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Spring Into Action: Role Models for Sun Safety.

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SPRING INTO ACTION: ROLE MODELS FOR SUN SAFETY

by

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Paper submitted in partial fulfillment of the requirements for the degree of

Doctor of Nursing Practice

University of Louisville
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Signature DNP Project Chair

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Date
Acknowledgements

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Abstract

Ultraviolet radiation during childhood increases a person’s risk for skin cancer later in life. Research has provided support for a multifaceted intervention that targets youth in order to decrease these future risks. The purpose of this paper is to discuss the implementation of an intervention that taught youth athletic football coaches and parent helpers to act as role models and influence sun safe behavior in their youth athletes in order to help reduce the carcinogenic effects of UV radiation in the future. The intervention consisted of a one-hour training session with coaches and parent helpers of a youth football team that focused on sun protection for youth and the responsibilities of coaches and parent helpers as role models for sun safety. The intervention was based on Social Cognitive Theory and aimed to increase sun safety knowledge, positive attitudes toward sun protection, and self-efficacy expectations of coaches and parent helpers. Effectiveness of the intervention was measured via a self-reported pre and post-test and analysis of the variables were compared via paired t-tests using SPSS. The intervention increased coach and parent helpers’ sun protection efforts, self-efficacy, and sun safety procedural knowledge. It decreased the symptoms of sun protection efforts that the coaches and parent helpers were experiencing prior to the intervention.

Keywords: Adolescents; coaches; community intervention; evidenced based practice; football; role models; skin cancer prevention; sun safety; sunscreen use; youth athletes
Spring into Action: Role Models for Sun Safety

One in five Americans will develop skin cancer in their lifetime (Stern, 2010). According to the Centers for Disease Control Prevention (2016), skin cancer is the most common type of cancer in the United States and more people are diagnosed with it every year than all other cancers combined (Skin Cancer Foundation, 2017). On average, one American dies from melanoma every hour (American Cancer Society, 2018). Approximately 136 Kentuckians die every year from melanoma, ranking Kentucky as having the 6th highest melanoma death rate nationally (Facts, 2010). The diagnosis of non-melanoma skin cancers in the United States has risen by 77% from the years 1994 to 2014 and new melanoma cases have increased by 53% from 2008 to 2018 (Skin Cancer Foundation, 2017). The associated medical costs to treat skin cancer are estimated to be $8.1 billion annually (Guy, Machlin, Ekwueme, & Yabroff, 2015). Nearly 34,000 emergency department visits in the United States were attributed to sunburns in 2013 costing an estimated $11.2 million (Guy, Berkowitz, & Watson, 2017).

There are two major causes of skin cancer: genetics and early exposure to ultraviolet (UV) radiation (Bishop, Harland, Randerson-Moore, & Bishop, 2007). Of these two causes, approximately 90% of nonmelanoma skin cancers and 86% of melanoma cases are associated with UV sun exposure (Skin Cancer Foundation, 2017). A person’s risk for melanoma doubles for those who have had more than five sunburns (Skin Cancer Foundation, 2017). Of those ever reporting a sunburn during childhood, the risk for development of skin cancer is almost doubled (Dennis et al., 2008). An estimated 43% of children in the United States from ages 6 to 11 have experienced one or more sunburn each year (Hall, McDavid, Jorgensen, & Kraft, 2001). Most of the skin damage caused by UV radiation occurs before the age of 18 (Parsons & Moore, 2014) and UV radiation exposure during childhood has a greater impact on skin cancer risk than it does
during adulthood, making protection strategies crucial for youth participating in outdoor activities and sports (Autier & Dore, 1998). Regular sunscreen use during childhood could reduce the lifetime incidence of skin cancer by approximately 78% (Heckman & Coups, 2011). In the United States, 84% of students are outdoors between 10 a.m. and 4 p.m. during peak UV radiation times (US Centers for Disease Control and Prevention, 2012). Children spend an average of 2.5-3 hours outside and receive three times the annual sun exposure of adults (Wesson & Silverberg, 2003).

