% CI: (7.6, 13.6)</p> <p>4. Use of sunglasses:</p> <table border="0"> <tr> <td></td> <td>Intervention</td> <td>Control</td> </tr> <tr> <td>BL:</td> <td>23.8%</td> <td>19.3%</td> </tr> <tr> <td>FU:</td> <td>25.7%</td> <td>18.5%</td> </tr> </table> <p>Absolute pct pt change: 2.7, 95% CI: (-0.4, 5.8)</p>		Intervention	Control	BL:	29%	22.6%	FU:	27.6%	21.3%		Intervention	Control	BL:	16.8%	14.8%	FU:	19.0%	15.0%		Intervention	Control	BL:	20.4%	20.1%	FU:	25.6%	14.7%		Intervention	Control	BL:	23.8%	19.3%	FU:	25.7%	18.5%
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<p>Author, Year: Stankeviciute et al., 2004</p> <p>Title: Skin cancer prevention: children's health education on protection from sun exposure and assessment of its efficiency</p> <p>Study Design: Greatest (Group RCT)</p> <p>Quality of Execution: Fair</p> <p>Location: Lithuania</p>	<p>Target population: 5th-6th grade students (ages 10-13 yrs.);</p> <p>Setting (School level): Secondary schools;</p> <p>Demographics: Gender: 53% boys Age: 10–13-year-old Grade: 5th grade Skin type: NR Race/Ethnicity: NR SES: NR</p>	<p>Intervention: "Let's know the sun better"- a group level school educational program/ intervention;</p> <p>Intervention implementation period: 4 weeks (before summer break)</p> <p>Intervention components: <u>Educational:</u> Exercise text books and recommendation for teachers; physical training lessons and practical skills what children learnt theoretically;</p> <p>Intervention for Control group: No intervention</p> <p>Setting: At school by teachers</p> <p>Intensity: 4 weeks - Total 5 classes (theoretical part: 3 classes; interactive activities: 2 classes);</p> <p>Parental involvement: No</p>	<p>Follow-up period: Baseline: May, 2002 FU: September, 2002;</p> <p>Outcomes of Interest</p> <p><u>Protective behaviors:</u></p> <ol style="list-style-type: none"> Use of sunscreen: a) Use of sunscreen more frequently and correctly (0.5 hours before going outside and every 2 hours when being outside for longer hours) Use of hat (ant type – Baseball+ Wide brimmed sunbonnet) Use of clothing (closed neck and long sleeved shirt) Use of sunglasses Use of shade (while being outdoors during sunny days) <p><u>Risky behaviors:</u></p> <ol style="list-style-type: none"> Time spent outdoors (During the period of highest sun intensity) 	<p>Population size(n): I: 106; C: 107</p> <p><u>Protective behaviors:</u> (proportion of children)</p> <ol style="list-style-type: none"> Use of sunscreen: a) Use of sunscreen (constantly) Intervention: 34.6% Control: 30.8% Absolute percentage point change: 3.8, 95% CI (-8.8, 16.4) Use of hat: (any type of hat) Intervention: 45.2% Control: 35.3% Absolute percentage point change: 9.9, 95% CI(-3.2, 2.3) Use of clothing Intervention: 21.0% Control: 7.5% Absolute percentage point change: 13.5, 95% CI(5.0, 22.0) Use of sunglasses Intervention; 61.9% Control: 44.3% Absolute percentage point change: 17.6, 95% CI(6.2, 29.0) Use of shade Intervention: 26.7% Control: 13.2% Absolute percentage point change: 13.5 , 95% CI: (2.9, 24.1) <p><u>Risky behaviors:</u></p> <ol style="list-style-type: none"> Time spent outdoors (During the period of highest sun intensity) Intervention: 41.0% Control: 55.7% Absolute percentage point change: -14.7, 95% CI: (-26.2, -3.2)

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<p>Author, Year: Lee et al., 2005</p> <p>Title: Site-specific protective effect of broad-spectrum sunscreen on nevus development among white schoolchildren in a randomized trial</p> <p>Study Design: Greatest (RCT)</p> <p>Quality of Execution: Fair</p> <p>Location: Canada, Vancouver, British Columbia</p>	<p>Target population: First(6-7yrs.) and fourth grade (9-10 yrs.) students and their parents;</p> <p>Setting (School level): Elementary schools and home;</p> <p>Demographics: Gender: NR Age: 6-7 years and 9-10 years old Grade: First and fourth Phenotype characteristics: Skin type: Dark (n= 48); Medium (n=47); Light (50) Hair color Dark brown (n= 46); Light brown (n=41); Red (n=10); Blonde (n=48) Freckles on face: Few or none (n=52); Moderate (n=36); Dense (n= 57) Race/Ethnicity: NR SES: NR</p>	<p>Intervention: Sunscreen distribution (a family level intervention)</p> <p>Intervention implementation period: June 1993 to May 1996</p> <p>Intervention components: <u>Environmental:</u> Parents of the children received two bottles of SPF-30 broad-spectrum sunscreen annually (one near the end of each school year in June 1993, 1994, and 1995 and second at the end of July each year.) with instructions to use it on all sun-exposed sites whenever the enrolled child was expected to be in the sun for 30 minutes or more;</p> <p>Intervention for Control group: No intervention</p> <p>Setting: school and home</p> <p>Parental involvement: Yes</p>	<p>Follow-up period: BL: 1993 FU: 3 years after the intervention(Twice a year questionnaire to parents; May 1996)</p> <p>Outcomes of Interest</p> <p><u>New nevi count:</u> (Whole-body nevus counts from 1993 were subtracted from 1996 counts for each child, giving the number of new nevi)</p> <ol style="list-style-type: none"> 1.New nevi (all sizes) 2. New nevi (nevi >2 mm in diameter) 3. New nevi (all sizes) for students with more than 10% facial freckling 	<p>Population size(n): I= 145; C=164</p> <p><u>New nevi count:</u> (mean number of nevi on whole body)</p> <ol style="list-style-type: none"> 1.New nevi (all sizes) Intervention: 28.8 Control: 34.5 Relative mean change: -16.52 2. New nevi (nevi >2 mm in diameter) Intervention: 2.2 Control: 4.9 Relative mean change: -55.10 3. New nevi (all sizes) for students with more than 10% facial freckling Intervention: 27.1 Control: 35.8 Relative mean change: -24.30

