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## Sunscreen Use and Screening in College Athletes: An Evidence-Based Pilot Project

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UNIVERSITY OF SAN DIEGO  
Hahn School of Nursing and Health Science  
DOCTOR OF NURSING PRACTICE

Sunscreen Use and Screening in College Athletes: An Evidence-Based Pilot Project

by

Nicole Brustkern BSN, RN, CPN

A Doctor of Nursing Practice Portfolio presented to the  
FACULTY OF THE HAHN SCHOOL OF NURSING AND HEALTH SCIENCE  
UNIVERSITY OF SAN DIEGO

In partial fulfillment of the  
requirements for the degree  
DOCTOR OF NURSING PRACTICE

May 22, 2021

Sharon Boothe-Kepple PhD, FNP-C, Faculty Advisor and Clinical Mentor

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I would like to extend my appreciation to USD Athletic Director Eli Bisnett-Cobb, ATC and Louise Lieberman, USD Women's Soccer Head Coach for their involvement in this project.

A sincere thank you to my friends, my family, and my partner, Isaiah Adona, for believing in my passion and pursuit of an advanced degree.

## Documentation of Mastery of DNP Program Outcomes

**Final Manuscript**

Sunscreen Use and Screening in College Athletes: An Evidence-Based Pilot Project

Nicole Brustkern

Sharon Boothe-Kepple

University of San Diego

### Abstract

*Background:* Melanoma is the third most common cancer in individuals ages 15 – 29.

The greatest risk for melanoma is ultraviolet (UV) radiation from the sun. Collegiate athletes are exposed to 1,000 more sun hours per year than the average adult, placing them at higher risk for melanoma. Evidence supports sunscreen education and screening to promote protective behaviors in young adults.

*Objective:* This evidence-based pilot project implements the standardized screening of sunscreen use and sun protective behaviors in women's soccer players ages 18 to 21 years old at the University of San Diego.

*Methods:* The Sun Exposure and Protection Index (SEPI), reflecting both UV exposure risk and sun protective behaviors, was administered to female soccer players before and after the intervention period. Athletes were instructed to apply SPF 50 to the face, neck, and chest once daily for 7 days while practicing on the soccer field. Educational materials about sun safety were provided. Principles of the Iowa Model and Health Belief Model guided this pilot project.

*Outcomes:* Twenty-two athletes participated in this pilot. 86.4% reported using sunscreen 5 or more days during the intervention period. 100% reported sunscreen use 3 or more days during intervention period, compared to 45.4% prior to implementation. The average score on the SEPI Part 2 prior to the pilot was 10. After intervention, there was an average reduction of 1.45 points in SEPI Part 2 scores, representing an increased propensity for sun protection and improved sun protection behaviors. Sun exposure screening should be considered as primary prevention in college athletes, who are at an elevated lifetime risk of ultraviolet radiation exposure. Furthermore, providing sunscreen



and educational materials prior to sun exposure may decrease the risk of future melanoma in this high-risk population.

## Sunscreen Use and Screening in College Athletes:

### An Evidence-Based Pilot Project

#### **Description of the Clinical Problem**

Skin cancer is the most common type of cancer in the United States, with melanoma accounting for 80% of skin cancer-related deaths (*Final Recommendation Statement: Skin Cancer Prevention*, 2018). Melanoma is the third most common cancer in young adults ages 15 – 39 years (U.S. Department of Health and Human Services, 2014, p. 4). The single greatest modifiable risk factor for melanoma is ultraviolet (UV) exposure from the sun. The highest number of emergency-department visits and cost related to sunburns are among females ages 18 to 29 years (Guy et al., 2017, p. 2). College athletes are exposed to an average of 1,000 more sun hours per year than the average adult (U.S. Department of Health and Human Services, 2014). The application of sunscreen for sun protection has been shown to inhibit many of the acute and chronic effects of UV radiation exposure, including melanoma (Young et al., 2017). Despite the well-documented benefits of sunscreen as photoprotection, sunscreen use remains low in the adolescent and young adult population (Ally et al., 2018). The U.S Preventive Services Task Force reports the benefits of behavioral counseling to improve sun protection practices in adolescents and young adults, up to 24 years (“Behavioral Counseling to Prevent Skin Cancer US Preventive Services Task Force Recommendation Statement,” 2018). Sun safety education programs are proven to be an effective strategy in improving athlete compliance with sunscreen use and other photoprotective behaviors (Jinna & Adams, 2013).

#### **Description of Evidence-Based Practice Project**

An evidence-based project (EBP) was implemented using The Sun Exposure and Protection Index (SEPI) to assess sunscreen use and the impact of education on sun protection knowledge and behaviors in women's soccer players at the University of San Diego (USD). At the time of intervention, the USD Athletic Department did not employ standardized sun protection screening or education. This pilot project used standardized and evidence-based screening tools to improve athlete sunscreen use during outdoor team practices. The intervention period took place in August of 2020 with the participation of 22 athletes.

### **Evidence-Based Practice Model**

The EBP model selected for this pilot project is the Iowa Model of Evidence-Based Practice to Promote Quality Care. A framework for quality improvement, the Iowa Model “serves as a guide for nurses and other healthcare providers to use research findings for improvement of patient care” (Titler et al., 2001, p. 498). The Iowa Model is widely used in both clinical and academic settings to address clinical inquiry via “problem and knowledge-focused triggers that may be addressed through synthesis and application of research findings” (Titler et al., 2001, p. 498). The model's use of research to support implementations improving practice standards aligns with the intentions of this DNP project. This project translates current research in young adult sunscreen use to initiative sun protection education and practices in the high-risk population of collegiate athletes. The Iowa Model provides a process grounded in critical-thinking, clinical inquiry, and reevaluation necessary for implementing this evidence-based practice change in the college athletics setting.

Additionally, the Health Belief Model was referenced throughout this project to represent the unique need to address the beliefs and perceptions of young adults and engage them in health behaviors (Glanz et al., 2015, p. 77). Risk perception is a primary motivator in health behaviors. Research suggests when interventions that identify, engage, and change risk perception are most likely to produce sustainable change (Ally et al., 2018, p.2). The Health Belief Model targets risk perception to produce self-motivated, long-term sunscreen use and sun protection behaviors in this pilot project.

### **Proposed Evidence-Based Solutions**

Prior to the pilot study, an initial literature review was conducted between January and February 2020. The review of literature was performed using the following search engines: CINAHL, PubMed, and Google Scholar. Keywords and Boolean phrases utilized during the initial searches were “young adult and melanoma”, “sunscreen and athlete”, “young adult and sunscreen”, “college athlete and sun”, and “young adult and athlete and sun”. Literature was narrowed to articles published within the last 8 years. These searches were performed multiple times between January 2020 and March 2020. A total of six articles were critically appraised to evaluate their proposed intervention for this manuscript. The articles were selected based on their English language, relevance to the population, and quality according to the Johns Hopkins Nursing Evidence-Based Practice Evidence Level and Quality Guide. 4 of the appraised articles reflected a Level I rank reserved for randomized controlled trials (RCT) and systematic review of RCT. One article reflected a Level 3 rank for nonrandomized control trials and quasi-experimental studies. One article reflected a Level 6 rating as a case study (Dang & Dearholt, 2017).

This pilot project focused on the implementation of standardized screening methods for sunscreen use and sun protection behaviors in university athletes. Results from the literature review supported the use of team-based education programs at the university level. Multiple RCTs and systematic reviews illustrate the elevated risk of skin cancer and significant impact of standardized education on sun protective behaviors. A study with over 800 National College Athletic Association (NCAA) athletes in 2018 confirmed that college athletes were at high risk of UV radiation and performed inadequate sun-protective practices. In this study, dermatologists implemented a standardized sunscreen and photoprotection education program for student athletes, coaches, and athletic trainers. Following the training, student athletes demonstrated improved frequency of sunscreen use and an increased in perceived risk of skin cancer (Ally et al., 2018). Another RCT involving adults ages 18-25 reported significant decreases in UV exposure and increases in sun protective practices with the use of a web-based skin cancer risk and behavior module (Heckman et al., 2016). A systematic review from 2013 further impressed the efficacy of educational programs for skin cancer prevention and sunscreen compliance in student athletes (Jinna & Adams, 2013).

The primary intervention of this EBP involves the implementation of a validated, standardized screening tool for UV exposure and sun protection habits. The Sun Exposure and Protection Index (SEPI) is a novel instrument for grading sun exposure habits. It is unique in that its results can be tailored for individualized sun protection advice as well as be used to evaluate interventions for sun exposure and protection on a group level (Detert et al., 2015, p. 992). The SEPI consists of two sections: the first evaluating sun habits and protection and the second assessing readiness to improve sun

protection. The purpose of the instrument is to identify both individuals with high risk sun exposure habits and those who are willing to increase their use of sun protection methods. Part 1 of the SEPI consists of 8 questions scored using a 5-point Likert scale (0= low risk behavior and 4 = high risk behavior) resulting in a total score of 0-32 points. A high score reflects more UV risk and less sun protective behavior (Widemar & Falk, 2018, p. 440). Part 2 of the SEPI indicates readiness to improve sun protection, consisting of 5 questions also scored 0=4. In this case, Part 2 reflects decreasing propensity to increase sun protection and results in a score of 0-20 points. A high score on the SEPI Part 2 represents low motivation to change sun-protection habits. Part 2 of the SEPI is based on the transtheoretical model of behavior change (TTM), which is well-established in behavioral medicine to describe motivation behind behavior change (Widemar & Falk, 2018, p. 440).