The American Academy of Pediatrics has recognized childhood and adolescence as a crucial period of vulnerability when behaviors are learned, making it the ideal time to intervene and establish sun safety behaviors (Weir et al., 2011). Healthy behavior patterns are established in early childhood and persist throughout a lifetime (Boe & Tilloston, 2006). Sun safety interventions that are initiated in early grades with consistent messages may be more successful at influencing behavior than programs initiated in middle school or later (Kristannson, Helgason, Mansson-Brahme, Widlund-Ivrson, & Ulen, 2003). UV radiation exposure during childhood is the most modifiable risk factor for skin cancer and approximately 85% of skin cancer cases could be prevented by limiting exposure to the sun (Arthey & Clarke, 1995). Successful interventions for changing sun safety behaviors of parents and children have been multicomponent, community-wide approaches (Olson, Gaffney, Starr, Gibson, Cole, & Dietrich, 2007).

Theoretical Framework

Various theories, such as the social cognitive theory (SCT), the health belief model, and the theory of reasoned action suggest that role models have a pronounced influence on individuals’ behavior (Parrott & Duggan, 1999). Coaches may be seen as role models, or a
particularly significant source of influence, during a time when youth are forming habits (Parrott & Duggan, 1999). They may unintentionally model behaviors with health consequences, making it extremely important to educate coaches of youth athletes on sun safe behavior so that they can positively influence the youth looking up to them. In addition, studies have indicated that primary school age children are typically more open and responsive to interventions targeted at increasing sun safe behaviors and attitudes toward skin cancer prevention (Cockburn, Hennrikus, Scott, & Snason-Fisher, 1989). Thus, a sun safety intervention targeting elementary and middle school aged children, rather than teens may be more effective.

The goal of the training intervention was for the coaches and parent helpers to act as role models of sun safety for their youth athletes by increasing their own self-protection from UV radiation and by demonstrating effective education and role modeling for the athletes. The SCT was used to help guide the project structure, process, and outcomes. The SCT postulates that the following are related to individual behavior change: self-efficacy, behavioral capability, expectations, expectancies, self-control, observational learning, and reinforcements (Rural Health Information Hub, n.d.). According to SCT, change begins with the precondition of knowledge of health risks and benefits and is also affected by the expected outcomes produced by those actions (Bandura, 2004). Following this theory, coaches were provided with education on the relevance of sun safety, sun skin cancer facts, how they can help protect themselves and the youth athletes, the potential impact they could have on skin cancer prevention, as well as information on how to get parents and caregivers involved. Interventional methods were reinforced using branded hats with the slogan “Spring into Action”.

Setting
The clinical site for this project was a youth athletic football field in a rural county located 35 miles from a major metropolitan area located in a southeastern area of the United States. Data was collected prior to the intervention on March 24, 2019 at the youth football field and post-test surveys were conducted at the end of the youth football spring training camp at the field on April 28, 2019. Coaches and parent helpers, the participants, came from multiple different football teams in the county. The participants were encouraged to act as role models for sun safety at a spring training football camp. The spring training football camp was hosted by the county’s youth athletic association and consisted of approximately 80-100 youth athletes ages 5-11 years old. Caregivers and parents were also invited to stay during the camps duration by the athletic association. The youth athletes were not direct participants of the study.

Barriers to the lack of sun safety behavior and knowledge in youth athletic coaches and parent helpers and the possible causes of this problem have been outlined in Figure 1 via a cause and effect diagram.

**Figure 1.** Cause and effect fishbone diagram. This figure illustrates the barriers and possible causes of lack of sun safety behavior and knowledge in youth athletic coaches and parent helpers.
Participants

The target population for this project was coaches and parent helpers of a youth football spring training camp that occurred in April 2019 in a rural county located 35 miles from a major metropolitan area. Inclusion criteria for project participation included: part-time and full-time coaches and parent helpers participating in a rural county’s youth football spring training camp in April 2019. Exclusion criteria included: Non-English speakers. The sample size was 11 coaches and parent helpers. The coaches and parent helpers participating in the spring training camp were leaders from multiple youth football teams throughout the rural county and its surrounding areas.

In order to recruit participants, addresses were collected from a leading official of the county’s youth football association and letters were mailed to potential participants inviting them to the training seminar on March 24, 2019.