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<p>Author, Year: Manganoni et al., 2005</p> <p>Title: Study of sunbathing in children: The preliminary evaluation of a prevention program</p> <p>Study Design: Greatest (NRT)</p> <p>Quality of Execution: Fair</p> <p>Location: North Italy (3 towns- Brescia, Bergamo, Trento)</p>	<p>Target population: Children (aged 8-9) from Italian schools and their parents;</p> <p>Setting (School level): Primary schools;</p> <p>Demographics: Gender: NR Age: 8-9 years Grade: NR Skin type: Light (33.4%); Medium (52.8%); Olive (4.7%); Dark (6.1%); Other (1%) Race/Ethnicity: White (74.5%); Yellow (0.8%); Black (0.8%), Not known (23.8%) SES: NR</p>	<p>Intervention: Sun safety educational program</p> <p>Intervention implementation period: 2001-02 (before summer break)</p> <p>Intervention components: <u>Educational:</u> Tech.- CD-ROM and video in form of fairy tale; Booklet: For children and parents (same messages as on video);</p> <p>Intervention for Control group: No intervention</p> <p>Setting: At school, teacher presented in presence of dermatologist (e.g., protective habits, consequences of sunbathing during peak hrs.);</p> <p>Parental involvement: Yes</p>	<p>Follow-up period: BL: Before summer FU: After summer</p> <p>Outcomes of Interest</p> <p><u>Protective behaviors:</u></p> <ol style="list-style-type: none"> 1. Use of sunscreen 2. Use of clothing/hat 3. Use of sunglasses 4. Overall sun protection <p><u>Risky behaviors:</u></p> <ol style="list-style-type: none"> 1. Number of excessive sun exposure during past year 2. Use of sun lamps during past year 	<p>Population size(n): I= 1309; C=636 Intervention group (no data for control group)</p> <p>Protective behaviors: (% of children)</p> <ol style="list-style-type: none"> 1. Use of sunscreen: Pre = 93.1% Post= 94.5% Absolute pct pt change: 1.4, 95% CI (0.9, -0.4) 2. Use of clothing/hat Pre = 77.6% Post= 75.8% Absolute pct pt change: 1.8, 95% CI (-1.4, 5.0) 3. Use of sunglasses Pre = 23.3% Post= 29.9% Absolute pct pt change: 6.6, 95% CI (1.7, 3.2) (No response for almost 50% of the cases) 4. Overall sun protection Pre= 92.1% Post= 94.0% Absolute pct pt change: 1.9, 95% CI (0,3.8) <p>Risky Behaviors: (% of children)</p> <ol style="list-style-type: none"> 1. Number of excessive sun exposure during past year Pre = 16.9% Post= 13.8% Absolute pct pt change: -3.1, 95% CI (-5.9, -0.3) 2. Use of sun lamps during past year Pre= 0.7% Post= 0.4% Absolute pct pt change: 0.3, CI (-0.3, 0.9)

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<p>Author, Year: Milne et al., 2006 (related studies Milne, 2001; Giles-Corti, 2004; English, 2005; English, 2005)</p> <p>Title: The impact of the kidskin sun protection intervention on summer suntan and reported sun exposure: Was it sustained?</p> <p>Study Design: Group non-randomized trial/greatest</p> <p>Quality of Execution: Fair</p> <p>Location: Perth, Western Australia</p>	<p>Target population: 5-6 yrs. old student;</p> <p>Setting (School level): School (elementary) and home;</p> <p>Demographics: Gender: 65% males Age 5-6 years Grade: NR Parents had tertiary education (67%) Skin type: NR Children with tendency to burn (63%) Race/Ethnicity: Southern European grandparents (65%) SES: NR</p>	<p>Intervention: KidSkin</p> <p>Intervention implementation period: 4 years (1995–1998);</p> <p>Intervention components: <u>Educational:</u> Moderate: Specially designed sun protection curriculum (age specific both at school and home-based activities), students were encouraged to stay indoors during peak hrs. and protect themselves when outdoors, written guidelines for schools to improve SP at schools High: same as above plus program materials from ' Totally Cool Summer Club' sent home during summer break <u>Environmental:</u> Increased shade provision in playground High: children were offered low-cost swimwear covering trunk, upper arms, and thighs to reduce exposure to nearly zero. <u>Policy:</u> Education and Health Departments of Western Australia</p>	<p>Follow-up period: BL: 1995 (late winter) FU1: 1997 (February) FU2: 1999 (February) FU3: 2001 (February);</p> <p>Outcomes of Interest <u>Protective behaviors:</u> in moderate and high intervention groups</p> <p>1. Use of sunscreen (Sunscreen use all the time while outside)</p> <p>2. Use of hat</p> <p>3. Use of