The SEPI is proven to be reliable and valid amongst countries with both high and low UV risk (Widemar & Falk, 2018, p. 439). The SEPI communicates sun exposure advice, targeting those of highest need, and can be implemented in research studies to monitor the effects of preventive interventions against UV exposure (Widemar & Falk, 2018, p. 438). The SEPI consists of 13 total questions and takes approximately 3 minutes to complete. The SEPI was selected as a screening method in this EBP for its short length, relevance to behavior change, and application in research studies.

The Fitzpatrick Skin Type classification was employed to survey sun sensitivity amongst athletes. The Fitzpatrick Skin Type is a commonly used method to measure self-reported UV sensitivity based on skin type categories, measured from I (always burns, never tans) to VI (deeply pigmented skin, never burns, tans very easily) (Widemar &

Falk, 2018, p. 439). Previous studies have shown that self-estimated skin sensitivity is more highly correlated with individual behavior rather than actual UV sensitivity (Widemar & Falk, 2018, p. 440). For this reason, the SEPI was selected as the primary instrument for measuring sun risk and sensitivity. However, the Fitzpatrick Skin Type quiz was also included to provide demographic information and skin-type specific sun protection recommendations.

The literature review identified access to sunscreen as a barrier to sun protection practices. In two separate systematic reviews, college athletes in RCTs attributed inaccessibility as the primary reason for their lack of sunscreen use (Orsimarsi, 2019)(Jinna & Adams, 2013). This project provided broad-spectrum sunscreen to participating athletes as an adjunct intervention to sunscreen and sun exposure screening.

### **Stakeholder Identification**

This EBP took place within USD and the Athletic Department. This was the first EBP to be performed within the USD Athletic Department. The success of this EBP established an interdisciplinary relationship between the School of Nursing and Athletic Department for future practice changes. Dr. Sharon Boothe-Kepple acted as the Doctor of Nursing Practice (DNP) student's faculty advisor and supervisor throughout the pilot project. The USD athletic director, Eli Bisnett-Cobb, and women's soccer team head coach, Louise Lieberman, were both identified as stakeholders within the Athletic Department. For successful outcomes, it was imperative that the DNP student collaborate with stakeholders within the Athletic Department to understand the goals and intentions of the EBP in this setting.

### **Implementation Barriers**

The COVID-19 pandemic posed the most significant, unexpected threat to the success of this project. The project intended to be conducted face-to-face at team practices during the preseason period to improve comradery, engagement, and participation. In the context of COVID-19, fall sports and competitions were unable to take place. This required the project to be conducted virtually via Zoom. The virtual delivery of education and screening threatened participant engagement and compliance.

Resistance to change acted as a potential barrier to the success of this EBP. NCAA athletes admit to seeking a tan through UV exposure (Orsimarsi, 2019, p. 117). This desire is grounded in United States cultural beauty norms which highlight tan skin as a sign of health (Wysong et al., 2012, p. 494). The Health Belief Model was selected to most effectively target these deep-rooted beliefs and initiate behavioral change.

### **Methods**

After receiving approval from the USD Institutional Review Board (IRB) and letter of support from Eli Bisnett-Cobb, ATC on behalf of the USD Athletics Department, the Doctor of Nursing Practice student collaborated with the women's soccer head coach to establish an appropriate timeline. The project and participation were presented to the athletes via Zoom in July 2020. Recruitment and screening occurred concurrently with preseason training in July and August of 2020. Inclusion criteria were active membership on the women's soccer team, age 18 to 24 years, location within the United States, and ability to apply provided sunscreen daily for 7 days. Exclusion criteria included allergy to sunscreen.

A total of 22 participants ages 18 to 21 years old qualified for participation in the EBP. Ages of participants are demonstrated in Figure 1. Figure 2 demonstrates



distribution of the sample amongst self-identified ethnicities. The sample was primarily white in ethnicity (61.9%).

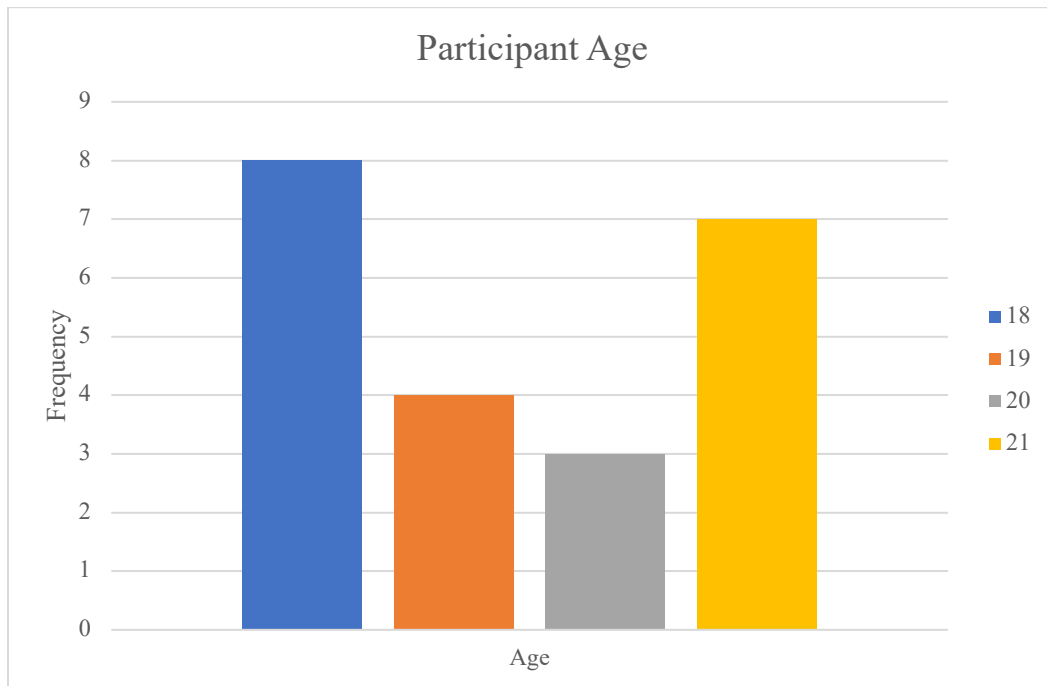
Eligible participants completed a demographic form, Fitzpatrick Skin Type quiz, and the SEPI prior to intervention period. Figure 3 illustrates the Fitzpatrick Skin Types of the athletes, reflecting self-reported UV sensitivity. These forms were distributed and completed electronically using the Google Forms platform. Sun protection and skin cancer risk education were provided based on the individual's Fitzpatrick Skin Type and SEPI score. Participants were given broad-spectrum SPF 50 sunscreen to apply to their face, neck, and chest daily for 7 days.

The intervention period took place in August 2020. Following the 7-day intervention period, participants completed the SEPI and self-reported their compliance with sunscreen use. Results were recorded within the Google Forms platform.

This study included two variables. The first variable was frequency of sunscreen use in three categories. The second variable was the SEPI Part II score, which reflected propensity to increase sun protection. The final variable was self-reported frequency of sunscreen application during a 7-day period.

