SUN AWARENESS AND SKIN CANCER PREVENTION
IN THE TEEN POPULATION: USING A SCHOOL BASED APPROACH IN
TEACHING ADOLESCENT SELF-HEALTH

by

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DEDICATION

I dedicate this project to all those like me, who worked for years to get a tan or any color at all for that matter, and now must live with the consequences of the choices made so many years ago. May the next generation learn from our mistakes and may we be the leaders in that journey to better health.
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ABSTRACT

The purpose of this project was to provide a comprehensive self-health education program related to sun awareness and skin cancer prevention to middle school students in an academic setting. Arizona has the leading rate of skin cancer in the United States and the leading modifier in skin cancer prevention is self-protective health behaviors. This paper discusses the successes and areas for further development of a school based self-health education program.
CHAPTER 1
SUN AWARENESS AND SKIN CANCER PREVENTION

Introduction

Skin Cancer is a growing health concern in North America. It is estimated that twenty percent of the population will develop some form of skin cancer in their lifetime (World Health Organization, 2001). The public is given the information on the web page for the American Cancer Society (ACS), that one million new cases will be diagnosed in 2005 and almost 60,000 of those cases will be melanoma, the most deadly form of skin cancer (Ries LAG, Eisner MP, Kosary CL, Hankey BF, Miller BA, et. al, 2005). The biggest modifiable risk factor for developing any form of skin cancer is ultraviolet ray exposure (ACS, 2005; Reynolds, Blaum, Jester, Weiss, Seng-Jaw and Diclemente, 1996) and teens in particular, lack consistent protective behaviors identified as deterrents to developing skin cancer (Geller, Colditz, Oliveria, Emmons, Jorgensen, Aweh, et al. 2002).

This paper proposes that school based educational programs may be one way of effectively educating teens about the dangers of sun exposure and its link to skin cancer. These educational programs must be developed such that they meet the needs of teens at a psychosocial and developmentally appropriate level. Erickson’s developmental stages will be used to guide the development of the educational materials to assure that they are meeting the needs of this particular developmental stage of identity verses identity confusion.
Several theoretical models will be used to guide behavior modification aspects of the educational program. Studies of health promotion that use a Social Cognitive Theory (SCT) and those that use the Health Belief Model (HBM) and have been found to be successful as evidenced by continued positive health behaviors after the initial education program has been completed (Glanz, Lew, Song and Cook, 1999; Ludwick and Gaczkowski, 2001; Reynolds).

Another emerging theory that has been successfully used in the area of adolescent health promotion is that of Informational-Motivational-Behavioral Skills Model (IMB). This model identifies that information and motivation equally influence prevention behavior skills and ultimately the prevention behavior itself. These theories will be used to develop a school based sun awareness and skin cancer prevention program for Desert Christian Middle School in Tucson Arizona as a model to be used with other area school systems that do not currently have a preventative health program in place.

Background and Significance

Cancer continues to be a leading health concern in the United States. Skin cancer specifically, is composed of 59,580 new cases of melanoma and more than 1 million new cases of basal cell and squamous cell carcinoma. Skin cancer will claim the lives of more than 10,000 people in the United States in 2005 (Ries et. al, 2005). Currently, one in five North Americans will develop some form of skin cancer in a lifetime (Skin Cancer Foundation, 2005; World Health Organization, 2001). In 1996, when the rate of skin cancer was only 5.2% of all cancers treated, the cost of treatment was more than 700
million dollars (Brown, Riley, Schussler, and Etzioni, 2002). As the rate of skin cancer diagnoses rises, so to does the cost associated with this disease.

Many factors influence a person’s ultimate risk of developing skin cancer in his or her lifetime. Those factors include ethnically inherent skin color and type, personal and familial history of skin cancer, presence of freckles or moles, exposure to ultraviolet rays, and use of sun protective measures (Ries et al., 2005). Race, inherent skin color, and genetic predisposition may not be modifiable, however, through early education and widened community awareness, modifiable risk factors could be ameliorated to decrease the population’s lifetime risk.

Exposure to ultraviolet rays, whether naturally through sun exposure or artificially at tanning salons, is the biggest modifiable risk factor for developing skin cancer (Ries et al., 2005). Teens, in particular, lack consistent protective behaviors (Geller, 2002). Some studies point to the teen years as the period of greatest ultraviolet light exposure owing to summertime vacation from school, summer labor jobs that tend to be outdoors and the continued culturally influenced desire for the perfect tan (Reynolds, 1996).

Preventing skin cancer and minimizing behaviors that increase a person’s risk for developing skin cancer have become the focus of several national campaigns. The CDC’s Choose Your Cover Campaign (Jorgensen, Wayman, Green, and Gleb, 2002) and the ACS’s Slip, Slop, Slap and SunSmart Campaigns have been in place for more than 20 years (Montague, Borland, and Sinclair, 2001). Healthy People 2010, developed by the United States Department of Health and Human Services as a goal for the health state of America, specifically addresses goals for sun awareness and skin cancer prevention in the
teenage population. The Environmental Protection Agency has also developed the

SunWise program offered free of charge to schools to assist them in educating young people about the dangers of unprotected ultraviolet radiation. This teen age group in particular is identified because youth are beginning to form lifetime health behaviors (McIntosh, Helms, Smyth, 2003). Concurrently, adolescence is also identified as the time period that is influenced most by the draw to participate in risk taking, or experimental behaviors and to conform to what is perceived as the acceptable norm (McIntosh, 2003). Both of these factors may lead to behaviors that increase lifetime risk for developing skin cancer.

Educational programs (e.g. SunWise) have been used to promote sun protective behaviors in youth. Researchers not only support a school based education component, but also the development of school policy changes, an educational component for teachers and parents and community awareness and encouragement of those behavioral changes (Glanz, K., Saraiya, M. and Wechsler, H., 2002; Lowe, Balanda, Stanton, and Gillespie, 1997; Lui, Barankin and Guenther, 2000). Family, community, and school support are mediators identified as positively influencing health protective behaviors (McIntosh et al., 2003).

Given the increase in skin cancer and the research that supports adolescence as the time to learn lifetime health behaviors, it is essential to teach youth the importance of sun protective behaviors and how to reduce their risk of developing skin cancer.
Purpose Statement

An educational program was developed to educate teens about skin cancer and the steps they can take to decrease their risks of developing melanoma, a potentially deadly form of cancer. The program was designed using a developmentally appropriate approach, as guided by Erikson’s developmental stages and the principles of established and emerging theories of health behavior modification. The purpose of this project is to effectively educate teens about their long-term risks of skin cancer and ongoing actions to alleviate that risk.
CHAPTER 2

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Literature Review

Introduction

The review of literature finds extensive research evidence related to skin cancer, skin cancer prevention and the lack of adequate sun protective behaviors especially among the teen age group. The statistical evidence related to skin cancer shows that this continues to be a health concern where education can play a part in decreasing overall health risk.