shade</p> <p>4. Use of protective clothing (swimwear, and covered back)</p> <p>5. Use of shade</p> <p><u>UV exposure:</u></p> <p>1. Suntan on the back and forearm</p> <p>2. Mean proportion of ambient exposure</p> <p><u>New nevi formation:</u> (mean number of nevi formation on back, face, and arms)</p>	<p>Population size(n): BL(1995): 1465 FU (1997):1223</p> <p>Protective behaviors: (% of children)</p> <p>1. Use of sunscreen</p> <table border="1"> <thead> <tr> <th></th> <th>Moderate</th> <th>High</th> <th>Control</th> </tr> </thead> <tbody> <tr> <td>BL:</td> <td>20.0%</td> <td>16.0%</td> <td>25.0%</td> </tr> <tr> <td>FU:</td> <td>20.0%</td> <td>23.0 %</td> <td>22.0%</td> </tr> <tr> <td colspan="4">ES(Absolute pct pt change)</td> </tr> <tr> <td></td> <td>3.0%</td> <td>10.0%</td> <td></td> </tr> </tbody> </table> <p>2. Use of hat</p> <table border="1"> <thead> <tr> <th></th> <th>Moderate</th> <th>High</th> <th>Control</th> </tr> </thead> <tbody> <tr> <td>BL:</td> <td>17.5%</td> <td>15.0%</td> <td>22.0%</td> </tr> <tr> <td>FU:</td> <td>16.0%</td> <td>18.2 %</td> <td>21.3%</td> </tr> <tr> <td colspan="4">ES(Absolute pct pt change)</td> </tr> <tr> <td></td> <td>-0.8%</td> <td>3.9%</td> <td></td> </tr> </tbody> </table> <p>3. Use of protective clothing: (covered back)</p> <table border="1"> <thead> <tr> <th></th> <th>Moderate</th> <th>High</th> <th>Control</th> </tr> </thead> <tbody> <tr> <td>BL:</td> <td>52.5%</td> <td>53.0%</td> <td>61.2%</td> </tr> <tr> <td>FU:</td> <td>72.0%</td> <td>85.2 %</td> <td>67.0%</td> </tr> <tr> <td colspan="4">ES(Absolute pct pt change)</td> </tr> <tr> <td></td> <td>13.7%</td> <td>26.4%</td> <td></td> </tr> </tbody> </table> <p>(Protective swimwear)</p> <table border="1"> <thead> <tr> <th></th> <th>Moderate</th> <th>High</th> <th>Control</th> </tr> </thead> <tbody> <tr> <td>BL:</td> <td>63.4%</td> <td>65.0%</td> <td>58.2%</td> </tr> <tr> <td>FU:</td> <td>67.5%</td> <td>70.6 %</td> <td>62.0%</td> </tr> <tr> <td colspan="4">ES(Absolute pct pt change)</td> </tr> <tr> <td></td> <td>3.7%</td> <td>5.2%</td> <td></td> </tr> </tbody> </table> <p>4. Use of shade</p> <table border="1"> <thead> <tr> <th></th> <th>Moderate</th> <th>High</th> <th>Control</th> </tr> </thead> <tbody> <tr> <td>BL:</td> <td>27.0%</td> <td>29.8%</td> <td>32.5%</td> </tr> <tr> <td>FU:</td> <td>37.5%</td> <td>44.0 %</td> <td>32.5%</td> </tr> </tbody> </table>		Moderate	High	Control	BL:	20.0%	16.0%	25.0%	FU:	20.0%	23.0 %	22.0%	ES(Absolute pct pt change)					3.0%	10.0%			Moderate	High	Control	BL:	17.5%	15.0%	22.0%	FU:	16.0%	18.2 %	21.3%	ES(Absolute pct pt change)					-0.8%	3.9%			Moderate	High	Control	BL:	52.5%	53.0%	61.2%	FU:	72.0%	85.2 %	67.0%	ES(Absolute pct pt change)					13.7%	26.4%			Moderate	High	Control	BL:	63.4%	65.0%	58.2%	FU:	67.5%	70.6 %	62.0%	ES(Absolute pct pt change)					3.7%	5.2%			Moderate	High	Control	BL:	27.0%	29.8%	32.5%	FU:	37.5%	44.0 %	32.5%
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		<p>developed guidelines- introduction of gold standard' No Hat, no Play' policy whereby children were required to wear broad brimmed hats, also encourage schools to use available shade. SunSmart Awards were offered annually as an incentive to adopt SunSmart guidelines</p> <p>Moderate: Schools receive guidelines on how to improve sun protection at school. High: also assist high intervention schools in implementing the guidelines on sun protection at school;</p> <p>Intervention for Control group: Standard health education curriculum</p> <p>Setting: At school by teachers</p> <p>Intensity: Moderate/high: Delivered in 4-6 40 minutes sessions during spring of each year over 4 consecutive years;</p> <p>Parental involvement: Yes</p>		<p>ES(Absolute pct pt change) 10.0% 9.2%</p> <p>UV exposure: 1.Suntan on the back and forearm (Mean melanin density)</p> <p>(Back)</p> <table border="0"> <tr> <td></td> <td>Moderate</td> <td>High</td> <td>ES</td> </tr> <tr> <td>I:</td> <td>3.6</td> <td>3.6</td> <td>(No significant change)</td> </tr> <tr> <td>C:</td> <td>3.7</td> <td>3.7</td> <td></td> </tr> </table> <p>(Forearm)</p> <table border="0"> <tr> <td></td> <td>Moderate</td> <td>High</td> <td>ES</td> </tr> <tr> <td>I:</td> <td>3.9</td> <td>4.0</td> <td>(No significant change)</td> </tr> <tr> <td>C:</td> <td>3.9</td> <td>3.9</td> <td></td> </tr> </table> <p>2.Mean proportion of ambient exposure(MED) by study group for whole school</p> <table border="0"> <tr> <td></td> <td>Intervention</td> <td>Control</td> <td>ES(Relative mean change)</td> </tr> <tr> <td>Moderate</td> <td>21.0%</td> <td>24.0%</td> <td>4.7%</td> </tr> <tr> <td>High</td> <td>22.0%</td> <td>24.0%</td> <td>-16.7%</td> </tr> </table> <p>New nevi formation: (mean number of nevi formation)</p> <p>(Back)</p> <table border="0"> <tr> <td></td> <td>Moderate</td> <td>High</td> <td>Control</td> </tr> <tr> <td>BL:</td> <td>3.0</td> <td>3.3</td> <td>3.5</td> </tr> <tr> <td>FU:</td> <td>8.2</td> <td>8.6</td> <td>10.1</td> </tr> </table> <p>ES(Relative mean change)</p> <table