CONCEPTUAL MODELS FOR ADULTHOOD PREPARATION SUBJECTS WITHIN THE PERSONAL RESPONSIBILITY EDUCATION PROGRAM (PREP)
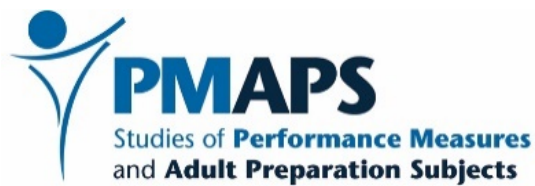
This page has been left blank for double-sided copying.

Conceptual Models for Adulthood Preparation Subjects within the Personal Responsibility Education Program (PREP)

February 2021

Elizabeth Clary

Heather Zaveri

Kristin Moore

Mindy Scott

Christopher Jones

Katie Eddins

Katie Adamek

Deana Around Him

Monica Arkin

Isabel Griffith

Sign up for the OPRE Newsletter

Follow OPRE on Twitter
@OPRE_ACF

Like OPRE on Facebook
OPRE.ACF

Follow OPRE on Instagram
@opre_acf

Connect on LinkedIn
company/opreacf

This page has been left blank for double-sided copying.

ACKNOWLEDGMENTS

This page has been left blank for double-sided copying.

CONTENTS

This page has been left blank for double-sided copying.

TABLES

FIGURES

This page has been left blank for double-sided copying.

I.   INTRODUCTION TO APS CONCEPTUAL MODELS FOR PREP

The Personal Responsibility Education Program (PREP), authorized by Congress in 2010 as part of the Affordable Care Act, is one of the largest federally funded programs designed to address adolescent pregnancy. PREP provides $75 million annually for evidence-based and promising adolescent pregnancy prevention programs, most of which states receive through formula grants. A set-aside of funding is also awarded competitively to Tribes and Tribal organizations and local organizations. PREP is administered by the Family and Youth Services Bureau (FYSB) in the Administration on Children, Youth and Families (ACYF) within the Administration for Children and Families (ACF) at the U.S. Department of Health and Human Services (HHS).

PREP grantees have discretion to design their programs, as long as they adhere to four requirements in the legislation to: (1) implement evidence-based or evidence-informed curricula; (2) provide education on both abstinence and contraception for the prevention of pregnancy, sexually transmitted infections (STIs), and HIV; (3) educate youth on at least three of six adulthood preparation subjects (APSs); and (4) focus on high-risk populations, such as youth residing in geographic areas with high teen birth rates, adjudicated youth, youth in foster care, minority youth, and pregnant or parenting teens. PREP grantees are also required to implement a positive youth development (PYD) approach in their programs. PREP grantees have discretion in how to meet these requirements, which allows them to tailor their programs to fit the needs of the targeted populations and their priorities.

PREP legislation requires grantees to incorporate into their programs content on a minimum of three of the six APSs specified in the authorizing legislation. The intention of supplementing pregnancy prevention programs with additional content is to further prepare youth for the transition to adulthood. It is hypothesized that incorporating the APS content will strengthen the ability of programs to reduce sexual risk behaviors and expand the range of outcomes that programs affect.

FYSB and the Office of Planning, Research, and Evaluation (OPRE) within ACF contracted with Mathematica and its partner, Child Trends, to develop conceptual models to help PREP grantees, as well as other practitioners, implement the APSs. This report presents conceptual models for each of the six APSs, and a unified framework that identifies commonalities across the models and provides guidance for including a PYD approach in APS programming.

> **Adulthood preparation subjects as specified by PREP legislation**
>
> 1. Healthy relationships, including, marriage and family interactions.
>
> 2. Adolescent development, such as the development of healthy attitudes and values about adolescent growth and development, body image, racial and ethnic diversity, and other related subjects.
>
> 3. Financial literacy.
>
> 4. Parent-child communication.
>
> 5. Educational and career success, such as developing skills for employment preparation, job seeking, independent living, financial self-sufficiency, and workplace productivity.
>
> 6. Healthy life skills, such as goal setting, decision making, negotiation, communication and interpersonal skills, and stress management.
>
> Source: U.S. Congress, Social Security Act, Section 513. Available at https://www.ssa.gov/OP_Home/ssact/title05/0513.htm

This report is a first step toward helping PREP grantees understand issues of integrating and implementing APSs into their programming. The information presented here reflects grantee perspectives and published literature on the APSs. This report aims to help PREP grantees to:

1. **Understand APSs.** Each conceptual model is designed to help PREP grantees define the APS, understand the topics and related content areas, and design, implement, and integrate programming for the subjects within their existing programming.

2. **Choose APSs.** Grantees can use this report to determine which APSs are best suited to include in their PREP programming. Grantees can compare the topics they cover related to sexual health and their current APSs with the topics listed in the APS conceptual models. Grantees can then choose to cover their current APS topics in more depth, or cover topics they do not already include in their programming.

3. **Develop APS content.** Once APS topics are chosen, grantees can use the conceptual models to design and deliver that content within their PREP programs. The conceptual models can serve as tools to support grantees with addressing APSs in a comprehensive and purposeful way.

4. **Target specific outcomes.** Grantees who know which outcomes they want to target can use the conceptual models to identify how programming for specific APSs might lead to intended outcomes. Alternatively, grantees can use the unified framework to determine which APSs to target to try to achieve specific outcomes.

A. Overview of PREP and the APS Conceptual Models Study

Although the PREP legislation required grantees to address APSs, little research has been done on how to integrate APSs with adolescent pregnancy prevention programs. Moreover, to date, there has been no rigorous research on how combining content on APSs and adolescent pregnancy prevention influences program effectiveness. For example, the limited research on the effectiveness of healthy relationship curricula for youth (Kerpelman et al. 2010; Antle et al. 2011) does not focus on the effect of incorporating this content into adolescent pregnancy prevention programming. The purpose of the APS conceptual models study is to begin to fill this gap by reviewing existing research literature and gathering practice knowledge from grantees to inform how to design and implement programming on APSs.

For the APS conceptual models research, the study team developed conceptual models for the six APSs, then created a unified framework to identify similarities across subjects. Together, the six conceptual models and the unified framework intend to help ACF support effective programs by providing PREP grantees with guidance on:

1. What constitutes adulthood preparation programming?

2. What infrastructure is needed to support it?

3. How could such programming be offered within or in coordination with adolescent pregnancy prevention programs?

4. What outcomes are anticipated?

While the conceptual models and unified framework are useful tools for PREP grantees, there are limitations to the guidance the models can provide. This is due in part to the variety of populations, settings, and potential approaches used by PREP grantees. No models could cover all possibilities or provide guidance for all situations that PREP grantees and providers will need to consider. As such, these models may not serve as detailed implementation guides. Also, the

study team did not (1) conduct a systematic review of intervention literature that would support drawing conclusions about the causality of specific interventions relative to the outcomes identified in each model, or (2) identify the exact amount of programming that should be provided to achieve those outcomes.

PREP grantees and APS implementation. PREP programs offer the six APSs with varying frequencies (Figure I.1). The subject healthy relationships is most commonly addressed, incorporated by 96 percent of PREP programs in 2017–2018. Healthy life skills and adolescent development are also popular, incorporated by 83 and 78 percent of PREP programs, respectively. Educational and career success and financial literacy are less commonly addressed (26 and 21 percent, respectively). The prevalence of APSs varies somewhat across programs under different PREP funding streams. For example, more Competitive PREP programs incorporated educational and career success into their programming than grantees of other PREP funding streams; 29 percent for Competitive PREP programs compared to 21 percent among all PREP programs. Similarly, more Tribal PREP programs incorporated the subject of parent-child communication than grantees in other funding streams.

PREP grantees typically take one of three approaches to offering adulthood preparation content:

- Selecting a curriculum for the prevention of pregnancy and sexually transmitted infections among youth (hereafter, referred to as a 'curriculum for pregnancy and STI prevention') that significantly covers topics related to selected APSs

- Supplementing an existing curriculum for pregnancy and STI prevention with existing APS curricula

- Developing separate, stand-alone APS programming that is not integrated with the pregnancy prevention curriculum

Grantees that select a curriculum for pregnancy and STI prevention that covers APS topics often focus on the three most commonly selected adulthood preparation subjects: healthy relationships, adolescent development, and healthy life skills (Zief et al. 2013). Some curriculum for pregnancy and STI prevention cover these topics, making this approach popular with some PREP grantees; however, in certain cases, the curricula do not cover the APS content in depth. Therefore, some grantees choose to supplement the curricula by offering content on the subjects either as part of core programming or through stand-alone programming. The three remaining adulthood preparation subjects—parent-child communication, educational and career success, and financial literacy—are less commonly covered by curriculum for pregnancy and STI prevention. Grantees that choose to focus on these subjects typically have to supplement existing curricula with additional material.

Figure I.1. Percentage of programs implementing each APS, by funding stream
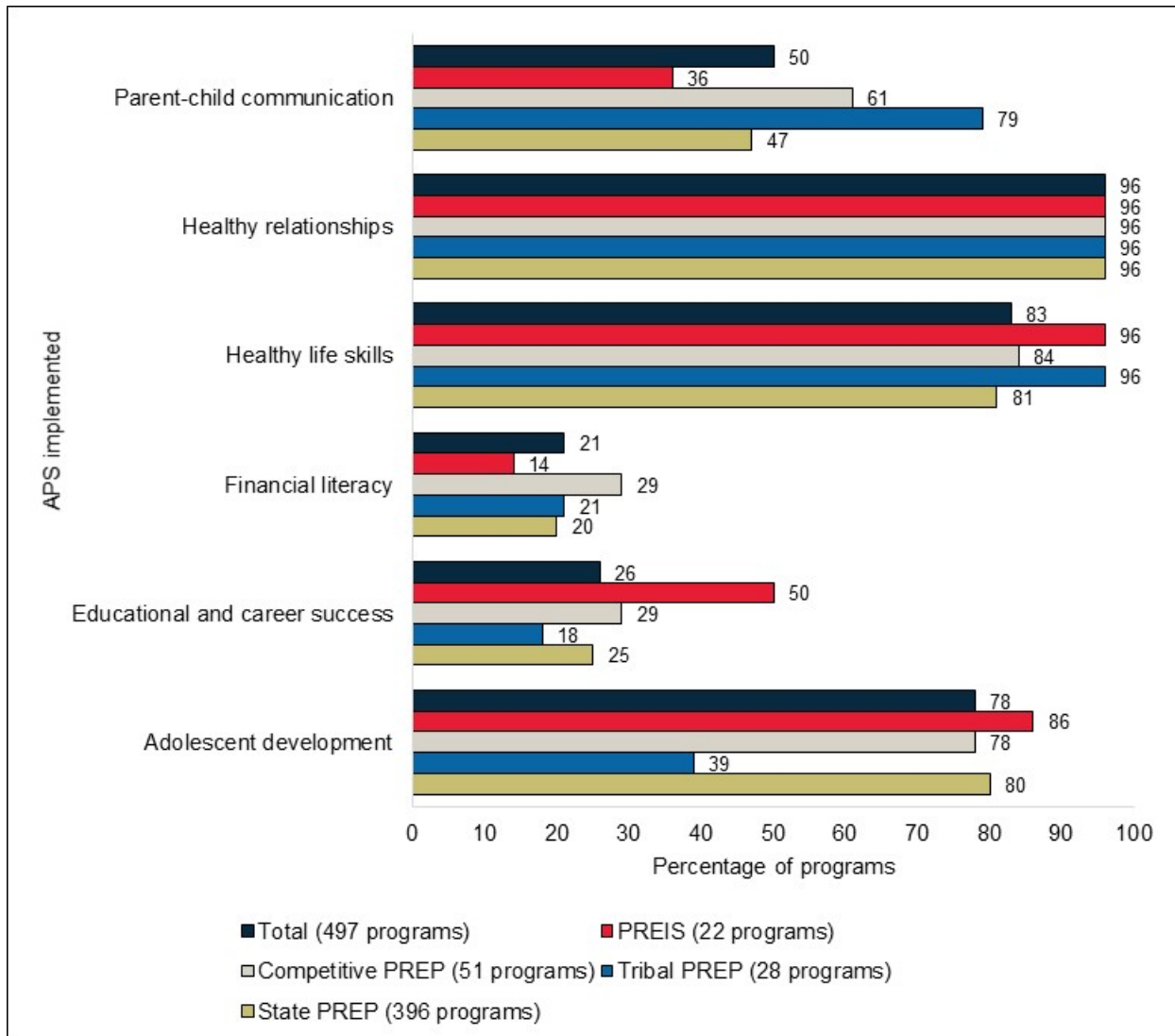
Source: PREP performance measure data for the 2017–2018 reporting cycle.
Note: PREIS stands for Personal Responsibility Education Program Innovative Strategies.

B. Overview of models

This report presents seven models: six APS conceptual models and a unified framework. Together, these models can help grantees implement APSs. Each APS conceptual model contains six components, which first were populated through a targeted literature search, then revised based on grantees' experiences implementing APSs, and finally revised based on feedback from a group of experts and stakeholders (this process is described in Chapter II). Two components (topics and program design and implementation) focus on operationalizing APSs in PREP. The components of the conceptual models are:

1. **Working definition:** A definition that describes the subject and what it means in the context of PREP. The study team created the definition to guide the literature search and

initial model development. Over time, the study team refined the working definition based on feedback from reviewers. Each model presents the subject's final working definition.

2. **Theory of change:** A theory of change that articulates why including the APS may help prepare youth and young adults for the transition to adulthood.

3. **Precursors:** A list of precursors that may affect youth prior to or as they enter the program. Precursors include developmental tasks relevant to adolescents and the specific subject as well as risk and protective factors that may affect how practitioners provide programming to adolescents.

4. **Topics:** A set of topics that PREP programs should consider including as part of the APS.

5. **Program design and implementation:** Several program design and implementation considerations that PREP programs can use to think about how to deliver, and who should deliver, the APS programming.

6. **Outcomes:** Two sets of outcomes—those that focus on changes to the core outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP (enhanced outcomes), and outcomes not related to the prevention of pregnancy and STIs among youth (expanded outcomes) in the models.

The unified framework is a consolidated model that identifies the commonalities between the precursors and outcomes in the individual APS conceptual models. It differs from the APS conceptual models in that it does not include a definition or theory of change, as it was developed to show the overlap between the APSs. The unified framework is intended to help PREP grantees understand how the addition of APS content, including use of a positive youth development (PYD) approach, can improve outcomes for participating youth. Grantees may use the unified framework to support selection of APSs or to see how APSs are related.

C. Road map to the report

This report is divided into 10 chapters so that readers can select the ones of most interest or use. Chapter II describes the process for developing the conceptual models. It includes an overview of the literature review and screening process and a discussion of how the team engaged grantees, stakeholders, and other experts to inform development of the models.

Chapters III through IX present the individual APS conceptual models and supporting literature for readers who want to understand an APS in greater detail:

- Chapter III Adolescent Development.
- Chapter IV Educational and Career Success.
- Chapter V Financial Literacy.
- Chapter VI Healthy Life Skills.
- Chapter VII Healthy Relationships.
- Chapter VIII Parent-Child Communication.

- **Chapter IX** Unified Framework.

Finally, Chapter X provides additional considerations for grantees using the models to select and implement the APSs. This chapter is relevant for all current and future PREP grantees, as well as for policymakers and technical assistance providers who work with PREP grantees to deliver PREP programming.

II. METHODS FOR DEVELOPING APS CONCEPTUAL MODELS

The goal of this study was to develop APS conceptual models and a description of the model and its supporting research. The conceptual models intend to help PREP grantees understand the APSs, select APSs for their programs, develop APS content, and understand how including APSs in PREP could affect youth outcomes. For developing the models, the study team created a systematic approach that could be replicated across subjects and was grounded in theoretical and empirical evidence.

The team developed the six conceptual models and the unified framework using a multi-staged, iterative process. For each APS, the study team followed several steps that incorporated multiple data sources to develop and then refine the conceptual model and description of supporting research (Table II.1). Throughout the process ACF reviewed the developing models. The steps involved:

1. Conducting a targeted review of research literature for each of the six APSs and summarizing information from the reviewed articles to develop the initial APS conceptual models.

2. Working with two consultants—James Jaccard (Professor of Social Work, New York University) and Peter Scales (Senior Fellow, Search Institute)—on the early stages of model development. These consultants are national experts on adolescent pregnancy prevention and reviewed initial working definitions and search terms for each APS and early drafts of the models and supporting narratives.

3. Interviewing selected PREP grantees and providers about their APS programming. Topics included how grantees chose which APSs to cover, whether they covered APSs through their existing curriculum for pregnancy and STI prevention or through additional resources, and who taught the APSs.

4. Coordinating a stakeholder review to solicit feedback on each conceptual model and supporting narrative. The team engaged PREP grantees, federal agencies, external organizations, and experts to ensure the models aligned with existing and best practices.

The resulting conceptual model schematics use a common template for consistency. Each schematic includes several common components:

-   **Working definition:** A definition describes the subject and what it means in the context of PREP. The study team created the definition to guide the literature search and initial model development. Over time, the study team refined the working definition based on feedback from reviewers. Each model presents the subject's final working definition.

-   **Theory of change:** The theory of change that justifies why including the APS may help prepare youth and young adults for the transition to adulthood.

-   **Precursors:** A list of precursors that may affect youth prior to or as they enter the program. Precursors include developmental tasks relevant to adolescents and the specific subject as well as risk and protective factors that may affect how practitioners provide programming to adolescents.

- **Topics:** A set of topics that PREP programs should consider including as part of the APS.

- **Program design and implementation:** Several program design and implementation considerations that PREP programs can use to think about how to deliver, and who should deliver, the APS programming.

- **Outcomes:** Two types of outcomes—those that focus on changes to outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP (enhanced outcomes) and outcomes not related to the prevention of pregnancy and STIs among youth outcomes (expanded outcomes).

Table II.1. Sources consulted for model development, by APS

APS	Adolescent development	Educational and career success	Financial literacy	Healthy life skills	Healthy relationships	Parent-child communication
Review of research literature						
Number of articles reviewed	42	40	35	41	65	47
PREP grantee interviews						
Number of PREP grantees and providers interviewed	23	10	12	23	26	15
Stakeholder review						
Number of PREP grantees or providers who provided feedback	7	4	4	7	6	6
Number of agencies and organizations that provided feedback	7	5	4	6	5	5
Number of experts who provided feedback	2	1	1	2	1	2
Total number of stakeholders that provided feedback	16	10	9	14	12	13

A. Review of research literature

The purpose of the review was to identify research literature that was representative of, and summarized current knowledge about, each APS. The study team structured the review to support the development of the conceptual model components. For each APS, the study team conducted a separate review, but each review relied on the same process. The process included (1) searching literature, (2) screening potential documents to select those with most relevance to the components of the conceptual model, (3) reviewing the selected documents, (4) summarizing findings using a template that aligned with the components of the conceptual model, and (5) identifying additional literature, sometimes foundational articles for an APS, recommended by consultants, experts, or stakeholders.

Searching literature. To identify potential documents, the study team searched both academic journals and grey literature from the past 10 years, 2007 to 2016.[1] For the academic literature,

---

[1] The study team included research literature published outside these dates when it was seminal, or if a stakeholder or expert recommended it.

the team searched a range of databases of scholarly literature, using a consistent definition of the population and primary and secondary search terms. Primary keywords had to appear somewhere in the text of the article along with one or more of the secondary keywords. See Appendix B for detailed tables about the search process, including the list of population definitions and primary and secondary keywords for each APS, as well as the databases searched.

Grey literature was comprised of reports and papers published by research organizations or government agencies. These documents often go through an extensive review process similar to peer review. To identify grey literature, the study team searched websites for selected organizations that conduct or publish relevant research, such as implementation studies of programs addressing one or more of the APSs. In addition to research conducted by Mathematica and Child Trends, the study team identified reports available on websites for similar organizations (see Appendix B).

Screening, reviewing, and summarizing documents. Together, these searches yielded more than 2,500 articles across the six APSs. The study team screened each article using a three-step process.

1. Junior staff screened out documents that were off topic (such as clinical health studies or parental interventions) or that focused on populations or programs outside the United States.

2. The study team reviewed the abstracts for the remaining documents and eliminated those in which the target population was either too young (elementary school or younger) or too old (college and up) for PREP. Exceptions were made if a document was particularly relevant to the APS study.

3. The team screened the remaining abstracts for usefulness to the development of the conceptual models. Prioritized articles either (1) discussed designing and implementing APS-related programs or (2) presented results for a relevant evaluation.

Following this process, for each selected article, the team conducted an in-depth review and abstracted information into a template aligned with the model components. The abstraction template asked reviewers to summarize key characteristics of the article, such as type of document, type of study, target population, relevant behavioral theory, and findings or results.

To ensure that each team member understood the full screening and review process and implemented the process consistently, study leaders trained all staff involved in reviewing documents and abstracting information into the template. After training, team members reviewed one document together to cement their understanding of concepts and use of the template. A senior team member completed quality assurance of the information summarized in the template.

Identifying additional documents. Along with the literature search, the study team identified, for review and abstraction, additional documents that were regularly cited in the original articles reviewed. The team added documents that were recommended by the consultants, external experts, or other stakeholders (such as foundational or cross-cutting articles). The team used the same process to review these documents by abstracting information into the literature review template.

Appendix A includes references, by chapter, for the documents reviewed for each APS.

B. Grantee interviews

Between February and April 2018, the study team conducted semi-structured interviews with representatives of PREP grantees to understand how they covered the APSs, including the content of programming. The grantees represented (1) State, Tribal, and Competitive PREP funding streams; (2) a diverse mix of youth target populations served, such as youth in alternative schools or in juvenile justice or out-of-home care; and (3) a variety of implementation settings, such as schools and community-based organizations. The team contacted recommended grantees and asked them to identify a provider familiar with program implementation to participate in the interview.

The study team conducted a one-hour telephone call with key informants (either the PREP program manager or a provider working with participants) on one of three discussion topics: (1) design and implementation of APS programming when APS content was covered in the curriculum for pregnancy and STI prevention ; (2) design and implementation of APS programming when separate curriculum or materials were used to cover the APSs; and (3) youth receptivity to APS programming. Each topic had a separate discussion guide, though all respondents provided similar background information on the populations served, implementation settings, APSs implemented, and curriculum used for each.

The team spoke with 26 respondents from 19 states, representing 25 PREP grantees and providers. Respondents represented 16 State PREP, 7 Competitive PREP, and 2 Tribal PREP grantees.[2] The 26 respondents served youth in a range of implementation settings, including middle and high schools, alternative schools, residential or transitional living settings, juvenile justice settings, after-school settings, and community-based organizations such as YMCAs or homeless shelters. Most grantees that respondents represented served youth in multiple settings.

> On average, grantee respondents covered at least four APSs; six covered all six APSs.
> - All respondents covered healthy relationships
> - Nearly all covered adolescent development and healthy life skills
> - Over half covered parent-child communication
> - Fewer covered financial literacy and educational and career success

Most respondents reported serving low-income youth in middle or high school, eight respondents served older youth. Respondents also served youth who were in foster care, incarcerated, or attending alternative school. Other risk factors among the youth served were homelessness, being a pregnant or parenting teen, and identifying as LGBTQ, but youth with these characteristics were described by six or fewer respondents.

C. Stakeholder review

The study team also asked stakeholders to review the models and supporting narratives. The purpose of this activity was to (1) ensure that the revised conceptual models reflected existing theory and research on each APS; (2) confirm that the revised models reflected grantees'

---

[2] As reported in the 2017-2018 PREP performance measures, there are 51 State PREP, 20 Competitive PREP, and 8 Tribal PREP grantees.

experiences with PREP programming; and (3) obtain feedback on whether the revised models plausibly linked to the expanded and enhanced outcomes.

The team engaged four groups of stakeholders:

1. **PREP grantees:** PREP grantees that incorporated APS into their programming.

2. **Federal agencies:** Representatives of federal agencies that worked on adolescent pregnancy prevention or youth programming related to the APS. These included staff or program officers from U.S. Departments of Education, such as the Institute for Education Science, and Health and Human Services agencies, such as the Children's Bureau, the Runaway and Homeless Youth Program, and the Office of the Assistant Secretary for Planning and Evaluation.

3. **External organizations:** Representatives of selected external organizations that address adolescent pregnancy prevention or youth programming. These people provided programming; supported organizations that provided it; or conducted related activities, such as research and policy advocacy on pregnancy prevention.

4. **Experts:** Experts with content knowledge on specific APS subjects.

In total, the team received feedback from 41 stakeholders: 17 representatives from PREP grantees, 8 representatives of federal agencies, 8 people from 6 external organizations, and 8 content experts.

At least one stakeholder reviewed each APS conceptual model. Representatives of federal agencies and external organizations were the only stakeholders asked to review the unified framework.

The team initially contacted stakeholders by email to request their involvement, and they provided feedback through individual or small-group calls. In addition to giving feedback during a call, all stakeholders had the option of providing written feedback to the team. In total, the study team held 14 calls to discuss stakeholder feedback: three group calls with grantees, one group call with representatives from federal agencies, one group call with representatives from selected external organizations, one call with representatives of one external organization who were unavailable at the time of the group call, and eight individual calls with content experts. The calls lasted between 60 and 90 minutes and occurred between September and November 2018.

During each call, the study team asked stakeholders to provide feedback on the models and discuss how to share them more broadly. For each stakeholder type, the study team developed a brief set of topics to cover during the call. Although the topics varied between stakeholder groups, they generally included:

- **Topics in conceptual models:** Whether the topics described in the models reflected what grantees covered in their programs, and whether the models accurately reflected the research on the subject

- **Improvements to conceptual models:** How the models might be improved to provide more support to grantees and what additional resources might help grantees use the models to plan and implement APS programming

- **Using the conceptual models:** How the models might help grantees plan and implement APS in their programming

- **Disseminating the conceptual models:** How to disseminate the models to PREP grantees

The study team revised the models based on the stakeholder review. Whenever possible, the study team implemented the stakeholder suggestions, if they were supported by the initial literature review. In some cases, the team reviewed new literature specifically recommended by the stakeholders, and then refined the models or the supporting narrative based on that information.

III. CONCEPTUAL MODEL FOR ADDRESSING ADOLESCENT DEVELOPMENT IN PREP

Mathematica:
    Elizabeth Clary
    Heather Zaveri
    Christopher Jones
    Katie Eddins
    Katie Adamek

Child Trends:
    Kristin A. Moore
    Mindy E. Scott
    Deana Around Him
    Monica Arkin
    Isabel Griffith

This page has been left blank for double-sided copying.

III. CONCEPTUAL MODEL FOR ADDRESSING ADOLESCENT DEVELOPMENT IN PREP

For the APS conceptual models study, the study team developed conceptual models for six adulthood preparation subjects (adolescent development, educational and career success, financial literacy, healthy life skills, healthy relationships and parent-child communication). The team then developed a unified framework to identify connections across subjects. Together, the models and framework are intended to help ACF support effective programs by providing PREP grantees with guidance on what constitutes adulthood preparation programming, the infrastructure needed to support it, how to offer such programming within adolescent pregnancy prevention programs, and anticipated outcomes. Each conceptual model draws on theoretical and empirical literature. Other sources included consultations with stakeholders and experts; feedback from staff in FYSB and OPRE; and interviews with PREP grantees about their experiences designing and implementing APS programming.

> The Family and Youth Services Bureau (FYSB) and the Office of Planning, Research, and Evaluation (OPRE), both within the Administration for Children and Families (ACF), contracted with Mathematica and its partner, Child Trends, to develop conceptual models for the adulthood preparation subjects (APSs) and to determine how they fit within PREP programming.
>
> PREP grantees must adhere to four program requirements: (1) implement evidence-based or evidence-informed curricula; (2) provide education on both abstinence and contraception for the prevention of pregnancy, sexually transmitted infections (STIs), and HIV; (3) educate youth on at least three of six APSs; and (4) focus on high-risk populations, such as youth residing in geographic areas with high teen birth rates, adjudicated youth, youth in foster care, minority youth, and pregnant or parenting teens. PREP grantees are also required to implement a positive youth development (PYD) approach in their programs. Grantees have discretion in how to meet these requirements. This discretion allows them to tailor their programs to fit the needs of the targeted population and their priorities.
>
> The intention of supplementing pregnancy prevention programs with APS content is to further prepare youth for the transition to adulthood. It is hypothesized that incorporating APS content will strengthen the ability of programs to reduce sexual risk behaviors and expand the range of outcomes that programs affect.
>
> This report is a first step toward helping PREP grantees understand issues of integrating and implementing APSs into their programming. The information presented herein reflects grantee perspectives and published literature on the APSs. The primary aim of this report is to provide grantees with a framework to support the implementation of APSs in their projects.

This chapter presents the conceptual model for adolescent development through a schematic and supporting narrative. It starts by defining adolescent development (Section A) and briefly describing how the study team developed the conceptual model (Section B). Then, sections C through H review each model component and the supporting literature. Section I discusses conclusions.

A. Working definition of adolescent development

The legislation authorizing PREP provided a limited definition for each APS.[3] To guide the APS study, the study team developed a working definition that built from the language included in the legislation. The study team then shared the working definition with APS consultants, librarians,

---

[3] https://www.ssa.gov/OP_Home/ssact/title05/0513.htm

and ACF and refined it based on their feedback. The study team continued to refine the working definition throughout the development of the conceptual model based on reviewed literature and feedback from ACF, PREP grantees, and stakeholders. Each APS is multifaceted, with a range of potential applications to youth. The working definition focuses on how the subject applies to PREP. The working definition for adolescent development is[4]:

> Physical, cognitive, social, and emotional maturation that occurs for youth roughly between ages 10 and 19. Age-appropriate programs and education can support the development of positive social behaviors and relationships; emotional well-being; academic achievement; healthy attitudes and values about adolescent growth and development, body image, racial and ethnic diversity; and related subjects.

B. Overview of the model development process

The study team developed each APS model through a multi-step process (described in more detail in Chapter II). First, the study team conducted a literature review on each individual APS. Then, they held semi-structured interviews with representatives of PREP grantees and providers to understand how they covered each APS. Finally, the team solicited feedback on each APS from additional experts and stakeholders through a series of conference calls and semi-structured interviews. Throughout development, staff from FYSB and OPRE provided feedback on the process, and on the evolving content of the developing conceptual models. Next, the study team describes the process of developing the conceptual model for adolescent development.

Research literature review. The study team started by conducting a targeted review of research literature on adolescent development. They systematically searched, screened, and reviewed articles and studies, and then extracted and summarized findings using a template that included sections for each intended component of the adolescent development conceptual model. For this topic, the team reviewed 42

Primary keywords: Adolescent development

Secondary keywords: Social independence, healthy attitudes, healthy or positive values, body image, social behaviors, emotional well-being, self-esteem, empowerment, self-determination, empathy, cognitive behavior, sense of self

documents, published from 2001 through 2016, including 21 literature reviews or meta-analyses, four empirical studies, nine theoretical articles, one program evaluation, and seven other articles, such as a resource guide, a checklist, point/counter-point articles, and a commentary in a journal supplement that synthesized recommendations from an expert panel. Many of the documents reviewed drew from foundational developmental theories such as Erickson's Stages of Psychosocial Development, Self-Determination theory, or adolescent behavioral risk theories.[5] (See Appendix A for a list of references by chapter, and Appendix B for detailed tables describing the literature review process.)

---

[4] The definition was intended to apply broadly to the adolescent population. There are many subpopulations of adolescents whose needs may differ based on personal characteristics, for example, race or ethnicity, sexual orientation, or disability status. Grantees and providers will need to tailor programs to the needs of subpopulations they serve.

[5] Note that most of the studies reviewed showed associations rather than causal relationships; findings that report correlations cannot be used to infer causality.

Interviews with PREP grantees and providers. The study team interviewed existing PREP grantees and providers about their APS programming and implementation. These interviews addressed APS program design and implementation, curricula or materials used to cover the APSs, and youth receptivity to APS programming. Altogether, the team spoke with 26 respondents from 19 states, across 25 PREP grantees. Respondents represented 16 State PREP, seven Competitive PREP, and two Tribal PREP grantees.[6] On average, respondents reported covering four APSs in their programs, ranging from the required minimum of three subjects to as many as six.

> Twenty-three out of 26 grantees interviewed said they covered adolescent development, and nearly all said they chose to cover it because it was relevant to all their youth populations.

Expert and stakeholder feedback. The study team engaged four groups of experts and stakeholders to provide feedback on the models. These people reviewed the models to ensure that they included relevant theories and research on the subject, and that the proposed model could enhance or expand PREP outcomes if operationalized as described. Experts and stakeholders represented four groups: (1) experts with content knowledge on specific APSs; (2) State PREP, Competitive PREP, and Tribal PREP grantees; (3) representatives of federal agencies that work on adolescent pregnancy prevention or youth programming related to the APS; and (4) representatives of selected external organizations involved with adolescent pregnancy prevention or youth programming related to the APS.

C. Adolescent development conceptual model

Figure III.1 shows the conceptual model for adolescent development. The definition of adolescent development and the theory of change are at the top, above the conceptual model. The model includes precursors that influence youth who participate in adolescent development instruction as part of PREP, such as developmental tasks and risk and protective factors. The model also identifies topics for inclusion in adolescent development programs, design and implementation features for PREP programs, and outcomes that may be affected by offering this programming. Outcomes are presented as enhanced and expanded outcomes for the PREP program. Enhanced outcomes refers to the outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP: sexual activity; contraceptive use; and incidence of pregnancy and sexually transmitted infections. Expanded outcomes refers to changes in outcomes not related to the prevention of pregnancy and STIs among youth, such as social skills, mental health, or academic achievement. Sections D through H of this chapter describe each component of the conceptual model in Figure III.1, expanding on information it contains, based on the supporting literature. For some components of the conceptual model, the text presents additional detail beyond what is included in the figure.

Adolescent development is a broad field. To focus on aspects of development that are malleable through intervention, the conceptual model incorporates several prominent theoretical frameworks, noted below. In the discussion that follows, the study team highlights the ways in which these theories guided development of the conceptual model:

---

[6] As reported in the 2017-2018 PREP performance measures, there are 51 State PREP, 20 Competitive PREP, and eight Tribal PREP grantees.

- The public health framework of risk, protective, and promotive factors

- Personal and social competencies that promote well-being outlined by the Committee on Community-Level Programs for Youth (National Research Council [NRC] and Institute of Medicine [IOM] 2002). These competencies are a set of qualities youth should possess for healthy development.

- The Youth Thrive Framework and Community Action Framework for Youth Development outline programmatic approaches that enhance the prospect of youth engagement and positive outcomes (Harper Browne 2014; Gambone 2004).

