HealthWise South Africa: Development of a Life Skills Curriculum for Young Adults

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Abstract

The purpose of this paper is to describe the development of an international collaborative effort that aims to reduce risky behavior (e.g., substance use, risky sexual behavior) that leads to outcomes such as HIV/AIDS, pregnancy, and addictions among a sample of South African youth. Because many of these risky behaviors occur in free time, a major part of the effort was leisure education to promote positive use of free time. The program described has been pilot tested and is currently underway as a larger-scale, randomized trial in the Province of the Western Cape in South Africa. This paper describes the conceptualization and revision of the HealthWise curriculum, working with the Western Cape Education Department, and the on-going randomized trial.

Keywords: adolescents, comprehensive health curriculum, leisure, prevention

This paper describes the development of an international collaborative effort that aims to reduce risky behavior (e.g., substance use, risky sexual behavior) that leads to outcomes such as HIV/AIDS, pregnancy, and addictions, and promote positive use of free time among a sample of South African youth. The program to be described has been pilot tested and is currently underway as a larger-scale, randomized effectiveness trial in the Province of the Western Cape in South Africa. In this paper we document the development of the program as it may represent a topic and model for international collaboration. We also provide some information on the curriculum and the research design, although the main purpose of this paper is to sketch the overall structure and purposes of the project rather than to discuss research methods and results in detail.

Documentation of this study is offered because, while there are numerous articles that describe the leisure and free time of youth worldwide (e.g., Irby & Tolman, 2002; Larson & Verma, 1999; Mahoney & Stattin, 2000; Patterson, Pegg, & Dobson-Patterson, 2000), there is not much written about cross cultural collaborations that aim to reduce risk and promote positive well being (e.g., leisure). Thus,
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this paper contains the following topics: (a) the impetus and need for the study; (b) conceptualization and theoretical foundations; (c) pilot study, with a focus on how the curriculum was modified; (d) working with the Western Cape Education Department to assure compatibility with mandated learner outcomes and sustainability; and (e) brief description of the current research design and anticipated outcomes beyond research findings.

Impetus and Need

Faculty from three universities, The Pennsylvania State University (United States), and The University of the Western Cape and The University of Cape Town (South Africa), are collaborating on this project. This project is the product of three U.S. National Institute of Drug Abuse (NIDA) sponsored efforts. First, a NIDA-sponsored conference on adolescent substance use and HIV risk was held in Durban, South Africa in March 2001. One outcome of the conference was the recognition that many of the issues inherent in prevention research were common across the two countries. Two key imperatives identified were the need for more systematic knowledge on issues of youth risk behaviors and theoretically based and systematically applied interventions to reduce risk and promote competencies among South African youth.

As a result of that conference, further NIDA funding was secured for a pilot study, which was completed in November, 2003. This pilot involved developing the "HealthWise: Life Skills for Young Adults" (Caldwell, Smith, & Wegner, 2004) curriculum and conducting a preliminary outcomes and process evaluation. The overall goals of the HealthWise curriculum are to (1) reduce the transmission of HIV/AIDS and other STDs, (2) reduce drug abuse, and (3) increase positive use and experience of free and leisure time. The program was designed to provide a sequential set of activities to teach youth:

- How to use their free time in ways that will be beneficial to themselves, their families and friends, and their community;
- Specific inter- and intra-personal skills to make good decisions, control their emotions such as anger and anxiety, resolve conflicts, and overcome boredom in free time;
- Specific facts about the causes and effects of drug use and sexual risk-taking behaviors;
- Specific ways to avoid peer pressure and to take responsible action in their free time;
- How to interact with and access community resources.

Our current efforts to conduct an effectiveness trial of the revised HealthWise curriculum are supported by another grant from NIDA. This meant that we could take results from the pilot study, revise the curriculum, and engage in a full-scale, randomized trial to evaluate the effectiveness of the curriculum. This trial began March, 2004 and will last through November 2008. A brief description of this trial is provided at the end of this article.