Consent Process. In order to inform participants of the project, the Co-Investigator discussed the project, the purpose, goals, risks, timeframe, and who to contact in case of questions with potential participants prior to the interventional training session. Participants were asked to sign a form consenting to participate in the project.

Purpose and Problem Statement

A review of the literature revealed that the use of a multicomponent model, utilizing the parents and members of the community as role models and educators, for addressing sun protection was successful at changing sun protection behaviors and reducing skin cancer risks (Crane et al., 2012; Olson et al., 2007; Parrott et al., 1999; Reynolds et al., 2008). In addition, most studies suggested that younger children were more receptive to interventions than older children (Hart & DeMarco, 2008). Multi-component community wide interventions have
achieved great success in changing sun safe behavior, however few multi-component interventions have been attempted in the United States (Dadlani & Orlow, 2008). One study had success in sun safety promotion by implementation of a program to train soccer coaches on acting as a positive role model for sun protection to youth and their parents (Parrot et al., 1999).

Skin cancer caused by UV rays is a preventable disease. There is a need for a community wide intervention given the rise in number of skin cancer cases, deaths, and the related costs. An estimated 44 million boys and girls under the age of 18 participate in organized youth sports programs (National Council of Youth Sports, 2008). Young participants of outdoor athletics are at an increased risk for skin cancer development due to repeated exposure to UV radiation that are often unavoidable at practice and games (Moehrle, 2008).

The purpose of this paper is to discuss the implementation of an intervention that taught youth athletic football coaches and parent helpers to act as role models and influence sun safe behavior in their youth athletes in order to help reduce the carcinogenic effects of UV radiation in the future.

The short-term goals of the intervention were: increased sun safety knowledge in coaches and parent helpers, increased positive attitudes towards sun protection in coaches and parent helpers, and increased self-efficacy expectations in coaches and parent helpers. Indirectly, the goal was to increase the youth athletes’ sun safety knowledge, positive attitudes towards sun protection, and self-efficacy expectations. However, this was not be measured, as the time frame of the study will not allow for this. The anticipated long-term goal is decreased incidences of skin cancer, which was not measured.

**Project Design**
In order to measure the effectiveness of the proposed intervention, the project used a pre-test post-test design. A project proposal was submitted to the University Institutional Review Board (IRB) for approval and acceptance. A support letter was provided by the Vice President of the selected county’s Youth Football Association on behalf of the association for implementation of this project. Enrollment of participants began March 1, 2019. Data collection began on March 24, 2019 and concluded at the last day of the youth football spring training camp on April 28, 2019.

**Intervention**

Participants attended a one-hour training session on March 24, 2019 prior to the start of the spring youth football camp. The training session included information on sun protection for youth, as well as responsibilities of the coaches and parent helpers as role models for sun safety. Training materials were modified versions of the Georgia “Got Youth Covered” project and were used with permissions from the Principal Investigator, Roxanne Parrott, and Co-Investigator, Ashley Duggan (Parrott & Duggan, 1999). The training manual included: skin cancer facts, skin cancer and youth, how parents can protect youths’ skin, sunscreen use, skin cancer prevention resources, skin cancer definitions, how to conduct a skin self-examination, and youth activities. Each participant received a training manual that contained information discussed in the seminar. In order to maintain consistency of implementation methods, all training and data collection was conducted by one individual, the Co-Investigator. The coaches were asked to act as role models of sun safety throughout the spring training camp, which occurred every Sunday in April 2019 for two hours. At the end of the training session, participants in the study were given sunscreen and hats with the slogan: Spring into Action and were encouraged to wear them during the spring training camp. In addition, the participants received copies of the training manual they received
during the one-hour session and were encouraged to hand the extra copies out to parents and care-givers at the spring training camp.

Figure 2 provides a simplified, visual diagram of the methods and timeframe for the intervention.

![Image](image-url)

**Figure 2.** Intervention implementation. This figure illustrates the methods and timeframe for implementation of the intervention.