Skin Cancer Statistics

Skin cancer is divided into three main categories: Melanoma, and Non-Melanoma which is then divided into Basal Cell Carcinoma and Squamous Cell Carcinoma. The rates of both melanoma, the most life threatening form of skin cancer, and non-melanoma skin cancers continue to rise at an alarming rate (Cokkinides, Weinstock, O’Connell, Thun, 2002; Glanz, 1999). In 2001, approximately 1.3 million new cases of basal cell or squamous cell carcinoma were diagnosed with approximately 2000 deaths from basal cell and squamous cell carcinoma combined (American Cancer Society [ACS], 2002). In 2005, an estimated 59,580 cases of melanoma will have been diagnosed and 10,590 deaths attributed to this form of cancer (ACS, 2005). More than 900,000 new cases of skin cancer are diagnosed every year (Alam and Ratner, 2001; Arizona Cancer Center [AZCC], 2005).
Skin Cancer in Arizona

Next to Australia, Arizona has the highest rate of skin cancer in the world (Harris, Griffith and Moon, 2001). Estimates for Arizona for 2004 included 1180 new cases of melanoma. Basal and squamous cell skin cancers as well as in situ carcinomas were not included in this estimate (Ries et al., 2005). This is an increase from the reported 765 cases reported for the total of years 1995-2000 (Arizona Cancer Registry). Living in Arizona increases an individual’s risk of getting non-melanoma skin cancer 4-7 times over that of individuals living in other states. Living in Arizona makes one’s risk of getting melanoma twice as high as living in other areas of the United States (Harris et al., 2001).

Skin Cancer Prevention

New evidence of a genetic predisposition to the development of skin cancer has emerged. It allows that although UV radiation causes genetic changes in cell structure which can lead to the development of skin cancer, some individuals are genetically more susceptible to those changes (Alam and Ratner, 2001; Daya-Grosjean and Sarasin, 2004). This may represent the future of skin cancer prevention once a cost effective, widely available screening mechanism is developed for this genetic variant.

Exposure to ultraviolet (UV) radiation, or rays, appears to be the most important modifiable environmental factor in developing skin cancer (Davis, Cokkinides, Weinstock, O’Connell, Wingo, 2002; Glanz, Saraiya, Wechesler, 2002; Lui et al., 2000). It is also evident that decreasing one’s exposure to UV rays decreases the risk of developing some forms of skin cancer (Glanz et al., 2002; Greinert, 2001; Lui et al.,
Yet despite attempts to raise awareness about melanoma and other forms of skin cancers, protective measures are practiced inconsistently at best (Davis et al., 2002; Weinstock, 2000) and are found to be alarmingly low in adolescents 12-18 years of age (Geller et al., 2002; Robinson, Rademaker, Sylvester, and Cook, 1997).

**Skin Cancer and Sun Awareness Education**

The evidence supporting the need for a national education campaign related to sun awareness and skin cancer prevention in the United States is compelling. Countries such as Australia where the skin cancer rates are comparable or higher than that of the United States have seen decreases in skin cancer rates since the institution of national education programs (Cancer Council of Southern Australia (CCSA), 2002). United States skin cancer rates continue to climb (Ries et al., 2005), implying that the current prevention trends are not being effective.

National foundations and organizations including the American Cancer Society (ACS), the National Institutes of Health (NIH) and the Center for Disease Control (CDC) each have made publicly available, information related to UV radiation from both natural and artificial sources, and its effects and relationship to skin cancer (ACS, 2005; NIH, 2005; CDC, 2002). Evidence of the trend to increase awareness is apparent in commonly available news and entertainment magazines such as *Newsweek, Cosmopolitan, Ladies Home Journal* and *USA Today*, which periodically have articles on the long and short-term effects of sun exposure and the risks of skin cancer. Researchers and statistical findings however, are clear that more needs to be done (ACS, CDC, NIH).
Studies indicate that school based educational programs can be effective ways to increase youth awareness of the dangers of the sun and mechanisms to protect themselves from the UV radiation exposure (Buller, Reynolds, Yaroch, Cutter, Hines, Geno, et al., 2006; Buller, and Borland, 1998; Ludwick and Gaczkowski, 2001). The US government’s campaign, *Healthy People 2010*, specifically addresses goals aimed at reducing the number of cases of skin cancer in America and specifically addresses education of teens as a mechanism toward that reduction. Other studies indicate that school based education programs can teach self-care behaviors when those programs include personal changes, institutional changes and family participation (Pender, Murdaugh, and Parsons, 2001).

The literature indicates that programs aimed at educating youth and effecting a positive change in health related behaviors have several things in common. They provide background knowledge related to risk behavior and possible outcomes of that behavior, address those risks in a way that is meaningful to the adolescent age group and they create or provide a peer, parent and community support system that continually reinforces the positive behaviors (Cho, 2003; Glanz et al., 1999; Glanz et al., 2002; Greinert, McKinlay, Breitbard, 2001).

The literature also indicates that adolescent behavior modification has significant barriers to change (Davis et al., 2002; Glanz et al., 2002; Robinson et al., 1997). Barriers specific to this age group including peer pressure and need for acceptance, media influences on adolescent belief and value systems, and increased risk-taking behaviors (Davis et al., 2002; Kristjansson, Helgason, Rosdahl, Holm, and Ullen, 2001; Field et al.
Teens may also hold erroneous beliefs related to their actual risk and the risks associated with the increasingly popular methods of indoor tanning (Cho, 2003; Cokkinides et al., 2002; Kristjansson et al., 2001).

**Sun Protective Behavior and Cultural Bias**

Although it has been shown that poor sun protective behaviors are portrayed by both male and female teens, there is a difference in the areas in which each gender fails to protect themselves (Abrams, Jorgensen, Southwell, Geller, and Emmons, 2003; Geller et al., 2002). Age is also a determinant of compliance with sun protective behavior (Geller, 2002; Reynolds et al., 1996). Early studies indicated that culture and ethnic background had not been shown to be significant in influencing sun protective behaviors (Glanz et al., 1999). This would indicate that race played no part in a teens decision to employ sun protective behaviors. However, recent findings indicate that the fastest rising population effected by skin cancer is those of Hispanic heritage (Cockburn, Zadnick, and Deapen, 2006). That rise is attributed in part to risk knowledge and the erroneous belief that darker skin eliminates risk and therefore diminishes need for prevention behaviors (Pipitone, Robinson, Camara, Chilineni, and Fisher, 2002).
Theoretical Framework

Introduction

The basic premise of this project is directed at educating teens in a manner which will improve their knowledge about skin cancer, sun protective behaviors and their ability to protect themselves from a potentially life-threatening form of cancer. A number of established theories and models are used to provide a theoretical framework for this task. These theories specifically are: Erikson’s Stages of Development, The Health Belief Model, the Social Cognitive Theory and the Information-Motivation-Behavioral Skills Model.