D. Precursors

The conceptual model starts with three sets of precursors for adolescent development: developmental tasks, risk factors, and protective factors. Some individual, peer, family, school, and community factors interact and influence how youth develop. These contextual factors often reflect characteristics and experiences that youth bring to a program, but they are not factors that programs should or could expect to change through youths' participation. While not included in the conceptual model figure, programs should consider these factors for their target populations and recognize that their relevance may vary, depending on the APS. For adolescent development, relevant contextual factors include youth and parent demographic and economic characteristics (such as age, gender, sexual orientation, and socioeconomic status), parent-child dynamics,[7] family cultural beliefs and customs, family composition (such as traditional and non-traditional), and neighborhood or community resources. For example, structural racism may affect youths' access to quality health care services (Harper Browne 2014). In some cases, contextual factors can encourage youth to avoid negative or risky behaviors, while in other circumstances, these factors may place youth at higher risk for involvement in activities that contribute to poor developmental and behavioral outcomes. Certain individual-level factors like age, grade level, or sex may increase or decrease the strength of the relationship between youth's experiences in the program and their outcomes.

---

[7] When the model references parents, the study team recognizes that some youth may not live with a biological parent, but rather are cared for by a guardian or other trusted adult. The term *parent* intends to be broad and reflect the range of potential caregivers.

Figure III.1. Adolescent Development Conceptual Model

Adolescent development is the physical, cognitive, social, and emotional maturation that occurs for youth roughly between ages 10 and 19. Age-appropriate programs and education can support the development of positive social behaviors and relationships; emotional well-being; academic achievement; healthy attitudes and values about adolescent growth and development, body image, racial and ethnic diversity, and related subjects.

Theory of Change: Healthy adolescent development is defined as meeting the appropriate developmental milestones in the areas of physical, cognitive, social, and emotional well-being. Youth development programs aim to build strengths and respond effectively to challenges in these domains. By focusing on outcomes that improve youth assets, PREP programs can support youths' development across domains, which will help youth to improve academic achievement, social skills, and physical and mental health and reduce risky behaviors such as delinquency, substance use, and unprotected sex. Increased protective factors and decreased risk factors will support attainment of positive PREP outcomes, such as reducing sexual risk behaviors, among participating youth.

Precursors

Developmental Tasks
- Brain development
- Sexual maturation
- Identity formation
- Social skills development

Risk Factors
- Experiencing trauma during childhood
- Neighborhood poverty
- Substance use
- Poor mental health
- Early physical development
- Community and school safety

Protective Factors
- Individual characteristics like self-confidence and social and other competencies
- Healthy relationships with family and peers
- School and community engagement
- Taking developmentally appropriate positive risks, such as trying out for a sports team

Adolescent Development Topics

Physical development: Anatomy and physiology, physical development and maturation of the reproductive organs (that is, puberty), knowledge of positive health habits and development of health risk management skills

Cognitive development: Knowledge of life skills, critical-thinking and reasoning skills, and decision-making skills

Emotional development: Attainment of mental health traits including positive self-regard, emotional self-regulation skills, coping skills, conflict resolution skills, self-efficacy, prosocial and culturally sensitive values, spirituality and religion, and moral character

Social development: Development of connectedness and trust with parents or caregivers, peers, and other adults; development of a self-identity; feeling connected and valued by larger social networks; attachment to prosocial institutions; development of a cultural identity influenced by cultural history and values; and commitment to civic engagement

PREP Program Design and Implementation
- Physical and psychological safety
- Appropriate structure
- Supportive relationships
- Opportunities to belong
- Positive social norms
- Support for efficacy and active participation
- Opportunities for skill building
- Integration of family, school, and community efforts

Enhanced PREP Outcomes

Short-term → Intermediate → Long-term

- Abstinence
- Contraceptive use
- Frequency of sexual activity
- Teen pregnancy
- Reproductive health
- STIs/HIV

Expanded PREP Outcomes

Short-term → Intermediate → Long-term

- Emotional well-being
- Social skills
- Substance use
- Delinquency
- Physical health
- Mental health
- Academic achievement

The team included developmental tasks to recognize that adolescents start at different places and progress at different rates through brain development, sexual maturation, identity formation, and social skills development. Risk factors make youth more likely to engage in negative behaviors or harder for them to develop strengths. In contrast, protective factors promote positive development by making youth less likely to engage in negative behaviors and helping them to mitigate risks and promote resilience. Although not specified in the model, promotive factors enhance positive development generally among youth, regardless of individual, familial, or community risk factors. Promotive factors overlap with protective factors (such as positive family relationships) but are more generally beneficial for all youth, whereas protective factors come into play in the context of risk (NRC and IOM 2009). Examples of promotive factors include ethnic identity, social support, and prosocial involvement.

Developmental tasks. PREP programs must consider youths' developmental needs when designing programming, as adolescence is a critical period of brain development and youth begin sexual maturation, continuing to refine their sense of identity and social skills (Patton and Viner 2007; NRC and IOM 2002). Personality traits such as self-identity, values, and social skills develop from early infancy throughout adulthood. However, there are stages of human development when these traits become more pronounced, which the conceptual model highlights. During early adolescence, around ages 10 through 14, youth begin to explore their sense of identity, and find their place in their peer group. They might adopt behaviors or a style of dress to help them "fit in" with their friends. During this time, youth develop self-regulation, interpersonal skills, and cognitive functioning that contribute to youth seeking rewards before they are able to fully grasp the short- and especially the longer-term consequences of actions. This in turn makes youth vulnerable to risk-taking behaviors (Steinberg 2007). During middle adolescence, around ages 15 through 18, youth develop personal values and a higher level of cognitive functioning. This enables them to further develop social skills and to experiment with identities that may vary from the identity of their peers. These changes prepare youth to develop a stable set of values and a coherent sense of themselves by young adulthood, starting around 19 years old (Nagaoka et al. 2015).

Risk and protective factors. Risk factors make youth more likely to engage in negative behaviors or harder for them to develop strengths. For example, experiencing trauma or poverty during childhood or adolescence increases the likelihood of poor outcomes related to mental health, physical development, and social competence in adulthood (NRC and IOM 2009; Harper Browne 2014). Poor neighborhoods may lack the resources that promote healthy development and may expose youth to risk factors such as violence and drugs and alcohol (NRC and IOM 2009). When experienced in childhood, factors such as trauma, poverty, and poor neighborhoods can also have a cumulative effect on adolescent outcomes. For example, growing up with social disadvantage and experiencing early trauma can lead to early uptake of risky behaviors during adolescence (Sawyer et al. 2012; NRC and IOM 2009; Harper Browne 2014). Trauma includes historical trauma, defined as "collective trauma experienced over time and across generations who share an identity," which can also negatively affect health outcomes among marginalized communities (Mohatt et al. 2014).

Personal characteristics such as sexual orientation, race, and disability can also put youth at higher risk of negative outcomes (NRC and IOM 2002). Substance use is positively correlated with early initiation of sexual behavior, low contraceptive use among those who are sexually

active, delinquency, and academic failure (IOM and NRC 2011). In addition, mental health problems, such as depression, anxiety, and post-traumatic stress disorder, can result in poor academic achievement, which can increase the risk of adolescent pregnancy (NRC and IOM 2009). IOM found that delinquency (engaging in crime or violence) is positively correlated with defiance, truancy, school misbehavior, problem sexual behavior, academic failing, high school dropout, adolescent pregnancy, violence, and risky driving (IOM and NRC 2011).

Youth, particularly girls who experience early onset of puberty, may be at risk of negative outcomes. Girls with early physical development were found to be at higher risk for depression, substance abuse, disruptive behaviors, and eating disorders (Steinberg and Sheffield 2001). Early-maturing boys, also subject to negative risks, were more likely to be sexually active, smoke, or take part in delinquent activities (American Psychological Association 2002). Late-maturing boys may also have lower self-esteem or stronger feelings of inadequacy than their peers (Steinberg and Sheffield 2001).

Protective factors, which include positive influences from peers, family, school, and community, mitigate risks and promote resilience and thus make youth less likely to engage in negative behaviors. For example, family upbringing contributes to the development of social competence: interpersonal skills that help youth understand feelings, thinking, and actions in social settings, such as reading social cues, solving interpersonal problems, and anticipating consequences to actions (Catalano et al. 2004). Positive family factors—such as strong parent-child communication, monitoring, setting appropriate limits, and parents' own health behaviors—are related to adolescent health-promoting behavior (Youngblade et al. 2007). In addition, the presence of at least one stable and supportive adult can protect a child from the impact of traumatic experiences, which reduces the risk they will develop serious problems later in life (Harper Browne 2014). However, some youth are in out-of-home care and are thus less likely to have these positive family factors. Peers can also positively influence youth. Researchers have found that having peers with prosocial behaviors or who achieve academically can be protective for youth (Steinberg 2007). Individual characteristics can also be protective. Guerra and Bradshaw (2008) found that youth with a strong ability to define their sense of self have more self-control and better decision-making abilities, a more refined set of moral beliefs, and greater connectedness to others. High levels of these competencies increased the likelihood of positive development, while low levels increase the likelihood of involvement in adolescent risk behaviors.

The safety of community and school environments also represents an important context for adolescent development, as both school and community safety are linked to increased social competence (Youngblade et al. 2007). Several authors discussed the potential of civic and community engagement as a protective factor. For example, one study explained that young adults need to "give back" to the social, political, or physical welfare of society to feel successful. Community engagement may also have a positive benefit on society as well as on individual youth (Scales et al. 2016). A different study found that civic engagement, such as participating in a youth advocacy group, can keep youth more fully engaged in their positive individual development (Pittman et al. 2003).

The American Psychological Association (2002) explains that experimentation in adolescence is developmentally appropriate, and that unless it threatens youths' health or life, it is a positive

sign that "adolescents feel secure enough to explore the unknown." In positive risk-taking, where youth face situations where they may fail (for example, trying out for a sports team), it is important for them to learn from their mistakes to become responsible adults (Harper Browne 2014). Because most risk taking involves less-safe behaviors, it is important to provide youth with opportunities for positive risk taking to decrease their likelihood to participate in unsafe risks and activities.

E. Theory of change for adolescent development

Theory of change

Healthy adolescent development is defined as meeting the appropriate developmental milestones in the areas of physical, cognitive, social, and emotional well-being. Youth development programs aim to build strengths and respond effectively to challenges in these domains. By focusing on outcomes that improve youth assets, PREP programs can support youths' development across domains, which will help youth to improve academic achievement, social skills, and physical and mental health and reduce risky behaviors such as delinquency, substance use, and unprotected sex. Increased protective factors and decreased risk factors will support attainment of positive PREP outcomes, such as reducing sexual risk behaviors, among participating youth.

Development during adolescence occurs in the physical, cognitive, social, and emotional domains. Physical development includes a range of biological changes, including physical and sexual maturation (IOM and NRC 2011). Cognitive development encompasses brain development, which—contrary to earlier thinking—occurs throughout the life span. During adolescence, brains develop the ability to make more complex decisions and understand abstract information. As part of this process, by mid-adolescence, youth generally develop better executive functioning skills, including the capacity to understand long-term consequences and exert more control over their impulses. The maturation of executive functioning and the social-emotional skills occur simultaneously and affect each other. However, not all aspects of executive function and social-emotional development may develop at the same time, and when they do not, inconsistent behavior is often observed in adolescence (IOM and NRC 2011). Social development continues during adolescence through refinement of a range of skills, including social skills, conflict resolution, empathy, relationship building, and managing conflict with parents, caregivers, or peers (Centers for Disease Control and Prevention 2015; Bell et al. 2012). Emotional development also continues when youth establish their sense of identity, learn how to regulate emotions, and develop moral values (American Psychological Association 2002).

F. Adolescent development topics

Youth development programs intend to enhance youths' ability to develop positively and reach their full potential (NRC and IOM 2002; Zarrett and Lerner 2008; Hamilton et al. 2004). To facilitate healthy development and well-being, programs may incorporate a range of topics that address personal and social competencies. These topics align with the assets outlined by the Committee on Community-Level Programs for Youth (NRC and IOM 2002) and include:

- **Physical development:** Anatomy and physiology, physical development and maturation of the reproductive organs (puberty), knowledge of positive health habits, and development of health risk management skills

- **Cognitive development:** Knowledge of life skills, critical thinking and reasoning skills, and decision-making skills

- **Emotional development:** Attainment of mental health traits, including positive self-regard, emotional self-regulation skills, coping skills, conflict resolution skills, self-efficacy, prosocial and culturally sensitive values, spirituality and religion, and moral character

- **Social development:** Development of connectedness and trust with parents or caregivers, peers, and other adults; development of a self-identity; feeling connected and valued by larger social networks; attachment to prosocial institutions; development of a cultural identity influenced by cultural history and values; and commitment to civic engagement

While not required, competencies in each domain above benefit youth. The more competencies a youth has, the more she or he can benefit developmentally. Positive experiences, supportive people, and opportunities to gain and refine life skills can contribute to youth acquiring and building their competencies (NRC and IOM 2002).

Grantee interviews demonstrated that many PREP programs addressed these topics. For example, staff described programming related to:

- Physical health and wellness, including puberty, anatomy, and physical changes

- Cognitive development, such as critical thinking and decision making

- Emotional development, including self-esteem and emotional and mental health

- Social or behavioral development, such as relationships with peers and adults, positive role models, trust and consequences, identity, decision making, and community connections.

Staff used a range of activities to cover these topics. For example, one program led a "values auction" during which youth self-identified their priority values. Another brought in a licensed clinical therapist so youth could meet her and see what therapy might be like, and gain exposure to mental health services.

G. Program design and implementation

Grantee interviews and the literature review identified design strategies that can guide the implementation of PREP programming that aims to strengthen adolescent development. The literature suggests that programs should remain flexible and incorporate multiple types of strategies and practices, including culturally adapting programs to fit the target population. The NRC and IOM (2002) identified a list of eight recommended practices programs can use to facilitate positive adolescent development:

1. **Provide physical and psychological safety--** safe facilities free from violence and abuse and encourage health-promoting practices, such as mental health services, that increase safe peer interactions and decrease confrontational interactions

2. **Provide appropriate structure**--including clear and consistent rules and expectations, and age-appropriate monitoring

3. **Encourage supportive relationships**—caring relationships, social support, positive communication, and supportive guidance

4. **Offer opportunities to belong**-- opportunities for meaningful inclusion of all youth regardless of gender, race, ethnicity, sexual orientation, or disabilities; opportunities for positive identity formation; and support for cultural and bicultural competence

5. **Reinforce positive social norms**--support behaviors and values that promote respect, including clearly communicated expectations

6. **Encourage efficacy and active participation**--support youth autonomy, offer opportunities for youth to take on leadership roles, and encourage youth to achieve meaningful change in their community

7. **Provide opportunities for skill building--**provide opportunities for physical, intellectual, psychological, emotional, and social development that prepare adolescents to make positive decisions about their health, as well as providing educational and career opportunities

8. **Integrate family, school, and community efforts--**coordinate and collaborate with family, school, and community partners

Other authors endorsed developing prosocial relationships or bonding with others as a promising practice (Catalano et al. 2004; Family and Youth Services Bureau 2007; Gavin et al. 2010; Markham et al. 2010; Nagoka et al. 2015). In addition, others recommended engaging youth in program development so they are not just service recipients, but active participants in the design and implementation of services (Harper Browne 2014; Pittman et al. 2003). Other authors highlighted the importance of involving parents or guardians—through either parent education (Bandy and Child Trends 2012) or parental involvement in programming (Chapman and Werner-Wilson 2008; Gavin et al. 2010; Bell et al. 2012). However, not all youth live with or interact with their parents—especially youth who are incarcerated or are in the foster care system. For these youth, involving caregivers or trusted adults might be appropriate, but the literature did not address this adaptation specifically.

During interviews, PREP grantees recommended selecting curricula and staff members that can cover both sexual health, including pregnancy and STI prevention, and adolescent development. PREP grantees indicated that they typically used a curriculum for the prevention of pregnancy and STIs among youth that also included adolescent development and other APS content. In addition, most grantees used the same staff to teach all content. Selecting a curriculum that combines the prevention of pregnancy and STIs and APS content helped staff maintain student interest and allowed them to use time efficiently. Staff who deliver pregnancy and STI prevention and adolescent development content may cover overlapping topics. For example, grantees described how content on decision making, trust and consequences, and peer relationships are relevant to adolescent development, pregnancy and STI prevention, and other APSs. Programs should also ensure that adolescent development content is culturally sensitive and inclusive of all youth. For example, programs could incorporate content relevant to tribal communities and other special populations of youth.

H. Outcomes

The reviewed literature suggested several outcomes that might be realized by addressing adolescent development. The study team organized outcomes into two categories—expanded and enhanced—based on whether they focus on changes to outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP (enhanced outcomes) or outcomes not related to the prevention of pregnancy and STIs among youth (expanded outcomes). The model is limited to outcomes supported by the literature review.

The team further organized outcomes as short-term, intermediate, and long-term. These categories are derived from a theoretical understanding of the logical sequencing of youth knowledge, attitudes, skills, and behaviors related to a particular outcome. *Short-term* outcomes are observed directly following a program and typically include initial changes in knowledge and attitudes, but may include immediate behavior changes. Short-term outcomes often continue to be relevant at later time points. *Intermediate* outcomes are the step between short-term and long-term outcomes. They can include the application of new skills or changes in behavior that result from the acquisition of knowledge and skills. Programs could expect to see these outcomes within six months to a year after a program. *Long-term* outcomes are observed a year or more after program completion. Depending on when youth attend the program, this could be during middle or high school or even after high school and into young adulthood. The model does not identify outcomes beyond young adulthood. The reviewed literature did not include articles on the effects of adolescent development programming in adulthood.

Enhanced outcomes. The literature suggests that interventions that incorporate adolescent development might also influence outcomes related to pregnancy and STI prevention. Youth with strong connections and positive bonds with adults —whether family members or other adults—may delay engaging in sexual activity. These connections can flourish when youth have strong social skills, emotional well-being, and strong mental health. When adults with whom youth have a positive bond model positive sexual attitudes and behaviors, youth perceive these attitudes and behaviors as normal. Several authors noted that such perceived norms encouraged youth to delay when they begin to engage in sexual activity and decrease their frequency of sexual activity (House, et al. 2010b; Gavin et al. 2010; Catalano et al. 2004). In turn, the age of sexual initiation and frequency of sexual activity influence unintended pregnancy and sexually transmitted infections. When youth initiate sexual activity at older ages, they experience fewer unintended pregnancies (NRC and IOM 2002). In addition, academic achievement is associated with higher rates of contraceptive use (House et al. 2010a).

Expanded outcomes. Addressing adolescent development in PREP may also result in changes beyond the prevention of pregnancy and STIs, including social skills, substance use, delinquency, emotional well-being, and academic achievement. Addressing adolescent development may enhance youths' competencies, such as self-control, decision-making skills, and connectedness to others, which in turn can increase their emotional well-being, social skills, and other positive behaviors (House et al. 2010a; Catalano et al. 2004; Guerra and Bradshaw 2008), as reflected in the short-term expanded outcomes. Improving emotional well-being can improve emotional attributes such as self-esteem, coping skills, and self-efficacy (Hamilton et al. 2004).

Some programs that address adolescent development have demonstrated increased social skills for youth (Bandy and Child Trends 2012; Catalano et al. 2004; Durlak et al. 2010). Increasing youths' social skills and emotional well-being can contribute to decreased engagement in harmful externalizing behaviors, such as substance use and delinquency, captured as intermediate expanded outcomes. Other programs addressing adolescent development have shown promise for reducing substance use and other problem behaviors, such as delinquency among adolescents (Catalano et al. 2004; Singson 2015; Bell et al. 2012; Bandy and Child Trends 2012). Programs that teach cognitive-behavioral skills (such as coping or emotion regulation) have shown improvements in mental and physical health outcomes for females (Bell et al. 2012). Finally, programs have shown improved academic achievement (Bandy and Child Trends 2012; Catalano et al. 2004), typically a long-term outcome. Improving academic achievement may influence other domains because academic failure is associated with adolescent pregnancy, violence, substance use, and poor mental health (Brooke-Weiss et al. 2008).

I. Conclusions

Addressing adolescent development in PREP can potentially lead youth to have increased physical, cognitive, social, and emotional well-being, resulting in reduced levels of risky behaviors and improved outcomes related to the prevention of pregnancy and STIs among youth and academic achievement. Adolescent development programming focused on youths' strengths may result in increased numbers of youth who abstain from sexual activity or reduce their involvement in risky sexual behavior. PREP programs that incorporate adolescent development programming are positioned to affect youths' outcomes related to the prevention of pregnancy and STIs as well as broader outcomes related to social and emotional well-being and academic performance.

IV. CONCEPTUAL MODEL FOR ADDRESSING EDUCATIONAL AND CAREER SUCCESS IN PREP

Mathematica:
- Elizabeth Clary
- Heather Zaveri
- Christopher Jones
- Katie Eddins
- Katie Adamek

Child Trends:
- Kristin A. Moore
- Mindy E. Scott
- Deana Around Him
- Monica Arkin
- Isabel Griffith

This page has been left blank for double-sided copying.

IV. CONCEPTUAL MODEL FOR ADDRESSING EDUCATIONAL AND CAREER SUCCESS IN PREP

For the APS conceptual models study, the study team developed conceptual models for the six APSs (adolescent development, educational and career success, financial literacy, healthy life skills, healthy relationships and parent-child communication). The team then developed a unified framework to identify connections across subjects. Together, the models and framework are intended to help ACF support effective programs by providing PREP grantees with guidance on what constitutes adulthood preparation programming, what infrastructure is needed to support it, how to offer such programming within adolescent pregnancy prevention programs, and what outcomes are anticipated. Each conceptual model draws on theoretical and empirical literature. Other sources included consultations with stakeholders and experts; feedback from staff in FYSB and OPRE; and interviews with PREP grantees about their experiences designing and implementing APS programming.

The Family and Youth Services Bureau (FYSB) and the Office of Planning, Research, and Evaluation (OPRE), both within the Administration for Children and Families (ACF), contracted with Mathematica and its partner, Child Trends, to develop conceptual models for the adulthood preparation subjects (APSs) and to determine how they fit within PREP programming.

PREP grantees must adhere to four program requirements: (1) implement evidence-based or evidence-informed curricula; (2) provide education on both abstinence and contraception for the prevention of pregnancy, sexually transmitted infections (STIs), and HIV; (3) educate youth on at least three of six APSs; and (4) focus on high-risk populations, such as youth residing in geographic areas with high teen birth rates, adjudicated youth, youth in foster care, minority youth, and pregnant or parenting teens. PREP grantees are also required to implement a positive youth development (PYD) approach in their programs. Grantees have discretion in how to meet these requirements. This discretion allows them to tailor their programs to fit the needs of the targeted population and their priorities.

The intention of supplementing pregnancy prevention programs with APS content is to further prepare youth for the transition to adulthood. It is hypothesized that incorporating APS content will strengthen the ability of programs to reduce sexual risk behaviors and expand the range of outcomes that programs affect.

This report is a first step toward helping PREP grantees understand issues of integrating and implementing APSs into their programming. The information presented herein reflects grantee perspectives and published literature on the APSs. The primary aim of this report is to provide grantees with a framework to support the implementation of APSs in their projects.

This chapter presents the conceptual model for educational and career success through a schematic and supporting narrative. It starts with defining educational and career success (Section A) and briefly describing how the study team developed the conceptual model (Section B). Sections C through H review each component of the model and the supporting literature. Section I discusses conclusions.

A. Working definition of educational and career success

The legislation authorizing PREP provided a limited definition for each APS.[8] To guide the APS study, the study team developed a working definition that built from the language included in the legislation. The study team then shared the working definition with APS consultants, librarians, and ACF and refined it based on their feedback. The study team continued to refine the working

---

[8] https://www.ssa.gov/OP_Home/ssact/title05/0513.htm.

definition throughout the development of the conceptual model based on reviewed literature and feedback from ACF, PREP grantees, and stakeholders. Each APS is multifaceted, with a range of potential applications to youth. The working definition focuses on how the subject applies to PREP. The working definition for educational and career success is:

> Obtaining at least a high school diploma or the equivalent is a starting point for long-term career success. Encouraging youths' academic performance and school attendance and engagement may foster improvements in grades and school retention for youth in traditional and alternative education settings. Long-term success can involve multiple paths to completing postsecondary education or training and finding stable and well-paying employment. The development of hard and soft skills for school and workplace productivity, preparation for postsecondary education and employment, job seeking and retention, career planning, independent living, lifelong learning, and career adaptability support future educational and career success.

B. Overview of the model development process

The study team developed each APS model through a multi-step process (described in more detail in Chapter II). First, they conducted a literature review on each individual APS. Then they held semi-structured interviews with representatives of PREP grantees and providers to understand how they covered each APS. Finally, the team solicited feedback on each APS from additional experts and stakeholders through a series of conference calls and semi-structured interviews. Throughout development, staff from FYSB and OPRE provided feedback on the process, and on the evolving content of the conceptual models. Next, the study team describes the process of developing the conceptual model for educational and career success.

Research literature review. The study team started by conducting a targeted review of the research literature on educational and career success. They systematically searched, screened, and reviewed articles and studies, and then extracted and summarized findings using a template that included sections for each intended component of the educational and career success conceptual model. In total, for educational and career success, the team reviewed 40 documents, published from 2002 through January 2019: 11 literature reviews or meta-analyses, five empirical studies, four theoretical articles, four program evaluations, two proposed program models, and 14 other documents, including a description of key factors for effective programs, resource guides, study reviews, and articles or books that fall into multiple categories.[9] (See Appendix A for a list of references by chapter, and Appendix B for detailed tables describing the literature review process.)

> **Primary keywords:** Education or career success
>
> **Secondary keywords:** Soft or hard job skills, employment preparation, education engagement, job seeking, independent living, school productivity, workplace productivity, education success, career success, drop-out prevention, academic performance, increased school attendance or engagement, continuing education, programming, sexual health

---

[9] Note that most of the studies reviewed showed associations rather than causal relationships; findings that report correlations cannot be used to infer causality.

Interviews with PREP grantees and providers. The study team interviewed existing PREP grantees and providers about their APS programming and implementation. These interviews addressed APS program design and implementation, curricula or materials used to cover the APS, and the receptivity of youth to APS programming. Altogether, the team spoke with 26 respondents from 19 states, across 25 PREP grantees. Respondents represented 16 State PREP, seven Competitive PREP, and two Tribal PREP grantees.[10] On average, respondents reported covering four APSs in their programs, ranging from the required minimum of three subjects to as many as six.

> Ten grantees interviewed said they covered educational and career success. Typically, respondents paired educational and career success and financial literacy. They offered this content to primarily lower-income, minority youth.

Expert and stakeholder feedback. The study team engaged four groups of experts and stakeholders to provide feedback on the models. These people reviewed the models to ensure that they included all relevant theory and research on the topics, and that the topics could enhance or expand PREP outcomes if operationalized as described. Experts and stakeholders represented four groups: (1) experts with content knowledge on specific APS; (2) State PREP, Competitive PREP, and Tribal PREP grantees; (3) representatives of federal agencies that work on adolescent pregnancy prevention or youth programming related to the APS; and (4) representatives of selected external organizations involved with adolescent pregnancy prevention or youth programming related to the APS.

C. Educational and career success conceptual model

Figure IV.1 shows the conceptual model for the educational and career success APS. The definition of educational and career success and the theory of change are at the top, above the conceptual model. The model includes precursors that influence youth who participate in educational and career programs as part of PREP, such as developmental tasks and risk and protective factors. The model also identifies topics for inclusion in educational and career programs, design and implementation features for PREP programs, and outcomes that may be affected by offering this programming. Outcomes are presented as enhanced and expanded for the PREP program. Enhanced outcomes refers to changes to outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP: sexual activity; contraceptive use; and incidence of pregnancy and sexually transmitted infections. Expanded outcomes refers to changes in outcomes not related to the prevention of pregnancy and STIs among youth when content, lessons, or instruction for educational and career programs are added to the PREP program. Sections D through H describe each component of the conceptual model in Figure IV.1, expanding on information contained in the figure, based on the supporting literature. For some components of the conceptual model, the text presents additional detail beyond what is included in the figure.

---

[10] As reported in the 2017-2018 PREP performance measures, there are 51 State PREP, 20 Competitive PREP, and eight Tribal PREP grantees.

D. Precursors

The conceptual model starts with three sets of precursors for educational and career success: developmental tasks, risk factors, and protective factors. Some individual, peer, family, school, and community factors interact and influence how youth develop. These contextual factors often reflect characteristics and experiences that youth bring to a program, but they are not factors that programs should or can expect to change through youths' participation. While not included in the conceptual model figure, programs should consider these factors for their target populations and recognize that their relevance might vary, depending on the APS. For educational and career success, contextual factors to consider include past educational experiences for youth, youth and parent demographic characteristics, family income and economic status, and educational and economic opportunities available in the community where youth grow up. In some cases, contextual factors can encourage youth to avoid negative or risky behaviors; in others, these factors may place youth at higher risk for involvement in activities that contribute to poor developmental and behavioral outcomes. Also, certain individual-level factors (such as age, grade level, or developmental level) might moderate youths' experiences in the program and affect their outcomes.

The team included developmental tasks to recognize that adolescents start at different places and progress at different rates through expected trajectories that occur in interconnected social, emotional, cognitive, and physical domains. Risk factors make youth more likely to engage in negative behaviors or harder to develop strengths. In contrast, protective factors promote positive development by making youth less likely to engage in negative behaviors and helping them to mitigate risks and promote resilience. Although not specified in the model, promotive factors enhance positive development generally among youth, regardless of individual, familial, or community risk factors. Promotive factors overlap with protective factors (for example, positive family relationships) but are more generally beneficial for all youth, whereas protective factors come into play in the context of risk (National Research Council and Institute of Medicine 2009). Examples of promotive factors include ethnic identity, social support, and prosocial involvement.

Figure IV.1. Educational and Career Success Conceptual Model

Educational and Career Success: Obtaining at least a high school diploma or the equivalent is a starting point for long-term career success. Encouraging youths' academic performance and school attendance and engagement may foster improvements in grades and school retention for youth in traditional and alternative education settings. Long-term success can involve multiple paths to completing postsecondary education or training and finding stable and well-paying employment. The development of hard and soft skills for school and workplace productivity, preparation for postsecondary education and employment, job seeking and retention, career planning, independent living, lifelong learning, and career adaptability support future educational and career success.

Theory of Change: Programs can help youth in both traditional and alternative education settings overcome barriers and build on strengths to achieve educational and career success. After contextual factors are accounted for, educational and career success starts with youths' attitudes and behaviors toward learning. Increased engagement in learning can lead to increased knowledge, skills, and academic achievement. Youth can follow different paths to achieve key outcomes, including graduating from high school, enrolling in and completing postsecondary education or training, and starting a career or steady, well-paying employment that promotes self-sufficiency. Programs may offer youth activities to foster educational and career success, including academic activities to increase knowledge, enrichment activities to stimulate interest and motivation in learning, and activities to help youth plan their future education and careers. Programs may increase effectiveness by influencing youths' family, peer, school, and community contexts, and accounting for youths' circumstances and strengths.

Precursors

Developmental Tasks
- Cognitive development
- Social and emotional development
- Identity formation

Risk Factors
- Fixed mindset
- Low expectations for future
- Life challenges (such as foster care, teen parent)
- Low parental involvement with youth's learning
- Fewer parental resources
- Peer norms supporting risky behaviors
- Low teacher expectations for youth
- Unsafe, disorganized, or under-resourced school
- High community unemployment and crime

Protective Factors
- Growth mindset
- Motivation to engage in school
- Academic, extracurricular, and career interests
- Warm and trusting parental relationship
- Support from extended family and siblings
- Supportive peer relationships (usually)
- High-quality instruction, teacher-student relationships, and school learning culture
- School supportive services
- Community involvement (organizations, employers)

Educational and Career Success Topics

Academic support and learning-related skills:
- Tutoring and test preparation
- Teach or reinforce skills for learning

Enriched learning and extracurricular activities:
- Arts, sciences, and sports
- Community service

Education planning and assistance:
- Information and support for postsecondary application process
- Exposure to college and college curricula

Job and career planning and activities:
- Information and advice on employment planning
- Exposure to careers and employment experiences

PREP Program Design and Implementation
- Decide scope and select programming
- Offer rigorous, planned content
- Choose modes of program delivery
- Provide engaging activities
- Integrate with schools
- Engage families
- Develop community and employer partnerships
- Tailor to diverse populations
- Develop skilled and knowledgeable staff
- Build organizational capacity for implementation

Enhanced PREP Outcomes

Short-term	Intermediate	Long-term
Knowledge of safe sex	Risky sexual behavior	Unintended teen pregnancy
		Repeat pregnancies

Expanded PREP Outcomes

Short-term	Intermediate	Long-term
Engagement with learning and school	Academic effort and habits	High school graduation or GED completion
Social, emotional, and other learning-related skills	School attendance	Postsecondary (academic and/or vocational) enrollment and completion
Having clear plans for the future	Disciplinary infractions	Gaining and maintaining employment
	Academic achievement	Earnings
	Work experience and skills	Career growth and job satisfaction

Developmental tasks. Youths' cognitive, social, and emotional development can affect their potential for later educational and career success. Youth must rely on cognitive skills (such as attention, synthesizing information, and critical thinking) in academic settings to learn and acquire knowledge (Policy Studies Associates 2014; Jensen 2009). Social and emotional development help youth achieve academically and learn career-specific knowledge and skills in the workforce. For example, self-management skills allow youth to regulate emotions, control impulses, and persevere through learning challenges. Relationship skills help youth cooperate with their peers and, in the future, their colleagues (Durlak et al. 2015; Hooker and Brand 2009). Several social and emotional skills relate to the concept of resilience, which describes how youth can succeed despite facing considerable adversity (Thornton and Sanchez 2010; Ruffolo 2008; Durlak et al. 2015). Finally, youth are forming their identity, which includes educational facets such as how they define themselves as a learner and what their abilities and future potential are, as well as broader facets, such as their ethnic or cultural identity. Educational and broader facets of identity can interact and affect youth engagement with learning and other attitudes and behaviors connected to educational and career success, such as expectations for the future or studying and participating in class (Yonezawa et al. 2009; Dumka et al. 2013). Ethnic and cultural identity is especially important for youth of color, such as African American, Hispanic/Latino, and Native American youth, for whom ethnic identity can evoke experiences of discrimination and historical trauma, which can harm their sense of self. Fortunately, ethnic identity can also consist of cultural connectedness, pride, and values that are affirmative (Dumka et al. 2013; Thornton and Sanchez 2010; Olguin and Keim 2009).

Youth participating in educational and career programs will continue to develop their cognitive skills, social and emotional skills, and identity during program participation. However, at the outset, youth begin with varied developmental histories. In particular, their development has already been affected by previous educational experiences and by the contextual factors discussed next. A key overarching factor is the socioeconomic disadvantage faced by the populations of youth served by PREP programs. For example, growing up in poverty means that children deal with emotional and social challenges, cognitive lags, and other issues, such as acute and chronic stressors, that can impede their ability to learn in school (Jensen 2009; National Research Council 2004).

Risk factors. Peers, family, school, and community environments interact and influence how youth develop. In particular, risk and protective factors can be organized into multiple levels through the social-ecological framework, which considers the complex interplay between individuals, their relationships, and broader institutional and community factors (Bronfenbrenner and Morris 2006). The research literature reviewed consistently described five ecological contexts as having factors linked with educational and career success: individual, family, peer, school, and community (or neighborhood) (Ruffolo 2008; Hopson et al. 2014; Hammond et al. 2007; National Research Council 2004; Henderson and Mapp 2002; Bowen et al. 2008).