**Data Collection**

All data was collected by the Co-Investigator. Participants were given a unique identifier at the beginning of the data collection period and were then referred to from there on out by that unique identification. The master list of names and identifiers was stored on a password protected laptop maintained by the Co-Investigator. Pre and post-test answers were scanned and also stored on a password protected laptop maintained by the Co-Investigator. Hard copies were immediately shredded. Health Insurance Portability and Accountability Act (HIPAA) procedures were followed and confidentiality and anonymity were maintained.
Ethical Considerations and Referral Plan

If any participants of the study were found to have any questionable skin lesions, as identified in the seminar, they were advised to seek dermatological care or see their primary care provider for referral. In addition, if a participant discovered any youth athletes with questionable skin lesions, they were advised to direct the youth athlete to their pediatrician or dermatologist for evaluation and care.

Measurement

The pre-test and post-test questions originated from Parrott and Duggan and are based on prior research and pilot-tested (1999). Permission was given by the author to utilize the tool via email communication on October 12, 2018. The pre-test and post-test measured six variables: sun protection efforts of coaches and parent helpers, sun protection behaviors of coaches and parent helpers, self-efficacy of coaches and parent helpers, availability of social resources, procedural knowledge of coaches and parent helpers, and experienced symptoms of coaches and parent helpers (Cronbach’s alpha =0.71-0.76). The pre-test also contained demographic questions: years as a coach or parent helper, ethnicity, age, and gender. The pre-test can be found in Appendix A. The post-test can be found in Appendix B and contained an open-ended question for program comments, in order to evaluate the participants’ experience throughout the process. The participants were pre-tested prior to the interventional training. A post-test was administered on the final day of the spring training camp after practice.

In order to maintain reliability of the intervention, the training session was presented by one person, the Co-Investigator, and in one session. Any data collected from participants who were unable to participate in both the training session and in the final day of the spring training camp, was not utilized in the data analysis process. Throughout the training session and spring
training camp the Co-Investigator was present in order to evaluate ongoing barriers and facilitators to the process.

**Results**

In order to evaluate the effectiveness of the intervention, pre-test and post-test data collected during the project was analyzed using paired t-tests via SPSS. Answers from each of the five subsets were summed and averaged before running the paired t-test. The criterion for significance was set at $p < .05$. Descriptive analysis was run on the demographic data collected and all qualitative data collected was analyzed for themes and patterns.

There were 11 participants in the project. 100% of the participants were Caucasian. 45% were male and 55% were female. The mean age of the participants was 32 years old (standard deviation = 3.41 years) and the mean time spent as a coach or parent helper was 3.64 years (standard deviation = 2.58 years), which is illustrated in Table 2.

Table 1

*Sociodemographic Profile*

<table>
<thead>
<tr>
<th></th>
<th>Patient age in years</th>
<th>Time as coach/parent helper in years</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Valid</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>32.64</td>
<td>3.64</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>3.414</td>
<td>2.580</td>
</tr>
</tbody>
</table>

Paired t-tests revealed that the coaches and parent helpers’ sun protection behaviors mean increased significantly from time 1 ($2.48 + 0.52$) to time 2 ($3.17 + 0.67$), $t(10) = -2.95, p<.014)$. 


The mean increase was -0.68 with a 95% CI ranging from -1.20 to -0.17. The magnitude of effect was large (eta squared = 0.47). The coaches and parent helpers’ sun protection promotion efforts mean increased non-significantly from time 1 (2.77 + 0.97) to time 2 (3.25+ 0.84), \( t(10) = -1.42, p<.186 \). The mean increase was -0.48 with a 95% CI ranging from -1.23 to 0.27. The magnitude of effect was large (eta squared = 0.17). The coaches and parent helpers’ self-efficacy mean increased significantly from time 1 (3.11 + 0.38) to time 2 (3.68+ 0.55), \( t(10) = -3.09, p<.011 \). The mean increase was -0.57 with a 95% CI ranging from -0.97 to -0.16. The magnitude of effect was large (eta squared = 0.49). The coaches and parent helpers’ experienced symptoms mean decreased significantly from time 1 (2.65 + 0.74) to time 2 (2.10+ 0.77), \( t(10) = 2.32, p<.043 \). The mean decrease was 0.55 with a 95% CI ranging from 0.02 to 1.07. The magnitude of effect was large (eta squared = 0.44). The coaches and parent helpers’ procedural knowledge mean increased significantly from time 1 (0.33 + 0.30) to time 2 (0.58+ 0.21), \( t(10) = -2.83, p<.018 \). The mean increase was -0.25 with a 95% CI ranging from -0.46 to -0.54. The magnitude of effect was large (eta squared = 0.44). The results of the paired sample t-tests can be found in Figure 3.
Figure 3. Impact of sun safety intervention. This figure illustrates the results of the paired t-tests pre-intervention and post-intervention.