Erikson’s Stages of Development

In 1968, Erik Erickson theorized that there are 8 different stages of psychosocial and cognitive development. The level of development that is identified with the adolescent population is that of identity verses identity confusion. This stage is defined as that time when teens are trying to be their own person; create their own identity. They take steps away from their parents and begin to develop their own individual personality and sense of self. The identity confusion comes as they try on many roles until they find the one that is comfortable for them. As the influence of their parents is replaced with the influence of their peers, they must also balance those things they know to be true and those that they assume to be true. It is in this time period that adolescents first have the ability to see and plan their future. In this stage, they are able to establish who they want to be vocationally, sexually, and personally. Erikson identifies that this age group has a preoccupation with their appearance, tends to hero worship, and are struggling with the
morality they learned as children and the ethical standards they will live by as adults. They may establish behaviors that define who they are including health promotional behaviors and beliefs that they will carry into adulthood. Linking this stage to sun protection behaviors may provide an avenue for creating those healthy behaviors to last through adulthood, however, the peer pressure and cultural standards put forth by their heroes and those they admire in the media may also pose difficult obstacles to overcome. These things must be considered as any educational program aimed at this age group is developed.

_Social Cognitive Theory_

Beginning as early as the 1800’s as the Theory of Social Learning, Social Cognitive Theory (SCT) evolved through research and development of its premises by theorists such as Albert Bandura. SCT is used as a mechanism for explaining how individuals acquire and perpetuate behavioral patterns. In the case of healthcare, it explains what motivates people to make and maintain healthy lifestyle choices. It surmises that health behaviors are part of an ebb and flow of influence including the individual, the environment and the behavior itself. The individual comes with preconceived ideas and an individual knowledge set which influences not only the perception of the environment but also that of the health behavior. Self-efficacy deals with how that individual perceives they will be able to acclimate to the new health behavior (CDC, 2004).
Individuals are affected by their environment when they learn by example. This is called observational learning. In the adolescent age group, this is particularly important, as the influence of the peer group is so strong. One teen watches the behavior of the group and the feedback that the group gets for that behavior. The feedback reinforces not only their desire to participate in the same behavior but also their feelings of self-efficacy. This can be both a succor and a hindrance when instituting new health behaviors. As an example, if the group as a whole is receptive to changing a health behavior such as wearing hats in the sun while outside at school, then the health behavior will continue to perpetuate itself. If however, the overwhelming feeling of the group is that hats are stupid, one could expect a higher level of resistance to change this particular health behavior.

This particular phenomenon has been shown to be helpful in positively influencing adolescent health behavior when the schools, parents and the community support the particular behavior modification. In this way, the environmental influence
toward the positive health behavior has effected the personal and environmental factors, which in turn affected the behavior itself.

At the same time, it is important to note that the individual must value the expected outcome of the behavior change. In this case, if they fail to understand the ramifications of the current behavior (Ultraviolet ray exposure without protection) and/or fail to see the value of changing that behavior (decreasing their risk of skin cancer), they will likely not participate in the intended behavior change.

**Health Belief Model**

The Health Belief Model (HBM), developed by Hochbaum, Kegels and Rosenstock, is a psychological model that explains the development of health behaviors by focusing on the beliefs and attitudes that influence the individual making the decision to participate in said health behavior. It postulates that three basic factors influence an individual’s likelihood of participating in a health-promoting behavior.

Those factors are:

1. The participant feels that a negative health outcome be avoided (i.e., Can I avoid getting skin cancer and/or the negative effects of sun and Ultraviolet light radiation?).

2. The participant feels that the proposed protective measures will prevent the negative outcome (i.e., Will using sun protective measures decrease my chances of having skin cancer and/or the negative effects of sun and Ultraviolet light radiation?).
3. The participant believes that they can do whatever the protective intervention is (i.e., can avoid the sun between 10 am and 4 pm, can use sun protective devices when sun exposure can not be avoided, and can refrain from using artificial UV tanning devices).

*Figure 2. Health Belief Model Adaptation (Glanz, Rimer and Lewis, 2002)*

This model has been used for many health promotion topics relating to the adolescent population. Human immunodeficiency virus (HIV) and sexually transmitted infection (STI) education programs as well as pregnancy prevention and smoking cessation programs have used the HBM to gear the educational program to match these three areas requiring health behavior modification with adolescent learning needs (Eisen, Zellman, and McAlister, 1992; Yep, 1993).
Information-Motivation-Behavioral Skills Model

Fisher and Fisher developed this behavior model in 1992, in study of STD/HIV behaviors of at-risk individuals. It is seen as an emerging theory and is being used in a number of adolescent health promotion settings such as STI/HIV prevention and breast self-exam education (Misovich, Martinez, Fisher, Bryan, & Catapano, 2003). It, like the HBM, sees that information and motivation to change are both important in the development of new health behaviors. Fisher and Fisher found that most at risk individuals were not only inadequately informed about preventative behaviors but also lacked the motivation to practice those behaviors. Without the skills needed to perform the intended behavior modification, the modification never happens. In the case of HIV studies, there was adequate knowledge about how to put on a condom, however, there was not adequate social knowledge of how to handle the situations leading up to deciding to use the condom. Both the personal and social motivation to take the intended protective action was lacking. The social skills to broach the subject of a condom with a partner were not there.

Figure 3. Information-Motivation-Behavioral Skills Model. (Fisher, Williams, Fisher and Malloy, 1999)
In terms of teaching adolescents about sun awareness and skin cancer prevention, the knowledge about the disease process, the preventative measures and how to handle the social setting of actually protecting yourself must be addressed (Fisher, & Fisher, 2002; Fisher, 1997; Fisher, Williams, Fisher, and Malloy, 1999).

Summary

Both the SCT and HBM have been shown to be effective in teaching adolescents preventative health behaviors. At the same time, studies of some adolescent health programs have shown mixed results including an increase in knowledge base but no significant durable change in protective behaviors (Kristjansson et al., 2001; Lowe et al., 1999). The IMB model has been shown to be effective in specific areas of health behavior modification by addressing the practical side of applying the protective knowledge as well as addressing the issues that motivate teens to want to participate in protective behavior.