The Need

Youth aged 25 years and younger constitute 54% of South Africa's population. Recent estimates of the prevalence of HIV among young people there reveal these rates to be among the highest in the world. In the economically deprived urban communities of South Africa, HIV/AIDS prevalence is 18.9% among females aged 15 to 19, and 43.1% among females aged 20 to 25 (MacPhail & Campbell, 2001). South Africa experiences 1,500 new HIV infections daily (Gilbert & Walker, 2002) and 60% of all new infections occur in the age range 15 to 25 years. Given the latency period associated with this disease, these estimates are considered conservative. Without extensive prevention efforts, the further spread of HIV among young people is highly likely. Furthermore, current estimates are that school-age teenagers (ages 15 to 20) comprise about 60% of new STD/HIV infections in South Africa (Abt Associates Inc. South Africa, 2000); if the present trend continues, most of the people living with HIV in South Africa will be school-going adolescents.

Accompanying this rise in HIV prevalence, there is a concomitant increase in the prevalence of other problem behaviors (e.g., early sexual behaviour and substance use) in South
Africa during the 8th and 9th grades, making this period a critical one for preventive interventions (Eaton, Flisher & Aaros, 2003; Flisher, Parry, Evans, Muller, & Lombard, 2003; Flisher, Reddy, Muller, & Lombard, 2003). The 2003 [South African] Youth Risk Behaviour Survey (Department of Health & Medical Research Council, 2003) identified that 41% of high school youth had engaged in sex; 14.4% initiated sex before the age of 14 years; 54% had two or more sexual partners in their lifetime; 13.8% used drugs or alcohol before sex; 22.8% claimed to always use a condom during sex; and only 12.2% think they could get AIDS in their lifetime.

Positive use of free time is an equally compelling issue, compounded by cultural and political artifacts of apartheid. During the apartheid era (pre-1994) residential areas were established for black and colored people on the outskirts of Cape Town, which were purposefully under-resourced. Despite the transformation that has occurred in South Africa since 1994, many of these areas remain socially disadvantaged and are characterized by poverty, crime, violence and gangsterism. It is estimated that close to 40% of youth are sedentary and do not participate in physical activities (Department of Health & Medical Research Council, 2003).

Four studies have provided evidence that leisure boredom is a problem among South African youth, and in particular black and colored students. A nationwide survey of the leisure prospects of 1,200 black youth aged 16 to 24 years living in urban areas in South Africa found that as many as one-third of the youths in the survey indicated feeling excessively bored (Müller, 1991). A qualitative study of the leisure experiences of adolescents living in a socially disadvantaged area of South Africa showed that opportunities to become involved in healthy leisure activities were restricted by the lack of leisure resources within the environment (Wegner & Magner, 2002). The adolescents spent most of their time sitting around together or "hanging out" because they had nothing else to do, leading Wegner and Magner to conclude that the experience of leisure boredom increased the potential for risk behaviors such as substance use and gang involvement. Their conclusion was supported by a qualitative study designed to identify and gain insight into the social context of alcohol misuse in adolescent boys (Ziervogel, Ahmed, Flisher & Robertson, 1997-98). Ziervogel et al. concluded that boys used alcohol because it alleviated boredom due to lack of participation in healthy, leisure activities. Finally, because of the need to empirically study boredom in South Africa, Wegner and her colleagues (Wegner, Flisher, Muller, & Lombard, 2002) conducted a study to determine the reliability of a U. S. measure of leisure boredom among South African adolescents.

Conceptualization of HealthWise Prevention, Risk, and Protection

Prevention science has witnessed a rapid evolution in its conceptual foundation (e.g., Catalano, Hawkins, Berglund, Pollard, & Arthur, 2002), providing two important ideas for this study. First is the recognition that understanding vulnerability, risk, and protection must be framed from a developmental systems perspective. Developmental systems theories stress the mutual and multi-directional influences among various levels of organization within the person and across the contexts in which they function (Bronfenbrenner, 1979, 1995; Bronfenbrenner & Morris, 1998; Ford & Lerner, 1992; Gottlieb, 1992; Lerner & Walls, 1999; Sameroff, 1983). Ecological systems theory (e.g., Bronfenbrenner, 1995) falls under the family of developmental systems theories and provides the metatheoretical perspective for this study. The second development that informs our study is the adoption in the 1990s of a broader focus on youth vulnerability, risk, and protection to include a focus on the whole child. This broader focus was a result of the positive youth development movement, which is still an emerging area. Combined, prevention science, a developmental systems theory, and a positive youth development approach...
provide the general framework for this proposed study.