Discussion

Interpretation

Although there was a small sample size, 100% of the sample size (N=11) participated from beginning of the intervention (March 24, 2019) to the end of the intervention (April 28, 2019). The intervention was shown to significantly increase coach and parent helpers’ sun protection efforts, self-efficacy, and sun safety procedural knowledge. There was a significant decrease in coach and parent helpers’ experienced symptoms of sun protection efforts, which was the desired effect. This means that participants felt less uncomfortable using sunscreen and other sun protection efforts, such as hats and long-sleeved shirts by the end of the intervention. This result may be attributed to the increased knowledge of importance of sun safety. However, correlations were not analyzed. There was an insignificant increase in coach and parent helpers’ sun protection promotion efforts. The lack of significant different scores may be a direct
consequence of the short time frame of the study.

A total of 64% of the participants reported that the closest store to buy sunscreen from was less than 30 minutes away, and the closest medical office to have a skin exam performed was less than 30 minutes away. A total of 36% reported the closest store and medical office was 30-60 minutes away. This gives some insight to how close sun safety resources are for the participants and highlights a need for closer options.

In a study of female collegiate athletes, an educational sun safety intervention showed a significant increase in knowledge and improved attitude and behaviors (Shue McGuffin, Jordan, Langford, & Honeycutt, 2019). These results are consistent with the findings of Spring into Action’s interventional impact. Another study implemented a community level intervention in a summer camp setting (Tracey, Saussy, Witt, Haugh, & Stumph, 2018). The intervention focused on a true or false question answer session, an overview of UV radiation, and guidelines for sunscreen use and sun safe play (Tracey et al., 2018). This intervention resulted in counselors being more likely to encourage their campers to wear sunscreen and more frequently assisting their campers in applying sunscreen (Tracey et al., 2018). This finding was not consistent with the results of Spring into Action’s interventional impact. There was an increase in sun protection promotion efforts, but not a significant one. This may be attributed to the short time frame of the study and its limitations. In addition, the studies’ findings were consistent in that they both showed an increase in sun related knowledge. This study also measured attitudes toward attractiveness as well as number of sunburns, which Spring into Action did not measure due to the short time frame of the study. These may be areas for future study. The third study that utilized a pre and post-test design was a study that measured the impact of an educational intervention on sun protection beliefs and practices of college student athletes (Ally et al., 2018).
The study focused on educating not only the student athletes, but the coaches and athletic trainers as well. The study concluded that following intervention, the student athletes were significantly more likely to use sunscreen, especially if encouraged by their coach (Ally et al., 2018). Spring into Action did not measure the frequency of sunscreen use. Therefore, the findings cannot be compared. The last study focused on determining the impact of social media influence on sun safe behavior rather than an educational sun safety intervention. Participants were shown melanoma awareness videos and allowed to share it on social media (Nabi, Huskey, Nicholls, Keblusek, & Reed, 2019). Participants were found to have an increase in sun safety behavior (Nabi et al., 2019). It is difficult to compare this study’s findings with Spring into Action’s, as the two studies utilized different interventional methods.

The Spring into Action intervention generated a lot of positive feedback. Four participants left comments at the end of the post-intervention survey. One participant commented on enjoying the hats, three participants stated they enjoyed learning tips and gaining more knowledge to teach the athletes. Of these, one also commented that the survey was a little too lengthy.

**Limitations**

Some limitations did exist during this project. The intervention was only implemented in a single setting and contained a small sample size. Future research should include a larger sample size and be expanded to other outdoor sports and multiple locations. In addition, there was a lack of long term follow up for outcome measures. Future studies should have expanded observation and longer follow up time frames. This would allow for the possibility to directly measure the impact of the intervention on youth athletes. Participants of this study were self-selected, and outcome measures were self-reported allowing for potential bias.
Conclusion

The short-term goals of the intervention were met, with the exception of a significant impact on sun protection promotion efforts. This study’s findings were fairly consistent with the current literature: sun safety educational intervention has a significant impact on sun protection knowledge, attitudes, and behaviors. However, the findings of this study were inconsistent in that there was no significant impact on sun protection promotion efforts, whereas current literature shows intervention does have a positive impact on promotion efforts. The time-frame for this project was limited, however the results of this project provides support for future research in the area of using role models for influencing sun safety behaviors in youth. The results from this intervention have provided strong data for future, more longitudinal, interventions.