Researchers support not only a school based education component, but also the development of school policy changes, an educational component for teachers and parents and community awareness and encouragement of those behavioral changes (Buller, Reynolds, Yaroch, Cutter, Hines, Geno, et al., 2006; Buller, and Borland, 1998; Lowe et al., 1999; Lui et al., 2000). Through this program, we will address sun awareness and skin cancer prevention on both a personal and community level through a school administered program that is designed to use the knowledge of Erikson’s developmental stages and the principles of the HBM, the SCT and the IMB model.
CHAPTER 3
SUN AWARENESS AND SKIN CANCER PREVENTION PROGRAM

The Educational Program

This educational program consists of lecture, class discussion and hands on participation projects meant to cultivate the student’s interest in self-protective behaviors. Permission to teach this program at Desert Christian Middle School in Tucson, Arizona was obtained from the school principal Mr. Dennis O’Reilly after an introductory letter explaining the program (Appendices A, B and C). Arrangements for teaching were finalized in conjunction with the Desert Christian Middle School Science Department in the form of a formalized lesson plan (Appendix D). Pre-class letters (Appendix E) were mailed to each student’s home, with the intent of initiating a discussion with the student’s parents on personal skin cancer history and family sun safety practices. The on-campus portion of the program was conducted during scheduled science class time in cooperation with Desert Christian Science teacher Mrs. Christy Voekel. Class periods at Desert Christian Middle School are 45 minutes long with a total of 6 different student groups (2 classes for each grade). The program was taught over two consecutive Thursdays with an additional day included between, during which a hands-on science experiment related to UV light was conducted.

The lecture portion of this program included a PowerPoint presentation (Appendix F), which included the topics listed in the objectives as well as explanation of all vocabulary words. It also included videos depicting middle school age students and their views on skin cancer and sun awareness that was obtained from Project Safety, a
production of the M.D. Andersen Cancer Center at the University of Texas in Houston (Appendix G).

This program was developed to cover two 40-minute class periods for each of the sixth, seventh and eighth grade class groups. For this school in particular, two 40-minute class periods was the time allotment available to add content within their current science curriculum. Literature review showed great variation in time allotted and content taught in other similar educational scenarios. (Buller, Reynolds, Yaroch, Cutter, Hines, Geno, et al., 2006; Buller, and Borland, 1998; Ludwick and Gaczkowski, 2001) State requirements for content are not consistent and Arizona in particular does not currently set any specific guidelines related to timeframe for teaching or methodology.

Using Theory in Practice

Erikson’s developmental stage of identity vs. identity confusion guided the development of each step in this educational process. The cited behavioral theories contributed to the development of individual components. The following delineates particular facets of these theoretical underpinnings as they apply to the learning components.

1) Students will complete a self-assessment of skin cancer risk with input from their parents as a take home assignment prior to class.
   a) Theoretical Basis:
      i) Health Belief Model: This exercise focuses on the perceived threat component of the HBM. Skin cancer risk might be much higher than the student suspects because it hasn’t been a topic of discussion at home with their parents.
2) Students will be given didactic information through class lecture, discussion and a PowerPoint presentation on the listed subject matter.

   a) Theoretical Basis:
   
   i) **Erikson’s Developmental Theory Stage of Identity vs. Identity Confusion:**
      Teens must process new health information in order to decide whether the information or suggested behavior is worthy of adopting for himself or herself. Videos used in the presentation depict teen peers who recognize the benefit of skin cancer prevention.
   
   ii) **Social Cognitive Theory:** It is important for the student to understand the expected outcome of the behavior change and the ramifications of the current behavior pattern if it does not change.
   
   iii) **Health Belief Model:** Students must understand risk and possible negative outcomes, prevention measures and their efficacy, and must perceive that they are able to participate in the preventative measures with regard to resources and effort.

3) Students will participate in a group exercise using ultraviolet reactive instruments to demonstrate the effects of available protective measures. Using Ultra Violet reactive items, students will note color changes under various conditions including complete shade, partial shade, full sun, SPF 30 protection, clothing protection, and polarized film protection.

   a) Theoretical Basis:
i) **Erikson’s Developmental Theory Stage of Identity vs. Identity Confusion:**

Information is presented in a way that makes the subject matter real in their emerging individual lives. Peer pressure is a major influence at this age in the establishment of behaviors. Including the peer group in the learning process will reinforce the positive behaviors that will lead to decreased skin cancer risk.

ii) **Social Cognitive Theory:** This theory focuses on how environment influences behavior choices. Environmental issues such as peer understanding and acceptance of positive health behaviors is created in this group exercise. By addressing the peer group as a whole and encouraging peer interaction in learning activities, it is hoped that there will be a positive peer influence in attitudes toward sun safety.

iii) **Information-Motivation-Behavioral Skills Model:** Giving the individual the skills needed to actually complete the expected behavior change is key to this behavior model. This exercise models the sun safe behaviors. Students can see the effects of ultra violet radiation and how the variable that they are able to control influences the effects of that radiation. Motivation to complete the expected behavior is directly related to whether the students feel that they have the ability to comply with the expected behavior changes. Do they know how to demonstrate sun-safe behaviors? This exercise assures them that they have the skills to practice the expected behaviors.
4) Students will participate in a group exercise to increase community awareness of sun damage, skin cancer and sun protective behaviors. Poster-board will be provided to small groups of students who must work together to create a poster which demonstrates how to overcome one of the identified barriers to self-protective behaviors. Posters will be displayed in a community forum upon completion.

a) Theoretical Basis:

i) Erikson’s Developmental Theory Stage of Identity vs. Identity Confusion: Peer pressure is a major influence at this age in the establishment of behaviors. Including the peer group in the problem solving process will reinforce the positive behaviors that will lead to decreased skin cancer risk. Community presentation of the posters will reinforce that as adolescents they are part of a larger community and can influence that community.

ii) Social Cognitive Theory: Environmental influences effect positive behavior changes. By involving the both the student peer group and the greater community in this activity, positive environmental influences may be created.

iii) Information-Motivation-Behavioral Skills Model: This exercise focuses on overcoming barriers to using sun protective behaviors. Working together with peers to create posters that teach others will promote a feeling of competence in the students ability to practice the sun safe behaviors they have been taught. Hopefully this group learning activity will encourage the group as a whole to practice the positive behaviors thus decreasing peer pressure to continue to
practice unsafe sun behaviors. It reinforces the verbal responses needed to
overcome peer pressure toward non-compliance.