border="0"> <tr> <td></td> <td>Moderate</td> <td>High</td> <td>Control</td> </tr> <tr> <td></td> <td>-5.28</td> <td>-9.69</td> <td></td> </tr> </table> <p>(Face and Arms)</p> <table border="0"> <tr> <td></td> <td>Moderate</td> <td>High</td> <td>Control</td> </tr> <tr> <td>BL:</td> <td>15.3</td> <td>14.2</td> <td>14.7</td> </tr> <tr> <td>FU:</td> <td>23.8</td> <td>22.5</td> <td>25.2</td> </tr> </table> <p>ES(Relative mean change)</p> <table border="0"> <tr> <td></td> <td>Moderate</td> <td>High</td> </tr> <tr> <td></td> <td>-9.26</td> <td>-7.57</td> </tr> </table>		Moderate	High	ES	I:	3.6	3.6	(No significant change)	C:	3.7	3.7			Moderate	High	ES	I:	3.9	4.0	(No significant change)	C:	3.9	3.9			Intervention	Control	ES(Relative mean change)	Moderate	21.0%	24.0%	4.7%	High	22.0%	24.0%	-16.7%		Moderate	High	Control	BL:	3.0	3.3	3.5	FU:	8.2	8.6	10.1		Moderate	High	Control		-5.28	-9.69			Moderate	High	Control	BL:	15.3	14.2	14.7	FU:	23.8	22.5	25.2		Moderate	High		-9.26	-7.57
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<p>Author, Year: Buller et al., 2006 (related study Reynolds, 2006- Mediation of a middle school skin cancer prevention program)</p> <p>Title: Effects of the Sunny Days, Healthy Ways curriculum on students in grades 6 to 8</p> <p>Study Design: Greatest (Group-randomized trial)</p> <p>Quality of Execution: Fair</p> <p>Location: USA/ Colorado, New Mexico, and Arizona</p>	<p>Target population: 6-8 graders;</p> <p>Setting (School level): Middle schools;</p> <p>Demographics: Gender: males: 41.8% Age: (%) 11= 4.1 ; 12=25.3; 13=50.7; 14=22.4; 15=0.4 Grade: NR Skin type: NR Race/Ethnicity: Race: White: 78.6%; Black: 6.5% Asian: 5%; Other: 3.1% Hispanic Ethnicity: Hispanic= 25.4; Non- hispanic= 75.8 SES: NR</p>	<p>Intervention: Sunny Days Healthy Ways (SDHW);</p> <p>Intervention implementation period: Mid March (2001) –end of April (6 weeks);</p> <p>Intervention components: <u>Educational:</u> Curriculum: lessons aim at increasing perceived personal risk for skin damage and skin cancer, positive expectation about sun protection in a variety of situations. Interactive activities to help children to set goals, monitor progress, and overcome barriers;</p> <p>Intervention for Control group: No intervention</p> <p>Setting: At school by teachers of health education and science during classes;</p> <p>Intensity: 6, 50 minutes lessons (in 15-30 minutes segments over several classes);</p>	<p>Follow-up period: BL: 2001-02 and 02-03 (February-March) FU: Same year in May (End of school year) (Data were collected in Colorado and some of New Maxico in 2001-02 school year; whereas in rest of the NM and Arizona in 2002-03)</p> <p>Outcomes of Interest <u>Protective behaviors:</u> (Proportion of children using protective behaviors for the time they were outside while at school yesterday during lunch, PE, and recess)</p> <p>1.Use of sunscreen (for all times)</p> <p>2.Use of clothing: (during lunch, PE, and recess)</p> <p>-Long sleeve shirt</p> <p>-Long pants</p> <p>3.Use of hat (during lunch)</p> <p>4.Use of shade (during lunch, PE, and recess)</p> <p><u>Incidence of sunburn</u></p>	<p>Population size(n): BL: I= 1019; C=1019 FU: I=884; C=885</p> <p>Protective behaviors:</p> <p>1. <u>Use of sunscreen:</u> (for all times)</p> <table border="0"> <tr> <td></td> <td>Pre</td> <td>Post</td> </tr> <tr> <td>I:</td> <td>77.1%</td> <td>80.4%</td> </tr> <tr> <td>C:</td> <td>78.6 %</td> <td>73.4%</td> </tr> </table> <p>Absolute pct pt change: 8.5%;CI(4.6, 12.4)</p> <p>2.<u>Use of clothing:</u> (during lunch, PE, and recess)</p> <p>Long sleeve shirt (at lunch)</p> <table border="0"> <tr> <td></td> <td>Pre</td> <td>Post</td> </tr> <tr> <td>I:</td> <td>48.7%</td> <td>22.9%</td> </tr> <tr> <td>C:</td> <td>51.4 %</td> <td>21.2%</td> </tr> </table> <p>Absolute pct pt change: 4.4%;CI(-0.1, 8.9)</p> <p>Long sleeve shirt (at PE)</p> <table border="0"> <tr> <td></td> <td>Pre</td> <td>Post</td> <td>Absolute</td> </tr> <tr> <td></td> <td></td> <td></td> <td>percentage point change</td> </tr> <tr> <td>I:</td> <td>25.6%</td> <td>12.8%</td> <td></td> </tr> <tr> <td>C:</td> <td>21.3 %</td> <td>8.7%</td> <td></td> </tr> </table> <p>Absolute pct pt change: -0.2%,CI(-2.2, 1.8)</p> <p>Long sleeve shirt (at recess)</p> <table border="0"> <tr> <td></td> <td>Pre</td> <td>Post</td> <td>Absolute</td> </tr> <tr> <td></td> <td></td> <td></td> <td>percentage point change</td> </tr> <tr> <td>I:</td> <td>50.5%</td> <td>29.8%</td> <td></td> </tr> <tr> <td>C:</td> <td>57.0 %</td> <td>22.8%</td> <td></td> </tr> </table> <p>Absolute pct pt change: 13.5%, CI (10.6,16.4)</p> <p>Long pants (at lunch)</p> <table border="0"> <tr> <td></td> <td>Pre</td> <td>Post</td> </tr> <tr> <td>I:</td> <td>83.6%</td> <td>46.8%</td> </tr> <tr> <td>C:</td> <td>86.2 %</td> <td>51.5%</td> </tr> </table> <p>Absolute pct pt change: -2.1%,CI(-5.4,1.2)</p> <p>Long pants (at recess)</p> <table border="0"> <tr> <td></td> <td>Pre</td> <td>Post</td> <td>Absolute</td> </tr> <tr> <td></td> <td></td> <td></td> <td>percentage point change</td> </tr> </table>		Pre	Post	I:	77.1%	80.4%	C:	78.6 %	73.4%		Pre	Post	I:	48.7%	22.9%	C:	51.4 %	21.2%		Pre	Post	Absolute				percentage point change	I:	25.6%	12.8%		C:	21.3 %	8.7%			Pre	Post	Absolute				percentage point change	I:	50.5%	29.8%		C:	57.0 %	22.8%			Pre	Post	I:	83.6%	46.8%	C:	86.2 %	51.5%		Pre	Post	Absolute				percentage point change