Problem-specific prevention programs (e.g., focus on drug prevention only) have been criticized from various perspectives. One of the concerns is that problem behaviors often co-occur (Blum, McNeely, & Nonnemacher, 2002; Catalano et al., 2002; Flisher, Zierovgel, Chalton, Leger, & Robertson, 1996). Another concern is that vulnerability and risk are influenced by a number of multi-level factors (personal, interpersonal, environmental) that combine to cause some youth to be at various levels of risk (e.g., Blum et al., 2002; Flay, 2002). Unfortunately, the mechanisms of how these factors combine are not well understood, but researchers advocate a comprehensive prevention program to address all levels of influence comprehensively (Blum et al., 2002; Flay, 2002; Flay, Allred, & Orndov, 2001; Nightingale & Fischhoff, 2002). Successful intervention programs must be based on a sound program theory built on an understanding of the interactive elements of vulnerability, protection, and stage of development (Blum et al., 2002). Despite the conceptualization of problem behaviors co-occurring, and the call for a comprehensive approach to the reduction of risk behavior, few comprehensive curricula exist. The HealthWise program was developed to address the concerns noted previously, including the rise in substance use and earlier sexual onset.

Cultural and Contextual Considerations

While the model for this program is based upon successful U. S. programs, HealthWise was specifically adapted to South Africa. The Kaiser Family Foundation's work in 2002 and the first national youth risk behaviour survey (Department of Health & Medical Research Council, 2003) showed that many of the risk factors among South African teenagers are consistent with those identified among U.S. teens, such as knowledge of risk behaviors, self-image, peer pressure, normative beliefs, communication skills, and access to condoms (Eaton et al., 2003).

Broad psycho-cultural factors that impact health meanings for teenagers in South Africa were also considered in the development of HealthWise. Peer pressure operates somewhat differently in South Africa. Male teenagers have reported peer pressure to express masculinity through unprotected sex, and to demand sex as a sign that they have a female's affection (MacPhail & Campbell, 2001; Plaatjie, 2003). Male teenagers who do not demonstrate a record of sexual "exploits" are stigmatized by peers, as are those who insisted on using condoms (Gilbert & Walker, 2002). Female teenagers experience less pressure to participate in unprotected sex from other females, although much more so from male partners (Gilbert & Walker, 2002).

Another cultural consideration when integrating the TimeWise portion of the curriculum into HealthWise was that TimeWise is built around the notions of self-regulation and autonomy. Compared to the United States, South Africa is a more collectivist culture than an individualistic culture (Stadler, 1995), which challenged us to address how best to adapt topics such as leisure motivation and decision making, which are grounded in concepts of autonomy and self-regulation. To address this cultural difference, we made sure we promoted the value of involving family and friends in decision making, and also included sentiments such as "although your friends and family are very important to you and help you make decisions about what you do in your free time, you should never compromise what you think is the right thing to do for your health and happiness."

Both the context of the schools and the community chosen for participation in this study impacted our program development. Although the study area (Mitchell's Plain) is clearly under-resourced with regard to recreation opportunities, a tour of the community and its facilities revealed that there are some viable healthy leisure options and, perhaps more important, community leaders seem to understand the importance of participating in healthy leisure. For example, the large marquee on the Mitchell's Plain Sport and Recreation Centre proclaims "Getting the Nation to Play." Likewise, on some street corners, colorful murals are painted with sayings like "Come
and Play – Create your Future.” Thus, we concluded that pursuing leisure interests in the community is possible, although challenging.

There are three main languages used in the Mitchell’s Plain area: Afrikaans, English and isiXhosa. Students are instructed in either English or Afrikaans, and they speak one or more of Afrikaans, English and isiXhosa outside of school.

**Integrating Leisure Education with Prevention**

Recently, advocates of including a positive youth development approach within a prevention framework suggested research be conducted about how factors associated with social settings affect risk and protection (Catalano et al., 2002; Pittman, Diversi & Ferber, 2002). One of the most important social settings for an adolescent is leisure. As a developmental context, leisure is critical for many reasons (e.g., Irby & Tolman, 2002; Kleiber, 1999). In leisure more than any other context, youth learn to be self-regulated, engage in identity work, develop competence and transitional skills, and experiment with sexual and social roles (e.g., Harter, 1990; Kleiber, 1999; Kleiber & Kirshnit, 1991; Larson, 1994; Shaw, Kleiber & Caldwell, 1995).