*Program Notes and Follow-up*

The author furnished all supplies for the student activities in this program and a
copy of the program was given to the school for future use. A follow-up letter was sent to
parents after the program’s completion giving them more information and resources to
answer future questions about sun awareness, skin cancer and skin cancer prevention
strategies (Appendix H). Furthermore, informational packets and sunscreen samples were
provided for each student to be distributed during class-trip activities, which will be done
later in the school year.
CHAPTER 4
EVALUATION AND CRITIQUE

Introduction

The intent of this project was to provide an educational opportunity to promote sun safety and skin cancer preventative behaviors in middle school age students. Using Erikson’s developmental stages as a guide, lesson plans were developed. These plans incorporated the Social Cognitive Theory (SCT), Health Belief Model (HBM), and Informational-Motivational-Behavioral Skills Model (IMB) to advance learning opportunities that would influence future behaviors by linking those behaviors with positive outcomes. The project, as written, had outcomes that could be identified as successes as well as areas in which more development was needed to reach full potential.

The Program

The educational program consisted of two classes, as well as a survey to evaluate student knowledge and views on self-protective measures before and after the classes. Although the pre-class survey was accomplished, the survey proved to be time consuming for the Science Teacher, Mrs. Voelkel who already had lesson plans set up for the month of March. There was not enough time at the end of the second class to complete the evaluations in class and no time for them in the following week’s lesson plans, so the post-class evaluations were not conducted. The lesson plan (Appendix D) was completed as listed. Mrs. Voelkel agreed to use a separate class period to allow the students more time to conduct the UV light experiment. I was not present for this class period but the students shared their findings with me on the second teaching day.
I presented two class periods, a total of 40 minutes each, to 152 students at Desert Christian Middle School. Twenty-five minutes during the class on the second day, was designated for working on posters to promote skin cancer prevention and overcome barriers to prevention. The students worked together in small groups, coming up with a slogan and drawing out their message.

During PowerPoint presentations, the students asked an average of 20-30 questions making it difficult to get through the material. However, the questions were thoughtful and showed their interest in the material being presented. The images of skin cancers that I had chosen made a big impact and teachers in other classes stated that students were still discussing the skin cancer images several days after the presentations were completed.

One of the teachers came to listen to the presentation on the first day of class. She wanted to make sure that I would be leaving the presentation with the school for use in future years. The Principal, Mr. O’Reilly, came to listen on the second day and asked the students questions about what they had learned. They answered quickly and correctly, explaining to him what Seek, Slip, Slop, Slap meant and the ABCD’s of the freckle check. They also shared with him that all tans are a sign of skin damage and that skin cancer can kill you if it goes undetected and untreated.

On subsequent days, when I was on school grounds for other reasons, students approached me to look at moles and freckles on their arms, legs and back. They stated that they had told their parents that they needed to get them checked when they went for their next sports physicals. Parents of five different students approached me on campus or
called me at home to thank me for the presentation and that they were thrilled not only that the content had been taught, but also that they had been given a role to play in educating their child. From the responses I received from parents, faculty and the students, I concluded that the educational program on Sun Awareness and Skin Cancer Prevention was very well received.

Making it Real

Developmentally appropriate educational materials were necessary to meet the needs of Erikson’s identity vs. identity confusion developmental stage. Gearing discussion toward those things that were most important to teens (appearance, acceptance by peers and self-determination), was meant to lead students to accept and practice safer behaviors. Behavior change would only be accomplished by providing reasons for change that were important to the age group. Using a variety of media venues to present the content was meant to meet the interest needs of this age group, which is fluent in the many technically advanced delivery modes.

PowerPoint presentations, which included video clips of students in the same age group as the target audience, were used. Educational materials included handouts from the American Cancer Society on skin cancer prevention and melanoma provided content for later reference. Students used local newspapers to locate the information related to UV index and how those values could be used to plan the day’s activities. Sun experiments using UV activated paper and several types of “sun protective” materials gave the students a hands on opportunity to see how Seek, Slip, Slop and Slap could make a real difference in protecting their skin.
Guided by the three behavior theories, the educational activities also included discussion designed to be interactive, about how particular health behaviors are beneficial and what factors influence the students desire to participate in those health behaviors. Both the SCT and HBM recognize that behavior change only occurs when the individual can see a connection between the disease or outcome and themselves. Because sun exposure does not have an immediately visible skin cancer effect, the reality of skin cancer itself needed to be emphasized. Photos used of skin cancers that had caused disfigurement seemed to have the most influence in stirring interest in and enthusiasm for positive health behaviors. Teachers indicated that the students talked of the gruesome photos for several days after the initial presentation and that they had made the connection between skin cancer and the positive benefits of protective behaviors.

Beyond the actual delivery of information, the causes of non-compliance with health behaviors was discussed to create a forum for peer encouragement and support. Reasons for non-compliance were identified and as a group, students developed strategies for overcoming the barriers of non-compliance. In one class, several students identified that they should wear sunglasses and hats during lunch break when they are typically outside in the sun. A discussion of how the student council could influence school rules ensued since the dress code currently excludes both of these items. Students quoted facts related to skin cancer occurrence and means of prevention in their plan to create social change in the school community rules.

Although these discussions were seen as a positive reaction to the teaching-learning process, there were several areas were time and attention span prevented
maximum learning and understanding. The students were given the opportunity to create posters that encouraged positive health behaviors related to skin cancer prevention. These posters were meant to address the issues they had identified in class as barriers to compliance and to encourage their peers to practice healthy behaviors. Although each of the groups created posters, many of the students produced prevention posters not related to reasons for non-compliance but rather strictly related to outcome prevention. The guiding principles of the Information-Motivation-Behavioral Skills Model discuss the importance particularly of equipping students with the tools needed to perform the expected task beyond the knowledge that the task is important. It was hoped by me, that the posters would inform the students of tools to overcome barriers to skin cancer prevention behaviors. This may be possible when the education is presented as an ongoing format with a longer time allotment or may indeed require a more mature audience to be accomplished.

_Overcoming Barriers_

In each of the classes, the same barriers were identified by the students. Smell, and feel of sunscreen on their skin, were consistently identified as deterrents to using sun protection. The larger and more frequently identified reasons however, were related to sun protection not being a developed habit. The students “forgot” or “didn’t think about it since it was such a short time outside,” or “didn’t have time to put it on.” This seemed to reinforce the idea that health behaviors must become a routine at a young age and reinforced throughout childhood. These students know that clothes are required when leaving the house because it is a routine that has been taught everyday since toddlerhood.
Perhaps if sunscreen application were taught in the same fashion, it would be part of the routine for middle school students. Further education, discussion and peer reinforcement of positive sun protective behaviors is needed to overcome the real and perceived barriers to the development of sun safe health habits.

Involving Family and Community

Parents were included in the educational program through letters encouraging discussion with their child about family history of skin cancer and family practices of sun protection. They were given internet-website resources, to continue the educational discussion at home. Feedback from parents was positive indicating that their children had come home discussing the importance of skin cancer prevention with them. They also expressed their appreciation for the educational program and desire to improve their own family’s health behaviors. Teachers from other areas of the school came to watch the presentation during their free periods and the school requested the PowerPoint presentations and information so that this program could be used on a yearly basis to encourage positive health behaviors. These were seen as positive outcomes as parents and teachers, although not as effectual as peers, are still important influences on middle school teens lives.