There is strong research supporting community wide, multi-component, sun safety interventions. However, there has not been any research indicating which sun safety intervention is the best. No comparisons of interventions have been made. In addition, the content of sun safety educational interventions may vary significantly from one study to the next. No research has been conducted to determine what content should be included in a sun safety intervention. These are all areas in which future research may be very beneficial.

The findings of Spring into Action, and the impact it had on youth athletic coaches and parent helpers, shows strong support for a sun safety educational intervention in order to help minimize the future carcinogenic effects of UV rays on youth athletes.
References


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doi:10.1002/(sici)1097-0215(19980812)77:43.0.co;2-7


ROLE MODELS FOR SUN SAFETY

doi:10.1177/109019819902600308


Appendix A

Spring into Action: Role Models for Sun Safety Pre-Test

%U of L SCHOOL OF NURSING%

Spring into Action: Role Models for Sun Safety is interested in learning about coaches’ and parents’ sun safe practices. Please take a few minutes to answer the following survey to help us plan the best program we can to promote sun protection for you and your youth athletes.

Age: __________ Ethnicity: __________ Sex: __________ Years as Coach/Parent Helper: __________

Please circle your response

1. How often do you…?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>...perform monthly self-exams of your skin</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...wear sunscreen of SPF 15 or more while in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...wear a wide-brimmed hat/cap with flap while in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...get a doctor/nurse to perform a clinical exam of your skin?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...wear a long-sleeved shirt while in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...wear sunglasses while in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

2. How often do you tell the youth athletes…?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>...to wear sunscreen when in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...to wear a wide-brimmed hat when in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...to wear a long-sleeved shirt when in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...to wear sunglasses when in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Modified from Georgia’s “Got Youth Covered” by Parrott & Duggan, 1999.
### ROLE MODELS FOR SUN SAFETY

<table>
<thead>
<tr>
<th>3. How difficult is...?</th>
<th>Very Difficult</th>
<th>Difficult</th>
<th>Neither</th>
<th>Easy</th>
<th>Very Easy</th>
</tr>
</thead>
<tbody>
<tr>
<td>...getting your youth athlete to wear sunscreen</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...getting your youth athlete to wear a wide-brimmed hat when in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...getting your youth athlete to wear a long-sleeved shirt when in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...getting your youth athlete to wear sunglasses when in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. How certain are you that...?</th>
<th>Very Uncertain</th>
<th>Uncertain</th>
<th>Neither</th>
<th>Certain</th>
<th>Very Certain</th>
</tr>
</thead>
<tbody>
<tr>
<td>...you could recognize unhealthy changes in your skin?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...you know the steps to follow for doing a skin exam to help detect skin cancer?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...you know how to protect your skin from the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...you will remember to protect your skin from the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...you will be able to protect your skin from the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Modified from Georgia’s “Got Youth Covered” by Parrott & Duggan, 1999.
ROLE MODELS FOR SUN SAFETY

5. In the following section, please indicate to what degree you agree or disagree with the statement.

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</tbody>
</table>

For the following sections, please circle all answers that apply.

6. When do you wear sunscreen?
   a. to swim  b. to work outside  c. to fish  d. to the beach
   e. always wear sunscreen when I am in the sun  f. never wear sunscreen
   g. other (please explain):

7. On what parts of your body do you apply sunscreen when you wear it?
   a. nose  b. eyes  c. lips  d. ears  e. neck/face area
   f. arms  g. shoulders  h. hands  i. chest  j. back
   k. legs  l. feet  m. never wear it  n. other (please explain):

8. When do you tell your youth athlete to wear sunscreen?
   a. when swimming  b. when working outside  c. when playing sports
   d. always when in the sun  f. never tell them to wear sunscreen
   g. other (please explain):

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ROLE MODELS FOR SUN SAFETY

9. On what parts of your youth athletes’ body do you tell him/her to apply sunscreen?
   a. nose   b. eyes   c. lips   d. ears   e. neck/face area
   f. arms   g. shoulders   h. hands   i. chest   j. back
   k. legs   l. feet   m. never wear it   n. other (please explain): __________

   For the next set of questions, please circle the letter which best reflects your belief.