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			(Sunburn in the past month)	<p>I: 79.1% 50.2% C: 85.3 % 54.1% Absolute pct pt change: 2.3%, CI (-1.0, 5.6)</p> <p>3. Use of hat (during lunch) Pre Post I: 3.7% 2.3% C: 1.3% 1.4% Absolute pct pt change: -1.5, CI(-2.4, -0.6)</p> <p>4. Use of shade (during lunch) Pre Post I: 40.3% 41.3% C: 50.8% 38.8% Absolute pct pt change: 13.0, CI: (9.8, 16.2)</p> <p>(during PE) Pre Post I: 38.1% 30.8% C: 35.0% 12.5% Absolute pct pt change: 15.2, CI(12.6, 17.8)</p> <p>(during recess) Pre Post I: 56.3% 55.6% C: 67.0% 59.1% Absolute pct pt change: 7.2, CI: (3.9, 10.5)</p> <p><u>Incidence of sunburn</u> (Sunburn in the past month) Pre Post I: 15.1% 25.8% C: 14.5% 28.3% Absolute pct pt change: -3.1, CI(-6.0, -0.2)</p>

Study Details	Population characteristics	Intervention Characteristics	Outcome measures	Results: Effect Estimate (95% CI/ P-value)																					
<p>Author, Year: Buller et al., 2006</p> <p>Title: Evaluation of the Sunny Days, Healthy Ways sun safety curriculum for children in kindergarten through fifth grade</p> <p>Study Design: Greatest (Group-randomized trial)</p> <p>Quality of Execution: Fair</p> <p>Location: USA (Arizona)</p>	<p>Target population: K-5 graders;</p> <p>Setting (School level): Elementary schools;</p> <p>Demographics: Gender: 48% males Age: NR Grade: K -5th grade Skin type: Skin sensitivity (mean) = 0.163 Race/Ethnicity: 75% Caucasian SES: NR</p>	<p>Intervention: Extended version of Sunny Days Healthy Ways</p> <p>Intervention implementation period: First exposure: Spring 1996 Second exposure : Spring 1997 (in late February for 6 weeks);</p> <p>Intervention components: <u>Educational:</u> Arm A: Repeated instruction (4 schools out of 6 schools that had been enrolled) Arm B: (Single instruction) 4 units (Living with sunshine and SP behaviors) were incorporated in other subjects (health, science, reading, math, geography, PE, art, computers and writing);</p> <p>Intervention for Control group: No intervention</p> <p>Setting: At school by teachers</p> <p>Intensity: Arm B (single instruction): 4 one hour class periods</p>	<p>Follow-up period: BL: 1996 February, prior to implementation of the SDHW (both groups) FU: Arm B: April and May, 1997 Arm A: Both in 1997 and 1998 after each instruction</p> <p>Outcomes of Interest <u>Protective behaviors:</u> (Overall protective behaviors by limiting sun exposure during peak hours, seek shaded area, protective clothing, and sunscreen)</p> <p><u>UV exposure:</u> (skin tone measure by using chroma meter)</p>	<p>Population size(n): Intervention (n): Group A (repeat) : 208 Group B (single): 227 Control: 207</p> <p>Protective behaviors: Child solar protection (Mean Pretest and Posttest Scale Scores)</p> <p><u>Group A (repeated instruction)</u></p> <table border="1" data-bbox="1346 639 1864 776"> <thead> <tr> <th></th> <th>Year 1</th> <th>Year 2</th> </tr> </thead> <tbody> <tr> <td>Grades 2-3</td> <td>2.09/2.17</td> <td>2.19/2.27</td> </tr> <tr> <td>Grades 4-5</td> <td>2.05/2.05</td> <td>2.02/2.05</td> </tr> </tbody> </table> <p>Repeat-instruction vs. single exposure: t= 2.22, p=0.026 (Children in grades 2-5, repeat exposure to SDHW improved children’s SR solar protection over a single exposure)</p> <p><u>Group B (single instruction)</u></p> <table border="1" data-bbox="1346 1013 1808 1127"> <thead> <tr> <th></th> <th>Intervention</th> <th>Control</th> </tr> </thead> <tbody> <tr> <td></td> <td>Pre/post</td> <td>Pre/post</td> </tr> <tr> <td>Grade 2-3</td> <td>2.09/2.08</td> <td>1.99/1.96</td> </tr> <tr> <td>Grade 4-5</td> <td>2.00/2.01</td> <td>1.95/1.89</td> </tr> </tbody> </table> <p>Single exposure vs. no exposure: t=1.52, p=0.129 (Grade K-1- No significant differences were found between the two experimental groups in gradeK-1 on changes in skin tone indicative of less sun exposure; students in grade 2-5 showed no improvement in SR solar protection in either grade.)</p>		Year 1	Year 2	Grades 2-3	2.09/2.17	2.19/2.27	Grades 4-5	2.05/2.05	2.02/2.05		Intervention	Control		Pre/post	Pre/post	Grade 2-3	2.09/2.08	1.99/1.96	Grade 4-5	2.00/2.01	1.95/1.89
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		<p>Arm A (repeat instruction): Same above + grade 1,3, and 5 received three 2 hr. booster units;</p> <p>Parental involvement: Yes</p>		<p>UV exposure: Single exposure: Grades K-1: No significant differences Grades 2-5: Minimal change</p> <p>Repeated exposure: Grades K-1: No change Grades 2-5: repeated instruction displayed lighter skin tones, indicating lower exposure toUVR, than children receiving only one (non-significant)</p>