The developmental potential of leisure suggests that it is not the “filling of time” that is important, but rather activities should develop skills, create challenges, and provide fulfilling experiences (Carnegie Council on Adolescent Development, 1992; Irby & Tolman, 2002; Zill, Nord, & Loomis, 1995). Many youth, however, do not know how to make their time meaningful in order to reap healthy and developmentally supportive benefits from their leisure. Under these circumstances, intervention efforts must be undertaken. One of the unique components of the HealthWise intervention is an evidence-based leisure education intervention, TimeWise: Taking Charge of Leisure Time (also funded by NIDA; Caldwell, in press).

**A Comprehensive Model to Reduce Adolescent Drug Use and Risky Sexual Behavior**

The metatheoretical framework for this study is based on ecological systems theory (Bronfenbrenner, 1992, 1995). An ecological perspective is concerned with contexts, which are daily life environments influenced by the variations and interactions of personal and situational variables, that afford either risk or opportunity (Garbarino, 1992). This perspective reflects the theoretical premise that healthy human functioning is characterized by an active orientation and that individuals are viewed as self-constructing, person-in-context relational systems. Understanding human development, therefore, requires modeling the active human system within and across domains.

While ecological systems theory provides a metatheoretical frame for the intervention, various theories of intervention, coexisting within the metatheoretical framework, allow specification of pathways of risk reduction, protection, and positive youth development. In particular, theories important to our project are those addressing self-determination (e.g., Baldwin & Caldwell, 2003; Caldwell, Baldwin, Walls, & Smith, in press; Ryan & Deci, 2000a, 2000b); optimal arousal, including flow, sensation seeking, and boredom (e.g., Caldwell, Darling, Payne, & Dowdy, 1999; Caldwell, Smith, & Weissinger, 1992; Csikszentmihalyi, 1990; Iso-Ahola & Crowley, 1991); social learning (e.g., Bandura, 1977a); self-efficacy (e.g., Bandura, 1977b); action in context (Silbereisen & Eyerth, 1986; Silbereisen & Todt, 1994); initiative (Larson, 2000); and interest development (Deci, 1992).

By definition, any comprehensive program that addresses multiple, coactional risk and

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**Figure 1a. HealthWise Conceptual Basis**

**HealthWise Conceptual Basis**

- **Self-awareness**
- **Skill Development**
- **Ecological Systems Theory**
- **Community Integration**
- **Knowledge, Analysis, & Synthesis**
in the "lesson boxes." These lessons are linked to short-term outcomes, also indicated in boxes, although due to space limitations not all outcomes are listed. Finally, Figures 1.a. through 1.e. provide a brief theoretical representation of how these lessons and hypothesized outcomes are linked to risk and protection processes. Again, not all processes can be explained due to space limitations, but these diagrams represent how curriculum and theory are integrated.

HealthWise addresses most of the conditions Flay (2002) cited as necessary for effectiveness. It is (a) comprehensive, covering multiple health-compromising and health-enhancing behaviors; (b) longitudinal, spanning two grades, with careful attention to fidelity and sustainability; (c) developmentally appropriate; (d) culturally sensitive; and (e) not limited to the confines of the classroom. Furthermore, it systematically trains teachers, uses protective factors at different levels has a complex theoretical structure that is difficult to convey succinctly. Therefore Figures 1.a. through 1.e. present our representation of the HealthWise model and include several elements. The model highlights personal, interpersonal, and environmental factors linked theoretically and/or empirically to the prevention of drug abuse and risky sexual behavior and the promotion of positive use of free time. The core of the model reflects the ecological systems approach, suggesting multiple and co-occurring risk and protective factors. The four circles indicate the types of intervention approaches taken. Youth are guided through self-reflective exercises; learn and practice specific skills; learn factual knowledge, which they are asked to analyze and synthesize; and have the opportunity to engage with their communities and interact with community members. These intervention approaches are tied to specific lessons, which are enumerated...
peers where appropriate to model behavior and demonstrate skills, and has been designed through an extensive process evaluation that includes teachers, students, and community leaders.

**Developing, Piloting and Revising HealthWise**

Initially, the curriculum consisted of seventeen, 50-minute lessons to be given to all 8th grade learners (i.e., students). These lessons were sequentially designed such that each built off the foundation from the previous one. In addition to classroom activities (e.g., worksheets, discussions, role plays, group work), the program was designed to connect youth with community providers of reproductive health, mental health, and recreation services through guest presentations and community-based homework assignments.