Youths' educational and career success is affected by their attitudes and values about themselves and learning; goals and expectations for their futures; and academic knowledge, skills, and abilities. For example, youth may have a "fixed mindset" regarding their intellectual abilities and think they cannot improve their intelligence regardless of the effort they put into learning (Dweck 2006). Many youth in PREP have grown up under disadvantaged circumstances that lead to risk factors in these areas. In addition, some youth face particularly challenging

circumstances, such as dropping out of school and returning to complete their education, living in a foster care setting, being placed in a juvenile detention center, experiencing abuse or neglect, and being pregnant or parenting (Princiotta and Reyna 2009; Ameen and Lee 2012; Vacca 2008; Mallett 2012; Costello 2014; Healthy Teen Network 2009).

Potential risk factors can also come from parents' behavior and practices (what they do) (McNair and Johnson 2009); their attitudes and expectations toward learning (Dumka et al. 2013; Centers for Disease Control and Prevention 2009); and in turn their access to resources—including time, human, social, and financial capital—and the quality of their relationship with their children (Bailey and Bradbury-Bailey 2010). An especially important risk factor is low parental involvement with youths' learning, either at home (such as not discussing school activities) or at school (such as not volunteering at school events) (Hammond et al. 2007; Henderson and Mapp 2002). Many of these risk factors are connected to the low incomes and financial stresses experienced by families of youth in PREP, which affect parents' ability to be involved with their children's learning. For example, a parent working an evening shift may not have time to discuss school with their child or attend a school event. In addition to family influences, peer norms about educational behavior (such as thinking that skipping classes is acceptable) and risky behavior (such as thinking that risky sexual behaviors or substance use are acceptable) are influential and may be risk factors for youth (Stanard et al. 2010; Centers for Disease Control and Prevention 2009).

Finally, school characteristics affect youths' chances for educational and career success (Ruffolo 2008). Low-skilled teachers, those who do not form strong relationships with their students, and those with low student expectations can all be risk factors for poor educational and career outcomes (Dweck 2006; Jensen 2009). The school environment may be a risk factor through a lack of safety or organization, and schools may lack necessary resources. Youth enrolled in non-traditional school settings, such as alternative schools or programs located within but separated from traditional schools, face additional risk factors if their schools use a disciplinary or punitive approach instead of one focused on education (Dupper 2008). Expanding the context from schools to the broader community, environmental factors such as poor economic conditions, high unemployment, and high crime rates also serve as risk factors for youth. Although these risk factors occur predominantly in disadvantaged urban neighborhoods, many rural communities also experience issues, such as a lack of access to services and to educational and career opportunities (National Research Council 2004; Jensen 2009).

Protective factors. Many youth have attitudes, values, goals, and expectations that protect against the disadvantages they face and support educational and career success. For example, self-efficacy and motivation to engage in school and avoid risky behavior are protective factors (McNair and Johnson 2009; Hammond et al. 2007; National Research Council 2004). Similarly, youth can hold positive attitudes, such as a "growth mindset" where they believe they can improve their intelligence through effort; this mindset is linked to stronger academic behaviors (Dweck 2006). Many youth have also developed their own interests in academic subjects, extracurricular activities, and potential careers. Such interests, especially those connected with academic subjects, can function as "sparks" that help youth thrive and overcome struggles with learning (Scales et al. 2011).

Parents and families serve as protective factors through their education-related attitudes and involvement, parental resources, and relationships with their children (Henderson and Mapp 2002). One key protective factor for youth is having a warm and trusting relationship with their parent or caregiver, which makes them more influenced by parenting practices and attitudes (Stanard et al. 2010). Extended family members and siblings can also influence youth by providing support and complementing parental resources (Thornton and Sanchez 2010; Henderson and Mapp 2002). This is especially important for youth who live in nontraditional homes with caregivers other than their birth parents, such as grandparents, other family members, or foster parents. In addition to families, having stable and supportive peer relationships is usually a protective factor. However, it is important for peers to hold prosocial norms about education, such as the value of participating in school activities and completing homework (Stanard et al. 2010; Centers for Disease Control and Prevention 2009).

In traditional schools and alternative educational settings, teachers who develop supportive relationships with their students and provide high quality instruction may be protective forces for youth who face risks. In addition, the availability of supportive services, such as tutoring or counseling, may help struggling youth by supplementing classroom instruction or addressing non-academic barriers affecting learning (What Works Clearinghouse 2007; Hooker and Brand 2009). Schools can also help youth by fostering a positive learning culture, which may include school staff prioritizing student learning, effectively using instructional time, and expecting all students to succeed (Centers for Disease Control and Prevention 2009). Finally, schools and districts with more resources have greater capacity to develop their teachers, provide support services, and facilitate a culture of learning (Hopson et al. 2014; Franklin et al. 2012).

Organizational and employer involvement in the community may also support youth. Organizations such as churches and nonprofit agencies can provide, or help youth and families obtain, educational, health, and social services. Assistance that focuses specifically on student learning, such as training community volunteers to tutor youth, is more likely to affect educational outcomes (Henderson and Mapp 2002). Having a paid job can help youth develop important skills and prepare them for future educational and career success, though working a high number of hours—likely due to a need to support their family financially—puts youth at risk for dropping out of school (Hooker and Brand 2009; Hammond et al. 2007). Employers may expose youth to future jobs and opportunities that could encourage them to focus on education and careers.

E. Theory of change for educational and career success

> **Theory of change**
>
> Programs can help youth in both traditional and alternative education settings overcome barriers and build on strengths to achieve educational and career success. After contextual factors are accounted for, educational and career success starts with youths' attitudes and behaviors toward learning. Increased engagement in learning can lead to increased knowledge, skills, and academic achievement. Youth can follow different paths to achieve key outcomes, including graduating from high school, enrolling in and completing postsecondary education or training, and starting a career or steady, well-paying employment that promotes self-sufficiency. Programs may offer youth activities to foster educational and career success, including academic activities to increase knowledge, enrichment activities to stimulate interest and motivation in learning, and activities to help youth plan their future education and careers. Programs may increase effectiveness by influencing youths' family, peer, school, and community contexts, and accounting for youths' circumstances and strengths.

Educational and career success is vital to the welfare of individuals and society, but many youth have poor education and career outcomes (Afterschool Alliance 2011; Hooker and Brand 2009; Bowen et al. 2008). Youth may have been hindered by contextual disadvantages (often family or neighborhood poverty) that put them at risk for poor cognitive and social-emotional development and other negative outcomes. At the same time, youth have strengths: many show resilience, develop solutions to improve over time, or are able to thrive by pursuing their interests and passions (Scales et al. 2011; Franklin et al. 2012). Despite the challenging circumstances many youth face, they have the potential to succeed (Jensen 2009). Targeted programs can help youth build on their strengths so they can succeed in school and in their careers. Youth are also affected by their experiences, which accumulate throughout their childhood and form a key part of their context. Educational experiences are especially important since youth are in school for at least a decade, and learning and achievement in earlier years influence later outcomes.

Educational and career success is influenced by youths' knowledge and skills and their engagement in learning, which in turn is influenced by their attitudes and interests (Hooker and Brand 2009). Youths' attitudes, mindsets, and values, especially toward learning, and future goals and expectations are crucial for educational and career success, and can be influenced by interventions (Dweck 2006; Policy Studies Associates 2014). Attitudes and interests affect behaviors, such as how youth act and the decisions they make. This includes positive actions (such as studying or participating in class) and negative ones (such as committing disciplinary infractions or not attending school). Attitudes and behaviors can also influence youths' engagement (Yonezawa et al. 2009; National Research Council 2004) and are linked to academic behaviors and behaviors in other domains, such as involvement in risky sexual activity or substance use (Afterschool Alliance 2008). Improved behaviors and greater engagement lead to greater academic achievement. They also lead to improvements in the broad abilities, skillsets, and mindsets that youth need for readiness in postsecondary education or training, jobs and careers, and life in general. These include the ability to apply learning and to work and stay focused (Krauss et al. 2016).

Finally, improved behaviors and abilities and greater academic achievement lead to long-term outcomes for educational and career success: graduating from high school, enrolling in and completing postsecondary education or training, and finding employment paying living wages. Ideally, the last step would involve a job with career potential, including jobs that require technical credentials. Beyond being full-time, successful employment requires wages and benefits that are sufficient to allow living independently and out of poverty. Youth can achieve

educational and career success through multiple avenues. One youth's path might be graduating from high school, attending and graduating from a four-year college, and starting a job with career potential. Other youth might earn a high school credential (diploma or GED) and enroll in community college or a vocational training program. Some youth might need to enter the workforce sooner than others, returning for more education while or after working.

Because youth are educated primarily in formal school settings, programs in PREP may face limits on how they can contribute to educational and career success outcomes. However, programs can supplement youths' schooling experiences through after-school or out-of-school activities. PREP grantees that are in school systems may be able to work with youth during the school day. The range of influences on educational and career success means there are a variety of ways in which programs can support youth. One way is direct academic instruction to increase youths' knowledge and academic skills about education and career options, which can supplement what they learn in school. Programs can also look ahead on the education-career pathway by helping youth to plan and prepare for college and careers. Another option is to target attitudes and behaviors that influence academic achievement for youth. For example, programs may use enrichment activities to motivate youth, stimulate interest in learning, and engage youth in education by connecting their personal interests and extracurricular activities to academic topics. Programs may target learning-related skills, giving youth tools to learn more in school and on their own. Programs may also try to influence attitudes, such as developing a "growth mindset" that encourages youth to invest effort in learning, even when they face challenges and setbacks (Dweck 2006).

Educational and career programs primarily target youth directly, but they may also have indirect effects by influencing the surrounding context. Programs may increase their capacity to reach youth by reaching out to families and promoting their engagement, both with the program and for learning at home; involving a large group of youth so that peer groups are part of the program; coordinating with schools to ensure support for school-related efforts; and partnering with community organizations and local employers to expand the opportunities available to youth. Whether or not a PREP grantee offers programming during the school day, working collaboratively with schools is important because the instruction and activities for both may be more effective if they are reinforced and supplemented. Finally, programs are more effective if they take into account that youth have different backgrounds, experiences, strengths, interests, and levels of development. Programs may succeed by building on the strengths and interests that youth already have, and encouraging youth to discover new interests (Ruffolo 2008). For some youth in challenging circumstances, programs might need to provide additional services before youth can focus on participation.

F. Educational and career success topics

PREP grantees may address educational and career programming through a range of topics. Although schools are the primary system for educating youth, programs like PREP have flexibility in how they may enhance school-based learning. Some topics are linked directly to academic instruction and support; others may target attitudes, future goals, or interests. Programs could focus on topics in one or multiple areas, depending on scope (Vandell et al. 2007). The literature review identified a range of topics for educational and career programming, though not all the literature discussed evidence of effectiveness for those topics.

- **Academic support and learning-related skills.** Programs can focus on academics in two areas. First and most directly, programs can supplement the instruction youth receive in schools. For example, they can provide tutoring, homework assistance, and test preparation support (Bailey and Bradbury-Bailey 2010; Mallett 2012; Little and Harris 2003; Hammond et al. 2007). These activities might focus on math and reading or other academic courses such as science or social studies. Second, programs can focus on improving youths' learning-related skills and attitudes, which could include study skills, social and emotional skills critical for learning (such as self-management and self-regulation), or growth mindsets (Centers for Disease Control and Prevention 2009; Jensen 2009; Dweck 2006).

- **Enriched learning and extracurricular activities.** Although programs with an academic focus may be valuable, evidence suggests that programs providing enriched learning and extracurricular activities have the potential for stronger effects on educational outcomes (Durlak et al. 2015). They do so by increasing youths' motivation and engagement, exploring and developing their interests, and building social and emotional skills that youth can apply to academic learning (Scales et al. 2011; Policy Studies Associates 2014). These activities are especially important for youth at risk for poor education and career outcomes (due to developmental history or risk factors) because many such youth have little or no access to enrichment activities through school or other community contexts. For example, many youth attend alternative schools that emphasize only basic classes and a "skill and drill" approach (Dupper 2008). Enriched learning and extracurricular activities can involve arts (such as drama, music, and dance), sciences and engineering (such as environmental science, architecture), and sports and physical disciplines (such as tai chi, track and field, and basketball) (Policy Studies Associates 2014; Yonezawa et al. 2009; Afterschool Alliance 2011). Activities can also focus on community service and service learning (Afterschool Alliance 2008; Vandell et al. 2007; National Research Council 2004; Berger et al. 2019). Programs can design enriched learning activities so youth earn a micro-credential for demonstrating competencies through them. Micro-credentials, which usually consist of digital badges, are attracting interest from colleges as an alternative approach to demonstrating college readiness, including for at-risk students (Fishman et al. 2018). Examples of early micro-credential programs have covered the STEM disciplines of science, technology, engineering, and math; design; and service learning. Although programs would need to follow best practices for micro-credential providers to promote credibility and transparency, they would work well for the relatively short time that PREP programs have with youth.

- **Education planning and assistance.** Programs can also help youth navigate their high school education and plan for education after high school (Afterschool Alliance 2011). Many youth, especially those at risk for poor education and career outcomes, have little knowledge of the complex college application and financial aid processes or a sense of the skills and effort needed to succeed in college (Costello 2014; Hooker and Brand 2009; National Research Council 2004). Other youth, especially those enrolling in alternative schools, are often discouraged and do not consider postsecondary education to be within their reach (Dupper 2008; Franklin et al. 2012). Programs can support youths' potential for postsecondary education through two broad areas. First, they can teach

youth about, and help them with, the application process for postsecondary education. This includes all postsecondary options but might be especially helpful for four-year colleges, which have more complex and intensive application processes. For example, dropout prevention programs have incorporated specific activities, such as visiting colleges or training programs, filling out applications, applying for financial aid, and preparing for entrance exams (What Works Clearinghouse 2007). Second, programs can link youth with colleges that offer an opportunity to earn college credit and gain experience with the rigors of college curricula. These can be bridge programs, dual-enrollment classes, or other formats (Costello 2014; Hooker and Brand 2009). Programs frequently partner with institutions of higher learning (including four-year colleges, community colleges, and vocational programs) to offer these types of activities in their communities. Although the literature and interviewed grantees focused almost entirely on assistance with postsecondary education, programs can also help youth navigate their high school education. For example, they can help youth plan and track progress on steps needed to graduate from high school, or find and obtain educational supports from inside or outside the school district.

- **Job and career planning and activities.** In addition to helping with education planning, programs can help youth plan for employment and future careers (Afterschool Alliance 2011). As with college planning, youth at risk for poor career outcomes often do not have enough knowledge or exposure to work in jobs that can lead to satisfying careers (Hooker and Brand 2009; National Research Council 2004). Programs can support youths' career potential in two areas. First, they can provide information and advice to help youth make career decisions and plans to pursue them (What Works Clearinghouse 2007; Olguin and Keim 2009). Activities include career exploration and advising, employer presentations, and career fairs. Activities can also include help with job application skills, such as navigating a job search, writing a resume, and interviewing. In discussing career options, programs can cover entrepreneurship and self-employment. Second, they can offer youth opportunities to gain career-related exposure and experience, such as networking opportunities, vocational training, apprenticeships, internships, community service, or work-study activities (Ameen and Lee 2012; Healthy Teen Network 2009; Hooker and Brand 2009; Dupper 2008; Berger et al. 2019). Programs can also coordinate with schools so that youth receive school credit for completing these opportunities. Besides providing support and opportunities geared toward future employment and careers, programs can help youth find and manage current jobs, since these can form an important foundation for future career success.

The PREP grantees interviewed or that provided feedback on the model focused their educational and career success programming on the third and fourth categories: supporting education and jobs and career planning. Grantees described specific activities that aligned closely with the topics described in the literature review. However, these grantees were not implementing programming for academic support or enrichment and extracurricular activities.

G. Program design and implementation

The literature review identified several design and implementation considerations for educational and career success programming. This section includes strategies that either showed evidence of effectiveness or that the literature identified as best practices or practices employed by (non-

PREP) programs. The PREP grantee interviews added operational information on how PREP grantees and providers offer educational and career programming. Based on these sources, recommendations for grantees include:

1. **Decide the scope of educational and career programming, and carefully select programming to cover the topics.** Educational and career programming can cover multiple topics, but many grantees reported having limited time to implement APS programming. Programs interested in offering educational and career programming should decide on focal topics. Covering postsecondary and career planning may be easier to fit into a limited window, as providing academic and extracurricular subjects requires more time.

   While many curriculum for the prevention of pregnancy and STIs among youth cover some APS content, they generally provide limited coverage of educational and career topics. Grantees will likely need to identify additional content beyond their curriculum for pregnancy and STI prevention to cover educational and career content. During interviews, grantees described developing materials and activities related to postsecondary and career planning. By developing activities, grantees had the flexibility to tailor the content to their populations. However, these activities are unproven and may bring up unanticipated challenges. Grantees who address academic and extracurricular activities may be able to identify existing curricula instead of developing activities.

2. **Offer rigorous, challenging, planned content.** Program content, especially when linked to academics, should be rigorous and challenging (Hooker and Brand 2009; National Research Council 2004). Although programs should be sensitive to the needs and circumstances of diverse youth populations, including those for whom remedial content may seem more appropriate, all youth need high expectations to achieve academic success (Vacca 2008; Dupper 2008). Although effective instruction and support is required in all areas, youth are more likely to find challenging content engaging than lower-level content. Programs will also be more effective if they intentionally plan the skills or knowledge youth will gain. One review of after-school programs uses the acronym SAFE to describe effective programs; that is, programs should develop skills in a planned **S**equence, use an **A**ctive and participatory approach to activities, spend time **F**ocusing on skill-building activities, and **E**xplicitly target specific skills (Durlak et al. 2015). One benefit of offering a micro-credential for demonstrating mastery of competencies through academic or enriched learning activities is that programs can use that process of designing such a credential to demonstrate the rigor of such programming (Fishman et al. 2018).

3. **Choose appropriate modes of program delivery.** Programs should consider how much to integrate educational and career success in programming on the prevention of pregnancy and STIs. One option is to provide educational and career content during the same sequence of sessions used to deliver a curriculum for pregnancy and STI prevention. This could help grantees link the topics, for example, by connecting discussions of postsecondary and career planning with the need to avoid risky behaviors that could prevent youth from following through on their plans. Also, this helps programming fit within the available time, which is likely limited in school-based programs.

Another option, which a few grantees described during interviews, is to deliver educational and career programming through separate activities. For example, grantees offered activities related to educational and career success through mentoring events, conferences with speakers and panels, and college fairs and visits. These were usually held once or twice a year, and youth from multiple PREP cohorts were invited to attend. Using these formats may allow grantees to cover a number of topics that might be difficult to provide in a classroom. Grantees can also use them to conduct activities a limited number of times with a large number of participants, instead of attempting to deliver them to each PREP cohort, which would require more resources. However, these formats are also harder for grantees to connect to the rest of the program, and grantees may reach fewer participants if some youth who attended sessions covering sexual health do not attend these separate activities.

4. **Provide engaging activities with opportunities for youth voice and autonomy.** Activities should engage youth so they are motivated to participate, learn, and apply their knowledge after the program ends. Programs can engage youth through experiential activities and, when classroom-style lessons are used, by enhancing didactic lectures with interactive elements such as discussions, games, and role-playing (Durlak et al. 2015; Centers for Disease Control and Prevention 2009; Hammond et al. 2007). Promoting youth involvement should, where possible, go even further to emphasize youth voice and autonomy. This can involve youth collaborating with peers and instructors, assuming leadership roles, and helping plan and make decisions about tasks and activities (National Research Council 2004; Ameen and Lee 2012; Yonezawa et al. 2009; Dupper 2008; Krauss et al. 2016).

   Programs may also engage youth through social media and other technology. As some interviewed grantees reported doing with other APSs, programs can use these to deliver educational and career content and communicate with youth outside formal sessions or events. This may be valuable when programs have limited time to offer formal programming. For example, programs providing education or job and career planning could use these to encourage youth to learn more about fields of study and employment that interest them. Some interviewed grantees also covered topics involving social media as part of APS programming; these cases concerned other APSs, but programs could cover relevant educational and career success topics. Examples include using social media and technology for job searching and networking, and the risks that social media can pose regarding employers' decisions about hiring.

5. **Integrate programming with schools.** Because of the central role that schools play in youths' education, much of the literature is focused on school-level interventions that affect not just teachers and classroom instruction but also the school climate and environment (What Works Clearinghouse 2007; Jensen 2009; Durlak et al. 2015; Costello 2014). Some interventions go as far as restructuring the traditional school and classroom setting, such as establishing an alternative school or a co-located but separate "school within a school" for youth facing challenging life circumstances (for example, youth who already dropped out of school, or who are pregnant or parenting) (Dupper 2008; Franklin et al. 2012). This approach helps because supplemental programs are often isolated and not integrated with each other or schools' core academic instruction (Durlak et al. 2015).

Although PREP grantees are unable to implement school-level change, educational and career programming should align as much as possible with what youth are doing and learning in school (including youth enrolled in alternatives to traditional school and classroom settings). Programs should coordinate with schools to ensure that programming aligns with school instruction. This includes any curricular or thematic focus at the school, such as the STEM disciplines of science, technology, engineering, and math; the arts; or one or more occupational fields (National Research Council 2004). It might also include other programs operating at the school. Programs that are not school-based may have less opportunity to align with schools.

6. **Engage families.** Recognizing that family involvement is critical for youth learning, programs can magnify their influence by engaging parents to reinforce the program (Stanard et al. 2010; Bailey and Bradbury-Bailey 2010). With some children living with other primary caregivers, such as extended family or foster parents, programs should be prepared to engage those caregivers where appropriate. Also, when engaging families, programs should include not just mothers but also fathers (Dumka et al. 2013). The roles of parents and other caregivers may vary in intensity, from talking with and encouraging their child to engaging with the child in program-related activities such as becoming more involved in college and career planning. Similarly, the programs' approaches to family engagement can be passive or active, ranging from requiring that youth involve their parents in at-home activities to communicating directly with parents or providing direct training and assistance to parents (for example, on how to help their children practice learning-related skills) (Ruffolo 2008; Centers for Disease Control and Prevention 2009; Hammond et al. 2007; Henderson and Mapp 2002; Durlak et al. 2015). A few grantees described engaging families through separate activities such as a "restaurant night" or a board game event. Although the interviewed grantees mentioned activities that covered other APSs, future grantees could involve parents in similar activities for educational and career success, such as an event on postsecondary education or career planning.

7. **Partner with community organizations and employers.** Programs can partner with community organizations to further support youths' educational and career success. These organizations may have unique resources and strengths that programs can leverage and build on (Policy Studies Associates 2014; Olguin and Keim 2009; Hooker and Brand 2009; National Research Council 2004; Henderson and Mapp 2002). Local colleges may partner to assist youth with college planning and offer opportunities to earn college credit (Afterschool Alliance 2011). Local employers may support career success by providing opportunities that schools may not be able to offer (such as internships) and modeling success to youth. For example, through one community initiative, employers commit to providing part-time jobs to youth and mentoring them (Hooker and Brand 2009). Other community organizations might partner on opportunities such as service learning or volunteer projects (Berger et al. 2019). The interviewed grantees frequently used partners for educational and career programming. Many grantees brought in guest speakers from colleges and employers (including entrepreneurs and small-business owners) to present to youth.

8. **Tailor programming to the diverse populations served by PREP.** Programs should consider whether to tailor educational and career content based on characteristics such as grade level or gender or when serving specific populations. For example, on postsecondary education and career planning, programs might want to focus on exposing younger youth to an overview of options while providing older youth with specific assistance, such as help with filling out college applications, being interviewed, and writing resumes. Youth of different grade levels may benefit from receiving programming in a cohort where they can learn from one another. For example, middle school youth may benefit from hearing older youth discuss their high school experiences.

   Modes of delivery might also have to vary. Interviewed grantees implementing in school-based settings commonly used weekly or biweekly sessions of about 45 minutes to an hour. However, programs in settings where youth might stay for varying periods of time, such as residential programs or programs serving youth involved in the justice system, were more likely to report delivering a shorter program or condensing it into a shorter period. Programs might also want to allow facilitators flexibility to customize programming based on learning styles and youth needs. For example, many alternative schools use individualized curricula that allow students to proceed at different paces (Dupper 2008; Franklin et al. 2012). PREP facilitators may need to tailor program delivery similarly.

   Finally, many youth face barriers to learning. Educational and career programs may be more effective if they offer youth, especially those facing challenging life circumstances, support services to enable learning. For example, youth who are pregnant or parenting may need assistance with child care or transportation (Healthy Teen Network 2009; Costello 2014); youth in juvenile detention may need aftercare programs to help them find employment after their release (Ameen and Lee 2012); and youth in foster care may benefit from joint assistance from education and child welfare agencies with independent living skills (Vacca 2008). Other services, such as counseling, health, mental health, or nutrition support, may benefit a range of youth (Hopson et al. 2014). Programs could partner with community partners for these services.

9. **Develop skilled and knowledgeable staff.** As with all interventions, educational and career programs should be well implemented, which requires that the program have organizational resources and processes in place. A critical element is preparing high quality staff through recruiting, hiring, training, and other professional development (Durlak et al. 2015; Hammond et al. 2007; Dupper 2008; Berger et al. 2019). Interviewed grantees reported that most APS content was delivered by the same staff who delivered curriculum for pregnancy and STI prevention. This may require additional training, though only a few interviewed grantees reported providing APS-specific training to staff. Staff may also need training in specific competencies, such as effectively engaging with families (Henderson and Mapp 2002). Incorporating volunteers may also be beneficial, such as engaging current college students or employers as mentors (Afterschool Alliance 2011; Mallett 2012). Another strategy that several grantees described is using guest speakers with topical expertise.

10. **Build organizational capacity for implementation.** Programs should build organizational systems and processes to enable stronger implementation. These could include monitoring curriculum implementation to ensure fidelity, effectively using assessments and data, and using planning-implementation-monitoring loops to improve activities (Hammond et al. 2007; Durlak et al. 2015; Hooker and Brand 2009). Programs can also set up professional learning structures and practices so staff can collaborate on improving implementation (Berger et al. 2019). Some of the strategies mentioned earlier, like partnering with other organizations, are important for leveraging resources the program might not have. Programs also need to consider dosage and duration; those that offer more sessions and have youth attend more sessions should see better outcomes than programs that are short or struggle with attendance (Little and Harris 2003; Vandell et al. 2007; Hammond et al. 2007). However, programs may be limited in the number of sessions they can offer. In addition, if a program is poorly implemented, even longer programs with good attendance may not have the desired impacts (Durlak et al. 2015). Finally, regardless of content or curricula, programs should, as part of implementation, focus on building relationships between staff and youth and creating a supportive climate.

H. Outcomes

The reviewed literature suggested several outcomes that might be realized by addressing educational and career success. The study team organized outcomes into two categories— enhanced and expanded—based on whether they focus on outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP (enhanced) or changes to outcomes not related to the prevention of pregnancy and STIs among youth (expanded). The model is limited to outcomes supported by the literature review.

The team further organized outcomes as short-term, intermediate, and long-term. *Short-term* outcomes are those one would expect to see directly following a program. Typically, such outcomes include initial changes in knowledge and attitudes, but they can also include immediate changes in behavior. *Intermediate* outcomes are the step between short- and long-term outcomes. They can include improved skills or changes in behavior that result from the acquisition of new knowledge and skills. Programs may expect to see these outcomes six months to a year after program completion. *Long-term* outcomes are those one would expect to see a year or more after program completion. Depending on when youth attend the program, this could be during middle or high school or even after high school and continuing into adulthood.

Enhanced outcomes. If PREP programs address educational and career success, the additional programming may also affect outcomes related to the prevention of pregnancy and STIs among youth. For example, there is evidence that youth who believe that adults and peers in their school care about them and their learning have more protection from a range of risky behaviors, including early sexual initiation (Centers for Disease Control and Prevention 2009). Theoretically, there are areas where outcomes related to educational and career success, especially short-term outcomes related to attitudes and behaviors, could also support outcomes related to the prevention of pregnancy and STIs among youth. However, evidence for these connections was generally not discussed in the articles reviewed. One potential connection is that youth who have higher self-efficacy about their ability to learn and their future potential may be more likely to avoid risky sexual behaviors that could interfere with their plans. Similarly, youth

who use social and emotional skills to improve learning-related behavior may also find it easier to use those skills to avoid involvement in risky behaviors, such as sexual activity or substance use.

Because of these potential connections, several existing interventions target multiple domains at the same time, including pregnancy prevention, substance use prevention, and academic achievement (Shuger 2012; Little and Harris 2003; Durlak et al. 2015). In some cases, evidence on these interventions does show improvement in all domains (Afterschool Alliance 2008). This includes some programs for special populations of youth, such as pregnant and parenting teens. These programs have been shown to help youth complete education and prepare for a career as well as reduce repeat pregnancies (Costello 2014).

Expanded outcomes. The literature suggests that addressing educational and career success content in PREP may result in changes to outcome domains beyond the prevention of pregnancy and STIs among youth health. These potentially affected domains reflect two pathways that occur over time: (1) the path from attitudes to behavior to achievement, as described in the theory of change; and (2) the path that youth follow as they develop, moving from achievement in school to graduating from high school to postsecondary education and having a career. In the short term, programs can affect youths' attitudes in several areas. First, they can increase engagement in school and learning, which includes motivation, interest, confidence, perseverance, and connectedness (Centers for Disease Control and Prevention 2009). Second, they can increase students' learning-related skills—especially social and emotional ones—including those involving self-awareness, self-management, persistence and coping, social awareness, relationships, problem solving, and responsible decision making (Durlak et al. 2015; Krauss et al. 2016). Finally, participating in programs can help youth hold higher future expectations and aspirations, and then to develop clear plans for their future education and career.

Related to intermediate outcomes, changes in youths' attitudes and behavior should lead to improved academic effort and habits such as studying and participating in class, school attendance, and fewer disciplinary infractions (such as referrals or suspensions). Another intermediate outcome is improved academic achievement and performance, which reflects stronger academic knowledge, skills, and abilities. These are most commonly measured by grades and test scores, but they also include educational attainment through being less likely to repeat a grade and through earning more high school credits. Although the literature rarely examined work experience and skills as an intermediate outcome, one review found that programs led to improvements in this area (Little and Harris 2003). These then lead to long-term outcomes, which should reflect and coincide with continued application of career and learning skills (Krauss et al. 2016). Although long-term outcomes can be achieved through multiple paths, conceptually they start with earning a high school diploma or GED. The next outcomes are enrolling and completing postsecondary education, including both academic and vocational programs. Finally, youth—now young adults—move into the labor market. Common career outcomes are gaining employment and earnings; other measures of long-term career success and well-being are having work with opportunities for growth and job satisfaction. Positive employment outcomes could also involve well-paying, consistent work in fields requiring technical credentials, as an alternative to careers requiring a college degree.

I.   Conclusions

Educational and career success is critical for youths' well-being in life, and accomplishing such success requires that youth exert considerable effort and skill. Despite the challenging contextual risk factors that many youth face, all youth have the potential to succeed by drawing on their strengths, protective contextual factors, and experiences in programs such as PREP. Fortunately, there are many possible topics programs can cover and approaches they can take to support the learning-related attitudes, behaviors, engagement, and skills that influence educational and employment outcomes. Programs should consider the full range of postsecondary education and workforce options and design their activities to meet the needs of the predominantly at-risk and disadvantaged populations served by PREP grantees.

This page has been left blank for double-sided copying.

V. CONCEPTUAL MODEL FOR ADDRESSING FINANCIAL LITERACY IN PREP

Mathematica:
  Elizabeth Clary
  Heather Zaveri
  Christopher Jones
  Katie Eddins
  Katie Adamek

Child Trends:
  Kristin A. Moore
  Mindy E. Scott
  Deana Around Him
  Monica Arkin
  Isabel Griffith

This page has been left blank for double-sided copying.

V. CONCEPTUAL MODEL FOR ADDRESSING FINANCIAL LITERACY IN PREP

For the APS conceptual models study, the study team developed conceptual models for six APSs (adolescent development, educational and career success, financial literacy, healthy life skills, healthy relationships and parent-child communication). The team then developed a unified framework to identify connections across subjects. Together, the models and framework are intended to help ACF support effective programs by providing PREP grantees with guidance on what constitutes adulthood preparation programming, what infrastructure is needed to support it, how to offer such programming within adolescent pregnancy prevention programs, and what outcomes are anticipated. Each conceptual model draws on theoretical and empirical literature. Other sources included consultations with stakeholders and experts; feedback from staff in FYSB and OPRE; and interviews with PREP grantees about their experiences designing and implementing APS programming.

The Family and Youth Services Bureau (FYSB) and the Office of Planning, Research, and Evaluation (OPRE), both within the Administration for Children and Families (ACF), contracted with Mathematica and its partner, Child Trends, to develop conceptual models for the adulthood preparation subjects (APSs) and to determine how they fit within PREP programming.

PREP grantees must adhere to four program requirements: (1) implement evidence-based or evidence-informed curricula; (2) provide education on both abstinence and contraception for the prevention of pregnancy, sexually transmitted infections (STIs), and HIV; (3) educate youth on at least three of six APSs; and (4) focus on high-risk populations, such as youth residing in geographic areas with high teen birth rates, adjudicated youth, youth in foster care, minority youth, and pregnant or parenting teens. PREP grantees are also required to implement a positive youth development (PYD) approach in their programs. Grantees have discretion in how to meet these requirements. This discretion allows them to tailor their programs to fit the needs of the targeted population and their priorities.

The intention of supplementing pregnancy prevention programs with APS content is to further prepare youth for the transition to adulthood. It is hypothesized that incorporating APS content will strengthen the ability of programs to reduce sexual risk behaviors and expand the range of outcomes that programs affect.

This report is a first step toward helping PREP grantees understand issues of integrating and implementing APSs into their programming. The information presented herein reflects grantee perspectives and published literature on the APSs. The primary aim of this report is to provide grantees with a framework to support the implementation of APSs in their projects.

This chapter presents the conceptual model for financial literacy through a schematic and supporting narrative. It starts by defining financial literacy (Section A) and briefly describing how the study team developed the model (Section B). Sections C through H review each model component and the supporting literature. Section I describes conclusions and suggests areas for future research.

A. Working definition of financial literacy

The legislation authorizing PREP provided a limited definition for each APS.[11] To guide the APS study, the study team developed a working definition that built from the language included in the legislation. The study team then shared the working definition with APS consultants, librarians, and ACF and refined it based on their feedback. The study team continued to refine the working definition throughout the development of the conceptual model based on reviewed

---

[11] https://www.ssa.gov/OP_Home/ssact/title05/0513.htm.

literature and feedback from ACF, PREP grantees, and stakeholders. Each APS is multifaceted, with a range of potential applications to youth. The working definition focuses on how the subject applies to PREP. The working definition for financial literacy is:

> Having the knowledge and skills needed to understand the financial terminology and concepts that enable adolescents to acquire and manage financial resources successfully. Short-term financial literacy skills include opening a bank account, saving, managing credit, and preparing and tracking personal budgets. Medium- and long-term financial literacy skills include knowledge of financial services, interest rates, insurance, debt and credit management, and future planning, including planning for college. Financially literate adolescents understand the implications of their spending on their current and future financial well-being and are able to make careful choices about how to acquire and spend their money and other resources.