<p>Author, Year: Buller et al., 2008</p> <p>Title: Randomized trial evaluating computer-based sun safety education for children in elementary school</p> <p>Study Design: Group RCT/ Greatest</p> <p>Quality of Execution: Fair</p> <p>Location: USA (Western United States)</p>	<p>Target population: Children (5-13 years) from K-5 grade;</p> <p>Setting (School level): Public elementary schools;</p> <p>Demographics: Gender: 48.6% female Age: Students: 20.1% age 6 or younger; 46.7% ages 7–9; 31.6% age 10 or older; Grades: 31.5% grades K–1;</p>	<p>Intervention: Tailored computerized programs with age appropriate sun safety education for children in primary schools</p> <p>Intervention implementation period: Over a 4-week period (29 days on average) during March through May (except at 1 year round school that implemented between May and June) following the pretest</p> <p>Intervention components: <u>Educational:</u> 3Arms: 1. SDHW interactive Computer Program (CD-ROM only) on hazards of</p>	<p>Follow-up period: BL: March to May 2002 FU: May and June of 2002;</p> <p>Outcomes of Interest</p> <p><u>Protective behaviors:</u> 1. Overall protective behaviors : (Composite scores from the self-reported sun protection behavior items (converted to z scores)</p>	<p>Population size(n): Computer program: 325 Teacher led presentation: 387 Both: 320</p> <p>Protective behaviors: 1.Overall protective behaviors (Composite mean scores- lower score meant better sun protection)</p> <p><u>CD-ROM only group (Intervention 1)</u> Grades K-1 (range: 1-15) BL: 10.42 FU: 9.52 Mean change= -0.90</p> <p>Grades 2-3 (range: 1-15) BL: 10.35 FU: 10.08 Mean change= -0.27</p> <p>Grades 4-5 (range: 1-18) BL: 12.73 FU: 12.61 Mean change= -0.12</p> <p><u>Teacher led presentation (Intervention 2)</u></p>

Study Details	Population characteristics	Intervention Characteristics	Outcome measures	Results: Effect Estimate (95% CI/ P-value)
	<p>32.6% grades 2–3, 35.8% grades 4–5</p> <p>Race/Ethnicity: 52.6% White (32.6% Hispanic), 9.2% African American, and 3.4% Asian</p> <p>Skin Type: 21.6% Type 1 (fair—at highest risk), 30.4% Type 2; 35.5% Type 3; 10.1% Type 4 (dark) 2.4% unknown</p>	<p>sun exposure and sun safety measures 2. Teacher led: presentation using similar lesson plans, grade level activities and worksheets. 3. Combination of both.</p> <p>Intervention for Control group: NA</p> <p>Setting: At school by teachers and project staff trained teachers;</p> <p>Intensity: Teacher led presentation session: each one hour; Computer program: Total 41.8 total hr</p> <p>Parental involvement: Yes</p>		<p>Grades K-1 (range: 1-15) BL: 10.66 FU: 10.14 Mean change= -0.52</p> <p>Grades 2-3 (range: 1-15) BL: 10.09 FU: 9.78 Mean change= -0.31</p> <p>Grades 4-5 (range: 1-18) BL: 12.26 FU: 11.94 Mean change= -0.32</p> <p style="text-align: center;"><u>Both (Intervention 3)</u></p> <p>Grades K-1 (range: 1-15) BL: 10.44 FU: 8.97 Mean change= -1.5</p> <p>Grades 2-3 (range: 1-15) BL: 10.18 FU: 9.76 Mean change= -0.42</p> <p>Grades 4-5 (range: 1-18) BL: 12.37 FU: 12.41 Mean change= - 0. 04</p>
<p>Author, Year: Naldi et al., 2008</p> <p>Title: Improving sun-protection behavior among children: results of a cluster-randomized trial in Italian elementary schools. The "SoleSi SoleNo- GISED" Project</p> <p>Study Design: Cluster-randomized</p>	<p>Target population: Students (grade 2- 3) and their parents;</p> <p>Setting (School level): Italian primary schools;</p> <p>Demographics: Gender: 50.34% boys Age: mean age= 8</p>	<p>Intervention: "SoleSi SoleNo-GISED project"</p> <p>Intervention implementation period: 3 month period</p> <p>Intervention components: <u>Educational:</u> Included distribution of educational booklets to parents and their children and the application of a short curriculum at school</p>	<p>Follow-up period: BL: 2001–2003(51 schools) FU (14–16 months from baseline): 2002– 2004 (71 schools);</p> <p>Outcomes of Interest</p> <p><u>Protective behaviors:</u></p> <p>1. Sunscreen use (Did your child regularly use sunscreens while in the</p>	<p>Population size(n): I: BL= 5676; FU= 4430 C: BL= 5554; FU=4181</p> <p>Protective behaviors: (% used)</p> <p>1.Sunscreen use : BL FU I: 71.5% 74.1% C: 70.7% 72.4% Absolute pct pt change: 0.9, CI(-1.0, 2.8)</p> <p>2. Use of hat : BL FU</p>

Study Details	Population characteristics	Intervention Characteristics	Outcome measures	Results: Effect Estimate (95% CI/ P-value)