**Figure 1**

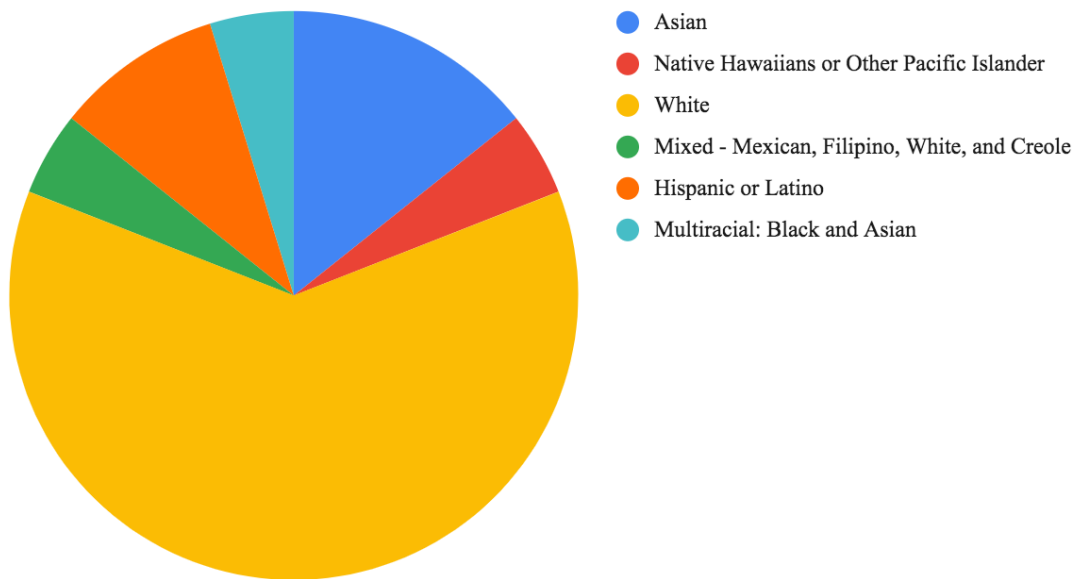
*Self-reported age of participants*

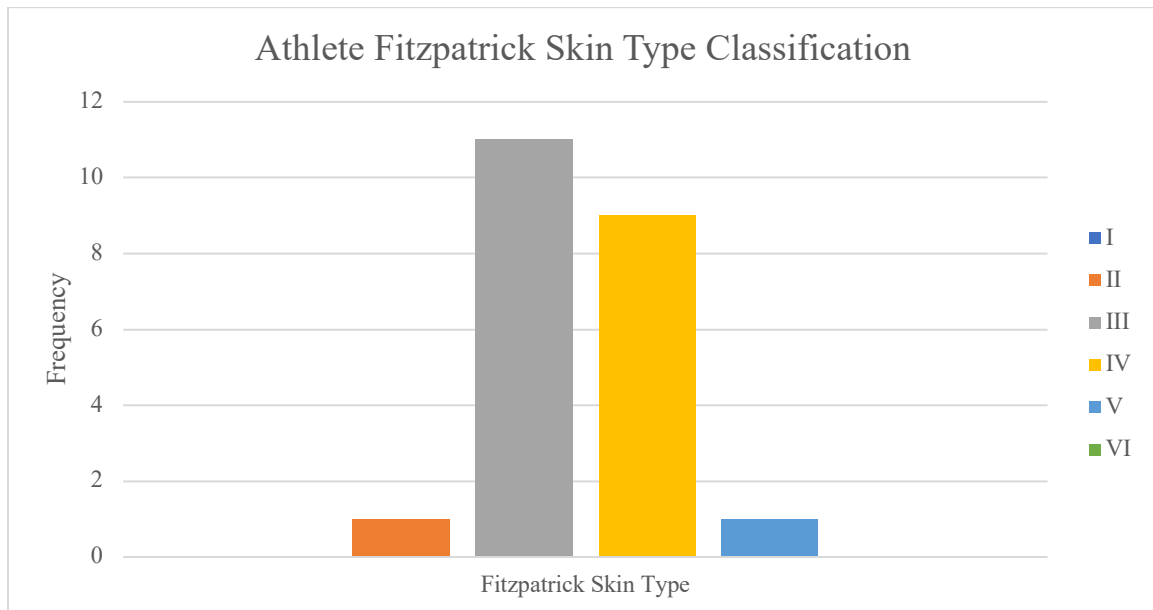


**Figure 2**

*Self-reported ethnicity of participants*

Ethnicity of Athletes



**Figure 3***Athlete self-reported UV sensitivity by Fitzpatrick Skin Type*

### Project Development and Implementation Timeline

The project concept was accepted by the faculty advisor in February 2020. The DNP student received permission and a letter of support from the Athletic Department in March 2020. USD Institutional Review Board (IRB) approval was obtained April 6, 2020. The DNP student began collaborating with women's soccer head coach, Louise Lieberman, following IRB approval. The timeline for intervention was established and planned concurrently with preseason training in July 2020. In face of the COVID-19 pandemic, the intervention period was delayed to August 2020 and occurred virtually in accordance with university policies and regulations.

Recruitment and initial screening took place in between July 27, 2020 and August 9, 2020. The 7-day intervention and data collection occurred simultaneously between August 10, 2020 and August 16, 2020. Data analysis occurred between September 2020 and January 2021. In October 2020, the project abstract was submitted to the Western

Institute of Nursing (WIN) Conference, National Association of Pediatric Nurse Practitioners (NAPNAP) Conference, and California Association of Nurse Practitioners (CANP) Conference. The abstract was accepted for poster presentation at WIN, NAPNAP, and CANP educational conferences. Presentation and final recommendations to stakeholders took place February 24, 2021. The project poster was presented at USD DNP Presentation Day on March 4, 2021. The project poster was displayed at the NAPNAP Conference on March 25, 2021, the WIN Conference on April 14, 2021, and the CANP Conference on April 22, 2021.

### **Process and Outcome Indicators**

Process indicators for this EBP included the implementation of the standardized screening tool, dispersal of educational materials, and provision of sunscreen. Adherence to process indicators throughout the recruitment and intervention period reflected process change. The DNP student was the principal investigator throughout the project, allowing for consistency in screening and education. The DNP student established contact with the head coach and athletes prior and following the intervention period to ensure full participation. All necessary data points, along with demographic data, were compiled into an Excel spreadsheet and participant identifiers were removed.

### **Outcome Indicator Data Monitoring**

The process change was implementation of a standardized screening and educational program. Outcome indicators consisted of frequency of sunscreen use following intervention and scores on the Part 2 of the SEPI. The SEPI Part 2 reflects readiness to improve sun protection (Widemar & Falk, 2018). The scores from the SEPI Part 2 were collected before and after the intervention then analyzed by the DNP student.

Scores before and after intervention were totaled and averaged to quantify the impact of education and screening on sun exposure risk perception. Frequency of sunscreen use was measured by athlete self-report before and after intervention.

### **Project Impact and Cost-Benefit Analysis**

The implementation of standardized screening was at no cost to USD or the Athletic Department. The DNP student independently provided education and supplied sunscreen for participants. The SEPI was available for use by the DNP student free-of-charge. Screening tools were distributed electronically. The DNP student was responsible for provision of the sunscreen and associated shipping fees. Neutrogena Inc. donated educational pamphlets on sun protection practices. Non-financial benefits of this EBP include reduced risk of melanoma in athletes and reduction in loss of athlete playing time due to sunburns. Notable intangible benefits include establishment of an interdisciplinary relationship between the School of Nursing and Athletic Department and promotion of a culture of sun safety at USD.

### **Results**

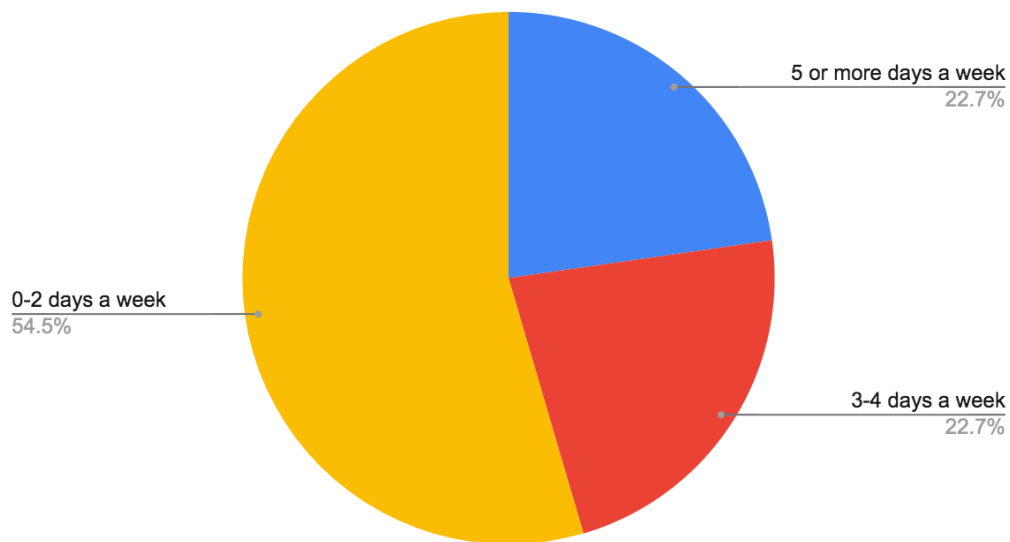
Twenty-two athletes (n=22) were eligible for participation in this pilot project. Of these athletes, 100% completed screening before and after the intervention period. As displayed in Figure 2, 86.4% of participants reported using sunscreen 5 or more days during the intervention period. 100% of athletes reported sunscreen use 3 or more days after the intervention period, compared to 45.4% prior to implementation. Prior to the 7-day intervention period, the average athlete score on Part 2 of the SEPI was 10. Figure 4 shows how the sample demonstrated a reduction of 1.45 points in SEPI Part 2 scores after project implementation. The reduction in average score represents an increased

propensity for sun protection and improved sun protection behaviors. Figure 3 demonstrates the overall trend in score reduction on the SEPI Part 2 for participating athletes.

#### Figure 4

*Frequency of participant sunscreen use before education and intervention period*

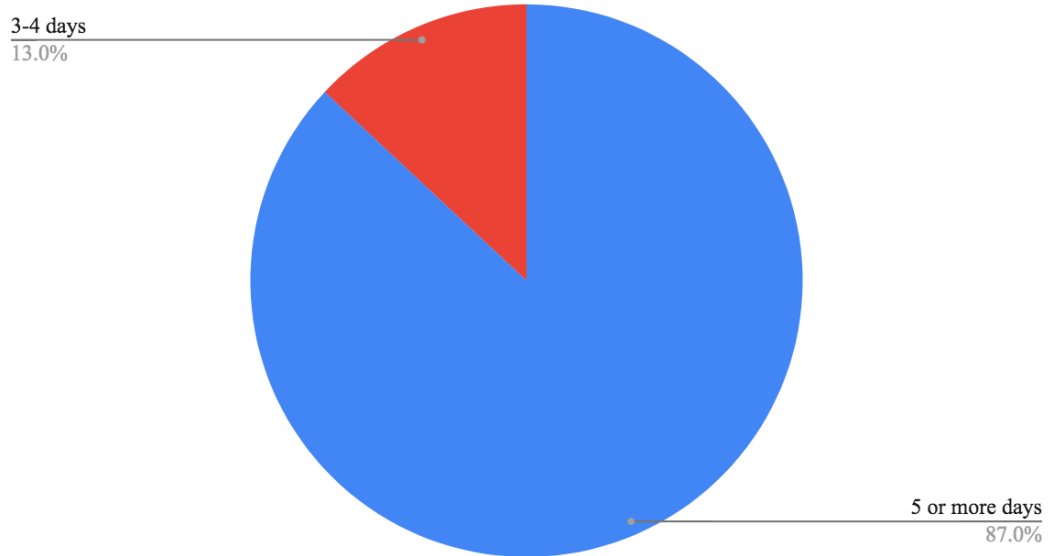
Frequency of sunscreen use, pre-intervention