**Pilot Test Study**

After the HealthWise curriculum was developed, it was pilot tested in Mitchell’s Plain. The goals of the pilot test were to (a) get feedback on the cultural applicability of a U.S.-based curriculum, (b) see how well the concepts and methods of teaching worked, (c) determine if the research teams were compatible to conduct further research, and (d) determine preliminary evidence of efficacy. To meet the study’s goals, extensive process, formative, and outcome evaluation data were collected.

Many schools in poorer areas of South Africa still suffer the legacy of apartheid and function poorly, with high levels of disorganization. Our goal in selecting schools to participate in the pilot study was to select from a pool that represented “adequately functioning” schools in anticipation of at least a fair chance of success and teacher enthusiasm. Therefore, out of 16 high schools in Mitchell’s Plain, we identified 12 with a relatively higher level of organization; from those four were randomly chosen for the pilot study. Classrooms within the four participating schools were randomly assigned to experimental or comparison condition. A posttest – only design was employed.

In January 2003, ten educators and two principals from the four pilot schools participated in a two-day training on the HealthWise program. All of the educators were experienced with teaching the existing “Life Orientation” program and had, on average, 12 years of teaching experience. They were highly enthusiastic during the training and began teaching HealthWise in February 2003. Eventually, based on other curricular needs of the schools, six of these ten teachers taught the curriculum.

Extensive formative and process evaluation data were collected as educators taught the curriculum. This was a critical part of the curriculum development (i.e., revision) as well as a critical part of making sure the educators felt supported and ensuring the success of the pilot study (i.e., not necessarily positive outcomes, but fidelity to the curriculum and research design). Data collection methods included the use of process evaluation forms to elicit from educators information about the viability of each lesson, focus group discussions with educators after they had taught each of the main topics that comprised the curriculum (e.g., self-awareness), and the observation of two lessons by members of the research team. Focus groups with learners were also conducted at the end of the curriculum. The data thus generated were used to revise the curriculum.

The sample for the pilot study was comprised of youth who are black or colored; there were no white students. Most families lived in similar conditions of poverty. In this region, over the past 7–10 years most shanty-style homes have been replaced by government-built, one- to three-room brick homes with electricity and plumbing. The average household income was very low (approximately US$100/month), with only a small range of dispersion. A total of 345 youth provided responses in the pilot study (experimental group n = 226, comparison group n = 119). Originally, there were 329 in the experimental group, but only 226 (69%) completed surveys due to problems with timing of survey administration for some classrooms.

Overall, the curriculum was well received, and the educators and learners felt it was cul-
Educators basically liked the flow of lessons and felt the content was covered well using the activities. Learners expressed that it was not typical of their other lessons, and many indicated that they “felt like someone was listening to them” or “made me feel like a person.”

There were some important revisions needed, however. Therefore, in January 2004, the U.S. researchers joined the South African researchers in Cape Town for two weeks of extensive revision work, as well as meetings with the school administrators. One of the main problems was that HealthWise took longer than anticipated to conduct each lesson. To address this problem, the curriculum was split across two years (8th and 9th grades), the number of activities in each lesson was reduced, and many of the worksheets were simplified. Group work activities were limited; with upwards of 50 learners in a classroom and little or no resources, educators felt that group work was difficult to monitor and control.

Another problem was the sequence of lessons, which required learners to conceive of developing a leisure time interest before learning about leisure time opportunities in their communities. It was also difficult for the learners to conceive of developing an interest when they felt there were too many constraints to doing so. Therefore, the curriculum was restructured to allow for maximum opportunity early on in the program for learners to get acquainted with community opportunities, discuss how to initiate opportunities, and form interest groups. In addition, an entire lesson on “overcoming roadblocks” was designed to follow the boredom/interest lesson. Thus, a four lesson sequence dealt directly with personal awareness, community possibilities, developing interests (and avoiding boredom), and overcoming roadblocks.

Another major revision to the curriculum was the decision to re-arrange the budget to hire two recreation specialists, called youth development specialists (YDSs), to explicitly work with learners in the classroom and in the community. Educators seemed to be unaware of the possibilities of leisure in the community and, while they were extremely supportive of the idea, did not feel well prepared to address lessons focused on leisure. The YDSs’ jobs are primarily focused on helping youth connect with recreation opportunities that exist and making opportunities happen in the community, but they also help students connect to health resources in the communities. In its final form, the sequence of the lessons is presented in Table 1.