<p>trial/ Greatest</p> <p>Quality of Execution: Fair</p> <p>Location: Italy</p>	<p>years (SD 0.7) Grade:2 and 3 Phenotype: 44% of the total baseline sample underwent assessment of phenotype and upper limb nevus count at baseline. <u>Eye color:</u> Black/dark brown (48.5) Light brown/brown green (27.7) Gray/green/hazel (16.3) <u>Hair color:</u> Black/dark brown (43.9) Brown (35.0) Red/blond(13.5) <u>Skin color</u> Light (61.3); Dark (30.9) <u>Freckles on the face</u> Yes (6.6); No (85.3)</p> <p><u>Number of melanocytic nevi on upper limbs</u> <5 (48.4%) 6–10 (27.6%) 11–15 (13.6%) 16–20 (5.3%) >20 (5.0%) Race/Ethnicity: NR SES: NR</p>	<p>(policy), based on a resource developed for health teachers;</p> <p>Intervention for Control group: No intervention</p> <p>Setting: At school by trained teachers</p> <p>Intensity: Median time spent by teachers on the educational intervention at school was 6 hours (range 4–19 hours);</p> <p>Parental involvement: Yes</p>	<p>sun last year?)</p> <p>2. Use of hat (Did your child usually wear a hat while in the sun last year?)</p> <p>3. Use of long sleeved shirt (Did your child usually wear a long-sleeved shirt while in the sun last year?)</p> <p><u>Risky Behaviors:</u></p> <p>1. Intense sun exposure (Did your child experience intense sun exposure last year?)</p> <p><u>Sunburn Incidence:</u></p> <p>1. Sunburn episodes (Did your child experience sunburn episodes last year? Yes; No is used as reference)</p> <p>2. Number of sunburn episodes (Could you specify the number of sunburn episodes experienced by your child during the last year? 1-2; 0 is used as reference)</p>	<p>I: 38.0% 34.4% C: 37.5% 33.6% Absolute pct pt change: 0.3, CI(-1.7, 2.3)</p> <p>3. Use of long sleeved shirt: BL FU I: 19.8% 20.3% C: 19.6% 18.6% Absolut pct pt change: 1.5, CI(-0.2, 3.2)</p> <p><u>Risky Behaviors:</u></p> <p>1. Intense sun exposure (Did your child experience intense sun exposure last year?) BL FU I: 79.0% 80.4% C: 78.4% 78.9% Absolute pct pt change: 0.9, CI(-0.8, 2.6)</p> <p><u>Sunburn Incidence:</u></p> <p>1. Sunburn episodes BL FU I: 13.8% 13.1% C: 13.8% 13.5% Absolute pct pt change: -0.4, CI(-1.8, 1.0)</p> <p>2. Number of sunburn episodes BL FU I: 10.1% 9.4% C: 10.3% 9.9% Absolute pct pt change: -0.3, CI(-1.5, 0.9)</p>

Study Details	Population characteristics	Intervention Characteristics	Outcome measures	Results: Effect Estimate (95% CI/ P-value)
<p>Author, Year: Gilaberte et al., 2008</p> <p>Title: Evaluation of a health promotion intervention for skin cancer prevention in Spain: the SolSano program</p> <p>Study Design: Before and after/ Least</p> <p>Quality of Execution: Fair</p> <p>Location: Arago ´n, Spain</p>	<p>Target population: Schools pupils (Grades 1–2);</p> <p>Setting (School level): Primary Schools and home;</p> <p>Gender: 49% boys Age: mean age 7; Grade: 82% first graders Skin type: [45.7% pale skin and easy sunburns >70% dark hair and eyes 51% with freckles and/ or moles Using above four items – skin cancer risk factors 6% four, 12% three, 24% two, and 31% one. Risk of skin cancer index: 0 (16.9%); 1 (31.2%); 2 (24.4%); 3 (12.2%); 4 (5.8%); No valid (9.40%) Race/Ethnicity: NR SES/Education: 67.1% lived in towns</p>	<p>Intervention: SolSano program</p> <p>Intervention implementation period: Spring 2005, from April to June</p> <p>Intervention components: <u>Educational:</u> Included activity guide for teachers, workbook for each student, several activities to be photocopied, a poster with sun safe recommendations. Family also received informaion pamphlet and a guide to paediatricians at PHC to encourage advise children and parents;</p> <p>Intervention for Control group: NA</p> <p>Setting: Student’s regular teacher at school and materials for home, also included pediatricians;</p> <p>Intensity: NR;</p> <p>Parental involvement: Yes</p>	<p>Follow-up period: BL: April 2005 FU: September 2005;</p> <p>Outcomes of Interest</p> <p><u>Protective behaviors:</u></p> <p>1.Sunscreen use (Do you apply your sunscreen always) 2. Any protective behaviors</p> <p>-At mountains -At Beach -At sports -At park</p> <p><u>Change in sunburn incidence:</u> (Did you sunburn last year)</p>	<p>Population size(n): BL= 1522 FU= 1522</p> <p><u>Protective behaviors:</u> 1.Sunscreen use (Do you apply your sunscreen always) BL= 52.4% FU= 55.6% Absolute pct pt change = 3.2, CI (0.3 to 6.3)</p> <p>2. Any protective behaviors At mountains Pre= 52.5% Post= 57.4% Absolute pct pt change = 4.9, CI (1.5, 8.3)</p> <p>At Beach Pre= 82.1% Post= 82.4% Absolute pct pt change = 0.3, CI (-2.4, 3.0)</p> <p>At sports Pre= 31.5 Post= 37.0 Absolute pct pt change: 5.5, CI (2.2, 3.0)</p> <p>At park Pre= 23.6 Post= 31.3 Absolute pct pt change: 7.7, CI (4.6,10.7)</p> <p><u>Change in sunburn incidence:</u> Pre= 35.8 Post= 23.5 Absolute pct pt change: -12.3,CI (-15.5, -9.1)</p>

Study Details	Population characteristics	Intervention Characteristics	Outcome measures	Results: Effect Estimate (95% CI/ P-value)
<p>Author, Year: Quereux et al., 2009</p> <p>Title: Prospective trial on a school-based skin cancer prevention project;</p> <p>Study Design: Group non-randomised trial/ Greatest</p> <p>Quality of Execution: Fair</p> <p>Location: Nantes , West of France</p>	<p>Target population: 3rd graders (8 and 11 years);</p> <p>Setting (School level): Primary school;</p> <p>Demographics: Gender: sex ratio (male/female) 1.1 in intervention and 1.3 in group control Age: children's median age was 10 years in each group Grade: 3rd Skin type: NR Race/Ethnicity: NR SES: NR</p>	<p>Intervention: Educational program</p> <p>Intervention implementation period: June 2006</p> <p>Intervention components: <u>Educational:</u> Materials and services delivered The lessons focused on four key areas: sun and