#### Figure 5

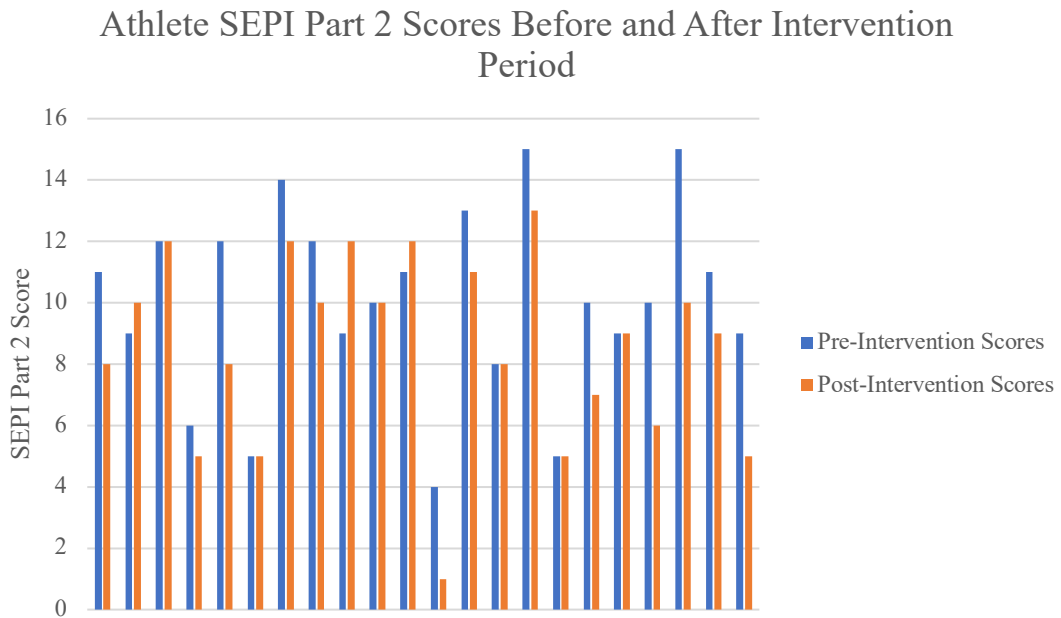
*Frequency of participant sunscreen use after education and intervention period*

Frequency of sunscreen use, post-intervention



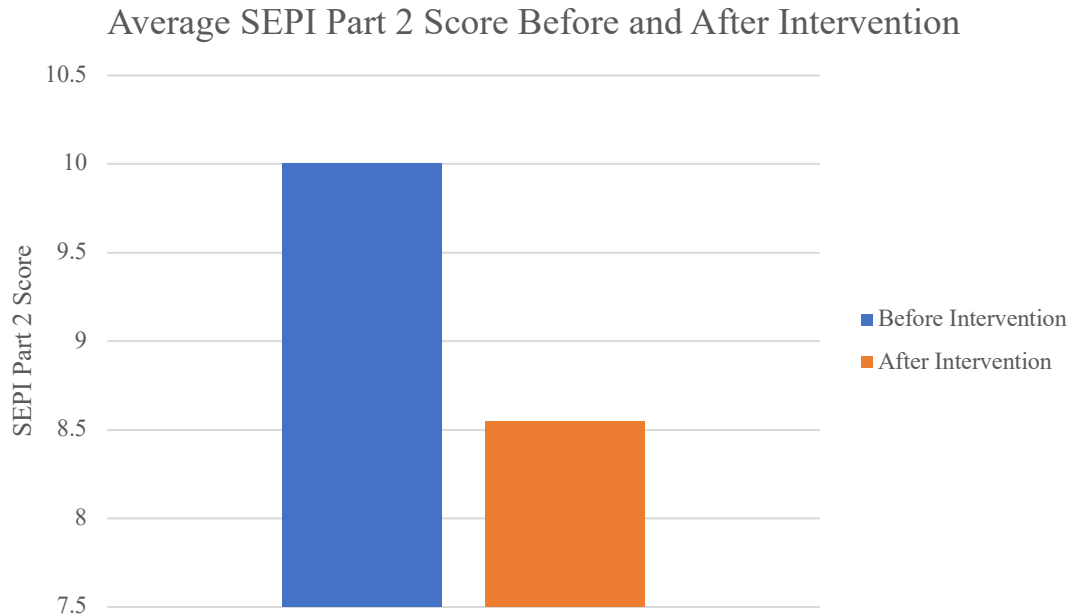
**Figure 6**

*Participant scores on Part 2 of the SEPI before and after education and intervention*



**Figure 7**

*Average participant score on the SEPI Part 2 before and after education and intervention period*



### Discussion and Sustainability

The success of this pilot project helps promote an interdisciplinary relationship between the School of Nursing and Athletic Department. With the success of standardized screening with the women's soccer team, future DNP students may extend the SEPI and framework for this project to other outdoor sports at USD. The benefits of standardized screening and education are only sustainable with the support of the Athletic Department, athletic trainers, and coaches. Prior to the implementation of this EBP, the Athletic Department began supplying SPF 50 sunscreen in the athletic training room where athletes frequent prior to practices and games. The next step in sustaining standardized sunscreen education and screening is training athletic trainers and coaches. Athletic trainers and coaches have consistent contact with athletes and are in a position to



deliver sunscreen education and reminders to athletes. Standardized sunscreen education and screening programs are low in cost, time efficient, and are effective in improving sunscreen use in college athletes.

### **Limitations**

Limitations of this pilot project include, but are not limited to, sample size, intervention period, and reliability of athlete self-report. The results suggest the efficacy of sunscreen use and behavior screening but cannot be extrapolated to the entire college athlete population due to the small sample size of this EBP. Additionally, the intervention was implemented for a total of 7 days. The screening tools and educational materials should be implemented for a longer intervention period before drawing conclusions on athlete adherence. Participants were given an informational video made by the DNP student about sunscreen application and instructed to apply daily to the face, neck, and chest prior to practice times. While self-report is not the most reliable method of data collection, independent application and self-reporting best reflected the pilot project's intent to improve self-motivated sunscreen compliance and behaviors.

### **Implications for Practice**

Evidence demonstrates that clinicians play an integral role in reducing UV exposure and skin cancer risk through direct counseling of patients, particularly among adolescent and young adult patients (U.S. Department of Health and Human Services, 2014, p. 27). The results of this pilot project in combination with current research illustrate the impact of standardized sunscreen education programs on behavioral change. Recent research concluded that raising awareness about the risks of UV exposure do not directly translate into behavior changes in adolescents (Hubbard et al., 2018, p. 2).

Sustainable, long-term change is achieved by targeting health beliefs, challenging risk perception, and providing individualized recommendations. Providers and communities cannot rely on posters and visual aids alone to promote sunscreen use in adolescents and young adults. It is imperative that primary prevention of skincare is prioritized with other routine screenings in both college athletics and primary care.

### **Conclusion**

Primary care providers and athletic departments are in unique positions to provide primary prevention of skin cancer to adolescents and young adults. College athletes present a particularly high-risk population for the consequences of UV exposure. Implementation of a standardized screening and educational tool for sun exposure, such as the SEPI, improves both risk perception and sunscreen use in this population. The literature supports the use of sunscreen education programs in university athletic departments. Addressing health beliefs and risk perception successfully motivates sustainable behavior change in this population. Sun exposure screening should be incorporated into both pre-participation screenings for athletes and primary care settings for adolescents and young adults.

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## Appendix A

### IRB Approval

irb@sandiego.edu <irb@sandiego.edu>  
To: nbrustkern@sandiego.edu, sharonboothe-kepple@sandiego.edu

Mon, Apr 6, 2020 at 2:59 PM



Apr 6, 2020 2:59 PM PDT

Nicole Brustkern  
Hahn School of Nursing & Health Science

Re: Exempt - Initial - IRB-2020-340, Sunscreen Use and Screening in College Athletes: An Evidence-Based Pilot Project

Dear Nicole Brustkern:

The Institutional Review Board has rendered the decision below for IRB-2020-340, Sunscreen Use and Screening in College Athletes: An Evidence-Based Pilot Project.

Decision: Exempt

Selected Category: Category 4. Secondary research for which consent is not required: Secondary research uses of identifiable private information or identifiable biospecimens, if at least one of the following criteria is met:

- (i) The identifiable private information or identifiable biospecimens are publicly available;
- (ii) Information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects;
- (iii) The research involves only information collection and analysis involving the investigator's use of identifiable health information when that use is regulated under 45 CFR parts 160 and 164, subparts A and E, for the purposes of "health care operations" or "research" as those terms are defined at 45 CFR 164.501 or for "public health activities and purposes" as described under 45 CFR 164.512(b); or
- (iv) The research is conducted by, or on behalf of, a Federal department or agency using government-generated or government-collected information obtained for nonresearch activities, if the research generates identifiable private information that is or will be maintained on information technology that is subject to and in compliance with section 208(b) of the E-Government Act of 2002, 44 U.S.C. 3501 note, if all of the identifiable private information collected, used, or generated as part of the activity will be maintained in systems of records subject to the Privacy Act of 1974, 5 U.S.C. 552a, and, if applicable, the information used in the research was collected subject to the Paperwork Reduction Act of 1995, 44 U.S.C. 3501 et seq.

Findings: None

Research Notes:

Internal Notes:

**Appendix B**  
**Letter of Support from Clinical**  
**Site**



Re: Sunscreen Use and Screening in College Athletes: A Pilot Project

Dear Nicole Brustkern (PI),

The University of San Diego Athletics Department is aware of your proposed research project. We understand that our involvement is to assist you and help you accomplish the evidenced based project, "Sunscreen Use and Screening in College Athletes: A Pilot Project." The Athletics Department will allow the principal investigator access to women's soccer team practices and participating players. Additionally, the PI will communicate with the coaches and inform them about the logistics of the project. Athletes will complete all appropriate consent forms prior to participating in the pilot and USD IRB approval will be completed. The pilot will include completion of a *Sun Exposure Screening questionnaire*, and a *Perception of Sunscreen Use* by the athletes. Participants will receive sunscreen samples from the principal investigator. The data collected from this pilot project will be analyzed and used to improve processes within the Athletic Department to identify UV radiation risk and improve sunscreen use among athletes.