Opportunities for Further Education and Study

As with other health-related information and behaviors, there is a need to hear the information many times over in order for it to become a part of our daily routine (Glanz, Saraiya, Wechsler, 2002). This is true with skin cancer prevention programs as well. Although the students knew the answers to presented information related to the ABCD’s
of skin cancer recognition and *Seek, Slip, Slop, Slap*, the pneumonic for skin cancer prevention, they admitted that few of them had followed these precautions during the weekend between the two days of the educational program.

Time available in the classroom was limited to two, forty-five minute periods. Although this program was developed with that in mind, more time would have allowed for longer discussions and greater reinforcement. Incorporating the content of sun awareness and skin cancer prevention in other class venues would have given more reinforcement to the informational component and allowed for better processing of information and incorporation of behavioral skills strategies into the student’s daily activities.

As more states adopt guidelines which require sun awareness and skin cancer prevention education in K-12 school curricula, more students will understand that they can protect themselves from the outcome of non-protective sun behavior. These programs must however, incorporate more than just the rhetoric of preached behaviors. They must reflect the importance of the behaviors in campus activities such as hat and sunglasses approval on campus. They must include the encouragement by teachers and faculty of shaded activities, sunscreen application and discussion of behavior outcomes on a regular basis. Parents and communities must see this as an important behavior linked to health and model these protective behaviors for their children.

Lastly, future programs must include mechanisms for overcoming or resisting those influences that deter students from practicing health behaviors. Students must be
equipped with the behavioral tools they need to overcome the identified barriers to practicing these important self-health behaviors.

Conclusion

Forming positive health habits during school years takes more than just one class on a given topic. It takes the message being relayed as part of everyday life. Strong health habits, whether good or bad, are developed over time. To change the current behaviors that regard skin cancer prevention as being “too much work for something that won’t happen to me” continuation of developmentally appropriate programs such as this one must be provided on a regular basis. The guiding theoretical framework for this project allowed for a developmentally appropriate education program that utilized proven behavior change theories to effect positive change in self-health behavior practices in teens. Further educational programming involving parents, schools, community, and students must be employed in both the development and implementation of these programs to get the support and joint action for these programs to make a difference in the development of positive health behaviors in the adolescent population.
APPENDIX A

INTRODUCTORY LETTER TO DESERT CHRISTIAN MIDDLE SCHOOL
As you know, I have returned to school to further my education in nursing. I am attending the University of Arizona College of Nursing and am enrolled in the Family Nurse Practitioner program. Part of my course of study is to complete either a thesis or graduate project. I have chosen to complete a graduate project which involves creating an education program for middle school age children on Sun Awareness and Skin Cancer Prevention.

Skin Cancer is estimated to have 59,580 new cases of melanoma and more than 1 million new cases of basal cell and squamous cell carcinoma, and will claim the lives of more than 10,000 people in the United States in 2005. Arizona is the national leader in cases of skin cancer in the United States. An estimated 1180 new cases of melanoma, the most serious form of skin cancer, will be diagnosed in Arizona this year alone. It has been shown that the single most important modifiable factor for reducing the risk of skin cancer is a change in sun exposure behavior. It has also been shown that the majority of sun exposure occurs during adolescence. With that in mind, the state just passed a requirement that public and charter schools teach sun awareness and skin cancer prevention as part of the curriculum for all school age children grades K-12. I would like to present this educational component to the students of Desert Christian Middle School.

The components of my teaching program include basic anatomy of the skin, effects of sun exposure, recognizing skin cancer, personal risk factors for skin cancer and ways of reducing those risks. The program is designed around several currently available educational programs such as SunWise, a program put out by the Environmental Protection Agency, and Project Safety, a program developed by the University of Texas MD Anderson Cancer Center and Skin Cancer Prevention 101, a program by the National School Board Association. I have condensed the information down into two class periods each of which will include a homework assignment that can be done easily by the students. I spoke with Janna Van Egmond who indicated that PE class would probably be the best setting for this program. The first assignment will involve students identifying their favorite place to visit in the world and noting the UV Index for that site over several days. This information is available by web site. The second assignment will be for the
students to work together to create posters for the community to promote sun awareness and skin cancer prevention. In-class activities will include a hands-on activity that demonstrates the effects of the sun on specially treated items which react to UV radiation. Students would be identifying which products work best to prevent the UV radiation from getting through. The SunWise program has activities that are meant specifically for integrating into other classes such as Science, Math and Reading and Writing. If you would like to expand the basic class to create a “Sun Awareness Week,” please just let me know as I can easily assist the other teachers with this.

I would also like to have the students fill out a brief survey that asks about their knowledge and current sun protective behaviors. This survey would be administered before and after the class presentation to assess learning. The survey would not be graded and would not require any identifying information on the submitted form. The information obtained from the survey would be useful to show an overall change rather than individual change in knowledge as well as expected sun protective behaviors.

As you know, middle school age kids are very easily influenced by the media, their peers, their family, their school and their community. I want to include parents in this education so that they will possess the same information that their adolescents are obtaining. I hope that the poster activity will allow for peers to reinforce with each student the information presented and the need for protective actions. Building healthy behaviors during this age group can lead to a healthier lifetime. I hope most of all, that the presented information will influence even one student in a manner which will help them protect themselves from the damaging effects of the sun while still being able to enjoy those activities which would be impossible without the sun.

I ask that you will consider letting me present this learning opportunity to the students of Desert Christian Middle School. I can be reached either at home at 760-0036 or on my cell at 850-7826 if you have questions or would like to talk further about this project.

Sincerely,

Diane Thomas  
FNP Masters Candidate Student
APPENDIX B

INTRODUCTORY LETTER TO DESERT CHRISTIAN SCIENCE DEPARTMENT
Dear Mrs. Voelkel,

Thank you for allowing me the opportunity to integrate sun safety and skin cancer prevention awareness teaching in your classroom this semester. I have attached a copy of my teaching outline and the class goals and objectives. I will be teaching during two class periods for each student. I have also attached a letter stating that you understand what I am going to teach and are agreeable to the content. I have also attached copies of 2 letters, which I will be sending home to parents, letting them know about the content of this class. I am hoping that reinforcement at home of the ideas discussed in this class will encourage positive health behavior modification.

Also please find a letter acknowledging that you are in support of this project and are willing to allow me to teach in your classroom the above listed content. This acknowledgement is needed as part of my graduate project.

Again thank you for allowing me this opportunity.