### Table 1: Revised HealthWise Lessons

<table>
<thead>
<tr>
<th>Grade 8</th>
<th>Grade 9</th>
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<tbody>
<tr>
<td>Lesson 1: Self-Awareness</td>
<td>Lesson 1: Review</td>
</tr>
<tr>
<td>Lesson 2: Managing Anxiety</td>
<td>Lesson 2: Leisure Motivation</td>
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<tr>
<td>Lesson 3: Managing Anger</td>
<td>Lesson 3: Community Connections</td>
</tr>
<tr>
<td>Lesson 4: Exploring Free Time</td>
<td>Lesson 4: Planning and Managing Leisure</td>
</tr>
<tr>
<td>Lesson 5: Free Time in My Community</td>
<td>Lesson 5: Relationships and Sexual Behavior</td>
</tr>
<tr>
<td>Lesson 6: Beating Boredom and Developing Interests</td>
<td>Lesson 6: Conflict Resolution</td>
</tr>
<tr>
<td>Lesson 7: Overcoming Roadblocks</td>
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<tr>
<td>Lesson 8: Decision Making</td>
<td></td>
</tr>
<tr>
<td>Lesson 9: Managing Risk</td>
<td></td>
</tr>
<tr>
<td>Lesson 10: Avoiding Risky Sexual Behavior</td>
<td></td>
</tr>
<tr>
<td>Lesson 11: Myths &amp; Realities of Drug Use</td>
<td></td>
</tr>
<tr>
<td>Lesson 12: Avoiding and Reducing Risk</td>
<td></td>
</tr>
</tbody>
</table>

### Working with the Western Cape Education Department

Schools have a unique role in combating the HIV/AIDS pandemic in South Africa and historically high drop-out rates have begun to decline (Fisher & Chalton, 1995). As per the Revised National Curriculum Statement Grades R-9 Policy (Department of Education, 2002) the Western Cape Education Department has recently adopted a life orientation (LO) component as part of the general education curriculum (Kelly, Parker & Oyosi, 2001). LO has many specific outcomes that are directly supported by HealthWise. We obtained these specific outcomes and mapped HealthWise lessons and objectives onto them.
HealthWise addresses all of the LO specific outcomes in some way, although some are covered more than others. Examples of specific outcomes for LO which are covered by the HealthWise objectives include: (1) demonstrate the values and attitudes necessary for a healthy and balanced lifestyle; (2) use skills and display attitudes and values that improve relationships in families, groups and community; and (3) evaluate and participate in activities that demonstrate effective human development.

While the U. S. team was visiting the South African team, several educators and administrators were invited to discuss HealthWise and provide input. These discussions included meetings with the LO curriculum specialist for the school district, the HIV/AIDS Life Skills Coordinator housed under Education Support Services, Education and Management Development Centre (EMDC), South Metropole, and the Head of Education Support Services for the EMDC. The LO curriculum specialist was especially enthused because HealthWise provided legitimacy for LO, which has been viewed a less important topic than other curricular areas. Due to enthusiasm about HealthWise, the EMDC administrator offered to house the YDOs in the administrative offices in Mitchell’s Plain. All educators, administrators, and support staff viewed the positive youth development focus of the curriculum (i.e., leisure education) as one of the most positive and needed aspects of the curriculum because it did not focus on negative behaviors.

The Current Effectiveness Trial

Currently, we have begun the next study (randomized-control trial). Concurrent with revising the curriculum, we refined the original logic model to help specify the theory of intervention. The purpose of this logic model was to identify program objectives with corresponding specific intervention activities that would allow us to understand if the program worked, why it worked. In this way, the logic model helped specify possible mediators (proximal outcomes) to the distal outcomes. Table 2 provides an example of the logic model for the curriculum and displays the information for the first leisure-based lesson on exploring free time. In the first column are the program objectives and corresponding intervention activities. The second column specifies the measures from the questionnaire that addressed each mediator. Finally, the third column provides some conceptual insight into the theory behind the lesson and its activities. The Life Orientation specific outcomes are also identified at the top of the table. Each lesson has a similar matrix.

Program objectives were developed by using five major areas, based on social learning theory (e.g., Bandura, 1977) and the theory of planned behavior (e.g., Ajzen, 2002). In terms of an intervention’s ability to effect change, the following areas should be addressed: knowledge, attitudes (e.g., personal valuing), understanding and interpreting social norms, skill development, and self-efficacy. Thus, program objectives and the curriculum were designed to address each of these areas. The objectives are to be read with the stem “Learners will...” in mind. Many of the items in the measures column have been pretested during the pilot phase of the project.