As the Director of Sports medicine/Head Athletic Trainer of the University of San Diego Athletics Department, I support the involvement of our department in this project and look forward to working with you.

Eli Bisnett-Cobb, MS, ATC  
University of San Diego Athletics  
Director of Sports Medicine/Head Athletic Trainer

## Appendix C

### Poster Abstract with Letter of Acceptance to Conference

**Title:** Sunscreen Use and Screening in College Athletes: An Evidence-Based Pilot Project

**Authors:** Nicole Brustkern BSN, RN, CPN and Sharon B. Kepple PhD, MSN, FNP-C, PHN

**Objective:** Approximately 100,000 individuals are diagnosed with invasive melanoma each year. Melanoma is the third most common in men and fourth most common in women ages 15 – 29. The single greatest risk for melanoma is ultraviolet radiation from the sun. Collegiate athletes are exposed to 1,000 more sun hours per year than the average adult. This evidence-based pilot project implements the standardized screening of sunscreen use and sun protective behaviors in women's soccer players ages 18 to 21 years old at the University of San Diego.

**Methods:** The Sun Exposure and Protection Index was administered to female soccer players at the University of San Diego in August 2020. Athletes were instructed to apply SPF 50 to the face, neck, and chest once daily for 7 days while practicing on the soccer field. Educational materials about sun safety were provided. Athletes completed the Sun Exposure and Protection Index again following the intervention period.

**Results:** All participants (n=24) completed the 7-day intervention. Results are currently under analysis.

**Conclusion:** The success of this pilot project exemplifies the impact of sun exposure screening as primary prevention in college athletes, who are at an elevated lifetime risk of ultraviolet radiation exposure. Furthermore, providing sunscreen and educational materials prior to sun exposure may decrease the risk of future melanoma in this high-risk population.





Nicole Brustkern &lt;nibrustkern@gmail.com&gt;

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**From NAPNAP: Re: Your Practice Innovation Poster Abstract Submission**

2 messages

**Simone Daley** <sdaley@napnap.org>  
 To: "nibrustkern@sandiego.edu" <nibrustkern@sandiego.edu>

Mon, Jan 4, 2021 at 1:19 PM

Sent via email to: [nibrustkern@sandiego.edu](mailto:nibrustkern@sandiego.edu)

Dear Nicole Brustkern,

CONGRATULATIONS! Your abstract, "Sunscreen Use and Screening in College Athletes: An Evidence-Based Pilot Project" has been selected for the **Practice Innovation** poster presentation at the National Association of Pediatric Nurse Practitioners' (NAPNAP) 42<sup>nd</sup> National Conference on Pediatric Health Care. As you know, the in-person conference will be held on March 10–13, 2021, at Rosen Shingle Creek in Orlando, Florida. The virtual conference will be held on March 24–27, 2021, with on-demand access to more than 80 CE sessions and poster presentations through July 31, 2021.

In order to ensure that our Conference formats best address the needs and expectations for upcoming poster presentations, we would like to hear from you! Please answer the following questions below and send your response back to Simone Daley at [sdaley@napnap.org](mailto:sdaley@napnap.org) by **January 8, 2021**:

I am planning to attend and present my poster at the in-person conference in Orlando.

I am unable to attend and present my poster at the in-person conference, but I am interested in displaying my poster in a virtual format as part of the virtual conference.

I am unable to attend and present my poster at the in-person conference and I am **not** interested in displaying my poster in a virtual format as part of the virtual conference.

We will then follow up with you in January with additional details and logistics about your poster presentation. At this time, in-person poster presentations are scheduled for display on: **dates to be determined**. Virtual posters will be available to view on the virtual platform during the virtual conference on March 24–27 and on demand until July 31, 2021. Poster presenters will not be required to be present at the virtual conference.

In the meantime, please confirm receipt of this notification to Simone Daley at [sdaley@napnap.org](mailto:sdaley@napnap.org) by **January 8, 2021**.

I look forward to seeing your posters and thank you for your willingness to participate in our 2021 NAPNAP conference!

Sincerely,

Jessica L. Spruit, DNP, RN, CPNP-AC  
 Conference Planning Chair

---

**Nicole Brustkern** <nibrustkern@gmail.com>  
 Draft To: Simone Daley <sdaley@napnap.org>

Tue, Jan 5, 2021 at 10:35 AM



Nicole Brustkern &lt;nibrustkern@gmail.com&gt;

**WIN RIE 2021**

3 messages

**Cynthia Connelly** <connellyc@sandiego.edu> Fri, Jan 29, 2021 at 10:19 AM  
 To: Briony DuBose <bdubose@sandiego.edu>, R M <rmattson@sandiego.edu>, Kristine Mendoza <kmendoza@sandiego.edu>, Rachelle Sey <rsey@sandiego.edu>, Sunny Stirling <sunnystirling@sandiego.edu>, Sandra Peppard <speppard@sandiego.edu>, Celeste Armenta <celestearmenta@sandiego.edu>, Nicole Brustkern <nibrustkern@gmail.com>, Janet Dewees <jdewees@sandiego.edu>, Lizbeth Velazquez <lvelazquez@sandiego.edu>, Ginny Meyerhuber <gmeyerhuber@sandiego.edu>, Roger Lankheet <rlankheet@sandiego.edu>  
 Cc: Jane Georges <jgeorges@sandiego.edu>, Mary Barger <mbarger@sandiego.edu>, Ruth Bush <rbush@sandiego.edu>, Caroline Etland <cetland@sandiego.edu>, "Burkard, Joseph" <jburkard@sandiego.edu>, "Boothe-Kepple, Sharon" <sharonboothe-kepple@sandiego.edu>, Kathy James <kjames@sandiego.edu>, Karen Hoyt <hoyt@sandiego.edu>

Greetings and Congratulations:

On behalf of Dean Georges, we are pleased to inform you, your abstract is accepted for a poster presentation at The Western Institute of Nursing (WIN) 54th Annual Communicating Nursing Research Conference "*Better Together: Integration of Nursing Research, Practice, and Education*", **VIRTUAL** Research and Information "Poster" Exchange (R&IE), April 14-16, 2021.  
R&IE posters will be on display for the full conference; poster presenters will upload PDFs of their posters and will communicate with conference participants via a chat function. **Instructions for uploading virtual posters will be emailed to each poster presenter in mid-February.**

**Conference Registration**

R&IE poster presenters are responsible for registering for the conference. **Please understand as a R&IE poster presenter you are making a commitment to display your poster.** The conference proceedings and program will list member organizations, the titles of their R&IE posters, and the authors of those posters. Conference registration is available on the WIN website [here](http://www.winuring.org) or <http://www.winuring.org>  
**\*\*\*\* AS AN R&IE PRESENTER YOU ARE ELIGIBLE TO RECEIVE A REGISTRATION DISCOUNT OF \$75. I WILL SEND YOU THE CODE AS SOON AS I RECEIVE IT FROM WIN.**

This year, USD's Hahn School of Nursing and Health Science will have a strong presence at WIN. In addition to the 12 student R&IE participants, various students, alumni, and faculty will be showcasing his/her work at poster and podium presentations.

Again, thank you again for submitting an abstract for the 2021 Research Information Exchange. We look forward to seeing your posters during the virtual display.

Sincerely,

RIE Abstract Review Committee

**Cynthia Connelly** <connellyc@sandiego.edu> Thu, Feb 11, 2021 at 3:02 PM  
 To: Briony DuBose <bdubose@sandiego.edu>, R M <rmattson@sandiego.edu>, Kristine Mendoza <kmendoza@sandiego.edu>, Rachelle Sey <rsey@sandiego.edu>, Sunny Stirling <sunnystirling@sandiego.edu>, Sandra Peppard <speppard@sandiego.edu>, Celeste Armenta <celestearmenta@sandiego.edu>, Nicole Brustkern <nibrustkern@gmail.com>, Janet Dewees <jdewees@sandiego.edu>, Lizbeth Velazquez <lvelazquez@sandiego.edu>, Ginny Meyerhuber <gmeyerhuber@sandiego.edu>, Roger Lankheet <rlankheet@sandiego.edu>  
 Cc: Jane Georges <jgeorges@sandiego.edu>, Mary Barger <mbarger@sandiego.edu>, Ruth Bush <rbush@sandiego.edu>, Caroline Etland <cetland@sandiego.edu>, "Burkard, Joseph" <jburkard@sandiego.edu>, "Boothe-Kepple, Sharon" <sharonboothe-kepple@sandiego.edu>, Kathy James <kjames@sandiego.edu>, Karen Hoyt <hoyt@sandiego.edu>

Dear All,



Nicole Brustkern &lt;nibrustkern@gmail.com&gt;

## CANP 43rd Annual Educational Conference - Presenter Information

1 message

Erin R. Meyer &lt;erin@canpweb.org&gt;

Mon, Mar 15, 2021 at 2:02 PM

Dear Presenter,

This email provides detailed information related to your presentation at CANP's Annual Educational Conference, taking place April 22-24, 2021, virtually. [Please read the email thoroughly](#) and contact me with any questions.

### Presentation Recordings:

CANP contracted with Socio and TLC Creative for the virtual conference. Both entities have several years' experience with virtual conferences and will be an asset to the conference. As part of our contract with TLC Creative, they will be working with speakers on their session recording(s). By way of this note, I would like to introduce you to the team at TLC. Please watch your inbox for an email from [tech@tlciscreative.com](mailto:tech@tlciscreative.com). This email will contain detailed information and instructions for your recording and will be in your inbox by Thursday, March 18 at the latest.