B. Overview of the model development process

The study team developed each APS model through a multi-step process (described in more detail in Chapter II). First, the team conducted a literature review on each individual APS. Then they held semi-structured interviews with representatives of PREP grantees and providers to understand how they covered each APS. Finally, the team solicited feedback on each APS from additional experts and stakeholders through a series of conference calls and semi-structured interviews. Throughout development, staff from FYSB and OPRE provided feedback on the process, and on the evolving content of the developing conceptual models. Next, the study team describes the process of developing the conceptual model for financial literacy.

Research literature review. The study team started by conducting a targeted review of research literature on financial literacy. They systematically searched, screened, and reviewed articles and studies, and then extracted and summarized findings using a template that included sections for each intended component of the conceptual model. In total, for financial literacy, the team reviewed 35 documents, published from 2005 through 2016: 10 empirical studies, seven literature reviews or meta-analyses, five program evaluations, two theoretical articles, two articles that proposed program models, and nine other documents, including recommendations from an advisory council and from the U.S. Department of Treasury, a curriculum review tool, and a parent/caregiver guide.[12] (See Appendix A for a list of references by chapter, and Appendix B for detailed tables describing the literature review process.)

> **Primary keywords:** Financial literacy
> **Secondary keywords:** Financial management, financial education, money management, fiscal responsibility, personal finance, basic savings, credit management, spending practices, financial well-being

---

[12] Note that most of the studies reviewed showed associations rather than causal relationships; findings that report correlations cannot be used to infer causality.

Interviews with PREP grantees and providers. The study team interviewed existing PREP grantees and providers about their APS programming and implementation. The interviews addressed APS program design and implementation, curricula or materials used to cover the APSs, and youth receptivity to APS programming. Altogether, the team spoke with 26 respondents from 19 states, across 25 PREP grantees. Respondents represented 16 State PREP, seven Competitive PREP, and two Tribal PREP grantees.[13] On average, respondents reported covering four APSs in their programs, ranging from the required minimum of three subjects to as many as six.

> Twelve grantees interviewed said they covered financial literacy. They chose this APS when it applied to their youth populations, such as low-income youth or youth in alternative school settings. Respondents generally paired educational and career success with financial literacy, implementing these lessons mostly with lower-income, minority youth.

Expert and stakeholder feedback. The study team engaged four groups of experts and stakeholders to provide feedback on the models. These people reviewed the models to ensure that they included relevant theories and research on the subject and could enhance or expand PREP outcomes if operationalized as described. Experts and stakeholders represented four groups: (1) experts with content knowledge on specific APSs; (2) State PREP, Competitive PREP, and Tribal PREP grantees; (3) representatives of federal agencies that work on adolescent pregnancy prevention or youth programming related to the APS; and (4) representatives of selected external organizations involved with adolescent pregnancy prevention or youth programming related to the APS.

C. Financial literacy conceptual model

Figure V.1 shows the conceptual model for financial literacy. The definition of financial literacy and the theory of change are at the top, above the conceptual model. The model includes precursors that influence youth who participate in financial literacy instruction as part of PREP, such as developmental tasks and risk and protective factors. The model also identifies topics for inclusion in financial literacy education programs, design and implementation features for PREP programs, and outcomes that might be affected by offering this programming. Outcomes are presented as enhanced or expanded for the PREP program. Enhanced outcomes refers to changes to the outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP, specifically sexual activity, contraceptive use, and incidence of pregnancy and STIs. Expanded outcomes refers to changes in outcomes not related to the prevention of pregnancy and STIs among youth. Sections D through H describe each component of the conceptual model in Figure V.1, expanding on information in the figure, based on the supporting literature. For some components of the conceptual model, the text presents additional detail beyond what is included in the figure.

D. Precursors

The conceptual model starts with three sets of precursors for financial literacy: developmental tasks, risk factors, and protective factors. Some individual, peer, family, school, and community factors interact and influence how youth develop. These contextual factors often reflect

---

[13] As reported in the 2017-2018 PREP performance measures, there are 51 State PREP, 20 Competitive PREP, and eight Tribal PREP grantees.

characteristics and experiences that youth bring to a program, but they are not factors that programs should or could expect to change through youths' participation. While not included in the conceptual model figure, programs should consider these factors for their target populations and recognize that their relevance may vary, depending on the APS. For financial literacy, contextual factors to consider are youth and parent demographic and economic characteristics and family structure and dynamics. In some cases, contextual factors can encourage youth to avoid negative or risky behaviors, and in other circumstances, they can place youth at higher risk for involvement in activities that contribute to poor developmental and behavioral outcomes. Further, certain individual-level factors (such as age, grade level, or sex) can moderate youths' experiences in the program and their outcomes.

The team included developmental tasks to recognize that adolescents start at different places and progress at different rates through expected trajectories that occur in interconnected social, emotional, cognitive, and physical domains. Risk factors make youth more likely to engage in negative behaviors or harder for them to develop strengths. In contrast, protective factors promote positive development by making youth less likely to engage in negative behaviors and helping them to mitigate risks and promote resilience. Although not specified in the model, promotive factors enhance positive development generally among youth, regardless of any individual, familial, or community risk factors. Promotive factors overlap with protective factors (for example, positive family relationships) but are more generally beneficial for all youth, whereas protective factors come into play in the context of risk (National Research Council and Institute of Medicine 2009). Examples of promotive factors include ethnic identity, social support, and prosocial involvement.

Developmental tasks. Physical, cognitive, and social and emotional development continue during adolescence, and PREP programs must consider youths' developmental needs when designing programming. Relevant to financial education is development of self-control, executive functioning, and conscientiousness. Self-control, and the related concept of executive functioning, refers to a range of cognitive abilities that enable a person to control behaviors, emotions, and desires. Self-control includes the ability to summon will power, monitor impulsivity, exhibit care and vigilance when completing tasks, regulate emotions, delay gratification, and process information. Executive functioning is a set of mental skills that help a person remain focused on the task at hand and juggle multiple priorities. Conscientiousness is exhibiting care and vigilance when completing tasks, and desiring to complete them well (Drever et al. 2015). These skills are learned throughout life, starting at a young age, and are necessary for most daily functioning. Numerous authors noted that self-control, executive functioning, and conscientiousness are necessary for financial well-being (Drever et al. 2015; Letkiewicz and Fox 2014; Moffitt et al. 2011). Executive functioning and self-control are causative factors in multiple well-being outcomes, including language acquisition, school readiness in early childhood, and health and safety in adolescence and adulthood (Drever et al. 2015).

Figure V.1. Financial Literacy Conceptual Model

Financial literacy is having the knowledge and skills needed to understand the financial terminology and concepts that enable adolescents to acquire and manage financial resources successfully. Short-term financial literacy skills include opening a bank account, saving, managing credit, and preparing and tracking personal budgets. Medium- and long-term financial literacy skills include knowledge of financial services, interest rates, insurance, debt and credit management, and future planning, including planning for college. Financially literate adolescents understand the implications of their spending on their current and future financial well-being and are able to make careful choices about how to acquire and spend their money and other resources.

Theory of Change: Providing youth with financial education and enabling their access to mainstream financial institutions can lead to greater financial capability (the ability to act on financial knowledge). At a stage when youths are beginning to make financial decisions and access financial products, PREP programs promote the development of financial capability by offering targeted financial education and support, through which youth can increase their savings and acquire less debt. Providing financial education and support in conjunction with pregnancy prevention programming may encourage youth to focus on planning for the future and avoiding actions that could prevent them from reaching their long-term goals.

Precursors

Developmental Tasks

• Development of self-control, executive functioning, and conscientiousness

Risk Factors

• Limited financial socialization
• Limited access to mainstream financial institutions
• Growing up in an impoverished family or neighborhood

Protective Factors

• Early financial socialization
• Access to mainstream financial institutions

Financial Literacy Topics

Spending and budgeting: Budgeting for college and life

Savings and investments: Managing wages

Borrowing, credit, and debt: Understanding financial aid, credit card and other debt

Insurance: Purchasing car, health, and other insurance and managing risks

Consumer financial protections: Avoiding fraud and identity theft

PREP Program Design and Implementation

• Make programming timely, relevant, and developmentally appropriate
• Encourage parental involvement in financial education
• Ensure facilitators are trained on financial literacy
• Engage local financial institutions to connect youth with mainstream banking opportunities
• Provide interactive and real-life scenarios to enable youth to apply learned skills

Enhanced PREP Outcomes

No enhanced PREP outcomes are expected to change as a result of financial education programming.

Expanded PREP Outcomes

Short-term	Intermediate	Long-term
Financial knowledge and confidence	Accrual of debt Savings Delinquency	Financial capability Involvement in criminal activity

Risk and protective factors. Financial socialization, which can serve as either a risk or a protective factor, is how youth are exposed to financial norms and behaviors and begin to develop their own financial values and standards. Ideally, such socialization starts in early childhood as children adopt the financial habits and values of their parents and gradually absorb financial concepts (Drever et al. 2015; Tang and Peter 2015; Van Campenhout 2015; Hoeve et al. 2014; Grohmann 2015). Growing up in an impoverished family may limit early financial socialization, and adverse experiences may give youth negative feelings toward money. Messages about money come from media, films, fairy tales, and more, and affect how people view money and personal finances (Newcomb 2016). Educators might assume that youth will already have some financial socialization before they attend PREP financial education. However, educators must recognize youth have different feelings about money and their levels of financial socialization will differ.

Youth who grow up in poverty may also have limited exposure to, or little positive experience with, mainstream financial institutions and more exposure to non-traditional financial institutions, such as check-cashing or payday loan operations, or unregulated local lenders. Youth from middle-class or wealthy environments are likely to have more knowledge of the financial products available. Learning to engage mainstream financial institutions helps youth develop an understanding of financial products, such as savings and checking accounts, credit cards, and car loans. However, prior contact with such institutions may vary across youth.

E. Theory of change for financial literacy

Theory of change

Providing youth with financial education and enabling their access to mainstream financial institutions can lead to greater financial capability (the ability to act on financial knowledge). At a stage when youths are beginning to make financial decisions and access financial products, PREP programs promote the development of financial capability by offering targeted financial education and support, through which youth can increase their savings and acquire less debt. Providing financial education and support in conjunction with pregnancy prevention programming may encourage youth to focus on planning for the future and avoiding actions that could prevent them from reaching their long-term goals.

The theory of change for financial literacy builds from the precursors that influence the youth who participate in PREP programming. Although increased financial literacy is the end goal of financial education, offering financial education programming will also affect the more important concept of financial capability—a step that goes beyond financial knowledge to include access to financial institutions and development of assets. Serido et al. (2013) define "financial capability" as knowledge and behavior related to how individuals manage resources and make financial decisions. Drever et al. (2015) define it as the combination of financial knowledge and competency, and the ability and opportunity to act on that knowledge. The study team refined those definitions to include having financial knowledge, and using it to increase one's assets and to identify and engage with financial institutions that serve one's best interests.

Underlying the theory of change are youth and human development theories including behavioral decision theory and behavioral economics, cognitive development theory, social construction theory, capability theory, and experiential learning theory. These theories suggest that youths' exposure to financial concepts and institutions prior to receiving programming prepare them to learn financial topics relevant to their lives and the decisions they are making. Adolescence is the

time when youth start to acquire debt, either through credit cards, personal loans from friends and family, the purchase of a car, or student loans for postsecondary education (Hoeve et al. 2014). Introducing the financial concepts of debt management and control and healthy spending can encourage youth to decrease debt reliance and increase savings and asset accumulation over their lifetimes. However, providing education on financial topics alone may not be sufficient to help youth achieve financial success later in life. Particularly for youth who lack financial socialization from their parents, as may be the case with youth involved with the child welfare system or the criminal justice system, supports such as mentoring and connections to financial institutions and products may be necessary. In addition, enabling youth to practice the financial skills they learn could help solidify healthy financial behaviors later in life.

Financial education should focus on topics relevant to youth at the time they are taught. By timing financial education to coincide with youths' labor market entry or decisions about financing postsecondary education, and educating them about financial institutions when they are likely to start using those institutions, PREP programming can capitalize on youths' motivation and life experiences. Also, at all ages, teaching about planning for, and encouraging an orientation toward, the future is relevant, especially because people tend to devalue outcomes in the distant future compared to more immediate outcomes (a process called *discounting*) (Newcomb 2016). In middle school, programming may emphasize healthy spending habits and strategies to avoid debt, and in high school, programming may also cover common types of loans and how to obtain them.

Presenting financial education and skills training in conjunction with pregnancy prevention programming may help youth to focus on future planning and avoid decisions that could adversely affect whether they reach long-term goals, such as engaging in delinquent or criminal acts, or having children before achieving educational goals. For example, youth may focus on how decisions about romantic relationships and whether to engage in sexual activity may affect financial long-term goals like building assets and becoming financially stable. It may also provide youth with knowledge and skills that encourage them to make decisions that keep them on track to achieve their long-term goals, which could involve obtaining a college degree, achieving financial stability, or delaying when they start a family.

In addition to building youths' financial capability, including financial education in PREP programming may also affect their overall well-being by helping to prepare them for adulthood. Serido et al. (2013) suggest that financial behaviors are associated with selected well-being outcomes. For example, households that had small emergency savings reported higher well-being, less stress, and greater work productivity; credit card debt has also been linked to negative financial behaviors and financial stress. Specifically, Serido et al. (2013) found that young adults who apply sound financial practices see an increase in their financial and overall well-being, and Shim et al. (2009) found that financial satisfaction was related to overall satisfaction, academic performance, physical health, and psychological health.

F. Financial literacy topics

PREP grantees will need to align the topics included in their financial education programming with the needs of youth from diverse backgrounds and experiences (Totenhagen et al. 2015; Danes et al. 2013). There is no standard set of topics that financial education programs cover,

and reviewed literature varies in topics recommended for financial literacy programming. Interviews with PREP grantees revealed that programs already cover spending, savings, money management, cost of living, credit, banking and opening accounts, student loans and financial aid, check cashing (as well as services for it), investing, and insurance.

Five general topics that programs may address are:

1. **Spending and budgeting.** This topic addresses how to develop a spending plan that aligns with one's resources, priorities, and available income. As part of the spending plan, programs can teach youth how to develop and maintain a budget to track earnings and spending (Federal Deposit Insurance Corporation [FDIC] n.d.; Hines et al. 2011; Consumer Financial Protection Bureau 2015; President's Advisory Council on Financial Literacy 2009; Banniter et al. 2015; Brown et al. 2013; Franklin 2007). They can also think about their cost of living and learn about banking and opening accounts and how to cash checks. This can help youth contemplate how much to spend on college, as well as how to budget while pursuing postsecondary education.

2. **Savings and investments.** This topic covers basic investment products, such as savings and checking accounts, the relationship between risk and return for investments, and how to select investment options at different times in one's life. It also covers principles of investment, such as how investments help to build wealth over time and how to buy and sell investments. The final areas in this topic focus on how agencies protect investors and regulate financial markets and products (Walstad et al. 2010; FDIC n.d.); President's Advisory Council on Financial Literacy 2009; Consumer Financial Protection Bureau 2015; Banniter et al. 2015). Adolescents should learn about checking and savings accounts when they first enter the labor market, and learning about investments can help them set and meet goals for the future.

3. **Borrowing, credit, and debt.** This broad category covers types of credit and debt, benefits of various credit options, and how to obtain and manage credit. As part of this category, youth may also learn about credit reports, how to obtain and monitor them, and strategies to avoid or correct debt problems. Youth may also learn major consumer credit laws (Walstad et al. 2010; FDIC n.d.; Hoeve et al. 2014; Hines et al. 2011; President's Advisory Council on Financial Literacy 2009; Banniter et al. 2015). Borrowing, credit and debt are particularly important for youth and young adults who are considering postsecondary education and need to learn how to finance it. Understanding borrowing and repayment terms for financial aid is critical for youth who want to go to college. A few grantee respondents reported teaching about financial aid and student loans.

4. **Insurance.** Topics in this area include insurance options, how and when to use them, purchasing and managing insurance, and types of risk and risk management (Hines et al. 2011; Franklin 2007; Banniter et al. 2015). Understanding insurance is relevant for youth as soon as they become licensed drivers, and will be relevant for young adults who receive employer-sponsored health insurance or who are choosing another health care option. It will also be helpful for youth who move out on their own and need to consider renter's insurance.

5. **Consumer financial protections.** This topic includes how to identify and protect yourself from identity theft and financial fraud, and what to do if you think you have

been victimized (FDIC n.d.; President's Advisory Council on Financial Literacy 2009; Banniter et al. 2015). As youth gain financial independence and begin developing a credit history and using financial services, financial protections are increasingly important. Especially if youth access financial products online, it is imperative that they learn to protect themselves from fraud, and understand the resources available to them if they become victims of theft or fraud.

G. Program design and implementation

PREP grantees will need to consider how and when to provide financial literacy programming within their program. Designing and implementing this APS will require grantees to choose who should deliver the content, when to deliver this information, and how to teach it so that youth can absorb it to the greatest extent possible.

The study team identified five design considerations for financial education:

1. **Timely, youth-relevant, and developmentally appropriate programming.** "Timely" means that topics should be covered when youth are ready to act on what they learn, and "relevant" means that topics should focus on areas that are meaningful to youth at their stage in life. "Developmentally appropriate" means that the content strategies should align with the developmental stage of the youth who will receive the programming. Several authors suggested that programs are beneficial when they focus on financial decisions youth are about to make (Danes et al. 2013; Edelstein and Lowenstein 2014; Hines et al. 2011; Newcomb 2016). For example, providing information on buying a car and getting auto loans and insurance are especially relevant for high school-aged youth, and learning to navigate the student loan process and compare options is relevant to high school students applying to college. By definition, this means that financial education should be an ongoing practice, not a one-time class. To be relevant, some material may have to be repeated at appropriate intervals. For example, concepts of money management may bear repeating when youth change jobs or receive bonuses or raises.

2. **Parental involvement.** While PREP programs may face challenges with involving parents in youths' financial literacy education, multiple authors encouraged parental involvement and identified it as a key component of a financial literacy program (Van Campenhout 2015; Drever et al. 2015; Lusardi et al. 2010; Totenhagen et al. 2015; Edelstein and Lowenstein 2014). To work around barriers to engaging parents directly, programs can include activities that encourage youth to talk with their parents about the financial education content provided during the program. However, parents may not be comfortable discussing financial topics with their children, and may not have experience using mainstream financial institutions.

3. **Trained facilitators.** As with any program, teachers or facilitators are best positioned to lead programming when they possess the appropriate skills and knowledge for the subject. For financial education, this involves identifying teachers or facilitators who have training on providing financial education content and feel confident providing such programming (Van Campenhout 2015; McCormick 2009; Totenhagen et al. 2015). These staff should also recognize that financial values are both emotional and intellectual, and

that youth bring a diverse set of feelings and beliefs about money, which may have to be addressed during programming (Newcomb 2016).

4. **Representatives from local financial institutions.** Programs may want to engage local financial institutions so that they can connect youth with mainstream banking opportunities and encourage them to get on a path toward financial capability. Financial institutions may also offer youth experiential learning opportunities to further their development of financial education knowledge and skills (Totenhagen et al. 2015; Johnson and Sherraden 2007; Edelstein and Lowenstein 2014). Examples include partnering with a local bank to help youth open checking or savings accounts, or having a representative of a bank or credit union speak about their financial products and how they may benefit youth. In addition to financial institutions, some nonprofit organizations offer asset-building programs such as Individual Development Accounts that can benefit youth.

5. **Real-life application of skills.** Programs may incorporate interactive and real-life scenarios to enable youth to apply the skills learned in this APS. Grantees interviewed provided several examples of giving youth activities to practice their new skills. One incorporated real-life scenarios and experiences into their financial literacy content. They developed scenarios for youth who did not finish high school, youth who attend community college, and youth in high school. In each scenario, the youth gets a job and then has to plan, using locally based information on income and expenses, what happens financially (and otherwise) if the youth or a partner accidentally becomes pregnant. Another described a similar activity (Baby Think It Over) where youth get a hypothetical salary and budget and need to plan how they will care for a hypothetical baby within that budget. A third person described a board game, drawn from a credit union's financial literacy curriculum that addressed "needs" versus "wants." In it, youth and their families got jelly beans to distribute to cover costs such as housing, utilities, communication, savings, insurance, gifts, furnishings, recreation, food, transportation, personal care, clothing, and laundry.

Social media and the use of online technology are important communication tools for youth. Programs can leverage youths' use of technology when designing interventions. For example, many programs have responded to the increase in youth online activity by incorporating more technology in their programming. Interventions that utilize digital and social technology allow youth to access content at convenient times, anonymously, and in private locations. Program staff should also consider teaching aspects of online banking and investing safely as part of their financial literacy programming.

H. Outcomes

The reviewed literature suggested several outcomes that might be realized by addressing financial literacy. The study team organized outcomes into two categories—expanded and enhanced—based on whether they focus on changes to outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP (enhanced) or outcomes not related to the prevention of pregnancy and STIs among youth (expanded). The model is limited to outcomes supported by the literature review.

The team further organized outcomes as short-term, intermediate, and long-term. These categories are derived from a theoretical understanding of the logical sequencing of youth knowledge, attitudes, skills, and behaviors related to a particular outcome. *Short-term* outcomes are observed directly following a program. Typically, they include initial changes in knowledge and attitudes, but they can also include immediate changes in behavior. *Intermediate* outcomes, the step between short- and long-term outcomes, can include improved skills or changes in behavior that result from the acquisition of knowledge and skills. Programs can expect to see these outcomes six months to a year after a program. *Long-term* outcomes are observed a year or more after program completion. Depending on when youth attend, this could be during middle or high school or even after high school and into young adulthood (beyond which the model does not identify outcomes). The reviewed literature did not include articles on the effects of financial literacy education in adulthood.

Enhanced PREP outcomes. The literature reviewed to develop the conceptual model included little on how providing financial education affects outcomes directly linked to the prevention of adolescent pregnancy. Reflecting this, the conceptual model shows that programs should not expect enhancements to outcomes related to the prevention of pregnancy and STIs among youth as a direct result of incorporating financial education in a PREP program. Depending on the focus of the financial education provided to youth, indirect changes to outcomes related to the prevention of pregnancy and STIs among youth are possible. Future research could examine hypotheses related to whether providing financial education to youth directly or indirectly affects outcomes related to the prevention of pregnancy and STIs among youth. Providing financial education could potentially prevent teen birth through improved self-control (Moffitt et al. 2011), less involvement in delinquent or criminal behaviors (Hoeve et al. 2014), or more orientation toward the future.

Expanded PREP outcomes. The literature suggests that addressing financial education as part of PREP may result in changes beyond the prevention of pregnancy and STIs. Overall, financial education programs can help youth to increase their financial capability: their combined financial knowledge, access to mainstream financial institutions, and accumulation of assets. In the short term, these outcomes are focused primarily on youths' attitudes, knowledge, and intentions. To increase their financial capability in the short term, youth may increase both their knowledge of financial products and their confidence in how to manage finances (Serido et al. 2013; Johnson and Sherraden 2007; Edelstein and Lowenstein 2014; Varcoe et al. 2005). Programs may focus on obtaining these short-term outcomes for youth in both middle and high school. While the short-term outcomes are important to one's overall financial capability, they are not sufficient to provide youth strong financial well-being in adulthood and must be coupled with development of self-control to make financial decisions. For intermediate outcomes, youth may have behavioral changes. For example, they may see reductions in their accumulation of debt and increases in their savings and assets. Youth can achieve these outcomes by increasing their financial knowledge and having greater confidence in their ability to make sound financial decisions. Achieving the intermediate and long-term outcomes will be most relevant to youth in high school. In particular, older youth, who may be in position to make these decisions, will have the opportunity to implement the financial knowledge they gain to increase their financial well-being. For example, they will (1) know how to choose checking and savings accounts with low or no fees or low-balance requirements, (2) understand how to select credit cards with favorable

interest rates (and understand compound interest and its effects), and (3) be able to evaluate the student loans available to them before signing up for college.

I.   Conclusions

Teaching financial literacy and capability has important implications for youths' long-term financial stability and well-being. More research studies are needed to identify how financial education could affect PREP enhanced outcomes. In light of existing research, financial education should coincide with youths' financial decisions, such as thinking about how to afford postsecondary education, and how to budget and save when youth are likely to enter the labor force. Creating interactive opportunities for youth to practice skills related to financial literacy will help reinforce the lessons. Whenever possible, parental engagement in financial lessons can help youth navigate their choices, and connecting youth with mainstream financial resources will help build a solid foundation for their futures.

VI. CONCEPTUAL MODEL FOR ADDRESSING HEALTHY LIFE SKILLS IN PREP

Mathematica:

Elizabeth Clary

Heather Zaveri

Christopher Jones

Katie Eddins

Katie Adamek

Child Trends:

Kristin A. Moore

Mindy E. Scott

Deana Around Him

Monica Arkin

Isabel Griffith

This page has been left blank for double-sided copying.

VI. CONCEPTUAL MODEL FOR ADDRESSING HEALTHY LIFE SKILLS IN PREP

For the APS conceptual models study, the study team developed a conceptual model for each APS (adolescent development, educational and career success, financial literacy, healthy life skills, healthy relationships and parent-child communication). The team then developed a unified framework to identify connections across subjects. Together, the models and framework are intended to help ACF support effective programs by providing PREP grantees with guidance on what constitutes adulthood preparation programming, what infrastructure is needed to support it, how such programming should be offered within adolescent pregnancy prevention programs, and what outcomes are anticipated. Each conceptual model draws on theoretical and empirical literature. Other sources included consultations with stakeholders and experts; feedback from staff in FYSB and OPRE; and interviews with PREP grantees about their experiences designing and implementing APS programming.

> The Family and Youth Services Bureau (FYSB) and the Office of Planning, Research, and Evaluation (OPRE), both within the Administration for Children and Families (ACF), contracted with Mathematica and its partner, Child Trends, to develop conceptual models for the adulthood preparation subjects (APSs) and to determine how they fit within PREP programming.
>
> PREP grantees must adhere to four program requirements: (1) implement evidence-based or evidence-informed curricula; (2) provide education on both abstinence and contraception for the prevention of pregnancy, sexually transmitted infections (STIs), and HIV; (3) educate youth on at least three of six APSs; and (4) focus on high-risk populations, such as youth residing in geographic areas with high teen birth rates, adjudicated youth, youth in foster care, minority youth, and pregnant or parenting teens. PREP grantees are also required to implement a positive youth development (PYD) approach in their programs. Grantees have discretion in how to meet these requirements. This discretion allows them to tailor their programs to fit the needs of the targeted population and their priorities.
>
> The intention of supplementing pregnancy prevention programs with APS content is to further prepare youth for the transition to adulthood. It is hypothesized that incorporating APS content will strengthen the ability of programs to reduce sexual risk behaviors and expand the range of outcomes that programs affect.
>
> This report is a first step toward helping PREP grantees understand issues of integrating and implementing APSs into their programming. The information presented herein reflects grantee perspectives and published literature on the APSs. The primary aim of this report is to provide grantees with a framework to support the implementation of APSs in their projects.

This chapter presents the conceptual model for healthy life skills through a schematic and supporting narrative. It starts with defining healthy life skills (Section A) and briefly describes how the study team developed the model (Section B). Sections C through H then review each model component and the supporting literature. Section I discusses conclusions and suggests areas for future research.

A. Working definition of healthy life skills

The legislation authorizing PREP provided a limited definition for each APS.[14] To guide the APS study, the study team developed a working definition that built from the language included in the legislation. The study team then shared the working definition with APS consultants, librarians, and ACF and refined it based on their feedback. The study team continued to refine the working definition throughout the development of the conceptual model based on reviewed

---

[14] https://www.ssa.gov/OP_Home/ssact/title05/0513.htm

literature and feedback from ACF, PREP grantees, and stakeholders. Each APS is multifaceted, with a range of potential applications to youth. The working definition focuses on how the subject applies to PREP. The working definition for healthy life skills is:

> Healthy life skills are the competencies that enable people to solve problems and deal in positive ways with challenges they face in their everyday lives. These skills include social, emotional, and cognitive skills, as well as physical and sexual health skills. Social skills focus on communication, negotiation and refusal, assertiveness, cooperation, and empathy. Emotional skills comprise self-regulation and development of personal confidence. Cognitive skills include decision making, goal setting, problem solving, and critical thinking. Physical and sexual health skills focus on making healthy life choices and can reinforce social, emotional, and cognitive skills. Adolescents can practice and build these skills in the classroom and at school—as peer leaders—and in the community, by providing service to others. Using these skills can enable adolescents to improve their emotional well-being, mental health, and social skills; decrease their involvement in risky behaviors; and improve their academic achievement.

B. Overview of the model development process

The study team developed each APS model through a multi-step process (described in more detail in Chapter II). First, the team conducted a literature review on each APS. Then they held semi-structured interviews with representatives of PREP grantees and providers to understand how they covered each APS. Finally, the team solicited feedback on each APS from additional experts and stakeholders through a series of conference calls and semi-structured interviews. Throughout development, staff from FYSB and OPRE provided feedback on the process, and on the evolving content of the developing conceptual models. Next the study team describes the process of developing the conceptual model for healthy life skills.

Research literature review. The study team started by conducting a targeted review of research literature on healthy life skills. They systematically searched, screened, and reviewed articles and studies, and then extracted and summarized findings using a template that included sections for each intended component of the healthy life skills conceptual model. In total, for healthy life skills, the team reviewed 41

> **Primary keywords:** Life skills
>
> **Secondary keywords:** Positive behavior, decision-making, communication, coping, adaptive behavior, self-management, self-regulation, goal-setting, risky or unhealthy behaviors, self-efficacy, self-determination, negotiation, conflict resolution, interpersonal decisions, programming, sexual health, self-awareness, critical thinking, risk-taking

documents, published from 1977 to 2017. These included seven literature reviews or meta-analyses, eight empirical studies, six theoretical articles, eight program evaluations, five proposed program models, and seven other documents, such as a resource guide, a checklist, a tip sheet, and study reviews. Four articles looked at target populations that included older youth: two of the literature reviews (Foxcroft and Tsertsvadze 2011; Gates 2008), one document that examined mentoring (Zand et al. 2009), and one on community service and service-learning

activities among youth (Spring et al. 2008).[15] (See Appendix A for a list of references by chapter, and Appendix B for detailed tables describing the literature review process.)

Interviews with PREP grantees and providers. The study team interviewed existing PREP grantees and providers about their APS programming and implementation. These interviews addressed APS program design and implementation, curricula or materials used to cover the APSs, and youth receptivity to APS programming. Altogether, the team spoke with 26 respondents from 19 states, across 25 PREP grantees. Respondents represented 16 State PREP, seven Competitive PREP, and two Tribal PREP grantees.[16] On average, respondents reported covering four APSs in their programs, ranging from the required minimum of three subjects to as many as six.

> Twenty-three grantees interviewed said they covered healthy life skills. Most chose it because it was relevant to their youth populations and already covered through their curriculum for the prevention of pregnancy and sexually transmitted infections among youth.

Expert and stakeholder feedback. The study team engaged four groups of experts and stakeholders to provide feedback on the models. These people reviewed the models to ensure (1) that they included all relevant theory and research on the subject; and (2) that the proposed model could enhance or expand the PREP outcomes, if operationalized as described. Experts and stakeholders represented four groups: (1) experts with content knowledge on specific APSs; (2) State PREP, Competitive PREP, and Tribal PREP grantees; (3) representatives of federal agencies that work on adolescent pregnancy prevention or youth programming related to the APS; and (4) representatives of selected external organizations involved with adolescent pregnancy prevention or youth programming related to the APS.

C. Healthy life skills conceptual model

Figure VI.1 shows the conceptual model for the healthy life skills APS. The definition of healthy life skills and the theory of change are at the top, above the conceptual model. The model includes precursors that influence youth who participate in healthy life skills programming as part of PREP, such as developmental tasks and risk and protective factors. The model also identifies topics for inclusion in healthy life skills programs, program design and implementation features for PREP programs, and outcomes that may be affected by offering this programming. For the PREP program, outcomes are presented as enhanced or expanded. Enhanced outcomes refers to the outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP: sexual activity; attitudes, beliefs, and knowledge about sex; contraceptive use; and incidence of pregnancy and sexually transmitted infections (STIs). Expanded outcomes refers to changes in outcomes not related to the prevention of pregnancy and STIs among youth when content, lessons, or instruction related to healthy life skills are added to the PREP program. Sections D through H of this chapter describe each component of the conceptual model in Figure VI.1, expanding on information contained in the figure, based on the supporting literature. For

---

[15] Note that most of the studies reviewed showed associations rather than causal relationships; findings that report correlations cannot be used to infer causality.

[16] As reported in the 2017-2018 PREP performance measures, there are 51 State PREP, 20 Competitive PREP, and eight Tribal PREP grantees.

some components of the conceptual model, the text presents additional detail beyond what is included in the figure.

D. Precursors

The conceptual model starts with three sets of precursors for healthy life skills: developmental tasks, risk factors, and protective factors. The team included developmental tasks to recognize that adolescents start at different places and progress at different rates through identity formation, social skills development, problem-solving skills, and cognitive development. Risk factors make youth more likely to engage in negative behaviors or harder for them to develop strengths, while protective factors make youth less likely to engage in negative behaviors, mitigate risks, and promote resilience. Protective factors promote positive development among youth. Although not specified in the model, promotive factors enhance positive development generally among youth, regardless of any individual, familial, or community risk factors. Promotive factors overlap with protective factors (such as positive family relationships) but are more generally beneficial for all youth, whereas protective factors come into play in the context of risk (NRC and IOM 2009). Examples of promotive factors include ethnic identity, social support, and prosocial involvement.

The risk and protective factors included in the precursors for healthy life skills are organized in accordance with the social-ecological framework, which includes individual, interpersonal, community, and societal levels (Bronfenbrenner and Morris 2006). During their transition from childhood to adolescence, youth are influenced by the individuals with whom they associate, their relationships with these individuals, and the context in which they themselves live. The social-ecological framework allows for the consideration of the complex interplay between individuals, their relationships, and community and societal factors.

Developmental tasks. The model includes developmental tasks in recognition that adolescent development is continuous, uneven, and complex. Youth continually encounter situations that help them to grow; however, they do not mature at the same rate physically, emotionally, or cognitively (Pittman et al. 2003). Generally, in early adolescence (around grades 4–8), youth further develop their self-image and their ability to think abstractly and solve problems (Mangrulkar et al. 2001). At this age, they gain increasing independence from their parents and greater control over their lives, and begin to relate to their peers in new ways (Gillespie et al. 2003). As youth move into middle adolescence (around grades 9–12), they encounter more-complex situations that require them to consider various alternatives and contemplate the short- and long-term consequences of their actions. As youth move into late adolescence (after grade 12), they continue to develop their self-identity and role in their communities and to focus more of forming intimate relationships (Pittman et al. 2003). As they age, youth learn to be more or less competent and productive in a variety of areas or skills, which might result in feelings of inferiority; these competencies, or lack thereof, can have long-term social, intellectual, and emotional consequences (Mangrulkar et al. 2001).