Specific Hypotheses

The specific hypotheses for the current study involve both direct program effects (distal outcomes) and mediational effects. In contrast to the comparison group, among those students exposed to the program, we hypothesize the following main program effects:

1. Lower use (and higher non-use) of substances (beer, alcohol, marijuana, inhalants);
2. Delayed onset of sexual intercourse among virgins;
3. Among those sexually active, a greater use of condoms during sexual intercourse (and a lower percentage of never-use of condoms; higher percentage of always-use of condoms);
4. A lower percentage rate of simultaneous substance use and sexual intercourse;
5. A greater use of condoms when both substance use and sexual intercourse occur simultaneously; and
### Table 2: Logic Model Example

**GRADE 8, LESSON 4 – EXPLORING FREE TIME**
**LEARNER OUTCOMES, MEASURES, AND THEORETICAL FOUNDATION**

**Specific Learning Outcome 5:** Practice acquired life and decision making skills.

**Specific Learning Outcome 7:** Demonstrate the values and attitudes necessary for a healthy and balanced lifestyle.

<table>
<thead>
<tr>
<th>Learner Outcomes</th>
<th>Research Measures/Proximal Outcomes</th>
<th>Theoretical Foundation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstrate knowledge about personal time use, benefits from leisure activities, and negative consequences that can happen from unhealthy leisure activities.</td>
<td>Benefits</td>
<td>This lesson is based on ideas that stem from the concept of intrinsic motivation (Ryan &amp; Deci, 2000). Specifically, before students can make choices about their leisure time activities, they must become aware of their current leisure patterns. Accordingly, the lesson focuses on developing self-awareness of leisure time activities. Students are taught that some activities will provide them with more benefits than others. By encouraging youth to take responsibility for their leisure activities by attempting to increase the benefits obtained, healthy behaviors will be promoted.</td>
</tr>
<tr>
<td>a. Define the words leisure, free time, and benefits.</td>
<td>I get a lot of benefits out of my free time activities.</td>
<td></td>
</tr>
<tr>
<td>b. Discuss Overhead 4.2 “Benefits of Leisure Activities” to learn about benefits that can come from healthy leisure.</td>
<td>I think that most of my free time activities are good for me.</td>
<td></td>
</tr>
<tr>
<td>c. Discuss negative consequences that can happen if one chooses poor leisure time activities.</td>
<td>The things that I do in my free time are not healthy.</td>
<td></td>
</tr>
<tr>
<td>d. Complete Worksheet 4.1 “My Free Time Profile” to develop a profile of how one’s time is spent.</td>
<td>I feel good about myself in my free time.</td>
<td></td>
</tr>
<tr>
<td>e. Complete Worksheet 4.2 “My Free Time Profile: Summary and Analysis” to identify which benefits one gets from current leisure activities and which ones are needed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Discuss why it is important to have healthy leisure activities.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 2. Demonstrate personal value of healthy leisure activities. | Having healthy free time activities can help me avoid risky behavior. |
| a. Discuss the importance of healthy leisure activities. |  |
| b. Complete Worksheets 4.1 “My Free Time Profile” and Worksheet 4.2 “My Free Time Profile: Summary and Analysis” to reflect and analyze how one spends one’s time and how one feels about one’s time. |  |
| c. Discuss ways one can get more benefits out of leisure. |  |

| 3. Shape peer norms regarding value of taking personal responsibility for healthy leisure activities. |  |
| a. Discuss why it is important to choose healthy leisure activities. |  |
| b. Discuss why it is important to be personally responsible for making good choices in free time. |  |

| 4. Demonstrate skills for taking personal responsibility for healthy leisure activities. |  |
| a. Complete Worksheets 4.1 “My Free Time Profile” and Worksheet 4.2 “My Free Time Profile: Summary and Analysis” and list benefits that one is not getting and needs to get. | I know how to plan leisure activities so that I can get a lot of benefits. |
| b. Discuss strategies for incorporating activities that will provide missing benefits. |  |

| 5. Believe in ability to take responsibility for personal leisure activities. |  |
6. Higher levels of participation in positive leisure activities.