Speakers are responsible for recording their own presentation using the tools provided by TLC, while we understand recording a presentation can be "scary" we ensure you that you're not alone. TLC will provide the necessary tools and support each speaker needs, including an email that will open the communication to TLC. Additionally, if you are part of a webinar, a session with more than 1 speaker, TLC will be contacting the speakers to setup a recording date and time. Also, feel free to contact me directly. There isn't a limit on the number of times you can record and we encourage you to record your presentation as many times as it takes to be comfortable with the recording.

As a reminder all sessions are pre-recorded and featured conference sessions will be played during their assigned conference time. Speakers with a featured conference session must be online during their assigned time to address the audience during a live Q&A. Speakers that are assigned to present an on-demand session will also pre-record their session and are encouraged to participate in the conference but don't need to be online at a specific time. To see your scheduled presentation time, view the [online agenda](#).

### Poster Presentation:

Poster presentations will also be pre-recorded. They will be placed in a "room" within the virtual conference platform and attendees can enter the "room" to access the poster presentations anytime during the conference. There isn't any live element to the poster presentations and poster presenters don't need to be online at a specific time. However, these presenters need to list their contact information in their presentation so attendees can reach out if they chose. All poster submissions were accepted and presenters will receive the same information as session speakers to pre-record their poster.

Note, poster presenters don't qualify for a complimentary conference registration.

### PowerPoints

Speakers are encouraged to use PowerPoint during their presentation. The PowerPoint and your image via webcam can be on the screen during the recording. When the recording is playing during the conference it will play in the form of a video and the PowerPoint will display for the audience. If you chose to use PowerPoint during your presentation, we ask that you use the attached template. The first slide will be an introduction slide with the speaker's photo and brief biography (25 words or less). This slide will be on the screen while a voiceover introduces the panelist(s) for that session.


Also, PowerPoints will be uploaded in the handout section of the platform for review during the featured or on-demand presentation. Submit your final PowerPoint separately, once you have completed your recording, further details will be supplied as to which email address you should send the presentation.

### CANP Conference Speaker Inclusivity Tip Sheet

Nurse Practitioners are representatives from all races and ethnicities, genders, all sexualities, and have various disabilities. In an effort to ensure your presentation is as inclusive as possible we are providing you with reminders to consider when creating and presenting your presentation. Please see the attached CANP Conference Speaker Inclusivity

## Appendix D


### Poster Presentation




# Play It Safe In The Sun!

## Improving Sunscreen Use in College Athletes

Nicole Brustkern BSN, RN, CPN, DNP-S  
Sharon B. Kepple, PhD FNP-C, PHN (Chickasaw)



#### Background



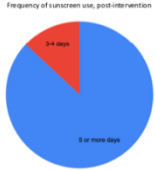
Melanoma is a leading cause of cancer in ages 15 – 29.

- UV radiation is a major risk.
- College athletes have a higher lifetime risk of melanoma with more sun exposure.

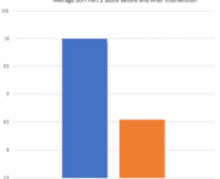
#### Purpose

- Improve sunscreen use
- Increase sun exposure awareness in collegiate athletes

#### Evaluation Results



100% of participants reported sunscreen use 3 or more days per week, compared to 45.4% prior to screening and education.



There was an average reduction of 1.45 points in participant score reflecting improved sun protection behaviors and decreased UV risk.

#### Evidence for Problem

- College athletes lack basic knowledge about skin cancer and sun protection.
- 50% of NCAA athletes never use sunscreen.
- College athletes exposed to 1,000 more hours of sun per year than average adults.
- Females ages 18 - 29 account for the highest number of ED visits and costs for sunburns.

#### Project Plan Process

Participants

Setting

Project Timeline

Outcome Measurement

**Participants**

- USD women's soccer players:
  - Voluntary participation
  - 18 – 24 years
- Setting**
  - Recruitment during team meeting via Zoom
  - Independent sunscreen application
- Project Timeline**
  - Jan. 2020: USD Athletic Approval
  - Apr. 2020: USD IRB Approval
  - Aug. 10 – 17 2020: Data collection
- Outcome Measurement**
  - SEPI Part II Scores
  - Frequency of sunscreen use
  - UV risk reduction

#### Conclusions

- Sunscreen use and UV risk screening are effective in targeting behaviors associated with melanoma risk.
- Young adults are receptive to behavior-based interventions in primary preventive practices.
- Improved sun exposure behaviors decrease lifetime melanoma risk for college athletes.

#### Evidence-Based Intervention

- The Sun Exposure Protection Index (SEPI)
- The Fitzpatrick Skin Type Quiz
- Sun protection educational materials
- SPF 50 sunscreen samples applied to face, neck, chest for 7 days

#### Cost-Benefit Analysis

- Cost of Neutrogena sunscreen: \$263
- Avg. cost of melanoma treatment and removal per player per year: \$5,346
- 24 athletes x 18.5% avg. melanoma risk for ages 15-29 = 4.44 players
- 4.44 players x \$5346 = \$23,736.24 avoided per team per year

#### Implications for Clinical Practice

- There is a need for standardized sun exposure education programs in college athletics.
- The importance of interdisciplinary relationships between athletic departments and practitioners.
- Targeting beliefs/behaviors in young adults improves sunscreen use.



## Appendix E

### PowerPoint Stakeholder Presentation

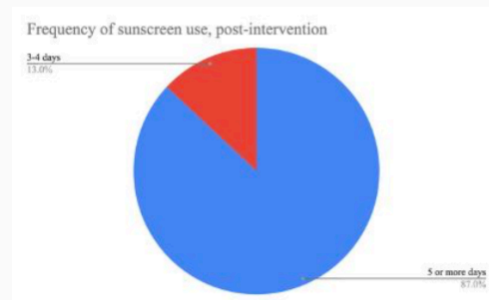
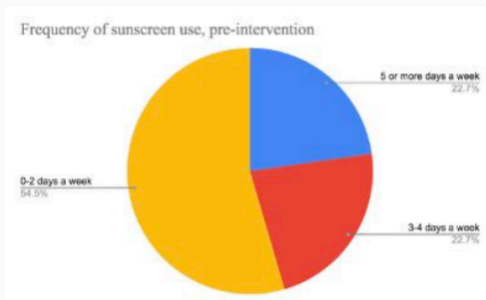
# Sunscreen Use and Screening in College Athletes: An Evidence-Based Pilot Project

*DNP Evidence-Based Practice Project Stakeholder Presentation*

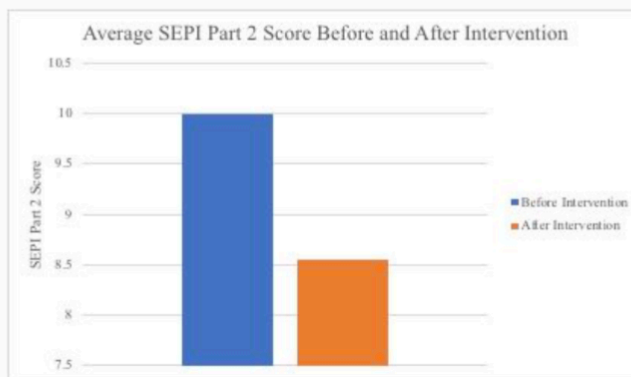
## Project Summary

- Purpose
  - Increase sunscreen use among women soccer players
  - Increase sun exposure awareness in the USD athletic community
- Methods
  - Distribution of SPF 50 sunscreen and educational materials
    - Apply to face, neck, and chest for 7 consecutive days
  - Completion of Sun Exposure and Protection Index (SEPI)

## Results: Sunscreen Use



## Results: UV Risk Exposure



## Cost-Benefit Analysis

- Cost of Neutrogena sunscreen
  - \$263
- Average cost of melanoma treatment per player per year
  - \$5,346
- 24 athletes x 18.5% (average melanoma risk for ages 15-29)  
= 4.44 players

4.44 players x \$5346 = \$23,736.24 avoided per team per year

## Athlete Feedback

"I normally wear sunscreen, so it was already routine for me to apply sunscreen to my face and neck. However, I learned the importance of supplementing sunscreen use with sun protection clothing."

"I got into the habit of applying it everyday and my face has been less red around areas I typically burn."

"Thank you for allowing me to participate in this study, the sunscreen really helped me."

"I really enjoyed participating in this study and making it a habit to put on sunscreen daily! Thank you!"