Figure VI.1. Healthy Life Skills Conceptual Model

Healthy life skills are the competencies that enable people to solve problems and deal in positive ways with challenges they face in their everyday lives. These skills include social, emotional, and cognitive skills, as well as physical and sexual health skills. Social skills focus on communication, negotiation and refusal, assertiveness, cooperation, and empathy. Emotional skills comprise self-regulation and development of personal confidence. Cognitive skills include decision making, goal setting, problem solving, and critical thinking. Physical and sexual health skills focus on making healthy life choices and can reinforce social, emotional, and cognitive skills. Adolescents can practice and build these skills in the classroom and at school—as peer leaders—and in the community, by providing service to others. Using these skills can enable adolescents to improve their emotional well-being, mental health, and social skills; decrease their involvement in risky behaviors; and improve their academic achievement.

Theory of Change: Healthy life skills programs develop youths' social, emotional coping, cognitive, and physical and sexual health skills—tied to relevant developmental, risk, and protective factors—and enable them to make positive choices. Using interactive teaching and learning methods, PREP programs can help youth to improve their social skills by developing effective communication, negotiation, refusal, assertiveness, cooperation, and empathy skills. In addition, programs can help youth increase their emotional coping skills so that they can increase their self-regulation and improve their personal confidence. Programs can also help youth enhance their cognitive skills, such as decision-making, problem-solving, and critical-thinking skills; physical health skills, such as nutrition and physical fitness decisions; and sexual health skills, such as knowledge of pregnancy and STI prevention, negotiation and refusal skills, and accessing of health services. Improved life skills can lead to improved emotional well-being, mental health, social skills, and academic achievement, and reduced involvement in risky behaviors such as substance use and delinquency. These positive outcomes can in turn lead to increased abstinence, improved condom and other contraceptive use, reduced risky sexual behavior (such as unprotected sex), and a decrease in adolescent pregnancy and STIs/HIV.

Precursors

Developmental Tasks
• Identity formation
• Social skills development
• Problem-solving skills
• Cognitive development

Risk Factors
• Inadequate or inaccurate knowledge about harmful effects of risky behaviors
• Inaccurate beliefs about prevalence and social acceptability of risky behaviors
• Poor self-concept (impulsivity)
• Mental health (anxiety)
• Adverse childhood experiences
• Peer or family involvement in risky behaviors
• Peer influence to engage in risky behaviors
• Dating violence and sexual coercion
• Under-resourced neighborhoods
• Role model engagement in risky behaviors
• Mass media

Protective Factors
• Positive family values
• Close relationships with family members
• Parental monitoring
• Peer acceptance and healthy peer behaviors
• Relationships with trusted adults at schools and in the community
• Involvement in community service
• School and community connectedness
• Role models that promote positive attitudes and expectations

Healthy Life Skills Topics

Cognitive skills: Enhancing decision-making, goal-setting, problem-solving, and critical thinking

Emotional coping skills: Managing stress and anger, improving personal confidence, and increasing self-awareness, self-regulation, and self-monitoring

Social skills: Learning means of communication, negotiation and refusal, assertiveness, cooperation, empathy, and appropriate use of social media

Physical health skills: Nutrition, eating disorders, deficiency diseases, substance use, body image, physical fitness, and sports-based activities

Sexual health skills: STIs/HIV/AIDS, anatomy, puberty, dating and relationships, conception and pregnancy, contraception, negotiation and refusal skills, and accessing health services

PREP Program Design and Implementation

• **Use interactive participatory methods:** utilize role playing, classroom and small group discussions, demonstration and guided practice, educational games and simulations, and decision mapping or problem trees

• **Follow a developmentally appropriate structure:** follow a planned and sequenced curriculum, building from simple to complex concepts, allow youth of different ages or genders to learn from each other

• **Develop skilled and supportive facilitators:** train facilitators on healthy life skills topics and encourage facilitators to use interactive teaching strategies, demonstrate how to apply complex social skills, and address sensitive issues

• **Create community connections and leadership opportunities:** connect youth with local organizations for sport- or community service-based activities and provide leadership opportunities

• **Use integrated curricula:** combine or intersperse APS and sexual health content, ensure curricula addresses youths' needs and characteristics

Enhanced PREP Outcomes

Short-term	Intermediate	Long-term
⬇ Sexual activity	⬇ Risky sexual behavior	
⬆ Attitudes, beliefs, and knowledge about sex		

Expanded PREP Outcomes

Short-term	Intermediate	Long-term
⬆ Social skills	⬇ Substance use	⬆ Academic achievement
⬆ Emotional well-being	⬇ Delinquency	
⬆ Mental health		

Risk factors. Risk factors make youth more likely to engage in negative behaviors or harder for them to develop strengths. The model includes, at the individual, interpersonal, community, and societal levels, risk factors that may influence youth. At the individual level, youth are more likely to undertake risky behaviors if they (1) lack adequate, accurate knowledge of potential harmful effects of these behaviors; (2) hold inaccurate beliefs about how socially undesirable it is to undertake these behaviors, and about the prevalence of such behaviors; and (3) possess traits and characteristics (such as poor self-concept, anxiety, impulsivity) that make them more susceptible to peer or media pressure (Botvin and Griffin 2015). Interactions and relationships with peers and family members also influence youth as they develop, including experiencing adverse childhood events, such as trauma and physical or sexual abuse. As youth move into middle adolescence, they spend more time with peers, including increased interactions with potential romantic partners, and become involved in more complex relationships (Mangrulkar et al. 2001; Gillespie et al. 2003). As they broaden their social sphere, youth confront additional risk factors. Peers and family members who are currently, or were previously involved, in risky behaviors might influence youth toward substance use, risky sexual behavior, delinquency, and violence (such as fighting or dating violence) (Botvin and Griffin 2015; Gillespie et al. 2003). Peer influence can also be a strong predictor of early sexual initiation (Graves et al. 2011). Youth who experience dating violence or sexual coercion may be more likely to engage in negative sexual behaviors and are at higher risk teen pregnancy (Silverman et al. 2001; Kirby 2007). If youth grow up in dangerous and/or under-resourced environments, they may develop coping strategies to navigate their community, such as negative perceptions of school and teachers or hyper-masculinity, which can lead to delinquency and to becoming involved in criminal or gang-related activity (Spencer and Tinsley 2008). Youth might also be negatively influenced by mass media and the behavior of their role models related to smoking, drinking, or drug use (Botvin and Griffin 2015).

Protective factors. Protective factors dissuade youth from engaging in negative behaviors, mitigate risks, and promote resilience. Youth can benefit from interactions with peers and family members to foster protective factors, such as (1) promoting positive family values, close family relationships, and parental monitoring (Spencer and Tinsley 2008); (2) being accepted by one's peers (Gfroerer et al. 2013); and (3) observing peers who make healthy behavioral choices (Graves et al. 2011). If youth witness positive practices—such as opportunities for prosocial involvement, skills development, and affirming recognition—modeled in schools and organizations, are involved in community service, or are closely connected to schools or their community, they can learn positive coping methods, models for positive behavior, and strategies to solve problems and achieve their goals (Spencer and Tinsley 2008). In addition, connecting with positive role models in school can lead to greater resilience, and better academic achievement, motivation, and success (Gfroerer et al. 2013). Finally, youth can be positively influenced by mass media when role models in the media promote positive attitudes and expectations about substance abuse (Botvin and Griffin 2015).

E.   Theory of change for healthy life skills

Theory of change

Healthy life skills programs develop youths' social, emotional coping, cognitive, and physical and sexual health skills—tied to relevant developmental, risk, and protective factors—and enable them to make positive choices. Using interactive teaching and learning methods, PREP programs can help youth to improve their social skills by developing effective communication, negotiation, refusal, assertiveness, cooperation, and empathy skills. In addition, programs can help youth increase their emotional coping skills so that they can increase their self-regulation and improve their personal confidence. Programs can also help youth enhance their cognitive skills, such as decision-making, problem-solving, and critical-thinking skills; physical health skills, such as nutrition and physical fitness decisions; and sexual health skills, such as knowledge of pregnancy and STI prevention, negotiation and refusal skills, and accessing of health services. Improved life skills can lead to improved emotional well-being, mental health, social skills, and academic achievement, and reduced involvement in risky behaviors such as substance use and delinquency. These positive outcomes can in turn lead to increased abstinence, improved condom and other contraceptive use, reduced risky sexual behavior, such as unprotected sex, and a decrease in adolescent pregnancy and STIs/HIV.

The theory of change for healthy life skills builds from social learning theory (Bandura and Walters 1977) and problem behavior theory (Jessor and Jessor 1977). As youth progress through adolescence, they continue to develop their self-image, attitudes, and values, and are increasingly able to think critically and solve problems (Mangrulkar et al. 2001; Gillespie et al. 2003). Social learning theory suggests that youth learn how to behave from (1) instruction provided and behavior modeled by parents, teachers, and other role models; (2) observation of their peers, family members, and others; and (3) social interaction with adults and peers (Mangrulkar et al. 2001). Problem behavior theory posits that youths' negative behaviors (such as substance use, risky sexual behavior, and delinquency) are influenced by their values, beliefs, and attitudes, as well as those of their family and peers (Mangrulkar et al. 2001; Gillespie et al. 2003). Participating in healthy life skills programming enables youth to witness positive behavior and learn coping strategies that support development of self-efficacy skills (that is, confidence in one's ability to act appropriately in a given situation), ultimately helping them to set specific behavioral and academic goals they can achieve (Mangrulkar et al. 2001).

Building on these theories, healthy life skills programming should aim to improve youths' social, emotional coping, and cognitive skills. Social or interpersonal skills include effective communication—for example, being assertive in voicing their opinions and refusing to participate in potentially harmful activities. Emotional coping skills include strategies to cope with and manage stress and anxiety, and monitor these feelings. Cognitive, or interpretative, skills focus on building youths' critical analysis skills, including problem solving, decision making, and understanding the consequences of one's actions (Mangrulkar et al. 2001; Gillespie et al. 2003).

Programming related to physical and sexual health skills can reinforce key social, emotional coping, and cognitive skills. For example, sports-based activities can help build self-esteem and self-efficacy (Family and Youth Services Bureau [FYSB] 2016). Physical health skills help youth make healthy choices with respect to nutrition and healthy eating, body image, tobacco use, physical fitness, and participation in sports. Sexual health skills (1) focus on knowledge of sexual development, STIs and HIV/AIDS, conception and pregnancy, and (2) help youth make healthy choices related to dating and relationships, contraception, and accessing sexual health services (Mangrulkar et al. 2001; Gillespie et al. 2003; FYSB 2016).

Through repeated observation and practice of healthy life skills, youth can improve their social and cognitive skills, learning how to develop effective communication, negotiation, decision-making, and problem-solving skills. They also can learn how to cope with their emotions by managing stress and dealing with sadness, anger and anxiety. The repeated practice of decision making and problem-solving leads youth to increased self-confidence and a sense of autonomy. Frequent observation of correct behaviors by others, and practice of skills with feedback and reinforcement, can help youth retain the skills for future use (Mangrulkar et al. 2001; Gillespie et al. 2003). By being taught healthy life skills in collaboration with pregnancy prevention programming, youth can learn to make positive decisions related to their sexual health decisions. They can learn (1) to express that they do not want to have sex and be assertive when faced with peer pressure to have it; and (2) to recognize myths and misconceptions about contraception, HIV, and STIs.

Evolving research on decision making is beginning to explore the developmental and contextual aspects of adolescence. Program providers who want to understand and shape adolescents' choices can focus on factors that influence the intention and decision to perform a behavior, such as social and normative pressures, including perceptions of peer activities. They can also focus on steps in the decision-making process and on the skills needed to analyze decisions, such as role-playing a high-risk situation prior to encountering the situation in real life (NRC and IOM 2004).

Social-emotional coping and cognitive skills can enhance positive and reduce negative behaviors and help youth make healthy life choices. Developing these skills can improve the ability of youth to understand the potential short- and long-term consequences of their actions, and how certain behaviors can lead to negative or positive outcomes. Building youths' abilities to generate solutions to interpersonal problems and to counteract or resist peer and social pressures can improve their coping skills (Mangrulkar et al. 2001; Gillespie et al. 2003). Healthy life skills can enable positive behaviors, such as developing and maintaining healthy relationships and pursuing academic achievement. They can defuse and prevent problem behaviors, such as risky sex, delinquency, and substance use. These skills can also help increase prosocial behaviors that benefit others and manage depression and anxiety (Reivich 2010). By practicing these skills and using them in real-world situations, youth can develop a more positive self-concept and achieve greater self-efficacy and well-being. They also become more likely to attain their goals (Botvin and Griffin 2015; Reivich 2010; Goleman 2008). Ultimately, the positive outcomes that can result from improved cognitive, decision-making, and critical-thinking skills, such as academic achievement, maintaining a full-time job that pays more than the minimum wage, and delaying pregnancy, can set youth on a path to achieve economic self-sufficiency in the long term (Haskins and Sawhill 2009).

F. Healthy life skills topics

Healthy life skills programming should incorporate topics that help youth bolster their positive self-concept and self-efficacy, set realistic goals, and identify pathways for achieving them (Cornell 2013; Reivich 2010; FYSB 2016). PREP grantees can address healthy life skills programming through five topic areas.

- **Cognitive skills.** Learning how to make decisions and solve problems; developing critical-thinking skills through which to analyze peer and media influences and perceptions of social norms and beliefs, including gender roles and stereotypes, and evaluate one's views and values; and setting and creating pathways to meet goals and plan for the future (Mangrulkar et al. 2001; Mears 2007; Botvin and Griffin 2015; Graves et al. 2011; Reivich 2010; Gillespie et al. 2003).

- **Emotional coping skills.** Learning how to manage stress, feelings, and reactions to conflict (such as anxiety, anger, and grief), and improving personal confidence and internal locus of control (that is, expectations about whether one's own behavior will bring about desired outcomes), thereby increasing positive self-concept, self-awareness, self-regulation, and self-monitoring. Relaxation techniques, time management skills, learning to seek help in times of distress, and learning to delay gratification of short-term rewards can reinforce emotional coping skills (Mangrulkar et al. 2001; FYSB 2016; Botvin and Griffin 2015; Gillespie et al. 2003).

- **Social skills.** Developing effective verbal and non-verbal communication, negotiation, and refusal skills; bolstering assertiveness skills; learning interpersonal skills (for example, to overcome shyness, initiate social interactions, and develop healthy relationships); and learning how to cooperate with and be empathetic to others (Mangrulkar et al. 2001; Botvin and Griffin 2015; Graves et al. 2011; FYSB 2016; Gillespie et al. 2003). In interviews, grantees suggest skills related to the appropriate use of social media, and applying critical-thinking skills to social media and "sexting"; how to respond to bullying; and identifying media messages and their impact, such as the impact of social media on body image, are important skills for programs to cover.

- **Physical health skills.** Learning about healthful foods, nutrition, eating disorders, deficiency diseases (including anemia and iron deficiency), and the physical effects of substance use; developing a healthy body image; learning about the benefits of or practicing physical fitness, exercise, and wellness activities; and participating in sport-based activities. (Mangrulkar et al. 2001; Gillespie et al. 2003; FYSB 2016).

- **Sexual health skills.** Learning about STIs and HIV/AIDS, including myths and misconceptions; learning about sexual anatomy, puberty, dating and relationships, conception and pregnancy, and available methods of contraception; developing negotiation and refusal skills related to saying no to sex or engaging in safer sex practices; and accessing services for help with sexual health issues (Mangrulkar et al. 2001; Gillespie et al. 2003; FYSB 2016).

G. Program design and implementation

Grantee interviews and the literature review identified five design strategies for healthy life skills programming. These strategies can guide implementation of programming in PREP.

1. **Use interactive participatory methods.** Research suggests that healthy life skills programming can best be taught through interactive, participatory methods. Youth learn skills best when they are able to observe them, practice them, and apply them to real-world situations. Youth can learn about and gain confidence in their ability to practice healthy life skills through a variety of interactive, participatory exercises, such as role-playing, classroom and small-group discussions, demonstration and guided practice,

educational games and simulations, and decision mapping or problem trees (Gillespie et al. 2003; Magrulkar et al. 2001; FYSB 2016). Examples include a values clarification exercise in which youth identify their own values and are taught skills to gather information and make informed choices based on those values; an assertiveness exercise in which youth brainstorm common peer pressure situations and role-play how to say no while maintaining friendships; or a goal road-map activity during which youth set realistic goals and identify pathways to achieve them (Graves et al. 2011; Reivich 2010). By practicing healthy life skills, youth can learn appropriate behaviors and improve their self-perceptions and self-concept, develop positive interpersonal relationships, and improve listening and communication skills (Gillespie et al. 2003; Graves et al. 2011).

Respondents to grantee interviews noted that interactive activities, especially those that combine sexual health and APS topics, help keep youth engaged in PREP programming. Some respondents used technology to deliver interactive programming, such as through iPads or web-based formats. One respondent described using Snapchat, Facebook, and Instagram to engage youth and inform them of additional activities in an interactive way. Research suggests that interventions that utilize digital and social technology can increase accessibility by allowing youth to access content at convenient times, anonymously, and in private locations (Strasburger and Brown 2014). Some grantee respondents reported involving parents in programming through parent events, interactive parent-youth activities, or homework for youth and their parents. Research supports the idea that providing parents with training or interactive tools about healthy life skills can help parents reinforce healthy life skills concepts with youth (Magrulkar et al. 2001; Gfroerer et al. 2013; Cornell 2013).

2. **Follow a developmentally appropriate structure.** Research points toward creating programs that follow a developmentally appropriate structure. Youth of the same age can be at different developmental stages and have varying skills, and their development can vary over time. In addition, youths' knowledge of and ability to apply life skills varies throughout adolescence. Several authors suggested following a planned and sequenced curriculum that considers the age, gender, and developmental stage of youth, building from simple to complex concepts, with later lessons reinforcing what was learned in early sessions (Gillespie et al. 2003; Botvin and Griffin 2015). However, several respondents to grantee interviews felt that when youth of different ages, developmental stages, or genders are taught together, youth are able to learn from one another. The majority of respondents provided the same APS content to all youth, though some tailored the content to ensure it was appropriate for youth of different ages, genders, or populations. Booster sessions can deliver developmentally appropriate material focused on the continued development and reinforcement of healthy life skills such as self-management, social skills, and coping skills (Botvin and Griffin 2015).

3. **Develop skilled and supportive facilitators.** Several authors advise that youth participating in healthy life skills programming can benefit from facilitators who are competent in directing and facilitating group interactions and supportive and respectful of youth. All interview respondents reported that staff who facilitated the curriculum for the prevention of pregnancy and STIs among youth also provided APS programming or curricula, although some facilitators invited guest speakers to cover certain APS topics or supplement APS programming. Research suggests that facilitators who teach healthy

life skills programming can benefit from having adequate training on relevant content (for example, adolescent sexuality and development, and information about abstinence, contraceptives, and STIs/HIV), as well as opportunities to practice their delivery of the content to increase their comfort in addressing sensitive topics. In addition, by receiving training on interactive teaching methods, facilitators can provide adequate support and guidance to youth, without dominating discussions or group activities (Mangrulkar et al. 2001; FYSB 2016; Gillespie et al. 2003). A few respondents described providing training on healthy-life-skills-specific content to staff, including trauma-informed practices; mental health; and talking to youth about health and unhealthy behaviors, including anticipating and responding to youth who perceive unhealthy behaviors as healthy.

Several authors recommended training facilitators on the following elements of effective facilitation: establish a program environment that values open communication and positive interaction; use interactive teaching strategies (for example, build competence in group process, role-play exercises, dramatizations, debates, small-group work, and open discussions); model and apply skills to particular behaviors (for example, provide encouragement and praise to reinforce positive social norms); teach complex social skills to youth; and address sensitive issues in adolescents (Mangrulkar et al. 2001; Gillespie et al. 2003). The authors also recommended that facilitator training be multi-phased, with continued training and booster sessions, and at least ten 45-minute sessions in the first year and five in subsequent years. Training should fit the providers' skill levels; and should pair experienced program providers with new trainees (Mangrulkar et al. 2001; Gillespie et al. 2003).

4. **Create community connections and leadership opportunities.** Several authors suggested that healthy life skills programs connect youth with local organizations and give youth leadership opportunities. Becoming involved with community organizations that focus on building healthy life skills (for example, through sports or community service activities) can sustain changes to youths' self-concept and self-efficacy following classroom-based programming (FYSB 2016). Providing youth with opportunities to participate in community service can increase their sense of empowerment, through strengthened leadership skills and increased self-efficacy. Doing so can enable them to solve real-world problems and achieve their academic goals. Community service also provides opportunities for youth to engage with adults outside a school setting and to become more active members of their local community (Spring et al. 2008). Several authors found that service learning programs, which include youth participation in community service activities and time to process student reactions to these activities, led to improvements in healthy behaviors, including delayed sexual activity, improved contraception use, and decreased teen pregnancy rates (Cornell 2013; Kirby 2007).

5. **Use integrated curricula.** PREP grantees indicated that they typically used a curriculum for pregnancy and STI prevention that also included APS content, including content related to healthy life skills. They felt that selecting a curriculum that combined both pregnancy and STI prevention and APS content helped maintain student interest and allowed programs to use their time more efficiently. Several grantees felt that selecting a curriculum which included a community service component was one way to address healthy life skills. Further, PREP grantees noted the importance of selecting a

curriculum that addresses the needs of youth and is a good fit for the implementation setting. Other factors to consider include whether the curriculum is sensitive to the circumstances of diverse youth, including sexual minorities; whether the curriculum is trauma-informed; whether it is culturally appropriate for the youth served; and how long it is. For example, shorter curricula may be needed for transient or homeless populations who cannot stay engaged with a program very long.

H. Outcomes

The reviewed literature suggested several outcomes that might be realized by addressing healthy life skills topics in PREP. The study team organized outcomes into two categories—expanded and enhanced—based on whether they focus on changes to outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP (enhanced) or outcomes not related to the prevention of pregnancy and STIs among youth (expanded). The model is limited to outcomes supported by the literature review.

The team further organized outcomes as short-term, intermediate, and long-term. These categories are derived from a theoretical understanding of the logical sequencing of youth knowledge, attitudes, skills, and behaviors related to a particular outcome. *Short-term* outcomes are those one would expect to see directly following a program. Typically, short-term outcomes include initial changes in knowledge and attitudes but may also include more immediate changes in behaviors. Such outcomes often continue to be relevant at later time points. *Intermediate* outcomes, the step between short- and long-term outcomes, can include improved skills or changes in behavior that result from the acquisition of new knowledge and skills. Programs could expect to see these outcomes six months to a year after a program is completed. *Long-term* outcomes are observed a year or more after program completion. Depending on when youth attend the program, this could be during middle or high school or even after high school and into young adulthood. (The model does not identify outcomes past young adulthood, and the reviewed literature did not include articles on the effects of healthy life skills programming in adulthood.)

Enhanced outcomes. If PREP programs that incorporate healthy life skills achieve the conceptual model's expanded outcomes, programs might also affect outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP. For example, life skills programming may lead to gains in knowledge and improved attitudes about sexual expectations and behavior and reproduction (Graves et al. 2011). Life skills programming may also lead to less involvement by youth in risky sexual behaviors. Participation in a life skills training program was associated, in the short term, with a reduced likelihood among youth aged 16 to 21 of having had sex in the past six months (Minnis et al. 2014), and, in the longer term, a reduced likelihood among young adults of having multiple sex partners or having sex while drunk or high (Griffin et al. 2006). Research also found that life skills programs that focused on promoting academic achievement and goal setting reduced the rate of pregnancies and repeat pregnancies (Cornell 2013).

Expanded outcomes. The literature suggested that incorporating healthy life skills into PREP could result in changes to outcome domains beyond youths' sexual health. Learning healthy life skills can result in improved social skills and emotional well-being, as reflected in the short-term expanded outcomes. Enhancing youths' social competency (that is, confidence, assertiveness,

and communication skills) and self-management skills (such as decision making, problem solving, and behavioral self-control) can lead adolescents to have lower rates of substance use, including cigarette, alcohol, and marijuana use (Botvin and Griffin 2015; Minnis et al. 2014; Foxcroft and Tsertsvadze 2011; Gillespie et al. 2003), as reflected in intermediate expanded outcomes. Programs that teach healthy life skills have also shown significant reductions in delinquency, interpersonal violence, and criminal behavior (Botvin and Griffin 2015; Gillespie et al. 2003; Mears 2007), and reduced likelihood of associating with friends who had been incarcerated or detained, or who were gang-affiliated (Minnis et al. 2014), which are defined as intermediate outcomes. Research has also shown that, in the long-term, development of goal-setting and problem-solving skills are positively related to academic achievement (Forneris et al. 2007). In particular, research has found that participating in life skills programs can promote positive social adjustment and reduce emotional disorders, improve health-related behaviors, self-concept, and levels of assertiveness, self-mastery, personal control, self-confidence, and self-satisfaction, and improve academic performance (Gillespie et al. 2003; Forneris et al. 2007).

The theory of change presented in this chapter hypothesizes that improved cognitive and critical-thinking skills resulting from participation in healthy life skills programming could lead to reduced rates of unprotected sex in the six months after the program, thereby lowering rates of adolescent pregnancy and HIV/STIs in the long term. However, the study team did not include these outcomes in the conceptual model, because they were not supported by the literature reviewed.

I.   Conclusions

Incorporating healthy life skills—specifically, social-emotional coping, cognitive, and physical and sexual health skills—into PREP programming can potentially increase youths' social and emotional well-being and bolster their decision-making and problem-solving skills, resulting in reduced levels of risky behavior and improved academic achievement. Development of healthy life skills may also increase the number of youth who use condoms or contraception or abstain from sex. Most research studies reviewed for this APS focused on the impact of healthy life skills programming on alcohol and substance misuse or risky sexual behavior, but did not directly link participation in healthy life skills programming to any reduction in the prevalence of adolescent pregnancy and STIs/HIV. More research is needed on how to integrate healthy life skills programming with curriculum for pregnancy and STI prevention, and the youth outcomes that might result from such an integrated program.

This page has been left blank for double-sided copying.

VII. CONCEPTUAL MODEL FOR ADDRESSING HEALTHY RELATIONSHIPS IN PREP

Mathematica:

    Elizabeth Clary

    Heather Zaveri

    Christopher Jones

    Katie Eddins

    Katie Adamek

Child Trends:

    Kristin A. Moore

    Mindy E. Scott

    Deana Around Him

    Monica Arkin

    Isabel Griffith

This page has been left blank for double-sided copying.

VII. CONCEPTUAL MODEL FOR ADDRESSING HEALTHY RELATIONSHIPS IN PREP

For the APS conceptual models study, the study team developed conceptual models for the six APSs (adolescent development, educational and career success, financial literacy, healthy life skills, healthy relationships and parent-child communication). The team then developed a unified framework to identify connections across subjects. Together, the models and framework are intended to help ACF support effective programs by providing PREP grantees with guidance on what constitutes adulthood preparation programming, what infrastructure is needed to support it, how such programming should be offered within adolescent pregnancy prevention programs, and what outcomes are anticipated. Each conceptual model draws on the theoretical and empirical research literature. Other sources included consultations with stakeholders and experts; feedback from staff in FYSB and OPRE; and interviews with PREP grantees about their experiences designing and implementing APS programming.

The Family and Youth Services Bureau (FYSB) and the Office of Planning, Research, and Evaluation (OPRE), both within the Administration for Children and Families (ACF), contracted with Mathematica and its partner, Child Trends, to develop conceptual models for the adulthood preparation subjects (APSs) and to determine how they fit within PREP programming.

PREP grantees must adhere to four program requirements: (1) implement evidence-based or evidence-informed curricula; (2) provide education on both abstinence and contraception for the prevention of pregnancy, sexually transmitted infections (STIs), and HIV; (3) educate youth on at least three of six APSs; and (4) focus on high-risk populations, such as youth residing in geographic areas with high teen birth rates, adjudicated youth, youth in foster care, minority youth, and pregnant or parenting teens. PREP grantees are also required to implement a positive youth development (PYD) approach in their programs. Grantees have discretion in how to meet these requirements. This discretion allows them to tailor their programs to fit the needs of the targeted population and their priorities.

The intention of supplementing pregnancy prevention programs with APS content is to further prepare youth for the transition to adulthood. It is hypothesized that incorporating APS content will strengthen the ability of programs to reduce sexual risk behaviors and expand the range of outcomes that programs affect.

This report is a first step toward helping PREP grantees understand issues of integrating and implementing APSs into their programming. The information presented herein reflects grantee perspectives and published literature on the APSs. The primary aim of this report is to provide grantees with a framework to support the implementation of APSs in their projects.

This chapter presents the conceptual model for healthy relationships through a schematic and supporting narrative. It starts by defining healthy relationships (Section A) and briefly describing how the study team developed the conceptual model (Section B). Sections C through H review each component and the supporting literature. Section I describes conclusions and suggests areas for future research.

A. Working definition of healthy relationships

The legislation authorizing PREP provided a limited definition for each APS.[17] To guide the APS study, the study team developed a working definition that built from the language included in the legislation. The study team then shared the working definition with APS consultants,

---

[17] https://www.ssa.gov/OP_Home/ssact/title05/0513.htm.

librarians, and ACF and refined it based on their feedback. The study team continued to refine the working definition throughout the development of the conceptual model based on reviewed literature and feedback from ACF, PREP grantees, and stakeholders. Each APS is multifaceted, with a range of potential applications to youth. The working definition for healthy relationships is:

> Healthy relationships are based on trust, honesty, listening, and respect and allow adolescents to feel supported, connected, and independent. In healthy relationships, adolescents must communicate and establish boundaries. They can learn to communicate, demonstrate empathy, manage conflict, and resist peer pressure. They can learn to recognize the characteristics of healthy (and unhealthy) relationships and develop skills to form healthy relationships and avoid unhealthy ones, including those that involve physical violence, emotional and verbal abuse, and coercion. Adolescents experiencing healthy relationships are less likely to engage in risk-taking behaviors. Such relationships can include peer and romantic relationships, but having healthy relationships with parents, family members, and other adults (guardians and caregivers) is also important and provides a foundation for the skills and behaviors needed to establish healthy relationships and boundaries with peers and partners.

B. Overview of the model development process

The study team developed each APS conceptual model through a multi-step process (described in more detail in [Chapter II](#)). First, they conducted a review of the research literature on each individual APS. Then they held semi-structured interviews with representatives of PREP grantees and providers to understand how they covered each one. Finally, the team solicited feedback on each APS from additional experts and stakeholders through a series of conference calls and semi-structured interviews. Throughout development, staff from FYSB and OPRE provided feedback on the process, and on the evolving content of the developing conceptual models. Next, the study team describes the process of developing the conceptual model for healthy relationships.

Research literature review. The study team started by conducting a targeted review of research literature on healthy relationships. They systematically searched, screened, and reviewed articles and documents, and then extracted and summarized findings using a template that included sections for each intended component of the healthy relationships conceptual model. In total, for healthy relationships, the team reviewed 66

> **Primary keywords:** Healthy relationships
>
> **Secondary keywords:** Relationship building, relationship skills, communication, conflict management, characteristics of a good relationship, friendships, peer relationships, dating, partner violence, building trust, honesty in relationships, respect in relationships, support in relationships, establish boundaries, programming, sexual health

documents. Most were published between 2002 and 2017, but several related to foundational theories were published before 2002. The documents included 22 literature reviews or meta-analyses, 22 empirical studies, four program evaluations or proposed program models, one program implementation report, and 17 other articles (such as resource guides, fact sheets, and research briefs). Literature reviews and meta-analyses may have summarized research published in the 1990s or earlier. Among the documents that included a description on the youth

population, 20 focused on adolescents (ages 13–19), three on young adults (ages 20–30), and 14 on adolescents and young adults.[18] (See <u>Appendix A</u> for a list of references by chapter, and <u>Appendix B</u> for detailed tables describing the literature review process.

Interviews with PREP grantees and providers. The study team interviewed existing PREP grantees and providers about their APS programming and implementation. The interviews addressed APS program design and implementation, curricula or materials used to cover the APSs, and youth receptivity to APS programming. Altogether, the team spoke with 26 respondents from 19 states, across 25 PREP grantees. Respondents represented 16 State PREP, seven Competitive PREP, and two Tribal PREP grantees.[19] On average, respondents reported covering four APSs in their programs, ranging from the required minimum of three subjects to as many as six.

> All 26 grantees interviewed said they covered healthy relationships.

Expert and stakeholder feedback. The study team engaged four groups of experts and stakeholders to provide feedback on the models. These people reviewed the models to ensure they included relevant theories and research on the subject, and that the proposed model could enhance or expand the PREP outcomes, if operationalized as described. Experts and stakeholders represented four groups: (1) experts with content knowledge on specific APSs; (2) State PREP, Competitive PREP, and Tribal PREP grantees; (3) representatives of federal agencies that work on adolescent pregnancy prevention or youth programming related to the APS; and (4) representatives of selected external organizations involved with adolescent pregnancy prevention or youth programming related to the APS.

C. Healthy relationships conceptual model

Figure VII.1 shows the conceptual model for healthy relationships. The definition of healthy relationships and the theory of change are at the top, above the conceptual model. The model includes precursors that influence youth who participate in healthy relationships programming as part of PREP, such as developmental tasks and risk and protective factors. The model also identifies topics for inclusion in programs that address healthy relationships, design and implementation features for PREP programs, and outcomes that may be affected by offering this programming. Outcomes are presented as enhanced and expanded for the PREP program. Enhanced outcomes refers to changes to the outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP: sexual activity; contraceptive use; and incidence of pregnancy and sexually transmitted infections. Expanded outcomes refers to changes in outcomes not related to the prevention of pregnancy and STIs among youth. Sections D through H describe each component of the conceptual model in Figure VII.1, expanding on information contained in the figure, based on the supporting literature. For some components of the conceptual model, the text presents additional detail beyond what is included in the figure.

---

[18] Note that most of the studies reviewed showed associations rather than causal relationships; findings that report correlations cannot be used to infer causality.

[19] As reported in the 2017-2018 PREP performance measures, there are 51 State PREP, 20 Competitive PREP, and eight Tribal PREP grantees.

D. Precursors

The conceptual model starts with three sets of precursors for healthy relationships: developmental tasks, risk factors, and protective factors. Some individual, peer, family, school, and community factors interact and influence how youth develop. These contextual factors often reflect characteristics and experiences that youth bring to a program, but they are not factors that programs should or can expect to change through youths' participation. While not included in the conceptual model figure, programs should consider these factors for their target population and recognize that their relevance may vary, depending on the APS. For healthy relationships, contextual factors to consider are youth and parent demographic and economic characteristics and family structure and dynamics. Contextual factors may encourage youth to avoid negative or risky behaviors, or they may place youth at higher risk for involvement in activities that contribute to poor developmental and behavioral outcomes. Also, certain individual-level factors (such as age, grade level, or sex) may moderate youths' experiences in the program and their outcomes.