Diane Thomas RN
Family Nurse Practitioner Student
University of Arizona College of Nursing
APPENDIX C

AUTHORIZATION TO CONDUCT PROJECT LETTER
Desert Christian Middle School  
7525 E. Speedway Blvd  
Tucson, Arizona 85710  

February, 10 2006

Dear Diane,

Principal O’Reilly has authorized me to respond to your request to provide an education module to the students of Desert Christian Middle School on sun awareness and skin cancer prevention. This is to acknowledge that I am aware that you will be teaching in my science classroom on March 2nd and March 9th. I have approved the content of this teaching module and understand that this graduate project fulfills requirements needed to complete your Master’s in Nursing through the University of Arizona.

Sincerely,

Christy Voelkel  
Desert Christian Middle School
APPENDIX D

LESSON PLAN
Subject: Science

Topic: Sun Safety and Skin Cancer Prevention

Grade Level: 6, 7 and 8

Teacher: Diane Thomas RN

Goals

1) Increase knowledge about effects of sun exposure.

2) Increase sun protective behaviors.

Objectives

1) Students will be able to:
   a) Describe the effects of sun exposure related to skin damage and skin cancer.
   b) Identify personal risk factors for developing skin cancer.
   c) Verbally identify the three types of skin cancer.
   d) Describe SPF and how it relates to skin protection.
   e) Describe the 4 components of Sun Safety.
   f) Identify media influences related to sun exposure.
   g) Identify personal mechanisms of resisting peer pressure to participate in unsafe sun behavior.

Materials

1) Self-assessment of skin cancer risk.

2) Classroom lecture and PowerPoint presentation on sun safety.

3) Group participation in Ultra Violet Light Effects exercise.
4) Group Participation in Community Awareness Poster Presentation related to Sun Safety and Prevention of Skin Cancer.

*Subject Matter*

1) How does the sun effect our health?
   a) Warmth: warms our earth, warms us.
   b) Mood: improves individual perception of wellbeing.
   c) Helps our bodies produce needed Vitamin D.
   d) Helps us get a great tan.

2) How does the sun and its UV rays cause skin damage and skin cancer?
   a) Effects of UV radiation on skin cells.

3) Personal risk factors for skin cancer.
   a) Skin type
   b) Familial or personal history
   c) Freckles and Moles
   d) Sun behaviors

4) How can we protect ourselves.
   a) Seek Shade
   b) Protective clothing including hats and sunglasses
   c) Sun screen
   d) Awareness of UV Index and hours of greatest risk: 10 am – 2 pm
   e) Watch your freckles and moles.
Vocabulary

1) Sun Safe Behaviors
2) Ultra Violet Radiation
3) UV Index The program is taught on consecutive Thursdays
4) Melanin
5) Skin Cancer
6) Melanoma
7) SPF

Procedure and Methods

5) Students will complete a self-assessment of skin cancer risk with input from their parents as a take home assignment prior to class.

6) Students will be given didactic information through class lecture, discussion and a PowerPoint presentation on the listed subject matter.

7) Students will participate in a group exercise using Ultra Violet reactive instruments to demonstrate the effects of available protective measures. Using Ultra Violet reactive items, students will note color changes under various conditions including: complete shade, partial shade, full sun, SPF 15 protection, SPF 50 protection, clothing protection, polarized film protection.

8) Students will participate in a group exercise to increase community awareness of sun damage, skin cancer and sun protective behaviors. Poster board will be provided to small groups of students who must work together to create a poster which demonstrates one of the following topics: Sun Exposure Dangers, Sun Protective
Behaviors, Perception of Tan and Health. Posters will be displayed in a community forum upon completion.

Assessment

1) Participation: Students will be evaluated throughout the program for their participation in class discussion, ultra violet light exercise, and community presentation poster exercise. Grading will be done in accordance with the classroom policies already established by Desert Christian Middle School and Science Teacher Mrs. Christy Voelkel.
APPENDIX E

PRE-PROGRAM PARENT LETTER
February 10, 2006

Dear Parents,

My name is Diane Thomas and I am a fellow DCMS parent. I am also working on my master’s project in preparation for graduation from the University of Arizona College of Nursing. My project centers on educating middle school age children about sun safety and skin cancer prevention. Arizona leads the nation in cases of skin cancer and is quickly approaching Australia as the skin cancer capital of the world. This is obviously a rather dubious honor. Some risks for skin cancer are inherent and therefore can’t be modified. Some risk levels however, can be changed through protective behavior strategies that we will be talking about in class.

Next week, I will be visiting your student’s classroom to talk about sun awareness and skin cancer prevention and would like your help in reinforcing this learning activity. Attached is a discussion sheet with questions related to skin cancer risk. We will be talking about these risks in class and it would be helpful for your child to have the background information that you can provide for them prior to class. The questions are easy and it shouldn’t take more than 15 minutes to discuss them with your child. They don’t need to write anything for this assignment, they just need to be aware of their own skin cancer risks.

God blessed us with the sun for warmth and light. I Corinthians 3:17 says “don't you know that you yourselves are God's temple and that God's Spirit lives in you?” He made us sovereign, with the ability to make choices both healthy and not so healthy. I believe that if we teach kids healthy protective behaviors from a young age and reinforce those behaviors as natural and routine through out their teen years, we can help them decrease their risk of skin cancer as adults thus protecting God’s handiwork. Thank you for your support of this project.

Diane Thomas RN
Family Nurse Practitioner Student
University of Arizona College of Nursing
Student/Parent Discussion Topics

1. Skin cancer risk increases based on skin type. People who have heritages that include Irish, Swedish, Danish, English and other European countries tend to have fair skin that can burn easily. Darker skinned heritages include Middle Eastern, African, Central and South American and Native American lineage. Fair skin, freckles and blue eyes have a much higher chance of getting sun burned and thus skin damage than darker skin types. Ask your parents about your ethnic heritage. Which skin type category do you fall into?

| Fair skin/ Burns | Fair skin/ Tans | Brown | Dark Brown |

2. Skin cancer risk increases if you have a family history of skin cancer. Ask your parents if they or their parents or other relatives have had skin cancer or a pre-cancer removed or treated in the past. If you have had relatives who have had skin lesions removed, were they your blood relative? (Not those who have married into your family but those that you have in your bloodline.)

3. Have you ever had a really bad sunburn? How many times?

4. What things do you do in your family to prevent sunburn, sun damage and skin cancer?
APPENDIX F

POWERPOINT PRESENTATION SLIDES
Sun Safety and Skin Cancer Prevention

A Program for
Desert Christian Middle School
Tucson, Arizona

Date: October 30, 1995
University of Arizona College of Nursing

Benefits of the Sun:

• Warms the Earth
• Provides light
• Helps plants grow and produce oxygen for us to breathe.
• Helps our bodies use calcium effectively for bone growth by helping cells produce Vitamin D.