## Recommendations

- Target beliefs and behaviors to improve sunscreen use
  - Improved sun exposure behaviors decrease lifetime melanoma risk
- Sunscreen education in pre-season meetings
- Verbal reminders about sunscreen prior to practice and games
- SPF 50 available in athletic training room



## Appendix F

### DNP Program Outcomes Exemplars

#### AACN DNP Essentials/NONPF Competencies/USD DNP Program Outcomes Exemplars

AACN DNP Essentials & NONPF Competencies	USD DNP Program Objectives	Exemplars Provide bulleted exemplars that demonstrates achievement of each objective
<p><b>DNP Essential I: Scientific Underpinnings for Practice</b></p> <p><b>NONPF: Scientific Foundation Competencies</b></p> <p><i>The scientific foundation of nursing practice has expanded and includes a focus on both the natural and social sciences including human biology, genomics, science of therapeutics, psychosocial sciences, as well as the science of complex organizational structures. In addition, philosophical, ethical, and historical issues inherent in the development of science create a context for the application of the natural and social sciences.</i></p>	<p><b>2.</b> Synthesize nursing and other scientific and ethical theories and concepts to create a foundation for advanced nursing practice.</p>	<ul style="list-style-type: none"> <li>• Synthesize and present evidence-based research supporting or denying the use of holy basil as a method of complementary alternative medicine, applying research to provider recommendations in practice (APNC 523)</li> <li>• Analysis of medical journals and emerging research on pediatric asthma severity, translating evidence-based research into care and recommendations for integration in advanced nursing practice (APNC 520)</li> <li>• Submission of a personal narrative to reflect upon a situation in clinical practice using principles of self-awareness and mindfulness (DNPC 610)</li> <li>• Successful completion of a systematic head-to-toe physical assessment of a standardized patient (APNC 521)</li> </ul>

		<ul style="list-style-type: none"> <li>• Presentation of an educational lecture on breath-holding in children, relationship to developmental theory, and implications in primary care (NPTC 549)</li> <li>• Utilize critical appraisal of evidence synthesizing literature to support sunscreen education programs in college athletics (DNPC 686, 630)</li> </ul>
<p><b>DNP Essential II: Organizational &amp; System Leadership for Quality Improvement &amp; Systems Thinking</b></p> <p><b>NONPF: Leadership Competencies/Health Delivery System Competencies</b></p> <p><i>Advanced nursing practice includes an organizational and systems leadership component that emphasizes practice, ongoing improvement of health outcomes, and ensuring patient safety. Nurses should be prepared with sophisticated expertise in assessing organizations, identifying system's issues, and facilitating organization-wide changes in practice delivery. This also requires political skills, systems thinking, and the business and financial acumen needed for the analysis of</i></p>	<p><b>5.</b> Design, implement, and evaluate ethical health care delivery systems and information systems that meet societal needs and ensure accountability for quality outcomes.</p>	<ul style="list-style-type: none"> <li>• Visualize goal-setting for reduction of hospital-acquired respiratory viruses in healthcare organization through creation of a driver diagram (DNPC 626)</li> <li>• Present a case study in health care related to wrong-site surgery in outpatient dermatologic practice, evaluating areas for application of strategic planning and quality improvement to reduce incidence of wrong-site surgery in accordance with Joint Commission standards (DNPC 626)</li> <li>• Creation of a business plan for a plant-based acne treatment system detailing financial requirements of the company, company leadership and infrastructure, and projected outcomes (DNPC 653)</li> <li>• Presentation of natural skincare business plan, including cost effectiveness and productivity, to prospective investors and stakeholders (DNPC 653)</li> <li>• Poster presentation of DNP project at California Association of Nurse Practitioners</li> </ul>

<p><i>practice quality and costs.</i></p>		<p>Conference, Western Institute of Nursing Conference, and National Association of Pediatric Nurse Practitioners Annual Conference (DNPC 630)</p>
<p><b>DNP Essential III: Clinical Scholarship &amp; Analytical Methods for Evidence-Based Practice</b></p> <p><b>NONPF: Quality Competencies/Practice Inquiry Competencies</b></p> <p><i>Scholarship and research are the hallmarks of doctoral education. Although basic research is viewed as the first and most essential form of scholarly activity, an enlarged perspective of scholarship has emerged through alternative paradigms that involve more than discovery of new knowledge. These paradigms recognize: (1) the scholarship of discovery and integration “reflects the investigative and synthesizing traditions of academic life”; (2) scholars give meaning to isolated facts and make connections across disciplines through the scholarship of integration; and (3) the scholar applies knowledge to solve a problem via the scholarship of application that involves the translation</i></p>	<p><b>4.</b> Incorporate research into practice through critical appraisal of existing evidence, evaluating practice outcomes, and developing evidence-based practice guidelines.</p>	<ul style="list-style-type: none"> <li>• Completion of a systematic review of evidence pertaining to the identification and assessment of postpartum depression, followed by recommendations supporting practice change of interest (DNPC 611)</li> <li>• Synthesize and present evidence-based research supporting or denying the use of holy basil as a method of complementary alternative medicine, applying research to provider recommendations in practice (APNC 523)</li> <li>• Analysis of medical journals and emerging research specific to pediatric asthma severity, translating evidence-based research into care and recommendations for integration in advanced nursing practice (APNC 520)</li> <li>• Integration of evidence-based research in the creation of a hypothetical plant-based acne treatment system utilizing botanical active ingredients clinically comparable to pharmacologic methods (DNPC 653)</li> <li>• Presentation of genomic influences in the development of Tetralogy of Fallot and development of an evidence-based manuscript outlining opportunities for lifelong care of patients with this condition (DNPC 622)</li> </ul>

<p><i>of research into practice and dissemination and integration of new knowledge.</i></p>		<ul style="list-style-type: none"> <li>• Successful implementation of an evidence-based pilot project screening for sunscreen use and sun protection behaviors in women's soccer players (DNPC 630)</li> <li>• Application of current COPD guidelines in the management of a patient with an acute COPD exacerbation via telehealth (NPTC 608)</li> <li>• Completion of DNP manuscript detailing the outcomes and recommendations related to a sunscreen screening and education implemented with women's soccer players at USD (DNPC 630)</li> </ul>
<p><b>DNP Essential IV: Information Systems/Technology &amp; Patient Care Technology for Improvement &amp; Transformation of Health Care</b></p> <p><b>NONPF: Technology &amp; Information Literacy Competencies</b></p> <p><i>DNP graduates are distinguished by their abilities to use information systems/technology to support and improve patient care and health care systems, and provide leadership within healthcare systems and/or academic settings. Knowledge and skills related to information systems/technology and patient care technology prepare the</i></p>	<p><b>7.</b> Incorporate ethical, regulatory, and legal guidelines in the delivery of health care and the selection, use, and evaluation of information systems and patient care technology.</p>	<ul style="list-style-type: none"> <li>• Selection of a data set from the Center for Disease Control and Prevention evaluating aerobic activity and education level and subsequent analysis using Microsoft Excel-based graphs and charts (HCIN 540)</li> <li>• Analysis of a case study in medication administration, identifying sources of human and system errors, and their prevention using information technology in the patient care setting (HCIN 540)</li> <li>• Examination of financial implications of electronic health record (EHR) implementation in outpatient settings and consideration in business planning (DNPC 653)</li> <li>• Production of a three-year financial prospectus for a plant-based acne treatment business plan, detailing expenses, revenue,</li> </ul>

<p><i>DNP graduates apply new knowledge, manage individual and aggregate level information, and assess the efficacy of patient care technology appropriate to a specialized area of practice along with the design, selection, and use of information systems/technology to evaluate programs of care, outcomes of care, and care systems. Information systems/technology provide a mechanism to apply budget and productivity tools, practice information systems and decision supports, and web-based learning or intervention tools to support and improve patient care.</i></p>		<p>and projected productivity (DNPC 653)</p> <ul style="list-style-type: none"> <li>• Development of a Cost-Benefit and Return on Investment Analysis pertaining to implementation of a standardized sunscreen education program in the University of San Diego women’s soccer team (DNPC 686)</li> <li>• Use of EPIC EHR system in clinical sites for record-keeping, billing, and electronic prescribing (NPTC 549, 604, 605, 608, 609)</li> </ul>
<p><b>DNP Essential V: Health Care Policy for Advocacy in Health Care</b></p> <p><b>NONPF: Policy Competencies</b></p> <p><i>Health care policy, whether created through governmental actions, institutional decision-making, or organizational standards, creates a framework that can facilitate or impede the delivery of health care services or the ability of the provider to engage in practice to address health care needs. Engagement in the process of policy</i></p>	<p><b>3. Demonstrate leadership in collaborative efforts to develop and implement policies to improve health care delivery and outcomes at all levels of professional practice (institutional, local, state, regional, national, and/or international).</b></p>	<ul style="list-style-type: none"> <li>• Presentation of childhood obesity, how the epidemic is affected by legislation and health policy, and implications for advanced practice nursing care in prevention (DNPC 648)</li> <li>• Development of a manuscript utilizing policy framework for evaluating Proposition V, San Francisco’s sugar sweetened beverage tax, identifying efficacy in addressing health issues and implications of the bill on public health (DNPC 648)</li> <li>• Implementation of an evidence-based pilot project on sunscreen use and screening in women’s soccer players at the University of</li> </ul>

<p><i>development is central to creating a health care system that meets the needs of its constituents. Political activism and a commitment to policy development are central elements of DNP practice.</i></p>		<p>San Diego (DNPC 630)</p>
<p><b>DNP Essential VI: Interprofessional Collaboration for Improving Patient &amp; Population Health Outcomes</b></p> <p><b>NONPF: Leadership Competencies</b></p> <p><i>Today's complex, multi-tiered health care environment depends on the contributions of highly skilled and knowledgeable individuals from multiple professions. In order to accomplish the IOM mandate for safe, timely, effective, efficient, equitable, and patient-centered care in this environment, health care professionals must function as highly collaborative teams. DNPs have advanced preparation in the interprofessional dimension of health care that enable them to facilitate collaborative team functioning and overcome impediments to</i></p>	<p><b>1.</b> Demonstrate advanced levels of clinical practice within defined ethical, legal, and regulatory parameters in designing, implementing, and evaluating evidenced-based, culturally competent therapeutic interventions for individuals or aggregates.</p> <p><b>3.</b> Demonstrate leadership in collaborative efforts to develop and implement policies to improve health care delivery and outcomes at all levels of professional practice (institutional, local, state, regional, national, and/or international).</p>	<ul style="list-style-type: none"> <li>• Appeal submission to American Nursing Association on childhood obesity and the necessity of attention and action at the federal level (DNPC 648)</li> <li>• Submission of an abstract urging involvement by a professional nursing association in addressing the implications of sugar-sweetened beverage consumption and supporting sugar-sweetened beverage taxes (DNPC 648)</li> <li>• Development of a manuscript utilizing policy framework for evaluating Proposition V, San Francisco's sugar sweetened beverage tax, identifying efficacy in addressing health issues and implications of the bill on public health (DNPC 648)</li> <li>• Collaboration with mental health counselors and social workers in the multifaceted care of students with anxiety, depression, and other mental health disorders affecting academic performance (NPTC 602)</li> <li>• Partnership with Athletics Department in</li> </ul>