Hypothesized effects on mediators that favor the program group include the following:
1. More positive attitudes toward condom use;
2. Less positive attitudes toward substance use and greater knowledge of the effects of substance use;
3. A more accurate (and lower) perception of peer substance use and sexual behavior;
4. Higher perceived refusal skills regarding having sex without a condom;
5. Greater knowledge of HIV/AIDS risk behaviors and the ABCD model;
6. Greater knowledge of and experience with community services (recreational, health, sexual health, counseling);
7. Less boredom during free time and greater ability to develop interests;
8. Greater ability to plan for and make decisions about free time activities;
9. Higher levels of initiative in free time; and
10. Greater decision-making skills and emotional control.

Sample for Current Study

The four high schools in the experimental group each have approximately 200 English-speaking and 150 Afrikaans-speaking students in each cohort (i.e., beginning in grade 8). These are the same schools that participated in the pilot study, and most of the same teachers who previously taught HealthWise for the pilot have been assigned to teach the revision of HealthWise. Five comparison schools have been identified, based on the proportion of Afrikaans-taught classrooms as well as matching SES and other demographic variables. The design calls for three successive cohorts, for a total of approximately 4000 students to be exposed to the curriculum, and an additional 4000 to serve as comparisons.

While the HealthWise curriculum for the pilot study was written in English only and given in classes taught in English, one teacher also used it with a class that was primarily Afrikaans-speaking. She has indicated that there were no differences in students’ reactions to the materials. Given that each of the four designated experimental schools have 30–40% primarily Afrikaans-speaking students (who were in classrooms excluded from the pilot study), the student workbook is being translated into Afrikaans so that all students will be able to receive the curriculum.

Data Collection

Many of the survey questions to be addressed are very complex, especially questions related to sexual behavior and the co-occurrence of using substances and engaging in sexual behavior; these require a complex series of contingent responses. For example, one is first asked, “Have you had sex in the last month?” If no, the youth continues to the next set of questions. If the response is yes, then a related series of questions are asked (e.g., Did you use a condom?). The pilot study indicated that youth had a very difficult time with paper and pencil versions of this contingency sequencing. Thus, for the current study, we are using palm pilots that present a programmed sequence of questions; youth do not have to negotiate contingency questions as they will automatically be given the appropriate follow-up question. Two members of the South African research team have successfully used this method of data collection for questions focused on sexual behavior. They found that learners concentrated more (and were more engaged) in completing the survey and were able to answer more questions than using paper and pencil methods. This method of data collection also reduces error in data coding and eliminates “out of range” answers.

Other Potential Outcomes

Clearly anything that can be done to reduce HIV/AIDS and risky sexual behavior, as well as reducing use of substances, is urgently needed in South Africa. From the inception of the idea in March 2001 to the current point, some unanticipated but positive consequences
are developing. For example, the unique positive youth development approach to these problems has potential to yield benefits beyond what we initially envisioned. Creating the youth development officer positions, which was not anticipated when we wrote the grant for the current study, has the potential to serve a catalytic function not only with the 8th and 9th grade learners, but also within the school district and within the community. The research team has discussed ways to make sure that this type of position is maintained beyond the five years of the grant. The fact that the EMDC is providing physical space and support for the YDSs is a great testament to the perception that the YDSs are going to fill an important gap in services to youth.

Another unanticipated possibility is that as the YDSs begin their work, they will use the UWC Occupational Therapy Community Project Process Model (De Jongh et. al., 2000) to identify needs and assets in the communities. The UWC occupational therapy (OT) department itself is watching the development of this project with keen interest and will be using the YDSs work as a model to incorporate occupational therapy training in this area. Similarly, UWC’s Department of Education is considering training teachers in the implementation of HealthWise, pending a successful first two years of implementation. These potential events, along with the success of the YDSs in documenting how they work with the youth to maximize free time opportunity, would greatly contribute to the quality of life among these young living in post-apartheid Cape Town.

Concluding Remarks

While leisure is not a term readily used by black and colored South Africans, enthusiasm resonates around the need to help youth learn and develop constructive and healthy ways to use free time. A comprehensive health curriculum that includes positive use of free time seems well suited to this context. The series of grants described in this article documents the systematic process needed to get to the point where the stage is set for the opportunity for change to occur. Time will now tell whether or not, and to what degree and why, HealthWise is successful in reducing risky behaviors and increasing positive use of free time among a sample of South African youth.

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