health, sun and UV radiation, sun and the atmosphere and sun protection</p> <p>Intervention for Control group: No intervention</p> <p>Setting: At school by trained teachers</p> <p>Intensity: 10 1-h sessions;</p> <p>Parental involvement: No</p>	<p>Follow-up period: BL: May,2006 FU1: July 2006 (no post in control; group) FU2: Nov 2006 (following summer holidays);</p> <p>Outcomes of Interest</p> <p><u>Protective behaviors:</u></p> <p>1. Use of sunscreen (at beach and during holidays, out in garden, swimming pool)</p> <p>2. Use of hat (at beach, in garden)</p> <p>3. Use of T-shirt (garden, at beach)</p> <p><u>Incidence of sunburn:</u> Sunburn experience among children</p>	<p>Population size(n): I: 120; C :160</p> <p>Protective behaviors:</p> <p>1. <u>Use of sunscreen:</u> At beach :BL FU I: 76% 75% C: 81% 84% Absolute pct pt change: -4.0, CI(-14.3, 6.3)</p> <p>At Garden: BL FU I: 14% 19% C: 22% 20% Absolute pct pt change: 7.0, CI (-3.0, 17.0)</p> <p>In holidays: BL FU I: 51% 57% C: 61% 66% Absolute pct pt change: 1.0, CI(-11.3, 13.3)</p> <p>Swimming pool: BL FU I: 34% 44% C: 45% 50% Absolute pct pt change: 5.0, CI (-7.6, 17.6)</p> <p>2. <u>Use of hat:</u> At beach: BL FU I: 62% 70% C: 71% 66% Absolute pct pt change: 13.0, CI(1.3, 24.7)</p> <p>At Garden: BL FU I: 57% 68% C: 61% 63% Absolute pct pt change: 9.0, CI (-3.0, 21.0)</p> <p>3. <u>Use of T-shirt:</u> At beach: BL FU I: 47% 41%</p>

Study Details	Population characteristics	Intervention Characteristics	Outcome measures	Results: Effect Estimate (95% CI/ P-value)
				C: 51% 51% Absolute pct pt change: -6.0, CI (-18.5, 6.5) At Garden: BL FU I: 86% 91% C: 86% 84% Absolute pct pt change: 7.0, CI (-1.1, 15.1) <u>Incidence of sunburn:</u> BL FU Intervention 70% 79% Control 69% 72% Absolute pct pt change: 6.0, CI (-4.7, 16.7)
<p>Author, Year: Hunter et al., 2010 (related study-Roetzheim, 2011)</p> <p>Title: Sun Protection at Elementary Schools: A Cluster</p> <p>Study Design: Cluster randomized trial/ Greatest</p> <p>Quality of Execution: Fair</p> <p>Location: USA, Florida</p>	<p>Target population: 4th grade students;</p> <p>Setting (School level): Elementary school and home;</p> <p>Demographics: Gender: NR Age: NR Grade: 4th Skin type: NR Race/Ethnicity: White: 39% SES: School location: Metropolitan 73% (8/11) Type of school: Public: 81% (9/11) Magnet or charter: rest Household income: <\$10 000–\$14 999</p>	<p>Intervention: Sun Protection of Florida’s Children project</p> <p>Intervention implementation period: August 8, 2006, through June 2008</p> <p>Intervention components: <u>Educational:</u> Classroom educational sessions on sun protection attitudes, social norms. FU sessions on benefits of sun protection (with emphasis on hat use), materials sent to parents at the start of the school year explaining the project <u>Environmental:</u> Two free wide-brimmed hats (one to use at school and one to use at home) to each</p>	<p>Follow-up period: For sun protective behaviors: BL(2006): late August - early September FU1(2006-07): Nov. 30- March 15 FU2(2007): March 27- May 22 FU3 (2007) : Fall FU4(2007): Winter FU5 (2008): Spring</p> <p>For new nevi: BL for nevi (2007): Fall FU1(2007-08): Winter FU2(2008): Spring</p> <p>Skin pigmenttion: BL: August 8- Sept. 29, 2006) FU1: Nov. 30- March 15 FU2: March 27- May 22 ;</p> <p>Outcomes of Interest</p>	<p>Population size(n): BL: 1115 FU1: 1029 FU2: 1244</p> <p><u>Protective behaviors:</u> (% of children)</p> <p>1.Hat use (wide brimmed hats) In school (observed)- Year 1: BL FU I: 2.0% 40.5% C: 1.7% 1.1% Absolute pct pt change: 39.1%</p> <p>Year-2 : BL FU I: 2.0% 19.0% C: 1.7% 1.0% Absolute pct pt change: 17.7% Outside (self reported) Year-1: BL FU I: 24.3 % 22.9 % C: 13.5% 10.5 % Absolute pct pt change: 1.6%</p>

Study Details	Population characteristics	Intervention Characteristics	Outcome measures	Results: Effect Estimate (95% CI/ P-value)
	20% \$15 000–\$24 999 15% \$35 000–\$49 999 16% \$50 000–\$74 999 17% ≥\$75 000 21%	student attending intervention school Intervention for Control group: 3-5 60-minute educational sessions on topics unrelated to sun protection; Setting: At school by community health education organization (MOREHEALTH) Intensity: 45 minutes brief educational - 3, 60 minutes interactive classroom sessions Parental involvement: Yes	<u>Protective behaviors:</u> 1.Hat use (wide brimmed hats)- at school and outside the school <u>UV exposure:</u> 1.Changes in skin pigmantation (at child's forehead) with Derma Spectrometer (% children with decreased melanin index) <u>Nevi count:</u> Assessment of new nevi count for a 2-year period.	Year-2 BL FU I: 24.3 % 11.5 % - C: 13.5% 9.9 % Absolute pct pt change: 8.3% <u>UV exposure:</u> (% of children) 1.Changes in skin pigmentation BL (n; I= 178, C=200); FU= (n; I=200, C=239) Post (year 2only) Intervention : 42% ; Control: 45.6% Absolute pct pt change: -3.6, CI (-13.1, 5.9) <u>Nevi count:</u> (mean number of nevi count) BL FU Intervention 9.0 6.8 Control 9.8 9.1 Relative mean change: -18.63; p-value 0.07