10. How often should you conduct an exam of your own skin to help detect skin cancer?
    a. whenever you take a shower   b. once a month
    c. once a year   d. don’t know/unsure

11. How often should you get a clinical exam of your skin to help detect skin cancer?
    a. whenever you take a shower   b. once a month
    c. once a year   d. don’t know/unsure

12. How long before going out in the sun should you apply sunscreen for it to be most effective?
    a. 20-30 minutes   b. just before going in the sun
    c. 5-10 minutes   d. don’t know/unsure

13. What type of material should you look for when selecting a protective shirt while working in the sun?
    a. loosely fitting and tightly woven   b. tightly fitting and tightly woven
    c. loosely fitting and loosely woven   d. don’t know/unsure

14. Which of the following types of hats provides the best protection from the sun?
    a. wide-brimmed straw hat   b. baseball cap
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   For each of the following, please indicate how long it takes you to travel to obtain the product or service.

15. To obtain a medical check-up? Please check one.
    __________ less than 30 minutes
    __________ 30-60 minutes
    __________ more than 60 minutes
    __________ don’t know

16. To get to a store that sells sunscreen? Please check one.
    __________ less than 30 minutes
    __________ 30-60 minutes
    __________ more than 60 minutes
    __________ don’t know

Modified from Georgia’s “Got Youth Covered” by Parrott & Duggan, 1999.
Have any of the following sources told you how to protect your skin while in the sun?  
Circle all that apply.

Doctor/nurse  Retailer  Friend  Family Member  Radio  
Television  Newspaper  Book  Magazine  Training Manual  
Pamphlet/Brochure  Employer  Organization for which you volunteer  
Other (please explain):______________________________

Thank you for taking Spring into Action: Role Models for Sun Safety’s pre-test!

Now let’s learn how to be a ROLE MODEL for sun safety!  
Help protect our youth from skin cancer!

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Appendix B

Spring into Action: Role Models for Sun Safety Post-Test

---

**SCHOOL OF NURSING**

*Spring into Action: Role Models for Sun Safety* is interested in learning about coaches' and parents' sun safe practices. Please take a few minutes to answer the following survey to help us evaluate the effectiveness of the “Spring into Action” program.

**Please circle your response**

<table>
<thead>
<tr>
<th>1. How often do you...?</th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>...perform monthly self-exams of your skin</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...wear sunscreen of SPF 15 or more while in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...wear a wide-brimmed hat/cap with flap while in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...get a doctor/nurse to perform a clinical exam of your skin?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...wear a long-sleeved shirt while in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>...wear sunglasses while in the sun?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. How often do you tell the youth athletes...?</th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>Always</th>
</tr>
</thead>
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<tr>
<td>...to wear sunscreen when in the sun?</td>
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<td>...to wear a wide-brimmed hat when in the sun?</td>
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### Role Models for Sun Safety

3. How difficult is...?

<table>
<thead>
<tr>
<th></th>
<th>Very Difficult</th>
<th>Difficult</th>
<th>Neither</th>
<th>Easy</th>
<th>Very Easy</th>
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<tr>
<td>getting your youth athlete to wear sunscreen</td>
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4. How certain are you that...?

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<td>you could recognize unhealthy changes in your skin?</td>
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<td>you know the steps to follow for doing a skin exam to help detect skin cancer?</td>
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<td>you know how to protect your skin from the sun?</td>
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<td>you will remember to protect your skin from the sun?</td>
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<td>you will be able to protect your skin from the sun?</td>
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Program Comments

Please comment on your experience with this project. For example, what did you enjoy, what did you not enjoy, would you make any changes to the program?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Thank you for your participation in Spring into Action: Role Models for Sun Safety! Remember:

You are a **ROLE MODEL** for sun safety!
Help protect our youth from skin cancer!

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