The team included developmental tasks to recognize that adolescents start at different places and progress at different rates through expected trajectories that occur in interconnected social, emotional, cognitive, and physical domains. Risk factors make youth more likely to engage in negative behaviors or to harder for them to develop strengths. In contrast, protective factors promote positive development by making youth less likely to engage in negative behaviors and helping them to mitigate risks and promote resilience. Although not specified in the model, promotive factors enhance positive development generally among youth, regardless of any individual, familial, or community risk factors. Promotive factors overlap with protective factors (for example, positive family relationships) but are beneficial for all youth, whereas protective factors come into play in the context of risk (National Research Council and Institute of Medicine 2009). Examples of promotive factors include ethnic identity, social support, and prosocial involvement.

Figure VII.1. Healthy Relationships Conceptual Model

Healthy relationships are based on trust, honesty, listening, and respect and allow adolescents to feel supported, connected, and independent. In healthy relationships, adolescents must communicate and establish boundaries. They can learn to communicate, demonstrate empathy, manage conflict, and resist peer pressure. They can learn to recognize the characteristics of healthy (and unhealthy) relationships and develop skills to form healthy relationships and avoid unhealthy ones, including those that involve physical violence, emotional and verbal abuse, and coercion. Adolescents experiencing healthy relationships are less likely to engage in risk-taking behaviors. Such relationships can include peer and romantic relationships, but having healthy relationships with parents, family members, and other adults (guardians and caregivers) is also important and provides a foundation for the skills and behaviors needed to establish healthy relationships and boundaries with peers and partners.

Theory of Change: To foster healthy relationships throughout adolescence and promote them in young adulthood, PREP programs should support the development of adolescents' (1) knowledge of the characteristics of healthy (and unhealthy) relationships, (2) beliefs that they can create healthy relationships and avoid unhealthy relationships, and (3) skills to form healthy relationships and avoid or remove themselves from unhealthy ones. PREP programming can help build this knowledge, and these beliefs and skills. When these three objectives are achieved in PREP programming, they should be reflected in adolescents' immediate behaviors, and ideally carried forward into young adulthood. Strengthening adolescents' knowledge, beliefs, and skills regarding healthy relationships could help improve overall reproductive health outcomes (for example, decrease in number of sexual partners, increase in abstinence), and outcomes related to fostering healthy reltionships (for example, increased quality of friendships and peer relationships, emotional and social well-being, and positive relationships as adults).

Precursors

Developmental Tasks

- Brain development, self-regulation, social skills development, sexual maturation, communication skills

Risk Factors

- Substance use
- Early dating, older partners, multiple sexual partners
- Family stress
- Family dysfunction
- Sexually active peer group
- Experience of neglect, abuse, or bullying
- Interpersonal and family violence
- Influenced by norms of relationship violence

Protective Factors

- Self-concept clarity
- Goal setting
- Positive peer relationships and influences
- Positive family relationships
- Positive role models
- Religiosity
- Secure attachment to parents, caregivers, and peers

Healthy Relationships Topics

- Recognition of unhealthy/healthy relationships
- Skills for intentional decision making and choices when accepting and/or rejecting a partner
- Respect for self and partner
- Age-appropriate social networks
- Positive relationships with peers
- Communication and conflict resolution skills
- Gender equity/power balance
- Assertive communication about sex and contraception
- Joint responsibility for contraceptive use and STI prevention practices

PREP Program Design and Implementation

- Provide skills training, target younger adolescents, and emphasize positive peer relationships
- Use diverse, accessible settings and tailor programming length to the setting
- Ensure culturally, developmentally, and age-appropriate programming
- Train facilitators to model healthy relationships and respectful communication with each other, as well as with and among youth
- Discuss appropriate online communication through social media
- Leverage youth's use of technology when designing interventions for youth
- Select curricula and staff members who can cover both sexual health and healthy relationships content

Enhanced PREP Outcomes

Short-term	Intermediate	Long-term
	↓ Number of sexual partners	↓ Teen pregnancy
	↑ Abstinence	↓ STIs/HIV
	↑ Condom and contraceptive use	
	↓ Risky sexual behavior	

Expanded PREP Outcomes

Short-term	Intermediate	Long-term
↑ Knowledge and attitudes related to healthy relationships	↑ Emotional and social well-being	↑ Academic achievement
↑ Skills related to healthy relationships	↓ Delinquency and disruptive behaviors	↑ Positive relationships as adults
↑ Quality of friendships and peer relationships	↓ Substance use	
↓ Bullying, violence	↑ Avoidance/safe exit of unhealthy relationships	

85

Developmental tasks. Brains continue to develop, not only in adolescence but throughout life, contributing to the development and refinement of self-regulation, social skills, sexual maturation, and communication skills. Brain development during adolescence enhances the capacity to think more abstractly, self-regulate emotions and behaviors, and take the perspective of others. This development allows youth to establish relationships with open communication, trust, and reassurance more effectively than younger children can. These enhanced social skills are important because adolescents continue to widen their social circles and spend more time with their peers and, eventually, in dating relationships (Farley and Kim-Spoon 2014). Although peer relationships take on greater importance as youth mature, the process of relationship exploration is unique to each individual. Youth progress through various stages at different times, depending on developmental tasks such as hormonal changes, sexual maturation, and social learning (Ayers and Davies 2011). Although some youth feel prepared for intimate relationships, the social skills, self-regulatory abilities, and communication skills necessary to establish healthy relationships are still developing, and therefore youth may need support and guidance to make positive choices.

Risk factors. Some factors may influence one another and place youth at a disadvantage for forming healthy relationships. On the most basic level, poverty and lack of resources for key needs are factors that place adolescents at a greater risk for unhealthy relationships, transactional sex (exchanging sex for money), and unintended pregnancy (Svanemyr et al. 2015). In addition, youth who drink alcohol or use drugs are at risk for both dating aggression and risky sexual behaviors (Ayers and Davies 2011; Claxton and van Dulmen 2013; Lundgren and Amin 2015; Moore et al. 2015). Similarly, youth who begin having sex at younger ages tend to have unhealthy relationships later in adolescence (Cooksey et al. 2002; Giordano et al. 2010). Friendships and peer norms also influence the formation of healthy relationships. For example, having sexually active friends puts young adolescents at a greater risk for forming unhealthy romantic relationships, which are characterized by incidences of violence, jealousy, verbal abuse, cheating, and the perceived power imbalance between partners (Giordano et al. 2010).

Trauma in its various forms can create challenges to forming and maintaining healthy adolescent and adult relationships. Family stress and dysfunction caused by poverty, household instability, neglect and abuse, or poor parenting practices all impede a youth's ability to form healthy relationships (Briggs et al. 2012; Lundgren and Amin 2015; Moore et al. 2015; Tobin and Duncan 2007; Vézina and Hébert 2007). Neglect and abuse, in addition to harsh parenting styles, may hinder emotional development in children and generate mistrust in relationships, creating a greater likelihood of forming unhealthy relationships throughout life (Vézina and Hébert 2007). In addition, being in foster care puts youth at higher risk for engaging in early sex and inconsistently using contraceptives (Scott et al. 2012).

Programs must consider whether youth have been exposed to violence. For instance, experiencing aggression in family or other relationships—as either victim or perpetrator—has been linked to unhealthy, aggressive relationships in adolescence (Card 2010; Center for Assessment and Policy Development and Healthy Teen Network 2006; Josephson and Pepler 2012; Moore et al. 2015; Vézina and Hébert 2007). Furthermore, witnessing conflict and violence between family members can contribute to dysfunction in other relationships later in life (Ayers and Davies 2011; Josephson and Pepler 2012; Lundgren and Amin 2015; Scott et al. 2012; Tobin and Duncan 2007). Exposure to aggression in relationships, whether within the

family or between peers, can contribute to the formation of attitudes condoning aggression. Research indicates that youth who believe that violence is justified or tolerable are more likely to experience intimate partner violence, as either the perpetrator or the victim (Josephson and Pepler 2012; Lundgren and Amin 2015; Vézina and Hébert 2007).

Protective factors. Some factors support youth development to facilitate the creation of healthy relationships. For example, clarity around how youth value and perceive themselves (self-concept) predicts a variety of positive relationship outcomes, including increased romantic relationship satisfaction and commitment. Research has found that increased psychological well-being, self-esteem, and positive identity construction are key mediating variables between self-concept clarity and quality romantic relationships (McIntyre et al. 2017). Defining and emphasizing life and educational goals can also play a protective role. For instance, setting goals and outlining the steps to build healthy relationships with peers, family, and romantic partners can help align youths' decision making with their goals (Moore et al. 2013). Positive relationships with family members (for example, parents, guardians, and caregivers), peers, and role models are protective against negative youth outcomes. Research has found that youths' relationships with parents, friends, and mentors are important precursors of behaviors and attitudes relating to reproductive health, social interactions, and risky behaviors (Roehlkepartain et al. 2017).

Although parents are important, on the subject of dating, adolescents prefer to talk to peers and value their opinions more than those of others; thus, friends are important influences (Briggs et al. 2012). Having secure attachments with close friends may allow youth to express and regulate their emotions (Gorrese 2016).

Role models also set examples for healthy relationships. Research finds that youth who have positive role models are more likely than youth without them to engage in healthy dating behaviors (Briggs et al. 2012). Moreover, youth who are highly involved in religious activities are less likely to be in risky or violent dating relationships (Ayers and Davies 2011; Claxton and van Dulmen 2013; Vézina and Hébert 2007). Some factors can be framed as risk or protective. For example, religiosity is often protective, but it can intersect with factors such as sexual orientation and become a risk.

Research is somewhat inconsistent about the importance of a large peer network. Social isolation is linked to difficulties with self-regulation and engagement in unhealthy relationships (Farley and Kim-Spoon 2014). However, people who are social are more likely to engage in casual sex (Claxton and van Dulmen 2013), and youth are more likely to engage in risky behaviors when their friends or their peers from extracurricular activities do the same. Collectively, this suggests that having high quality peer relationships is important, but peer influences may be problematic for youth who socialize with large groups, particularly those that engage in risky behaviors.

E. Theory of change for healthy relationships

Theory of change

To foster healthy relationships throughout adolescence and promote them in young adulthood, PREP programs should support the development of adolescents' (1) knowledge of the characteristics of healthy (and unhealthy) relationships, (2) beliefs that they can create healthy relationships and avoid unhealthy relationships, and (3) skills to form healthy relationships and avoid or remove themselves from unhealthy ones. PREP programming can help build this knowledge, and these beliefs and skills. When these three objectives are achieved in PREP programming, they should be reflected in adolescents' immediate behaviors, and ideally carried forward into young adulthood. Strengthening adolescents' knowledge, beliefs, and skills regarding healthy relationships could help improve overall reproductive health outcomes (for example, decrease in number of sexual partners, increase in abstinence), and outcomes related to fostering healthy relationships (for example, increased quality of friendships and peer relationships, emotional and social well-being, and positive relationships as adults).

The theory of change for healthy relationships builds on the principle that relationships can (1) shape youths' behaviors (both positive and negative), (2) contribute to identity development, and (3) affect romantic relationships into adulthood (Wildsmith et al. 2013). The influence of romantic relationships on youths' behaviors and future outcomes demonstrates the need for promoting healthy such relationships in PREP. Numerous studies suggest that adolescents may lack knowledge of the characteristics of healthy and unhealthy romantic relationships, frequently have low expectations that they can form healthy romantic relationships, and may lack the knowledge and skills to avoid unhealthy ones. In addition, factors such as poor communication, weak decision-making skills, exposure to violence, and risky sexual behaviors further complicate a youth's ability to develop healthy relationships (Gardner and Steinberg 2005; Giordano et al. 2010; Office of Family Assistance 2012; Wildsmith et al. 2013). Research finds that, when a youth is in a romantic relationship, its dynamics often influence sexual health behaviors within the partnership, such as consistent contraceptive use and communication about safe sex practices (East et al. 2007). These behaviors have implications for outcomes related to the prevention of pregnancy and STIs or HIV. Based on these findings, programming should aim to help adolescents develop (1) knowledge of the characteristics of healthy and unhealthy relationships, (2) beliefs that healthy relationships are important and attainable, and (3) skills to form healthy relationships and avoid and remove themselves from unhealthy ones (Child Trends 2014).

Many theoretical frameworks inform how the characteristics of adolescents' early relationships shape their future relationships, as well as behaviors and outcomes in other domains, including outcomes related to the prevention of pregnancy and STIs among youth. Attachment theory, for example, proposes that children's initial relationships with their parents or other caregivers provide a model for future peer and romantic relationships (Bowlby 1969, 1973, 1980; Hazan and Shaver 1987; Waters et al. 2000). The lifespan developmental perspective proposes that the consequences of dating experiences (both positive and negative) among adolescents can affect the quality of their adult relationships (Caspi 1987; Elder 1998). These theories promote understanding of how adolescents develop their beliefs, attitudes, and behaviors regarding romantic relationships. In addition, researchers propose that relationship dynamics change as youth progress through the stages of a relationship (Farley and Kim-Spoon 2014). When children are younger, they attach to and depend on their parents, but when they grow older, they tend to depend on their peers and then their dating partners (Connolly et al. 2004; Connolly et al. 2000; Nickerson and Nagle 2005). Furthermore, the quality of new relationships builds on the quality

of older ones. Findings suggest that adolescents with higher quality parent and peer relationships have more committed, intimate romantic relationships (Farley and Kim-Spoon 2014). When promoting positive knowledge, beliefs, and behaviors in programming, one must consider how adolescents' previous experiences and other spheres of influence contribute to their decisions and actions related to romantic relationships.

As discussed above, research suggests that peers can strongly influence adolescents' decisions and behaviors in romantic and sexual relationships. Adolescents often talk to peers about their dating experiences, and most value their peers' opinions (Briggs et al. 2012). If the peer group accepts and endorses dating violence and aggression, the strength of the peer networks may well have negative implications for youth, as they will be more likely to engage in violent dating relationships (Briggs et al. 2012). Adolescents' romantic relationships are influenced by peer and social networks, and PREP programs should incorporate components that address how to promote positive relationships within both spheres.

Decision making plays an important role in adolescent relationships, so decision-making theories are relevant to the theory of change for healthy relationships. Programs that want to understand and shape adolescent choices can consider two broad approaches to adolescent decision making: (1) focus on the factors that shape behavior goals and decision making, such as social pressures to perform a behavior, including approval and disapproval from important persons in the adolescent's life (for example, parents) and perceptions of what peers are doing; and (2) focus on the steps in the decision-making process and the skills needed to apply thoughtful decision analysis. For example, programs may engage youth in role playing a situation that requires them to make a quick but high-risk decision prior to facing the situation in real life (National Research Council and Institute of Medicine 2004). While youth do not always have a choice in what happens to them, key takeaways for programs are that decision making is a multi-step process influenced by internal and external factors, and programs can support healthy adolescent decision-making through their programming activities.

Healthy adolescent romantic relationships serve as a precursor for relationships during early adulthood (Karney et al. 2007). Empirical evidence connecting adolescent and early adulthood romantic relationships is limited by a lack of longitudinal research. However, research finds that high quality adolescent romantic relationships may be associated with positive relationships and relationship commitment in early adulthood. Longer such relationships may prepare youth for higher quality romantic relationships in early adulthood (Collins et al. 2009; Karney et al. 2007).

In contrast, engaging in unhealthy romantic relationships has implications for youths' immediate beliefs, attitudes, and behaviors and the quality of future romantic relationships. The literature finds that the occurrence of interpersonal violence (defined as any intent or action taken to control one's partner) within a dating relationship increases the likelihood that either victimization or perpetration of violence will occur in future relationships (O'Leary and Smith Slep 2003). Based on these findings, programming should emphasize how to develop healthy relationships and how to identify characteristics of—and avoid—unhealthy relationships during adolescence and into young adulthood.

F. Healthy relationship topics

Based on the research review, the study team identified several topics that programs should incorporate as valuable for healthy relationships:

- **Recognition of unhealthy/healthy relationships** refers to youths' ability to identify such relationships by their characteristics. Beyond the ability of youth to recognize those characteristics, healthy relationship programs should aim to help youth develop the skills and self-efficacy to form a healthy relationship and to avoid or remove themselves from an unhealthy one (Child Trends 2014). In addition, research suggests that youth desire guidance from parents, educators, and other influential adults on how to navigate healthy relationships and avoid unhealthy ones (Weissbourd et al. 2017).

- **Skills for intentional decision making and choices when accepting or rejecting a partner** refers to youth making informed and intentional healthy decisions when selecting a potential romantic and/or sexual partner. Research indicates that adolescents and young adults often feel unprepared to form caring, lasting relationships and desire guidance from their parents, educators, and other influential adults. Based on this finding, researchers recommend that parents and educators have open discussions with youth to help them understand the characteristics of mature love as opposed to other forms of intense attraction (such as infatuation), which often influence youths' choice of partner (Weissbourd et al. 2017). Moreover, research suggests that youth who make certain choices, such as having multiple sexual partners, often do not use contraception and are at risk for STIs (Kelley et al. 2003). Encouraging youth to develop knowledge of their own values and future goals can protect against unhealthy relationships and risky health behaviors (Lewandowski et al. 2010). Programs should discuss the various types of romantic relationships, encourage youth to be aware of the type they are seeking, and provide youth with skills to make level-headed choices when selecting a partner.

- **Respect for self and partner** refers to youth having a positive regard for themselves and their sexual or romantic partners. One study recommended that relationship programming should conceptualize and elaborate on self-respect and respectful behaviors toward one's partner (Weissbourd et al. 2017). For instance, educators could discuss specific examples of caring for oneself and for one's partner, drawing from depictions in books and media that show how thoughtful, self-aware adults manage common challenges and conflicts. Furthermore, educators could use those examples to engage in discussions with youth and provide them with skills on how to develop and maintain healthy relationships with one another and their partners (Weissbourd et al. 2017).

- **Age-appropriate social networks** refers to youth forming friendships with peers in their age range and engaging in activities appropriate to their development. One study that examined friendship and dating patterns among young adolescents (ages 13–14) indicated that youth having friends in higher grades or "going steady" with anyone was associated with earlier sexual initiation (Cooksey et al. 2002). In addition, a review of literature on the prevalence of adolescent dating violence suggests that some youth seek dating relationships before they are developmentally ready, which puts them in the position of being unprepared for the social, emotional, and psychological effects of involvement in intimate relationships (Ayers and Davies 2011). Programs could include components that

encourage youth to form positive and healthy social networks appropriate to their developmental stage. Because most youth use technology and access online social network sites, programs should consider including information on how to safely use dating applications, text services, and other online resources.

- **Positive relationships with peers** refers to youth engaging in healthy communication and prosocial behaviors with their peers. Although parents remain an important influence, peers become more relevant during adolescence, and research finds that peer opinions and norms can be more influential than parents for some behaviors (Briggs et al. 2012). In addition, research supports that antipathetic relationships among peers, which are characterized by mutual dislike, are associated with numerous negative outcomes, including rejection by peers, low positive peer regard, and fewer friendships (Card 2010). These findings demonstrate the importance of promoting positive peer-to-peer relationships and communication in programming.

- **Communication and conflict resolution skills** refers to youth having the ability to effectively communicate and manage stressful situations within their close relationships, such as with friends, family, and co-workers. Research findings suggest that many adolescents lack adequate problem-solving and conflict resolution skills, which are important to ensure that close relationships do not become violent (Ayers and Davies 2011). Frequent verbal conflict is associated with violence in romantic relationships (Giordano et al. 2010), and skills such as clear communication, active listening, cooperation, and conflict resolution can be helpful in preventing violence in these relationships, and could prevent bullying (Lawner and Terzian 2013). Further, the nature and content of communication among partners is important (Giordano et al. 2010; Holcombe et al. 2008). For instance, when sexually active youth communicate about sex and contraception with their partners, they are more likely to use condoms (Widman et al. 2014; Markham et al. 2010). These findings demonstrate the importance of having a component of programming that focuses on providing youth with the skills and self-efficacy to communicate effectively and manage conflict within their sexual or romantic partnerships. Although the studies reviewed are limited to intimate relationships, these skills may also benefit youth in other close relationships.

- **Gender equity/power balance** refers to partners, including both heterosexual and same-sex partners, having an equal share of power, responsibility, and ability to communicate their needs and concerns within a relationship. Numerous research findings suggest that societal and cultural norms perpetuate male dominance and female passivity in sexual encounters, which could hinder consistent contraceptive use, result in unsafe sexual practices, and lead to fear of emotional or physical abuse (East et al. 2007; Tang et al. 2001; Ehrhardt et al. 2002). In a national study of adolescents and young adults, almost half the respondents reported that they do not perceive gender-based degradation to be a problem in our society, despite 87 percent of female respondents indicating at least one experience of misogyny, sexual harassment, or other forms of gender-based degradation in their lifetime (Weissbourd et al. 2017). Programs should emphasize the importance of incorporating components that promote gender-equitable norms within relationships and in society.

- **Assertive communication about sex and contraception** refers to youth being able to effectively communicate their needs and concerns regarding sex and contraceptive use in a relationship. This includes skills to guard against possible reproductive coercion, violations of consent, and other unhealthy situations and instead to promote healthy relationship dynamics. While assertive communication applies to youth of all genders, research supports that male dominance and female passivity in sexual encounters are likely to hinder women's ability to negotiate contraceptive use and limit their assertiveness (East et al. 2007). Programs may consider providing youth with skills reflective of clear, assertive communication on topics such as consent, refusal of sex, and exiting unhealthy relationships, each with an emphasis on gender-equitable concepts and norms.

- **Joint responsibility for contraceptive use and STI/HIV prevention practices** refers to both partners promoting regular contraceptive use within their relationship. For example, these behaviors may include asking a partner to be tested for STIs (including HIV), reminding a partner to use a birth control method on a regular basis, looking for information on contraceptives with their partner, and, if possible, going with their partner to a doctor or clinic for clinical services to obtain contraceptives. Research findings suggest that consistent condom use among couples declines as the relationship progresses and may be hindered by feelings of mistrust within adolescents' relationships (Civic 2000; Kirkman et al. 1998). In addition, male partners sometimes believe that contraception is the woman's responsibility. Findings demonstrate that this attitude is a significant barrier to condom use (Skidmore and Hayter 2000; Flood 2003). Therefore, programs should emphasize the importance of both partners being involved in decision making about contraceptive use for both pregnancy and STI/HIV prevention, and encourage consistent contraceptive and prevention practices throughout their relationship. In addition, programs should provide youth with practical negotiation skills related to contraception and STI/HIV prevention within their relationships.

Grantees and providers teaching healthy relationships also noted multiple topics covered under this APS, including decision making and communication in relationships, dating violence, staying safe in relationships, what unhealthy relationships look like, age of consent, what consent looks like, sexual orientation and identity, and sex trafficking.

G. Program design and implementation

PREP grantees will need to consider how and when to provide healthy relationships programming. Designing and implementing this APS will require that grantees choose who should deliver the content, when to deliver this information, and how to teach it so that youth can absorb it to the greatest extent possible.

The study team identified seven design considerations for healthy relationships:

1. **Provide skills training, target younger adolescents, and emphasize positive peer relationships.** To be effective, programs should provide youth with skills training to practice healthy relationship skills (Poobalan et al. 2009). One PREP grantee mentioned that they host a "date night" on which they provide youth with skills on how to have a fun and safe date free of alcohol and drugs. Programs should also try to reach youth when they are young, ideally before they are sexually active (Poobalan et al. 2009; Svanemyr et al. 2015). Programs also benefit from focusing on positive peer-to-peer communication and strong friendships, particularly when they are working with younger populations who may not yet be engaged in romantic relationships (Briggs et al. 2012; Jeon and Goodson 2015; Svanemyr et al. 2015). Furthermore, several PREP grantees shared that they cover content on how to establish and maintain healthy relationships with friends, family, work colleagues, and acquaintances.

2. **Use diverse, accessible settings and tailor programming length to the setting.** To serve youth across diverse backgrounds, multiple authors recommended providing programming in a wider array of settings than just schools (Ayers and Davies 2011; Child Trends 2014; De Koker et al. 2014). One report on healthy relationship education for youth explained that, when schools partner with community-based organizations to deliver programming, it increases flexibility for students, strengthens community support, and boosts the ability to reach at-risk youth by expanding access outside schools (Scott et al. 2017). For example, youth who have dropped out of school or are suspended/expelled will not be reached in school-only settings, and they might be the ones most in need of healthy relationship education (Ayers and Davies 2011). The settings should also be accessible to youth, with transportation provided both ways if necessary (Child Trends 2014). When possible, healthy relationship education should also be provided over a relatively long duration and with multiple sessions; reviews of evaluations of intimate partner violence prevention, adolescent pregnancy prevention, and healthy marriage and relationship education curricula have found that longer programs are more often effective (De Koker et al. 2014; Svanemyr et al. 2015; Lundgren and Amin 2015; Child Trends 2014). Child Trends (2014) recommended at least 12 sessions for school-based programs over a period of 3–6 months. For out-of-school programs, they suggest a shorter, more intensive duration to account for retention issues that are more frequently faced by programs not operating in a school. PREP grantees shared that they often implemented shorter curricula for transient populations (for example, court-system-involved or homeless youth), youth in residential treatment centers, and pregnant or parenting youth. The grantees expressed that, with limited time to deliver content to these populations, it was important to use a curriculum that covered both sexual health and the APS content in a short time.

3. **Ensure culturally, developmentally, and age-appropriate programming.** Some healthy relationship education programs were adapted from programs originally designed for and tested with adults; therefore, they may need further adaptation and testing for youth (Karney et al. 2007). In addition, programs should ensure that their material is culturally tailored to the populations they serve. For example, Malhotra et al. (2015) note that one effective program to prevent dating violence among adolescents adapted its curriculum for Hispanic families by including joint sessions with youth and

their families after Hispanic adolescents expressed this preference in focus groups. Karney et al. (2007) note that providing culturally appropriate curricula can be difficult and that programs will likely need help in tailoring curricula to the target population. Some PREP grantees said that their programs tailored content or discussion topics by age, gender, or the needs or interests of a group. The decision to tailor content to youth based on their individual characteristics, such as age or developmental level, may help to ensure that the curriculum addresses their needs (Scott et al. 2017). For instance, this may include reviewing a curriculum to ensure that it is sensitive to the circumstances of diverse youth, such as pregnant and parenting youth or youth who have experienced trauma (Poobalan 2009).

4. **Train facilitators to model healthy relationships and respectful communication with each other, as well as with and among youth.** Youth may know what a healthy relationship should look like, but they might never have seen one (Guzman et al. 2009). Facilitators should be encouraged to find positive examples in books, television, and film to demonstrate characteristics of healthy relationships (Weissbourd et al. 2017) and to use language and resources that are inclusive of diverse subgroups. For example, PREP grantees described reviewing program content to ensure it represents diverse youth and discussing how circumstances may vary for different groups of youth as they plan role-plays and other activities. In addition, research on healthy marriage and healthy relationship programming for youth finds that utilizing "active sessions" during curriculum delivery is a promising approach to educating youth about healthy relationships. Examples of such sessions include role-playing, skits, and journaling activities (Scott et al. 2017). Facilitators should also be encouraged to model behaviors such as appropriate boundary setting and reflection on one's own emotions in relationships with program participants and staff. Youth who have positive role models are more likely to engage in healthy dating behaviors (Briggs et al. 2012). In addition, facilitators should be trained to intervene whenever they witness degrading language or behavior between youth. If facilitators do not step in, it may be perceived by youth as permission for the behavior to continue (Weissbourd et al. 2017).

5. **Discuss appropriate online communication through social media.** Social media and the use of other technology are important means of communication in youth relationships (Lenhart et al. 2015). However, online communication can expose youth to inappropriate content or behaviors such as graphic sexual imagery and unwanted sexual solicitations. Exposure to this content online is correlated with increased sexual risk (Kachur et al. 2013). Programs have the opportunity to teach youth about the dangers of online communication, especially with people they do not know, and promote positive aspects of online communication and social media. For example, social media could be a mechanism for engaging families of program participants and a way to connect youth to resources and supports when access in their community is limited (Guilamo-Ramos et al. 2015). Several PREP grantees reported that they taught lessons or led discussions about social media or technology as a part of their programming. Specifically, topics included (1) identifying social media outlets youth are using and the appropriate use of each, and (2) applying critical-thinking skills to social media and practices such as "sexting."

6. **Leverage youths' use of technology when designing interventions for youth.** Many programs have responded to the increase in youth online activity by incorporating

technology into their programming. Program staff can model how technology can foster and support healthy relationships by using it in their communication with participants and their families. A few PREP grantees expressed that they delivered some programming with iPads or a through a web-based format. One grantee mentioned that they used social media platforms (for example, Snapchat, Facebook, and Instagram) to engage with the youth in their program. Studies provide preliminary evidence that utilizing social media and text messaging to reach youth can increase knowledge regarding the prevention of STIs (Jones et al. 2014). Interventions that utilize digital and social technology can increase accessibility by allowing youth to access content at convenient times, anonymously, and in private locations (Strasburger and Brown 2014).

7. **Select curricula and staff members who can cover both sexual health and healthy relationships content.** PREP grantees indicated that they typically used a curriculum for the prevention of pregnancy and sexually transmitted infections among youth that also included APS content. Further, although some facilitators specialized in either sexual health or APSs, most grantees used the same staff to deliver both types content. Selecting a curriculum that combines sexual health and APS content helped maintain student interest and allowed programs to be more efficient with their time. Staff who deliver both sexual health and healthy relationships content may cover topics that overlap with each other. For instance, one PREP grantee mentioned that their program delivers content on the age of consent, what sexual consent looks like, and the legality of sexting.

H. Outcomes

The reviewed literature suggested several outcomes that might be realized by addressing healthy relationships. The study team organized outcomes into two categories—enhanced and expanded—based on whether they focus on changes the core outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP (enhanced) or outcomes not related to the prevention of pregnancy and STIs among youth (expanded). The model is limited to outcomes supported by the literature review. The outcomes are relevant to both casual relationships and committed romantic and sexual relationships.

The team further organized outcomes as short-term, intermediate, and long-term. *Short-term* outcomes are observed directly following a program. Typically, such outcomes include initial changes in knowledge and attitudes, but they can include more immediate behavior changes. *Intermediate* outcomes, the step between short- and long-term outcomes, can include improved skills or changes in behavior that result from the acquisition of new knowledge and skills. Programs can expect to see these outcomes six months to a year after completion. *Long-term* outcomes are those one would expect to see a year or more after program completion. Depending on when youth attend the program, this could be during middle or high school or even after high school, in young adulthood (beyond which the model does not identify outcomes). The reviewed literature did not include articles on the effects of healthy relationship programming in adulthood.

Enhanced outcomes. Programs that incorporate healthy relationship education might affect outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP, either directly or indirectly through the expanded outcomes described in the subsequent section. In the

short-term, it is expected that incorporating healthy relationship education will primarily impact changes in knowledge, attitudes, and skills related to healthy relationships, as described in the expanded outcomes. The study team did not find research that examined short-term knowledge and attitudes specifically about pregnancy and STI prevention, so none are included in the model.

Intermediate enhanced outcomes that might be affected by positive relationships with peers and partners include fewer sexual partners, increased chance of practicing abstinence or use of contraception, and reduced risky sexual behaviors, such as being sexually active under the influence of alcohol or drugs. Reduced risky sexual behaviors is associated with positive role models (Briggs et al. 2012). In contrast, dating violence is associated with an increased number of sexual partners, increased alcohol use, and riskier sexual behavior (Claxton and van Dulmen 2013). Having stronger relationships with romantic partners has been found to be associated with increased abstinence (Markham et al. 2010), though these findings vary by race and gender. Specifically, Markham et al. (2010) identified two longitudinal studies that found a protective association between emotional commitment to a partner and abstinence. One of these studies found the association for African American males only (emotional commitment was found to be a risk factor for sexual initiation among white, Asian, and Hispanic males and for females), and another study reported a protective association for emotional commitment among females but not males. In addition, Manlove et al. (2004) found that associations between relationship commitment and contraceptive use vary by gender. For example, contraceptive use was more likely among males who reported a greater connection to their partners before having sex. However, the odds of ever or consistent contraceptive use among females was lower for those in romantic versus nonromantic relationships (Manlove et al. 2004).

In general, youth who have only a single romantic relationship are more likely to use condoms compared with youth who have multiple, concurrent, or sequential romantic relationships where issues such as alcohol use and low self-efficacy to use contraceptives may contribute to sexual risk (Kelley et al. 2003).Youth who have only a single romantic relationship are also less likely than youth in sequential or concurrent sexual relationships to contract STIs in the long-term (Kelley et al. 2003). Furthermore, youth in foster care who demonstrate healthy relationship skills also are less likely to become pregnant (Scott et al. 2012). In contrast, intimate partner victimization is associated with increased unintended pregnancy and increased risk of STIs (Moore et al. 2015; Ayers and Davies 2011).

Expanded outcomes. The literature suggests that incorporating healthy relationship topics in PREP may also result in changes to outcome domains beyond a youth's sexual health. One of the most immediate outcomes expected is that youth may improve their knowledge and attitudes regarding healthy relationships. This includes attitudes against intimate partner violence, their skills to develop and maintain healthy relationships, such as being able to identify characteristics of healthy/unhealthy romantic relationships, and communication and conflict management skills (Lundgren and Amin 2015; Office of Family Assistance 2012). Other short-term outcomes expected are that the quality of their friendships and peer relationships will improve, while the incidence of bullying and violence among peers will decrease (Josephson and Pepler 2012).

In turn, these outcomes may lead to better emotional and social well-being, decreased delinquency and disruptive behavior, decreased substance use, and avoidance of or safe exit from

unhealthy relationships as intermediate outcomes. Positive relationships (peer and romantic) are also associated with increased self-awareness and emotion regulation (Gorrese 2016; Roehlkepartain et al. 2017). Poor-quality relationships, including bullying, are associated with increased internalizing behaviors, including depression, anxiety, and suicidal ideation (Ayers and Davies 2011; Card 2010; Tobin and Duncan 2007). Poor-quality peer relationships are also associated with delinquency and disruptive behaviors, a result in part of adolescents avoiding school or participating in other environments where bullying and other negative interactions occur (Tobin and Duncan 2007). Therefore, increasing relationship quality with peers may lead to decreased delinquency and disruptive behaviors. In addition, Briggs et al. (2012) found that having a positive role model is associated with a decreased risk of substance use.