<p><i>interprofessional practice. DNP graduates have preparation in methods of effective team leadership and are prepared to play a central role in establishing interprofessional teams, participating in the work of the team, and assuming leadership of the team when appropriate.</i></p>		<p>implementing an evidence-based pilot project for sunscreen use and screening in women's soccer players at the University of San Diego (DNPC 630)</p> <ul style="list-style-type: none"> <li>• Facilitate referrals to First 5 of San Diego county for developmentally at-risk children screened in the primary care setting (NPTC 549)</li> </ul>
<p><b>DNP Essential VII: Clinical Prevention &amp; Population Health for Improving Nation's Health</b></p> <p><b>NONPF: Leadership Competencies</b></p> <p><i>Consistent with national calls for action and with the longstanding focus on health promotion and disease prevention in nursing, the DNP graduate has a foundation in clinical prevention and population health. This foundation enables DNP graduates to analyze epidemiological, biostatistical, occupational, and environmental data in the development, implementation, and evaluation of clinical prevention and population.</i></p>	<p><b>6.</b> Employ a population health focus in the design, implementation, and evaluation of health care delivery systems that address primary, secondary, and tertiary levels of prevention.</p>	<ul style="list-style-type: none"> <li>• Presentation of epidemiology of sickle cell disease, ethical implications to care, and prevention plan at the primary, secondary, or tertiary level (DNPC 625)</li> <li>• Assisted facilitating on-campus conference for mental health awareness and suicide prevention at Mesa College Community (NPTC 602)</li> <li>• Assessment of childhood obesity in the U.S. and its relation to public school nutrition, creating a set of guidelines for public schools and providers to assess and prevent childhood obesity at the primary and secondary levels of prevention (DNPC 648)</li> <li>• Completion of a simulated patient encounter highlighting education on lifestyle modification as a secondary prevention strategy in treating hyperlipidemia (NPTC 604)</li> <li>• Presentation of epidemiology of sickle cell</li> </ul>

		<p>disease, ethical implications to care, and prevention plan at the primary, secondary, or tertiary level (DNPC 625)</p> <ul style="list-style-type: none"><li>• Creating a culture of melanoma awareness within the USD athletic department through sun exposure screening as primary prevention against consequences of UV exposure with the women's soccer team (DNPC 630)</li></ul>
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<p><b>DNP Essential VIII: Advanced Nursing Practice</b></p> <p><b>NONPF: Independent Practice/Ethics Competencies</b></p> <p><i>The increased knowledge and sophistication of healthcare has resulted in the growth of specialization in nursing in order to ensure competence in these highly complex areas of practice. The reality of the growth of specialization in nursing practice is that no individual can master all advanced roles and the requisite knowledge for enacting these roles. DNP programs provide preparation within distinct specialties that require expertise, advanced knowledge, and mastery in one area of nursing practice. A DNP graduate is prepared to practice in an area of specialization within the larger domain of nursing.</i></p>	<p><b>1.</b> Demonstrate advanced levels of clinical practice within defined ethical, legal, and regulatory parameters in designing, implementing, and evaluating evidence-based, culturally competent therapeutic interventions for individuals or aggregates.</p>	<ul style="list-style-type: none"> <li>• Creation of a behavior-based, standardized sunscreen education program for the University of San Diego athletic department (DNPC 630)</li> <li>• Understanding of the legal parameters and liability of nurse practitioner-led medical practices, such as in aesthetic medicine (NPTC 602, 605)</li> <li>• Accumulation of 500 clinical hours specific to the care of children and adolescents in a community-based primary care clinic (NPTC 549)</li> <li>• Application of evidence-based interventions to improve sun protection behaviors and address knowledge gaps in women’s soccer players at the University of San Diego (DNPC 648, DNPC 630)</li> <li>• Completion of approximately 1400 clinical hours in primary care and specialty settings with populations across the lifespan, from newborn to geriatric (DNPC 630)</li> <li>• Understand the role of a primary care nurse practitioner in the specialty setting of Hematology and Oncology, addressing the holistic needs of patients undergoing cancer treatment (NPTC 604, 608)</li> </ul>
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## Appendix G Other Supporting Documents



**Sunscreen Use and Screening in College Athletes:  
An Evidence-Based Pilot Project**

Led by Principle Investigator: Nicole Brustkern BSN, RN, CPN, DNP Student at USD  
Supporting Faculty: Sharon Boothe-Kepple, PhD, MSN, FNP-C, PHN (Chickasaw)

***Play it safe in the sun!***  
**Help reduce skin cancer in women's  
soccer players at USD!**

You will be given **FREE** Neutrogena Sunscreen to apply to your face, neck, and chest for 7 days. This project requires daily sunscreen use and the completion of a 13-question survey at the beginning and end of the project. Time to complete surveys will not exceed 30 minutes. You will receive a Starbucks or Better Buzz gift card for participating.

Eligible participants will complete all necessary consent forms and receive copies for their records. There is no foreseeable risk, harm, or physical discomfort associated in participating in this project.

Interested? Questions? Please contact me via text, phone call, or e-mail!

Nicole Brustkern  
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E-mail: NBrustkern@sandiego.edu  
Sharonboothe-kepple@sandiego.edu



University  
of San Diego®  
HAHN SCHOOL OF NURSING AND HEALTH SCIENCE  
Betty and Bob Beyster Institute for  
Nursing Research, Advanced Practice, and Simulation

Neutrogena Corporation  
5760 96th Street  
Los Angeles, CA 90045

March 9, 2020

Nicole Brustkern BSN, RN, CPN, DNP-S  
7845 Westside Drive  
Apartment 111  
San Diego, CA 92108

I am a registered nurse and doctoral student with the Hahn School of Nursing at the University of San Diego (USD). I am conducting an evidence-based study on sunscreen use in female collegiate soccer players at USD this summer. I am writing to appeal to Neutrogena for their support of my pilot project.

There is a plethora of evidence to illustrate the need for educational programs that encourage sunscreen use in female collegiate athletes. However, women's soccer players remain at significantly higher risk than the general population for development of melanoma. Evidence highlights lack of education and access to sunscreen as major barriers to sunscreen use. In this project, I plan to implement evidence-based UV exposure education and distribute Neutrogena sunscreen to players to encourage a culture of sun safety at USD.

As a former athlete and avid sunscreen enthusiast, I have been a longtime user of Neutrogena Clear Face sunscreens. An additional concern from athletes is sunscreen potentiating the development of acne. Neutrogena Clear Face provides a dermatologist-recommended, non-comedogenic solution to this barrier. I plan to utilize Neutrogena's research and my personal testimony of this product to increase the likelihood that the players will comply with use in the short and long-term.

It is my sincere hope that Neutrogena will consider supporting my project by supplying samples of Clear Face sunscreen for the 24 athletes involved. I believe the education provided in this pilot combined with the promotion of this product will encourage more consistent sunscreen use and decreased melanoma in this high-risk population. I deeply appreciate your consideration and support of my pilot project.

With appreciation,

## Appendix H

### Certificates or Documentation of any Additional Certifications

#### COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)

##### COMPLETION REPORT - PART 1 OF 2 COURSEWORK REQUIREMENTS\*

\* NOTE: Scores on this [Requirements Report](#) reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- **Name:** Nicole Brustkern (ID: 7597723)
- **Institution Affiliation:** University of San Diego (ID: 1652)
- **Institution Email:** nbrustkern@san Diego.edu
- **Institution Unit:** DNP FNP
- **Phone:** 4252692369
  
- **Curriculum Group:** Human Subjects Research - SBR
- **Course Learner Group:** Social & Behavioral Research - Basic/Refresher
- **Stage:** Stage 1 - Basic Course
- **Description:** Choose this group to satisfy CITI training requirements for Investigators and staff involved primarily in Social/Behavioral Research with human subjects.
  
- **Record ID:** 36145726
- **Completion Date:** 02-Apr-2020
- **Expiration Date:** 02-Apr-2023
- **Minimum Passing:** 80
- **Reported Score\*:** 83

REQUIRED AND ELECTIVE MODULES ONLY	DATE COMPLETED	SCORE
Belmont Report and Its Principles (ID: 1127)	22-Oct-2018	3/3 (100%)
Conflicts of Interest in Human Subjects Research (ID: 17464)	22-Oct-2018	5/5 (100%)
Students in Research (ID: 1321)	02-Apr-2020	4/5 (80%)
History and Ethics of Human Subjects Research (ID: 498)	22-Oct-2018	7/7 (100%)
Defining Research with Human Subjects - SBE (ID: 491)	02-Apr-2020	5/5 (100%)
Informed Consent - SBE (ID: 504)	02-Apr-2020	4/5 (80%)
Privacy and Confidentiality - SBE (ID: 505)	02-Apr-2020	1/5 (20%)

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

Verify at: [www.citiprogram.org/verify/2k870cea18-3391-4f86-aff1-581d2ecef916-36145726](http://www.citiprogram.org/verify/2k870cea18-3391-4f86-aff1-581d2ecef916-36145726)

Collaborative Institutional Training Initiative (CITI Program)

Email: [support@citiprogram.org](mailto:support@citiprogram.org)

Phone: 888-529-5929

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