Risks from the Sun:

• Sun Burn
• Dry Sun Damaged Skin
• Retinal Damage
• Skin Cancer

Skin Cancer Facts:

• 1 in every 5 Americans will get skin cancer.
• 1 in every 100 will get melanoma, the deadly form of skin cancer.
• Arizona has the highest rate of skin cancer in the United States.
• Sun exposure is the #1 modifiable factor in preventing skin cancer.

How does the sun damage your skin?
Ultraviolet rays from the sun are what cause sun damage.

Two important types of UV rays:
- UVA: which causes the skin to look aged and causes skin cancer.
- UVB: which causes the skin to burn and can cause skin cancer.

How does the sun damage your skin?

Tanning Machines

Freckle Check!

- Once a Month you should check for:
  - A: Asymmetry
  - B: Borders
  - C: Color
  - D: Diameter
Three Types of Skin Cancer

- Basal Cell Carcinoma
- Squamous Cell Carcinoma
- Melanoma

Three Types of Skin Cancer

Squamous Cell Carcinoma
- Sometimes comes up like an ulcer or a bump that won’t heal.

Three Types of Skin Cancer

- Squamous Cell Carcinoma
- This man didn’t wear a hat or sunscreen on his head and a small bump turned into a huge squamous cell cancer from which he eventually died.

Three Types of Skin Cancer

- Melanoma
- One in every 100 people will develop melanoma in their lifetime in the United States.

Three Types of Skin Cancer

- Melanoma
- Has varied color from black to blue to brown or gray.
- Has irregular borders and texture.
Getting A Killer Tan

Treatment for Skin Cancer

Early Treatment:
Surgical removal of cancer cells. May
leave scars depending upon how deep and how
large.

Late Treatment:
Surgical removal of cancer lesion and
chemotherapy if the cancer has grown enough to
t travel to other areas.

As Middle School Student...
Are you at risk?

Personal Risk Factors for Skin Cancer

- Fair Skin with or
  without freckles.
- Lots of moles.
- Family or personal history of skin cancer.
- Living in high altitudes.
- 3 or more blistering sunburns before the age of 18.
- Exposure to UV radiation from tanning machines
  or medical treatment.
- Taking medications that increase the skin's
  photosensitivity.
- Living in the sunbelt.

The 4 S's of Sun Safety

- Seek:
- Slip:
- Slap:
- Slop:
Seek, Slip, Slap, Slop

- Seek:
- Slip:
- Slap:
- Slop:

What is the UV Index?

- What is the UV index?
- Where can you find it listed?
- How can it help you plan to be sun safe during your day?

The "UV Index?"

- Seek:
- Slip:
- Slap:
- Slop:
What is SPF?

Sun Protection Factor

What is SPF

- The amount of protection from burning that sunscreen gives you.
- 10 minutes x SPF% = how long you should be able to stay in the sun without a burn.

Wrapping it Up

- Tanning = skin damage
- Check your Freckles
- Protect yourself:
  - Know the UV index
  - Seek shade
  - Slip on protective clothes
  - Slap on sunglasses and hat
  - Stop on Sunscreen with at least 30 SPF

Taking Care of What you Have.
Skin Cancer Prevention and Sun Awareness

Desert Christian Middle School
Tucson, Arizona

Check Your Freckles

- A
  - Asymmetry
    Can you stretch a rubber band over your freckle?
- B
  - Borders
    Are the edges smooth or do they look like a serrated knife?
- C
  - Color
    Is it red or brown?
- D
  - Diameter
    Is it bigger than the head of a pin or a small button?

Protect Yourself?

- SEEK
- SLIP
- SLAP
- SLOP
  - Seek shade between 10am and 4pm when the sun's UV rays are the strongest.
  - Slip on clothes to block the sun's rays.
  - Slap on a hat and sunglasses.
  - Slop on 30+ SPF sunscreen.
What image does the media send?

Project Safety Video

What Keeps you from Doing the Healthy Thing?

How can you promote Healthy Sun Living?

References


APPENDIX G

PERMISSION LETTER FROM PROJECT SAFETY
Dear Ms. Thomas,

You have the permission of the Project S.A.F.E.T.Y. program to use video clips from the Project SAFETY CD-ROM in your teaching program, as long as you identify and attribute these clips: "Project S.A.F.E.T.Y. video clips used with permission from The University of Texas M. D. Anderson Cancer Center Project S.A.F.E.T.Y. program"

Good luck, and let us know how it works out.

Sincerely,

Susan Madigan
Project S.A.F.E.T.Y. Coordinator
The University of Texas M.D. Anderson Cancer Center
Project S.A.F.E.T.Y. - Unit 240
1515 Holcombe Blvd.
Houston, TX 77030-4009
Phone: 713-792-1606
www.mdanderson.org/projectsafty
APPENDIX H

FOLLOW-UP LETTER TO PARENTS
March 10, 2006

Dear Parents,

I have had the opportunity to spend time in your child’s classroom teaching about sun safety and skin cancer prevention. We discussed the following topics in class and your child should be able to:

a) Describe the effects of sun exposure related to skin damage and skin cancer.
b) Identify personal risk factors for developing skin cancer.
c) Verbally identify the three types of skin cancer.
d) Describe SPF and how it relates to skin protection.
e) Describe the 4 components of Sun Safety.
f) Identify media influences related to sun exposure.
g) Identify personal mechanisms of resisting peer pressure to participate in unsafe sun behavior.

Some of the ways that you can continue to encourage your child to be sun safe include encouraging the use of sunscreen with at least SPF 15 anytime your child is going out into the sun. Although most of us think to put it on at the beach or pool, sun damage is possible anytime we are out in the sun, especially during the hours of 11 am to 4 pm. Long sleeved shirts help keep sun off arms when out working in the yard or participating in sports. Sunglasses with UV protection are important to protect eyes from sun damage and hats should be worn to protect both scalp and eyes. And lastly, personal observation of freckles and moles. Any mole or freckle that changes size, becomes itchy, scaly or bleeds, or an area of skin that has delayed healing should be checked by your family care provider. Skin cancers that do occur can be treated and death prevented if they are identified and treated early. Further information of skin cancer and skin cancer prevention can be obtained at:

- The American Cancer Society (http://www.cancer.org/docroot/home/index.asp),
- Cancer Research UK (http://www.cancerresearchuk.org/sunsmart/)
- or through the EPA (http://www.epa.gov/sunwise)

Again, thank you for the opportunity to teach your child. I hope that the information presented will assist with the development of positive health behaviors.

Diane Thomas RN
Family Nurse Practitioner Student
University of Arizona College of Nursing
REFERENCES