In the long term, research suggests that healthy relationship education is expected to lead to increased academic achievement and more positive relationships as young adults. Specifically, when youth have more positive relationships, they have fewer unexcused absences from school, which often leads to improved academic outcomes (Briggs et al. 2012; Farley and Kim-Spoon 2014; Roehlkepartain et al. 2017). The literature finds that negative and violent relationships can lead to worse outcomes later in life. For example, youth who experience victimization are more likely to be victims of interpersonal violence as adults (Ayers and Davies 2011). In addition, bullying perpetration is a risk factor for verbal and physical aggression in early romantic relationships, which in turn is a risk factor for intimate-partner violence among adults (Josephson and Pepler 2012). Preventing these negative experiences can help improve relationships during young adulthood. Furthermore, having the skills to manage healthy romantic relationships has been linked to better quality and greater stability of relationships during young adulthood among vulnerable youth in foster care (Scott et al. 2012). This finding further supports the idea that promoting healthy relationships (as opposed to just preventing or avoiding unhealthy ones) will also lead to positive long-term outcomes.

I.   Conclusions

Overall, programming to enhance healthy relationships has important implications for adolescent peer and romantic relationships, as well as pregnancy and STI prevention and a host of other outcomes that contribute to both immediate and long-term well-being. More research is needed that considers the importance of healthy relationships in combination with the importance of avoiding dysfunctional relationships. Most research studies currently focus either on the avoidance of violence (for example, dating/intimate partner violence, or bullying) or on promoting positive features (for example, communicating effectively). In practice, these two constructs are not distinct and programs that focus on violence prevention may offer content that is complementary to programs that focus on healthy relationships. Similarly, research that focuses on improving relationships seldom considers outcomes outside romantic relationships, such as relationships with peers. Peer and romantic relationships are often studied separately, though peers clearly influence romantic relationships and vice versa. Additional research is needed to identify outcomes for some of the most vulnerable youth populations (for example, homeless and runaway youth, youth who trade sex or are sexually trafficked) or other youth subpopulations, such as youth in foster care or youth in single-parent homes. Also, research is needed on the topic of social media and digital technology, and the ways in which interactions with these platforms can influence short- and long-term outcomes.

This page has been left blank for double-sided copying.

VIII. CONCEPTUAL MODEL FOR ADDRESSING PARENT-CHILD COMMUNICATION IN PREP

Mathematica:

Elizabeth Clary

Heather Zaveri

Christopher Jones

Katie Eddins

Katie Adamek

Child Trends:

Kristin A. Moore

Mindy E. Scott

Deana Around Him

Monica Arkin

Isabel Griffith

This page has been left blank for double-sided copying.

VIII. CONCEPTUAL MODEL FOR ADDRESSING PARENT-CHILD COMMUNICATION IN PREP

For the APS conceptual models study, the study team developed conceptual models for the six APSs (adolescent development, educational and career success, financial literacy, healthy life skills, healthy relationships and parent-child communication). The team then developed a unified framework to identify connections across subjects. Together, the models and framework are intended to help ACF support effective programs by providing PREP grantees with guidance on what constitutes adulthood preparation programming, what infrastructure is needed to support it, how to offer such programming within adolescent pregnancy prevention programs, and what outcomes are anticipated. Each conceptual model draws on theoretical and empirical literature. Other sources included consultations with stakeholders and experts; feedback from staff in FYSB and OPRE; and interviews with PREP grantees about their experiences designing and implementing APS programming.

> The Family and Youth Services Bureau (FYSB) and the Office of Planning, Research, and Evaluation (OPRE), both within the Administration for Children and Families (ACF), contracted with Mathematica and its partner, Child Trends, to develop conceptual models for the adulthood preparation subjects (APSs) and to determine how they fit within PREP programming.
>
> PREP grantees must adhere to four program requirements: (1) implement evidence-based or evidence-informed curricula; (2) provide education on both abstinence and contraception for the prevention of pregnancy, sexually transmitted infections (STIs), and HIV; (3) educate youth on at least three of six APSs; and (4) focus on high-risk populations, such as youth residing in geographic areas with high teen birth rates, adjudicated youth, youth in foster care, minority youth, and pregnant or parenting teens. PREP grantees are also required to implement a positive youth development (PYD) approach in their programs. Grantees have discretion in how to meet these requirements. This discretion allows them to tailor their programs to fit the needs of the targeted population and their priorities.
>
> The intention of supplementing pregnancy prevention programs with APS content is to further prepare youth for the transition to adulthood. It is hypothesized that incorporating APS content will strengthen the ability of programs to reduce sexual risk behaviors and expand the range of outcomes that programs affect.
>
> This report is a first step toward helping PREP grantees understand issues of integrating and implementing APSs into their programming. The information presented herein reflects grantee perspectives and published literature on the APSs. The primary aim of this report is to provide grantees with a framework to support the implementation of APSs in their projects.

This chapter presents the conceptual model for parent-child communication through a schematic and supporting narrative. It starts by defining parent-child communication (Section A) and briefly describing how the study team developed this model (Section B). Sections C through H review each model component and the supporting research literature. Section I describes conclusions and suggests areas for future research.

A. Working definition of parent-child communication

The legislation authorizing PREP provided a limited definition for each APS.[20] To guide the APS study, the study team developed a working definition that built from the language included in the legislation. The study team then shared the working definition with APS consultants, librarians, and ACF and refined it based on their feedback. The study team continued to refine

---

[20] https://www.ssa.gov/OP_Home/ssact/title05/0513.htm.

the working definition throughout the development of the conceptual model based on reviewed literature and feedback from ACF, PREP grantees, and stakeholders. Each APS is multifaceted, with a range of potential applications to youth. The working definition focuses on how the subject applies to PREP. The working definition for parent-child communication is:

> Exchanges, between parents (or caregivers) and children, of information, opinions, concerns, or advice, either verbal or nonverbal (such as hugging, sharing quality time, and parental modeling). Effective communication begins during infancy and involves trust, empathy, honesty, sharing of accurate information, and willingness to listen and participate in a two-way conversation. Ongoing, positive parent-child communication has a critical influence on youth development, feelings of connectedness, and resiliency.

Note that relatives or trusted adults can assume the role of parent or caregiver. In fact, PREP grantee interviews revealed that several providers expanded their definition of *parents* to include trusted adults. This occurred for grantees serving Tribal youth, youth in foster care, and youth involved with the juvenile justice system, as well as others. In other instances, youth may have to navigate relationships with multiple adults who are in caregiving roles. For example, a youth in foster care may have simultaneous relationships with a foster parent and a biological parent. When possible, we have included discussion of the role of both parents and caregivers or others serving in a parental role. However, much of the research literature reviewed for this study focuses on parents and might not support expansion to other caregivers and trusted adults.

B. Overview of the model development process

The study team developed each APS through a multi-step process (described in more detail in Chapter II). First, they conducted a review of the research literature on each individual APS. Then they held semi-structured interviews with representatives of PREP grantees and providers to understand how they covered each APS. Finally, the team solicited feedback on each APS from additional experts and stakeholders through a series of conference calls and semi-structured interviews. Throughout development, staff from FYSB and OPRE provided feedback on the process, and on the evolving content of the developing conceptual models. Next, the study team describes the process of developing the conceptual model for parent-child communication.

Research literature review. The study team started by conducting a targeted review of the research literature on parent-child communication. They systematically searched, screened, and reviewed articles and studies, and then extracted and summarized findings using a template that included sections for each intended component of the parent-child

Primary keywords: Parent-child communication
Secondary keywords: Conversation, communication, parent-child relationships, sexual decision-making, sexuality, parents' beliefs about sex, youth sexual development, parental monitoring, knowledge of parents' expectations, knowledge of reproductive health, programming

communication conceptual model. In total, for parent-child communication, the team reviewed 47 documents, published from 2002 through 2016: five research literature reviews or meta-analyses, 25 empirical studies, four program evaluations, and 13 other articles (such as resource guides, fact sheets, and research briefs). Among the documents that indicated a description on the population of youth, 26 focused on adolescents (ages 13–19), and three focused on young

adults (ages 20–30).[21] (See Appendix A for a list of references by chapter, and Appendix B for detailed tables describing the literature review process.)

Interviews with PREP grantees and providers. The study team interviewed existing PREP grantees and providers about their APS programming and implementation. The interviews addressed APS program design and implementation, curricula or materials used to cover the APSs, and youth receptivity to APS programming. Altogether, the team spoke with 26 respondents from 19 states, across 25 PREP grantees. Respondents represented 16 State PREP, seven Competitive PREP, and two Tribal PREP grantees.[22] On average, respondents reported covering four APSs in their programs, ranging from the required minimum of three subjects to as many as six.

> Fifteen grantees interviewed said they covered parent-child communication.

Expert and stakeholder feedback. The study team engaged four groups of experts and stakeholders to provide feedback on the models. These people reviewed the models to ensure that they included all relevant theory and research on the topics, and that the topics could enhance or expand PREP outcomes if operationalized as described. Experts and stakeholders represented four groups: (1) experts with content knowledge on specific APSs; (2) State PREP, Competitive PREP, and Tribal PREP grantees; (3) representatives of federal agencies that work on adolescent pregnancy prevention or youth programming related to the APS; and (4) representatives of selected external organizations involved with adolescent pregnancy prevention or youth programming related to the APS.

C. Parent-child communication conceptual model

Figure VIII.1 shows the conceptual model. The definition of parent-child communication and the theory of change are at the top, above the model. The model includes precursors that influence youth who participate in parent-child communication instruction as part of PREP, such as developmental tasks and risk and protective factors. It also identifies topics for inclusion in programs that address parent-child communication, design and implementation features for PREP programs, and outcomes that might be affected by offering this programming. Outcomes are presented as enhanced and expanded for the PREP program. Enhanced outcomes refers to changes to the outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP: sexual activity; contraceptive use; and incidence of pregnancy and STIs. Expanded outcomes refers to changes in outcomes not related to the prevention of pregnancy and STIs among youth when content, lessons, or instruction for parent-child communication are added to PREP. Sections D through H describe each component of the conceptual model in Figure VIII.1, expanding on information in the figure based on the supporting literature. For some components of the conceptual model, the text presents additional detail beyond what is included in the figure.

---

[21] Note that most of the studies reviewed showed associations rather than causal relationships; findings that report correlations cannot be used to infer causality.

[22] As reported in the 2017-2018 PREP performance measures, there are 51 State PREP, 20 Competitive PREP, and eight Tribal PREP grantees.

D. Precursors

The conceptual model starts with three sets of precursors for parent-child communication: developmental tasks, risk factors, and protective factors. Some individual, peer, family, school, and community factors interact and influence how youth develop. These contextual factors often reflect characteristics and experiences that youth bring to a program, but they are not factors that programs should or can expect to change through youths' participation in programming. While not included in the conceptual model figure, programs should consider these factors for their target population and recognize that their relevance may vary, depending on the APS. For parent-child communication, contextual factors to consider are youth and parent demographics (Maria et al. 2014; Kirby and Lepore 2007) and economic characteristics (Kirby and Lepore 2007), parent-child gender dynamics (Afifi et al. 2008; Harris et al. 2013), family cultural beliefs and customs (Afifi et al. 2008; Guilamo-Ramos and Bouris 2008), family complexity (such as non-traditional households) (Kirby and Lepore 2007) and youth sexual orientation (Thoma and Huebner 2014). In some cases, contextual factors can encourage youth to avoid negative or risky behaviors, and in other circumstances, these factors may place youth at higher risk for involvement in activities that contribute to poor developmental and behavioral outcomes. Further, certain individual-level factors (such as age, grade level, or sex) can moderate youths' experiences in the program and affect their outcomes.

The team included developmental tasks to recognize that adolescents start at different places and progress at different rates through expected trajectories that occur in interconnected social, emotional, cognitive, and physical domains. Risk factors make youth more likely to engage in negative behaviors or harder for them to develop strengths, while protective factors make youth less likely to engage in negative behaviors, mitigate risks, and promote resilience. Although not specified in the model, promotive factors enhance positive development generally among youth, regardless of any individual, familial, or community risk factors. Promotive factors overlap with protective factors (for example, positive family relationships), but are more generally beneficial for all youth, whereas protective factors come into play in the context of risk (National Research Council and Institute of Medicine 2009). Examples of promotive factors include ethnic identity, social support, and prosocial involvement.

Developmental tasks. The brain continues to develop, not only in adolescence, but all throughout life, contributing to ongoing refinement of social skills, the ability to plan for the future, and goal-setting. Brain development during adolescence enhances the capacity to think abstractly, self-regulate emotions, and take the perspective of others, allowing youth (more so than younger children) to establish relationships with open communication, trust, and reassurance. These enhanced social skills are important, because adolescents continue to widen their social circles and spend more time with peers. At the same time, adolescents still depend on parents, guardians, and caregivers for care, affection, and help learning about effective decision making.

Figure VIII.1. Parent-Child Communication Conceptual Model

Parent-child communication is exchanges, between parents (or caregivers) and children, of information, opinions, concerns, or advice, either verbal or nonverbal (such as hugging, sharing quality time, and parental modeling). Effective communication begins during infancy and involves trust, empathy, honesty, sharing of accurate information, and willingness to listen and participate in a two-way conversation. Ongoing, positive parent-child communication has a critical influence on youth development, feelings of connectedness, and resiliency.

Theory of Change: PREP programs should address parent-child communication as a component of the parent-child relationship. Providing youth and their parents and caregivers with education, guidance, and skills on how to communicate openly about sexual health may lead to improvements in adolescents' enhanced and expanded outcomes. By teaching and encouraging positive and proactive communication, PREP programs may influence the beliefs and behaviors of youth, and their parents and caregivers, related to open, accurate, and age-appropriate communication about sexual behaviors, contraception, and decision making. Enhanced parent-child communication may help improve youth decision making about sexual health, including the prevention of pregnancy and STIs, the quality of parent-child relationships, communication skills, emotional well-being, academic achievement, and self-sufficiency.

Precursors

Developmental Tasks
- Brain development, social skills development, planfulness, goal-setting

Risk Factors
- Youth trauma
- Youth social isolation
- Parental lack of acceptance of youths' sexual orientation
- Harsh parenting

Protective Factors
- Age-appropriate parental monitoring
- Parental engagement (bonding, attachment)
- History of positive parent-child communication
- Positive, open interaction style
- High quality parent-child relationships (closeness)

Parent-Child Communication Topics

Topics Important for Parents:
- Proactive communication (early and ongoing parent-child communication)
- Accurate knowledge of sexual health
- Comfort discussing sexual health

Topics Important for Parents or Youth:
- Closeness to parents
- Knowledge of parents' expectations

Topics Important for Youth:
- Initiating conversations with parents and caregivers
- Identifying and communicating with a trusted adult in the absence of a parent or caregiver

PREP Program Design and Implementation
- Support parents so they can communicate with youth early and often
- Offer opportunities that will increase parents'/caregivers' knowledge of sexuality and communication
- Incorporate role-play and interactive skill-practice into programming
- Engage fathers and male caregivers in addition to mothers and female caregivers
- Ensure that programming is contextually appropriate for youth in non-traditional households
- Discuss appropriate online communication through social media
- When designing interventions for youth, leverage their use of technology
- Select curricula and staff members who can cover the prevention of pregnancy and STIs and parent-child communication

Enhanced PREP Outcomes

Short-term
- ↑ Attitudes, beliefs, and knowledge about sex, condom/contraceptive use, and STIs/HIV

Intermediate
- ↑ Effective communication with sexual partner
- ↑ Condom and contraceptive use
- ↓ Risky sexual behavior
- ↑ Abstinence

Long-term
- ↓ Teen pregnancy
- ↓ STIs/HIV

Expanded PREP Outcomes

Short-term
- ↑ Frequency, quality, and content of parent-child communication

Intermediate
- ↑ High quality parent-child relationships
- ↑ Shared values in parent-child relationship
- ↑ Emotional and social well-being
- ↓ Delinquency and disruptive behaviors
- ↑ Parental engagement

Long-term
- ↑ Self-sufficiency
- ↑ Academic achievement
- ↓ Substance use

Risk factors. Individual- and interpersonal-level risk factors play an important role in influencing the ways adolescents develop and interact with parents and other caregivers. For example, youth who have experienced trauma, such as sexual or physical abuse, from a parent or other adult may have greater difficulty than an adolescent who did not have such experiences in forming a close relationship with their parents and trusting adults (Fuxman et al. 2015). Trauma is an important individual contextual factor for PREP programs to consider, especially those that serve homeless and runaway youth and juvenile-justice involved youth. The unique situations of these program recipients could have exposed them to traumatic experiences and may have isolated them from family and other supportive persons. In addition, there has been little research on how parental mental health and trauma affect the way parents and caregivers communicate to their children about sex. Because of the strong association between parents' attitudes and beliefs and children's sexual behaviors, one can expect that issues of mental health/trauma in parents play a role in the way they communicate with their children about sex.

When youth identify as a sexual or gender minority, parent-child dynamics and communication can change in important ways. For example, family rejection can occur, communication can be strained, and secrecy regarding sexual orientation can inhibit healthy parent-child communication. Although perceived parental monitoring and parent-adolescent communication are generally protective against risky sexual behaviors, research suggests that these findings do not necessarily generalize to sexual-minority youth (Thoma and Huebner 2014). For instance, one cross-sectional study found that high levels of communication with parents about sex was associated with a greater risk of unprotected anal intercourse for young men who have sex with men. In this study, parental monitoring and communication were not, on average, protective against sexual risk or activity (Thoma and Huebner 2014), indicating that in addition to frequency, other characteristics of parent-child communication, such as quality and context, are also important.

Harsh parenting styles, whether nonverbal, psychological, or physical, can also be a risk factor. For example, a review of research literature on parental influences on adolescent decision making and contraceptive use found that adolescents with parents who had an authoritarian parenting style (demanding, but not responsive; controlling) may be more likely to turn to peers than parents for moral and informational decisions and have trouble making decisions (Commendador 2010). In addition, there is little research on the specific role of child abuse or neglect in parent-child communication; however, one can expect that negative family dynamics could play a role in inhibiting parent-child communication.

Protective factors. Several interpersonal-level factors can play a protective role in parent-child communication. Age-appropriate parental monitoring, parent-child engagement, history of positive parent-child communication, and positive parent interactions are linked to reduced youth engagement in sexual activities. For example, girls who perceive consistent parental monitoring have been found to be less likely to engage in sex than girls who perceived inconsistent monitoring (Yang et al. 2007). Research shows that parent-child closeness and communication about sex have been linked to fewer sexual risk behaviors, greater condom use, self-efficacy, and less unprotected sex among urban African American males (Harris et al. 2013). One study also found that the quality of parent-child relationships was linked to the quality of interaction between parents and children; specifically, the better the relationship between parents and children (defined as a higher level of perceived closeness and satisfaction with the parent-child

relationship), the less likely youth were to feel anxious during or avoid conversations with their parents (Afifi et al. 2008). Furthermore, the closer parents are to their children, the more likely adolescents are to communicate about sex with both their mothers and their fathers (Harris et al. 2013). Individual and interpersonal factors may also interact to shape how youth develop and engage with parents, guardians, or other adult caregivers. For example, one study found that youth reporting high levels of parent-child communication and parental monitoring had the lowest incidence of pre-intimate behaviors (kissing, touching) that are often precursors to sexual activity. The findings suggest that parent-child communication is more protective in combination with high levels of age-appropriate parental monitoring (Maria et al. 2014). However, PREP grantees noted that engagement may be challenging because of the limited availability of parents and caregivers.

Adolescents in PREP programming may have different experiences with parental care, affection, and guidance. Studies have found that parents play a large role in influencing their children's decision making, especially when it concerns values. A study of youth ages 12–19 found that 38 percent identified their parents as the source that most influenced their sexual behavior, outweighing their peers in some cases (Aspy et al. 2007). Parents and caregivers can use this influence to provide developmentally appropriate guidance that teaches youth to problem-solve, including how to create plans to set boundaries with peers, set realistic goals, and identify action steps for accomplishing them.

E. Theory of change for parent-child communication

Theory of change

PREP programs should address parent-child communication as a component of the parent-child relationship. Providing youth and their parents and caregivers with education, guidance, and skills on how to communicate openly about sexual health may lead to improvements in adolescents' enhanced and expanded outcomes. By teaching and encouraging positive and proactive communication, PREP programs may influence the beliefs and behaviors of youth, and their parents and caregivers, related to open, accurate, and age-appropriate communication about sexual behaviors, contraception, and decision making. Enhanced parent-child communication may help improve youth decision making about sexual health, including the prevention of pregnancy and STIs, the quality of parent-child relationships, communication skills, emotional well-being, academic achievement, and self-sufficiency.

The theory of change for parent-child communication builds on the foundation of the parent-child relationship, along with other precursors that influence the youth who participate in PREP. A key guiding principle is that parents and caregivers, in addition to peers, can have a strong influence on youth sexual behaviors (Aspy et al. 2007; Harris et al. 2013). Data indicate that the influence of parents is stronger than that of friends, teachers, or the media (National Campaign to Prevent Teen and Unplanned Pregnancy 2016). Therefore, providing both youth and parents with the knowledge and skills to communicate openly with each other about sexual health may enhance the effectiveness of PREP programming. Research studies on the value of parent-child communication tend to focus on mothers over fathers. For instance, a study that assessed parental influences on sexual risk behaviors among African American boys found that mothers were more likely than fathers to engage in parent-child sexual communication (Harris et al. 2013). Yet fathers also are important influences on their children and may have a unique influence on youths' sexual behaviors. For example, in a study on mother-child and father-child sexual communication among adolescents, fathers' sexual attitudes were the best overall predictor of

adolescent sexual attitudes and behavior (Tubre 2007). Another study, of racially and ethnically diverse women ages 19–21, found that father-daughter sexual communication delayed daughters' onset of sexual activity and decreased how often daughters had sex (Hutchinson and Cederbaum 2011). All parents and caregivers should be considered in PREP programs that address parent-child communication.

In addition to providing education about the prevention of pregnancy and STIs for parents/caregivers and youth and teaching positive communication skills, PREP programs that address parent-child communication may encourage parents/caregivers to be more actively engaged in their children's lives. Positive parental engagement (defined by parents' intentions, beliefs, and perceptions of their relationship with their child) builds a foundation of trust that facilitates honest communication and can influence behavior and decisions, which is especially important as children transition into adolescence. Building on this principle, the theory of planned behavior suggests that to increase the frequency of parent–adolescent communication about sex and sexuality, practitioners must first secure parents' willingness to have such conversations. Such willingness is influenced by parents' attitudes toward discussing these subjects with their children, parents' beliefs about how their children will engage in the conversation, and the level of control parents think they have over communication. For example, parents' beliefs that discussing sex encourages young people to engage in it may inhibit parents from having these conversations.

Decision-making theories are also relevant to the theory of change for parent-child communication, and research on decision making is evolving to account for adolescent development and contexts. For programs that want to understand and shape adolescent decision making, two broad approaches are worth consideration: (1) focus on the factors that shape behavior goals and decision making, such as social pressures, including both approval or disapproval from important persons in the adolescent's life (such as parents) and perceptions of what peers are doing; and (2) focus on the steps in the decision-making process and on the skills needed to analyze decisions. An example would be role-playing a situation that requires an adolescent to make a quick but high-risk decision prior to facing the situation in real life (National Research Council and Institute of Medicine 2004). Regardless of the approach a program draws on, a key takeaway is that adolescent decision making is a multi-step process influenced by many internal and external factors. Therefore, programs must consider how parent-child communication could affect factors that influence the choices and decision-making skills of their target population.

Research finds lasting benefits of improving the quality of parent-child communication (for example, making communication clear and explicit), specifically for outcomes related to the prevention of pregnancy and STIs (Aspy et al. 2007; Harris et al. 2013). Improved communication between parents and children has positive implications for the outcomes of their children, such as fewer risky sexual behaviors, increased contraceptive use, and reduced adolescent pregnancy (Commendador 2010). Positive parent-child communication during adolescence can also lead to better parent-child relationships and improved emotional well-being, academic achievement, and self-sufficiency.

F. Parent-child communication topics

The timing, content, context, and frequency of parent-child communication are important topics to consider, as they are relevant not only for parents, but also for other caregivers or trusted adults. Therefore, program staff should consider the diversity of caregiver-child relationships when integrating parent-child communication topics.

Topics for parents and caregivers

- **Proactive communication** occurs early (prior to or during adolescence) and often, and not just in response to behaviors (for example, discussing sexual behaviors before engagement in them begins). Studies that focus on the positive influence of frequent parent-child communication and parental monitoring among younger adolescents demonstrate the importance of parents and caregivers engaging in communication with their children before the children begin sexual activity (Fuxman et al. 2015; Maria et al. 2014). Programs should emphasize the importance of having proactive communication with their youth to best influence their outcomes related to the prevention of pregnancy and STIs.

- **Accurate knowledge of sexual health** refers to parents and caregivers being able to convey correct information about topics such as the proper avoidance of STIs and pregnancy) and, when necessary, being able to help adolescents find services. One study suggests that parents who know less about sexual health communicate less frequently with their children, which highlights the importance of giving parents accurate sexual health information (Weiss 2011). Grantees can develop content or use existing resources to confer a working knowledge of sexual health to parents and caregivers so that they can discuss the topic properly with their children. Programs can emphasize the role they play in communicating values and expectations, as well as in encouraging and supporting access to services. Further, programs can help parents and caregivers recognize the value of having other well-qualified program staff teach their adolescent children correctly.

- **Comfort discussing sexual health** refers to parents' and caregivers' willingness to discuss (and their ease in discussing) sexual health topics with their adolescents. Findings from an observational study on parent-child communication suggest that adolescents exhibit fewer anxious and avoidant behaviors when their parents are receptive, informal, and composed during conversations about sexual health (Afifi et al. (2008). There may be gender differences in parents' comfort discussing sexual health. Mothers tend to be the main communicators about sex, whereas fathers tend to talk with their children about other topics (Wikkeling-Scott 2011). However, an evaluation of an intervention to promote mother-child and father-child communication about sex found that fathers, not mothers, had more frequent conversations with youth about sex following program participation (Evans et al. 2009). This suggests that fathers play an important role in communicating information about sex but—because of discomfort, social expectations, or some other reason—may need a "push" to talk with their children about it. Although most programs focus only on mothers, programs should work with both female and male parents and caregivers to build their comfort discussing sex with their children. Being comfortable discussing sexual health will facilitate these conversations, but programs should encourage parents and caregivers to talk with their children about sex honestly

and often even when they are *not* comfortable. In addition to conversations about sex, parents and caregivers can discuss values and expectations more broadly with youth. They can also strategically pick appropriate settings to have these conversations.

Topics for parents or youth

- **Closeness to parents** refers to youth reports of warm and effective communication with their parents/caregivers. Several studies suggested that youths' feelings of closeness to their parents influenced their sexual risk behaviors (Harris et al. 2013; Afifi et al. 2008; Usher-Seriki et al. 2008). Programs should offer youth opportunities to increase their sense of closeness to their parents/caregivers and teach them strategies for enhancing these bonds. In addition, parents and caregivers should work on continually strengthening bonds with their children through setting the stage for effective communication. Program providers should also recognize that some family relationships are complex. If, for example, parent-child dyads have poor or no communication about less-sensitive topics, it may be difficult to address a challenging topic like sexuality. If the parent-child relationship is nonexistent or turbulent, other trusted adults can assume the role of communicator.

- **Knowledge of parents' expectations** refers to youths' awareness of their parents' and caregivers' expectations of appropriate attitudes and behaviors. A study that examined parents' knowledge and expectations of their children's sexual behaviors found that parents' expectations predicted sexual outcomes. For example, youth were more likely to have negative sex-related outcomes when parents believed they were engaging in related behaviors (Mollborn and Everett 2010). Therefore, programming must provide accurate information for parents and caregivers to share with their children and must emphasize that youth should maintain an open dialogue with their parents/caregivers and learn their expectations, values, and perceptions.

Topics for youth

- **Initiating conversations with parents and caregivers** refers to skills that youth can use to start conversations about sexual health, including prevention of pregnancy and STIs. Grantees reported difficulty engaging parents and caregivers in PREP programming. Grantees noted that when programs are able to communicate only with youth, it is important to empower youth by providing them with the skills they need to initiate important conversations with parents and caregivers. Programs can do this by implementing role-playing exercises or by sending youth home with "assignments" that require parental input.

- **Identifying and communicating with a trusted adult in the absence of a parent or caregiver** can benefit youth who do not have a strong relationship or regular communication with a parent or caregiver. This can be due to a variety of factors, such as parental incarceration or homelessness and situations where a youth is involved in the child welfare or juvenile court system. Grantees noted that programs can encourage youth to identify trusted adults in their life, which may include relatives, program staff, or school staff. Programs can then guide youth in having discussions with these adults about topics related to sexual health.

G. Program design and implementation

PREP grantees must consider how and when to provide parent-child communication content within their PREP programs. Designing and implementing this APS will require that grantees choose who should deliver the content, when to deliver it, and how to teach it so that youth can absorb it to the greatest extent possible. One way to improve parent-child communication is to support and educate parents, which will in turn inform youth outcomes. This may not always be possible, though, given programs' structure or youths' relationships with parents.

The study team identified eight design considerations for parent-child communication:

1. **Support parents so they can communicate with youth early and often (i.e., proactive communication).** Reduce parental barriers to communication and provide parents and caregivers with guidance on how to engage in positive communication and non-judgmental listening with their youth. One PREP grantee developed a parent toolkit that included pamphlets and articles on topics such as the right time to talk to your adolescent about sensitive topics; fears parents may have about communicating with their adolescent about their health; and the basic laws of consent and how they affect the adolescent. They also developed a list of local resources for parents related to food or clothing.

   Programs can find and use existing resources or develop their own content to share with parents and caregivers. Guidance should be delivered in a simple and easily accessible format and contain concrete and practical advice. For example, explain that parents and caregivers can show they care about their child through verbal or nonverbal communication, such as texts and emails. Ensure that parents realize how important their thoughts and perspectives are to their children (Albert 2012; National Campaign to Prevent Teen and Unplanned Pregnancy 2008). Also explain to parents and caregivers that although they may never be completely comfortable discussing some things, they must get to a point where they can have honest conversations despite discomfort. Discussions on sex and parental monitoring (i.e., parental awareness of children's whereabouts and friendships) should begin early, well before youth are engaging in sexual activity (Aspy et al. 2007; Beckett et al. 2010; Fuxman et al. 2015; Lohman and Billings 2008). However, regardless of whether youth are sexually active, regular and direct communication is important to encourage parents to be calm and to reduce adolescent anxiety (Afifi et al. 2008; National Campaign to Prevent Teen and Unplanned Pregnancy 2008).

   Communication is more protective when combined with parental monitoring. Specifically, youth with high levels of both parent-child communication and age-appropriate parental monitoring report lower levels of "pre-coital" sexual behaviors than youth with high communication and low monitoring (Maria et al. 2014). Other barriers to communication include perceptions that children are too young, uncertainty on how to start conversations, limited knowledge, and discomfort (Hartmann et al. 2016; Malacane and Beckmeyer 2016; Wilson et al. 2010). Parents find it easier to talk if they have a strong relationship with their child, take advantage of opportunities for discussion, and begin age-appropriate conversations when children are young (Wilson et al. 2010).

2. **Offer opportunities that will increase parents'/caregivers' knowledge of sexuality and communication (i.e., accurate knowledge of the prevention of pregnancy and**

STIs). Consider delivering program content directly to parents/caregivers, or to them and youth together. Clear, direct conversations on sexual health require that parents and caregivers be knowledgeable or know trustworthy resources to turn to for information. When offering opportunities to parents and caregivers to increase their knowledge of sexuality and communication, programs should ensure that messages are aligned with their curricula and are appropriate for the community and age range of youth served. Programs might serve youth only, parents and caregivers only, or both youth and parents/caregivers. Because parent-child communication is a relational practice that involves at least two people and two perspectives, programs must consider carefully how best to promote positive parent-child communication if only youth or only parents/ caregivers participate. For example, one PREP grantee created a "parent involvement network." During events, they educate parents on ways to communicate with their adolescents and shield them from risk. They also have a radio broadcast for parents every weekend. Another grantee hosted parent events, such as a "restaurant night" to discuss parents' expectations of their children, as well as a parent-child retreat focused on communicating on difficult topics. (At the next retreat, they will discuss substance abuse and youth suicide.) They also bring the parents and students together and use activities to help them consider the style of communication they want the family to have.

3. **Incorporate role-play and interactive skill-practice into programming (i.e., comfort discussing the prevention of pregnancy and STIs health).** By delivering content directly to parents and caregivers, programs can provide opportunities to practice communication skills (Sutton et al. 2014). Engaging parents and caregivers in programs can be challenging, but programs that offer information only to parents and caregivers and do not provide an opportunity to hone communication skills are often less effective than programs that combine a focus on parents and caregivers and youth (Terzian and Mbwana 2009). In addition, the content of discussions is strongly associated with youths' attitudes and behaviors (Isaacs 2012). For example, teaching youth how to set clear rules and discussing the importance of delaying sex are associated with youth being less likely to initiate sex. Similarly, when parents discuss birth control methods and STIs, youth who do engage in sex are more likely to use birth control (Aspy et al. 2007; Usher-Seriki et al. 2008). Further, ensuring that parents can clearly express their expectations for their youth must also be considered (Mollborn and Everett 2010). Program facilitators can serve as role models for these conversations designed to help families initiate dialogue and offer opportunities for skill-building, as well as provide parents with developmentally appropriate resources that they have created or have borrowed from other sources (Aspy et al. 2007; Widman et al. 2016; Teitelman et al. 2008).

4. **Engage fathers and male caregivers in addition to mothers and female caregivers.** Youth report receiving little information about sexuality and dating from their fathers, which suggests that programs should ensure that fathers are comfortable with sexual communication, reduce their barriers to communication, and provide them with opportunities to build skills (National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention 2013; Hutchinson and Cederbaum 2011). Although much of the research on parent-child communication has focused on the mother-child relationship (Commendador 2010; Harris et al. 2013; Hutchinson and Cederbaum 2011), researchers have found that father-child communication and monitoring can also delay sexual initiation and increase contraception/condom use (Kalina et al. 2013; Teitelman et al.

2008). In a study of father-daughter communication about sex, many daughters reported that their fathers shared their philosophy on sex and provided support, thus promoting healthy behaviors and choices. However, daughters also wished that their fathers had discussed (1) insights about understanding men; (2) modeling openness and comfort with sexual communication; and (3) more information about specific sexual topics, family values, and expectations (Hutchinson and Cederbaum 2011).

5. **Ensure that programming is contextually appropriate for youth in non-traditional households.** Many youth do not live with both their mother and father. Therefore, programming should be appropriate for all types of family formations, including single parents, step-parents, foster parents, grandparents, and other supportive adults. Although the research literature on the influence of positive communication between other supportive adults and youth is limited (Fuxman et al. 2015), it seems likely that many features of effective parent-child communication will be applicable to other guardians, caregivers, or trusted adults.

6. **Discuss appropriate online communication through social media.** Online and mobile communication presents an opportunity for technology-based interventions around the prevention of pregnancy and STIs to reach a large number of parents and adolescents nationwide. Research indicates that families are generally motivated to receive this type of information through online and mobile devices as a result of their accessibility, widespread use, and ability to deliver large quantities of information (Jones et al. 2014; Kachur et al. 2013). Although social media and the use of other technology are important means of communication in youth relationships and potentially in families (Lenhart et al. 2015), online communication can also expose youth to inappropriate content or behaviors, such as graphic sexual imagery and unwanted sexual solicitations. Exposure to this online content is correlated with increased sexual risk (Kachur et al. 2013). Several PREP grantees reported teaching lessons or leading discussions about social media or technology as part of their PREP programming. Topics included identifying social media outlets youth are using and the most appropriate use of each. Programs have the opportunity to teach youth about the dangers of online communication, especially with people they do not know. Youth may also use online communication and social media to connect with a parent or caregiver. Programs may consider discussing appropriate online communication specifically with parents or caregivers as well.

7. **When designing interventions for youth, leverage their use of technology.** Many programs have responded to the increase in youth online activity by incorporating more technology into their programming. Preliminary evidence suggests that using social media and text messaging to reach youth can increase knowledge regarding the prevention of STIs (Jones et al. 2014). A few PREP grantees used social media to help deliver content or engage participants. Two respondents delivered some programming with iPads or through a web-based format. One described using Snap Chat, Facebook, and Instagram to engage participants and inform them of additional activities. This respondent said that if youth followed their social media posts and commented on them, it showed the program to be "cool enough" to engage youth. Interventions that utilize digital and social technology can increase their accessibility by allowing youth to access content at convenient times, anonymously, and privately (Strasburger and Brown 2014).

8. **Select curricula and staff members who can cover both the prevention of pregnancy and STIs and parent-child communication.** PREP grantees indicated that they typically used a curriculum for the prevention of pregnancy and sexually transmitted infections among youth that also included APS content. In addition, most grantees used the same staff to deliver both types content. Staff who deliver content on both pregnancy and STI prevention and parent-child communication may be more adept at connecting other topics important for youth health and well-being and fostering parent-child communication. For example, several PREP grantees noted that they encourage parent-child communication beyond health topics related to the prevention of pregnancy and STIs, including substance abuse, youth suicide, sleep habits, home responsibilities, and events that shaped family history (for example, historical trauma was covered by a Tribal PREP program). One grantee also encouraged youth to communicate to their parents about what it was like for them as adolescents and the differences they faced then compared to now.

H. Outcomes

The reviewed research literature suggested several outcomes that might be realized by addressing parent-child communication. Most of the literature reported on correlational, rather than causal, relationships between variables. Although evidence may indicate that the presence of one variable predicts a particular outcome, future research and rigorous evaluation studies are needed before a causal relationship can be made. The study team organized outcomes into two categories—enhanced and expanded—based on whether they focus on changes to outcomes not related to the prevention of pregnancy and STIs among youth (expanded) or outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP (enhanced). The model is limited to outcomes supported by the literature review.

The team further organized outcomes into short-term, intermediate, and long-term. *Short-term* outcomes are those one would expect to see directly following a program. Typically, such outcomes include initial changes in knowledge and attitudes but can also include immediate changes in behavior. *Intermediate* outcomes, the step between short- and long-term outcomes, can include improved skills or changes in behavior that result from the acquisition of new knowledge and skills. Programs can expect to see these outcomes six months to a year after program completion. *Long-term* outcomes are those we would expect to see a year or more after program completion, such as ongoing pregnancy and STI prevention and preparation for adulthood care. Depending on when youth attend the program, this could be during middle or high school or even after high school and continuing into young adulthood.

Enhanced outcomes. Programs that incorporate parent-child communication in PREP might influence outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP. In the short term, when parent-child communication is improved, youth attitudes, beliefs, and knowledge about sex, condom/contraception use, and STIs/HIV are also improved (Child Trends What Works 2011; Harris et al. 2013; Niego et al. 2008; National Campaign to Prevent Teen and Unplanned Pregnancy 2012). For the intermediate outcomes, improved parent-child communication builds skills for communicating more effectively with sexual partners (Child Trends What Works 2011; Isaacs 2012) and can lead to reduced involvement in risky sexual behaviors, including fewer sexual partners, and an increased likelihood of remaining abstinent and delaying sexual initiation (Commendador 2010; Yang et al. 2007). In addition, improved

attitudes, beliefs, and knowledge in turn improve sexual behaviors as an intermediate outcome (increased condom and contraceptive use, and getting HPV vaccines) and in the long term (reduced pregnancy and STIs/HIV) (Kirby and Lepore 2007; Wasik et al. 2014).

Expanded outcomes. The research literature suggests that addressing parent-child communication in PREP may result in changes to outcomes beyond youths' sexual health. One of the most immediate outcomes desired is to increase and improve the frequency, quality, and content of parent-child communication about topics such as birth control and condoms, values and expectations about sex, consequences of early sexual initiation, and peer pressure (Isaacs 2012). This enhanced communication builds upon, and in turn contributes to, higher quality parent-child relationships and shared values (an important part of sexual socialization) between youth and their parents as intermediate outcomes (Harris et al. 2013). The quality of the parent-child relationship includes closeness, warmth, trust, and satisfaction with the relationship. Focusing on parent-child communication is also expected to improve emotional and social well-being among youth as an intermediate outcome. For example, youth who are close to their parents will have lower anxiety when discussing sex with them than youth who are not close (Afifi et al. 2008). Similarly, a review of multiple random assignment evaluation studies found that frequent and positive parent-child communication and improved parent-child relationships can help youth avoid risky behaviors; specifically, interventions that have provided parents with skills training related to increasing monitoring and improving communication had positive impacts on delinquency, substance use (drugs and alcohol), and disruptive behavior (Terzian and Mbwana 2009). Long-term outcomes such as self-sufficiency and academic achievement may also be achieved through positive parent-child communication. For example, increasing parent communication skills can help parents convey expectations about areas outside sexual health topics, such as academic expectations, which can encourage success in the classroom and foster more involvement in the child's school life (Centers for Disease Control and Prevention 2009).

I.   Conclusions

Enhancing parent-child communication has important implications for adolescents' sexual health, their relationship with their parents and caregivers, and other outcomes that contribute to long-term well-being and self-sufficiency. Programs should address four important aspects of parent-child communication: (1) timing, (2) content, (3) context, and (4) frequency. Together, these factors help to promote positive and engaging parent-child communication and adolescent well-being.

Nevertheless, more research and evaluation on parent-child communication is needed, specifically, research on the role of fathers in communicating sexual health information to their children, and research on vulnerable populations, such as homeless and runaway youth, youth in foster care, and youth in single-parent homes. Additional research is also needed on social media and digital technology and how interactions with these platforms might influence short- and long-term outcomes for youth. Because many of the studies reviewed are cross-sectional, understanding the direction of effects can be difficult.

This page has been left blank for double-sided copying.

IX. UNIFIED FRAMEWORK FOR ADDRESSING ADULTHOOD PREPARATION SUBJECTS IN PREP

Mathematica:
  Elizabeth Clary
  Heather Zaveri
  Christopher Jones
  Katie Eddins
  Katie Adamek

Child Trends:
  Kristin A. Moore
  Mindy E. Scott
  Deana Around Him
  Monica Arkin
  Isabel Griffith

This page has been left blank for double-sided copying.

IX. UNIFIED FRAMEWORK FOR ADDRESSING ADULTHOOD PREPARATION SUBJECTS IN PREP

For the APS conceptual models study, the study team developed conceptual models for the six APSs (adolescent development, educational and career success, financial literacy, healthy life skills, healthy relationships and parent-child communication). The team then developed a unified framework to identify connections across subjects and explore how to incorporate positive youth development (PYD) into PREP programming. Together, the models and framework are intended to help ACF support effective programs by providing PREP grantees with guidance on what constitutes adulthood preparation programming, what infrastructure is needed to support it, how to offer such programming within adolescent pregnancy prevention programs, and what outcomes are anticipated. The models draw on theoretical and empirical literature. Other sources included consultations with stakeholders and experts; feedback from staff in FYSB and OPRE; and interviews with PREP grantees about their experiences designing and implementing APS programming.

The Family and Youth Services Bureau (FYSB) and the Office of Planning, Research, and Evaluation (OPRE), both within the Administration for Children and Families (ACF), contracted with Mathematica and its partner, Child Trends, to develop conceptual models for the adulthood preparation subjects (APSs) and to determine how they fit within PREP programming.

PREP grantees must adhere to four program requirements: (1) implement evidence-based or evidence-informed curricula; (2) provide education on both abstinence and contraception for the prevention of pregnancy, sexually transmitted infections (STIs), and HIV; (3) educate youth on at least three of six APSs; and (4) focus on high-risk populations, such as youth residing in geographic areas with high teen birth rates, adjudicated youth, youth in foster care, minority youth, and pregnant or parenting teens. PREP grantees are also required to implement a positive youth development (PYD) approach in their programs. Grantees have discretion in how to meet these requirements. This discretion allows them to tailor their programs to fit the needs of the targeted population and their priorities.

The intention of supplementing pregnancy prevention programs with APS content is to further prepare youth for the transition to adulthood. It is hypothesized that incorporating APS content will strengthen the ability of programs to reduce sexual risk behaviors and expand the range of outcomes that programs affect.

This report is a first step toward helping PREP grantees understand issues of integrating and implementing APSs into their programming. The information presented herein reflects grantee perspectives and published literature on the APSs. The primary aim of this report is to provide grantees with a framework to support the implementation of APSs in their projects.

This chapter presents the APS unified framework through a schematic and supporting narrative. It starts by discussing the purpose of the framework (Section A) and briefly describing how the study team developed it (Section B). Section C describes the model and how it differs from the APS conceptual models. Sections D, E, and F review each component of the unified framework, with Section E focusing specifically on PYD. Section G offers suggestions to PREP grantees for using it.

A. Purpose of the APS unified framework

The APS unified framework is intended to help PREP grantees understand how the addition of APS content, including use of a positive youth development (PYD) approach, can improve

outcomes for participating youth. The framework first identifies commonalities across the six APS conceptual models, focusing on the precursors and outcomes that are common across APSs. PREP grantees can use the precursors in the unified framework to understand the needs of their target population of youth, or to choose which APSs to cover based on relevant precursors. Grantees can also use the model to target specific enhanced or expanded outcomes, selecting the APSs that show changes in the outcomes of interest.

The unified framework does not include program topics or design and implementation features, because those elements are largely distinct for each APS, so there are few overlaps. Instead, the framework describes the PYD approach that is relevant to all APSs and demonstrates how it can support positive outcomes in PREP programs. The Interagency Working Group on Youth Programs defines PYD as:

> An intentional, prosocial approach that engages youth within their communities, schools, organizations, peer groups, and families in a manner that is productive and constructive; recognizes, utilizes, and enhances young people's strengths; and promotes positive outcomes for young people by providing opportunities, fostering positive relationships, and furnishing the support needed to build on their leadership strengths (FYSB 2007).

Other definitions of PYD emphasize that youth can experience positive development and contribute to their families, schools, and communities if they receive guidance and support from caring adults (Singson 2015). Research has shown that incorporating PYD principles can enhance youths' strengths, help engage youth in their communities, and promote positive relationships and opportunities for them (Gavin et al. 2010).

B. Development of the APS unified framework

The unified framework builds from the six APS conceptual models. Each APS conceptual model schematic follows a common layout that includes precursors, program topics, design and implementation features, and expected outcomes. The unified framework integrates precursors and outcomes across APSs. Precursors—factors that influence youth who participate in PREP programming— include developmental tasks, risk factors, and protective factors. Outcomes are expected changes in youth behaviors as a result of participating in programming for the APS. The study team organized outcomes into two categories—enhanced and expanded—based on whether they focus on changes to outcomes related to the prevention of pregnancy and STIs among youth (enhanced) or outcomes not related to the prevention of pregnancy and STIs among youth (expanded).

To develop the unified framework, the team created a series of tables that listed the precursors and outcomes included in each APS model and identified the APSs that were relevant for each precursor and outcome (included in Appendix C). They then reviewed the tables to identify common precursors and outcomes. The unified framework includes only precursors and outcomes that were included in two or more APS conceptual models. Therefore, some precursors and outcomes are missing from the unified framework but are important for a specific APS.

C. APS unified framework model

Figure IX.1 shows the APS unified framework, which depicts commonalities across the six APS conceptual models for the precursors and outcomes, which are listed in descending order, beginning with those relevant to the most APSs. For each precursor and outcome, the framework uses abbreviations to identify the relevant APS:

- AD: adolescent development

- EC: educational and career success

- FL: financial literacy

- HL: healthy life skills

- HR: healthy relationships

- PC: parent-child communication

In addition, the unified framework incorporates PYD principles, which are applicable to all six APSs. The following sections describe each component.

D. Precursors for adulthood preparation subjects

The unified framework starts with three sets of precursors for adulthood preparation: developmental tasks, risk factors, and protective factors. Developmental tasks recognize that adolescents start at different places and progress at different rates through social and emotional skills development, brain and cognitive development, executive functioning, identity formation, and sexual maturation. Risk factors make youth more likely to engage in negative behaviors or harder for them to develop strengths; protective factors make youth less likely to engage in negative behaviors, mitigate risks, and promote resilience and positive development among youth.

Developmental tasks. The APS conceptual models identified nine developmental tasks across the six APS schematics. Five development tasks were identified for at least two APSs.[23]

1. **Social and emotional skills development** (AD, EC, HL, HR, PC): Social skills development includes feeling connected to and having trust with parents, peers, and other adults; feeling connected and valued by larger social networks; and having a commitment to civic engagement. Although peer relationships take on greater importance as youth mature, the process of relationship exploration is unique to each individual. During adolescence, youth also develop emotional skills, including positive self-regard; coping and conflict resolution skills; self-efficacy; prosocial and culturally sensitive values; and strong moral character.

---

[23] Because the unified framework presents a high-level summary of findings, citations are not included in the lists of developmental tasks, risk and protective factors, or outcomes. Detailed findings are in the individual APS chapters. A list of references, by chapter, is in Appendix A.

Figure IX.1. Unified Framework Model

Common Precursors for Adulthood Preparation Subjects

Developmental Tasks
- Social and emotional skills development (AD, EC, HL, HR, PC)
- Brain and cognitive development (AD, EC, HL, HR, PC)
- Executive functioning, including self-control (FL, HR, PC)
- Identity formation (AD, EC, HL)
- Sexual maturation (AD, HR)

Risk Factors
- Under-resourced neighborhood (AD, EC, FL, HL)
- Youth trauma, resulting from neglect, abuse, or bullying (AD, HL, HR, PC)
- Peer or family involvement in risky behaviors (EC, HL, HR)
- Substance use (AD, HR)
- Poor mental health (AD, HL)
- Life challenges, such as foster care, adolescent parenting, or homelessness (EC, PC)
- Limited parental resources (EC, FL)
- Interpersonal and family violence (HL, HR)

Protective Factors
- Positive relationships with family and peers (AD, EC, HL, HR, PC)
- Involvement in school or community (AD, EC, HL)
- Secure attachment to parents, caregivers, or peers (HR, PC)
- Age-appropriate parental monitoring (HL, PC)
- Positive role models (HL, HR)
- Relationships with trusted adults in school and community (EC, HL)

Adulthood Preparation Programming in PREP

Incorporate positive youth development principles by:
- Engaging youth in their communities, schools, organizations, peer groups, and families
- Recognizing, using, and enhancing youths' strengths
- Promoting positive outcomes through positive and supportive relationships and leadership opportunities

Adulthood preparation subjects:
- Adolescent development
- Educational and career success
- Financial literacy
- Healthy life skills
- Healthy relationships
- Parent-child communication

Common Enhanced PREP Outcomes
- ⬇ Risky sexual behavior (EC, HL, HR, PC)
- ⬇ Adolescent pregnancy (AD, EC, HR, PC)
- ⬆ Abstinence (AD, HR, PC)
- ⬆ Condom and contraceptive use (AD, HR, PC)
- ⬇ STIs/HIV (AD, HR, PC)

Common Expanded PREP Outcomes
- ⬇ Delinquency and disruptive behaviors (AD, EC, FL, HL, HR, PC)
- ⬆ Academic achievement (AD, EC, HL, HR, PC)
- ⬆ Emotional and social well-being (AD, EC, HL, HR, PC)
- ⬇ Substance use (AD, HL, HR, PC)

Adulthood preparation subjects abbreviations: AD: Adolescent development; EC: Educational and career success; FL: Financial literacy; HL: Healthy life skills; HR: Healthy relationships; PC: Parent-child communication

The unified framework identifies precursors and outcomes common to at least two adulthood preparation subjects (APSs) and describes how to integrate positive youth development in APS programming. Please see the individual conceptual models for more detail.

2. **Brain and cognitive development** (AD, EC, HL, HR, PC): Brains continue to develop during adolescence and, in some ways, throughout the life span, contributing to the development and refinement of social, academic, emotional, and communication skills. Brain development during adolescence enhances youths' capacity to build critical thinking and reasoning skills that allow them to think more abstractly, self-regulate emotions, and take the perspective of others.

3. **Executive functioning, including self-control** (FL, HR, PC): Executive functioning is a set of mental skills that help one to remain focused on the task at hand and to juggle multiple priorities. Self-control is the ability to inhibit impulsivity, regulate one's emotions, delay gratification, and process information. These skills are learned throughout life, starting at a young age, and are necessary for everyday functioning.

4. **Identity formation** (AD, EC, HL): Adolescents typically form their identity by exploring their abilities and future potential and defining their sexual, ethnic, or cultural identity.

5. **Sexual maturation** (AD, HR): Sexual maturation is defined by the physical onset of puberty and the ability of youth to reproduce. Youth progress through sexual maturation at different rates, depending on the timing of their hormonal changes.

Risk factors. The APS schematics included 28 risk factors, of which 8 were relevant in at least two APSs. The following list identifies and briefly describes the 8.

1. **Under-resourced neighborhood** (AD, EC, FL, HL): Economically and resource challenged neighborhoods that lack resources to promote healthy development (such as high quality and safe schools, safe communities, employment opportunities, and mainstream financial institutions) may contribute to negative outcomes for youth.

2. **Youth trauma, resulting from neglect, abuse, or bullying** (AD, HL, HR, PC): Experiencing trauma during **childhood** or adolescence increases the likelihood of negative outcomes related to mental health, physical health and development, and social competence in adulthood.

3. **Peer or family involvement in risky behaviors** (EC, HL, HR): Peers and family members who are currently or were previously involved in risky behaviors, such as substance use, risky sexual behavior, delinquency, or violence (such as fighting or dating violence), may influence youth to become involved in these behaviors as well.

4. **Substance use** (AD, HR): Youth who drink alcohol or use drugs are at risk for both dating violence and risky sexual behaviors. Substance use is also positively correlated with early initiation of sexual behavior, low contraceptive use among those who are sexually active, delinquency, and academic failure.

5. **Poor mental health** (AD, HL): Youth who experience mental health problems, such as depression, anxiety, or post-traumatic stress disorder, may be at increased risk of poor outcomes related to life skills and adolescent development, including sexual health.

6. **Life challenges (such as foster care, adolescent parenting, or homelessness)** (EC, PC): Life challenges, such as dropping out of school, living in a juvenile detention center

or foster care, and being pregnant or parenting, can lead adolescents to engage in risky sexual behavior.

7. **Limited parental resources** (EC, FL): Potential risk factors for youth may include their parents' and caregivers' behaviors and practices, including attitudes and expectations toward learning, such as the importance of education, and parents' and caregivers' access to resources, including time, as well as human, social, and financial capital. When parents are less involved at home or at school, that can negatively affect the parent-child relationship and the child's academic achievement.

8. **Interpersonal and family violence** (HL, HR): Youth who experience family or interpersonal violence, including dating violence, are more likely to engage in unhealthy relationships or risky sexual behaviors and are thus at higher risk for adolescent pregnancy.

Protective factors. Across the six APS schematics, the study team identified 21 protective factors, of which the following 6 were relevant in at least two schematics:

1. **Positive relationships with family and peers** (AD, EC, HL, HR, PC): Positive relationships with family members and peers protect against negative outcomes for youth, such as engagement in risky behaviors, and may contribute to youth developing prosocial behaviors and attitudes related to sexual health, such as the prevention of pregnancy and STIs.

2. **Involvement in school or community** (AD, EC, HL): Civic engagement through school or the community may contribute to youths' social and physical development.

3. **Secure attachment to parents, caregivers, or peers** (HR, PC): Increased closeness and satisfaction with the parent-child relationship leads youth to be more comfortable communicating with their parents and caregivers. Secure attachments with close prosocial friends may allow youth to better express and regulate their emotions.

4. **Age-appropriate parental monitoring** (HL, PC): Age-appropriate, consistent parental monitoring is linked to reduced youth engagement in sexual activity.

5. **Positive role models** (HL, HR): Youth who have positive role models are more likely to engage in healthy dating behaviors and to show greater resilience and better academic achievement, motivation, and success.

6. **Relationships with trusted adults in school and community** (EC, HL): Youth who witness and experience positive, supportive relationships with adults in schools or the community are more likely to develop positive coping skills, healthy relationships, and successful strategies to solve problems and achieve goals.

E. Adulthood preparation programming in PREP

APS programming in PREP includes two components. First, grantees are required to incorporate PYD into their programs. Second, as required in the legislation that established PREP, grantees must select at least three of the six APSs and offer content for them. The unified framework highlights the PYD approach that all PREP grantees must use. Because content and

implementation strategies are unique to each APS, they are not part of the unified framework. Instead, such strategies can be found in the individual APS schematics.

PYD is not a specific curriculum or program model; it is both a framework for thinking about how youth develop and a way to structure programming for youth. PYD emphasizes (1) youths' strengths rather than their shortcomings, (2) positive relationships, and (3) the context and opportunity for youth to gain competencies (Gavin et al. 2010; Singson 2015; FYSB 2007). Applying a PYD approach strengthens adolescents' ability to respond effectively to developmental changes and challenges (Gavin et al. 2010). Using the PYD framework enhances the prospect of youth engagement and positive outcomes (House et al. 2010; Catalano et al. 2004; Guerra and Bradshaw 2008, FYSB 2007).

Programs can provide opportunities for youth engagement and leadership at the personal, organizational, and community levels. At the personal level, programs can stimulate youth leadership and growth, by asking youth (1) to take on leadership roles, (2) to plan and lead activities, and (3) to use or display creative talent such as art, writing, or athletics. At the organizational level, programs can include youth in decision making, governance, and rule making; gather youth input on new programs; and provide opportunities for youth to mentor or tutor other youth. At the community level, programs can provide volunteering opportunities and encourage youth to make their voices heard through participation in governance, decision making, or the media (for example, through a youth-run newspaper, website, or radio station) (FYSB 2007).

F. Outcomes for adulthood preparation subjects

Together, the six APS conceptual models identified 50 outcomes (14 enhanced, 36 expanded) that programming in at least one APS would affect. Of these 50, the unified framework includes 5 enhanced and 4 expanded outcomes that were present in at least two APS schematics. The conceptual models identified outcomes as short-, medium-, or long-term, depending on when change could be expected to occur. The unified framework does not make this distinction, because the expected timing of three outcomes (emotional and social well-being, substance use, and academic achievement) varied across APSs. The following list describes each outcome shared across two or more APSs, and factors that influence the outcome.

Enhanced PREP outcomes

1. **Risky sexual behavior** (EC, HL, HR, PC): Positive relationships with peers and partners, positive role models, life skills programming, improved self-efficacy, positive attitudes about their ability to learn and their future potential, positive attitudes and knowledge about sex, and improved parent-child communication may lead to reduced engagement in risky sexual behaviors, such as multiple sexual partners and having sex while under the influence of alcohol or drugs.

2. **Adolescent pregnancy** (AD, EC, HR, PC): Healthy relationship education; life skills programming that promotes academic achievement and goal-setting; and improved attitudes, beliefs, and knowledge related to parent-child communication may contribute to decreases in adolescent pregnancy.

3. **Abstinence** (AD, HR, PC): Strong connections and positive bonds to adults, improved parent-child communication, the perception that peers are not engaging in sexual activity, and increased perceptions of attachment to or love for a romantic partner may contribute to increased abstinence and a delay of sexual initiation.

4. **Condom and contraceptive use** (AD, HR, PC): Academic achievement; positive relationships with peers and partners; and improved attitudes, beliefs, and knowledge about sexual health may contribute to higher rates of condom and contraceptive use.

5. **STIs/HIV** (AD, HR, PC): Improved parent-child communication is associated with improved attitudes, beliefs, and knowledge about STIs and HIV. Youth who have had only a single romantic relationship or demonstrate healthy relationship skills are at lower risk of contracting an STI or HIV.

Expanded PREP outcomes

1. **Delinquency and disruptive behaviors** (AD, EC, FL, HL, HR, PC): Improved communication and conflict resolution skills, increased relationship quality with peers, improved life skills, and increased parental monitoring may contribute to reduced involvement in delinquency or disruptive behaviors.

2. **Academic achievement** (AD, EC, HL, HR, PC): Improved life skills, such as those that promote positive social adjustment; development of goal-setting and problem-solving skills; positive relationships as young adults; and positive parent-child communication, may contribute to improved academic achievement.

3. **Emotional and social well-being** (AD, EC, HL, HR, PC): Improved social skills, healthy relationship and life skills, and positive parent-child communication may contribute to improved emotional and social well-being.

4. **Substance use** (AD, HL, HR, PC): Having a positive role model, enhancing youths' social competency and self-management skills, and engaging in positive parent-child communication may lead to decreased substance use.

G. Conclusions

The purpose of incorporating APS content into PREP programming is to help youth improve their physical, cognitive, social, and emotional well-being, which in turn may result in decreased involvement in risky sexual behaviors, delinquency, and substance use, among other outcomes. Across the six APSs identified in the PREP legislation, there are numerous common factors that may influence outcomes. Using the unified framework to identify these factors may assist PREP grantees in selecting which APSs to cover, based on their target populations or outcomes. Further, by incorporating PYD principles into APS programming, PREP programs may enhance youths' strengths, engage youth in their communities, and promote positive relationships and opportunities for the youth they serve. The unified framework and the individual APS schematics are resources to help grantees determine what constitutes APS programming, what infrastructure is needed to support this programming within adolescent pregnancy prevention programs, and how APS programming might affect youth outcomes. A program's ability to achieve the intended results will depend in part on the content presented to youth, the quality of program implementation, and youths' attendance and engagement. PREP grantees should strive to implement high quality programs that present APS content to youth in an engaging manner.

X. CONSIDERATIONS FOR USING CONCEPTUAL MODELS TO SELECT AND IMPLEMENT APS TOPICS IN PREP

Mathematica:

  Elizabeth Clary

  Heather Zaveri

  Christopher Jones

  Katie Eddins

  Katie Adamek

Child Trends:

  Kristin A. Moore

  Mindy E. Scott

  Deana Around Him

  Monica Arkin

  Isabel Griffith

This page has been left blank for double-sided copying.

X. CONSIDERATIONS FOR USING CONCEPTUAL MODELS TO SELECT AND IMPLEMENT APS TOPICS IN PREP

PREP grantees have requested guidance on expectations for the design and implementation of their APS programming. The APS models—that is, the schematics and the supporting narratives—and the unified framework presented in this report begin to provide this guidance.

The models and framework can help current and future PREP grantees, and other PREP stakeholders, to understand, choose, and develop APS content to target specific outcomes.

However, there are limitations to the guidance these models can provide. This is due in part to the variety of populations, settings, and potential approaches used by PREP grantees. No models could cover all possibilities or provide guidance for all situations that PREP grantees and providers will need to consider. Therefore, these models are not intended to serve as detailed implementation guides. Also, the study team did not (1) conduct a systematic review of intervention literature that would support drawing conclusions about the causality of specific interventions relative to the outcomes identified in each model, or (2) identify the exact amount of programming that should be provided to achieve those outcomes. Therefore, grantees will continue to have discretion over how to design and implement their APS programming.

> The Family and Youth Services Bureau (FYSB) and the Office of Planning, Research, and Evaluation (OPRE), both within the Administration for Children and Families (ACF), contracted with Mathematica and its partner, Child Trends, to develop conceptual models for the adulthood preparation subjects (APSs) and to determine how they fit within PREP programming.
>
> PREP grantees must adhere to four program requirements: (1) implement evidence-based or evidence-informed curricula; (2) provide education on both abstinence and contraception for the prevention of pregnancy, sexually transmitted infections (STIs), and HIV; (3) educate youth on at least three of six APSs; and (4) focus on high-risk populations, such as youth residing in geographic areas with high teen birth rates, adjudicated youth, youth in foster care, minority youth, and pregnant or parenting teens. PREP grantee are also required to implement a positive youth development (PYD) approach in their programs. Grantees have discretion in how to meet these requirements. This discretion allows them to tailor their programs to fit the needs of the targeted population and their priorities.
>
> The intention of supplementing pregnancy prevention programs with APS content is to further prepare youth for the transition to adulthood. It is hypothesized that incorporating APS content will strengthen the ability of programs to reduce sexual risk behaviors and expand the range of outcomes that programs affect.
>
> This report is a first step toward helping PREP grantees understand issues of integrating and implementing APSs into their programming. The information presented herein reflects grantee perspectives and published literature on the APSs. The primary aim of this report is to provide grantees with a framework to support the implementation of APSs in their projects.

This chapter discusses how grantees can use the conceptual models and unified framework to support the design and implementation of their programs. The chapter ends by proposing future directions for the development of additional resources and guidance to supplement the models, as well as future directions for research.

A. Potential uses of the APS conceptual models and unified framework

Chapters III through VIII present the content of the six APS conceptual models. The study team developed and refined these models through an extensive process that involved a literature

review, interviews with PREP grantees, and reviews and input from PREP grantees, stakeholders, and experts. The models provide expanded definitions for the APSs and present theories of change for how grantees can use APS programming to help youth. They also contain several other components: precursors that influence youth; topics for inclusion in the APS; design and implementation features to use for PREP programming; and outcomes that might be affected by including programming on the APSs. Each model contains both a schematic that presents a high-level overview of the model and a supporting narrative with detailed discussions of each component. Previously, there was little information or guidance about APSs and incorporating them into PREP. The models make a substantial contribution to the PREP program and its grantees by filling in this gap with rich, extensive information in one source tailored for PREP grantees.

Now that the APS conceptual models and unified framework are available, PREP grantees can use them (1) to understand APSs, (2) to choose APSs, (3) to develop APS content, and (4) to target specific outcomes. These models can also help other PREP stakeholders understand the APSs and support grantees' APS programming. Because the models can inform grantees at any stage of development and implementation of such programming, they should be useful to all grantees, regardless of the status of their APS programming. This section discusses considerations for each potential use; grantees participating in the stakeholder review mentioned several of these.

Understand APSs. Each model—which includes a high-level schematic and a detailed supporting narrative—is designed to help PREP grantees and stakeholders understand the topics that fall under each APS and how to design and implement programming for the APSs. The models contain other useful information, such as the contextual factors that affect youth in PREP and the theory of change for how incorporating the APSs into PREP programming can help improve youth outcomes. Although the models should be useful for anyone involved with PREP, they might be especially useful for people new to PREP, such as new program staff or future grantees who might not be familiar with the APSs. The models introduce individual APSs and present terminology and other information needed to understand each subject. For example, grantees can have new staff learn about APSs from the models. Grantees or facilitators can also use the models with staff in implementation settings or with other partners. Grantees providing PREP in schools, for example, could use the model schematics to give a high-level overview of the APSs to school and district staff. Finally, grantees could use the information in the models to help develop grant applications, to help ensure that their proposed activities align with the topics identified for the APS, or to illustrate hypothesized linkages between activities and intended outcomes.

Choose APSs. Grantees may also use the APS conceptual models and unified framework to determine which APSs to include in their programming. Grantees can do this by first identifying potential curricula or by reviewing the models to see which protective factors, risk factors, or specific topics are of interest to them. If grantees select their curricula first, they should review the content to identify which if any APS topics are adequately and appropriately covered. Conversely, grantees can first review the topics in each model and then choose which APSs to include based on the topics on which they want to focus.

When selecting APSs, grantees need to consider the number of APS topics they will cover and the depth of coverage in their programming. Grantees do not need to address every topic identified in the model for the subject. Instead, they can select the topics of greatest interest or relevance for their population. However, to achieve desired outcomes related to the APSs, grantees should ensure that they thoroughly cover the subjects they select. That is, programs need to include enough topics identified for the subject in their PREP programming. Grantees should also cover selected topics thoroughly so that youth understand them and benefit from the activity or material. While additional research is needed to identify how much programming is sufficient, grantees need to ensure they intentionally cover their selected APSs for the programming to be meaningful to the youth.

Develop APS content. Once grantees know which APSs and related topics they will deliver, they can use the conceptual models to help refine and/or develop their APS programming. Grantees can search for curricula, activities, or other resources that focus exclusively on APS content; curricula are more likely to cover the topics broadly across an APS, and other resources might be more targeted to a specific topic or subgroup of topics within the APS. The design and implementation sections of the APS conceptual models can help grantees determine how to deliver that content within their PREP programs. The unified framework also describes how to broadly incorporate positive youth development principles in PREP programming for any APS.

In some cases, grantees' existing curricula and activities may omit a specific APS topic that the grantee elects to include. In this case, grantees can use the models to guide development of supplemental programming for that topic. First, grantees would need to identify gaps between the topics they will to cover and what is already covered by their existing curriculum or programming. Grantees can then identify (or develop) supplemental materials that address these topics, incorporating recommendations from the models' sections on program design and implementation. Grantees can add this supplemental programming to existing lessons or offer them as supplemental activities not connected to the main program (as after-school activities, parent nights, or community education).

Target specific outcomes. The APSs are related to several potential outcomes, both enhanced (outcomes related to the prevention of pregnancy and STIs among youth targeted by PREP) and expanded (outcomes not related to the prevention of pregnancy and STIs among youth). Grantees who know which outcomes they want to target can use the conceptual models to see whether and how each APS might support the enhanced or expanded outcomes they seek. Alternatively, grantees who have not chosen specific outcomes to target can review the outcomes in all the models, decide which ones are most important to them, and then select APSs based on which subjects target those outcomes. In both cases, grantees can use the unified framework to see how outcomes overlap across APS conceptual models, and then use the individual models to understand how and why each APS might help achieve those outcomes. Grantees can also design evaluation research questions and plans based on the outcomes they hope to achieve.

B. Limits of the conceptual models and tailoring APS programs

There are important limitations on how to use the APS conceptual models. The models are not designed to be prescriptive, for two reasons. First, grantees serve a wide variety of populations and operate in many different settings. They are constrained in the time and resources available to deliver programming on at least three APSs, and there are many different approaches to covering the APSs. Second, the models cannot resolve every question or provide definitive guidance. The study team did not design its review of the literature to support identification of elements that had evidence of effectiveness or to identify optimal amounts of programming. This report provides the research background from known literature to support and guide development of resources and recommendations around the amount of programming. In some areas, it might be possible to provide more guidance after a further, intensive examination of the literature. However, some questions must remain unanswered simply because there is not yet enough evidence, and more research throughout the field is needed. In several areas, the models deliberately provide no guidance. They do not specify how many hours grantees should spend on each APS, how many topics grantees should cover within each APS, or which curricula or resources grantees should use to cover each APS.

Instead, the models provide an overview and a range of possibilities so grantees can adapt them for their own programming. Certain model components will be more or less relevant depending on the grantee's situation. Accordingly, grantees do not need to follow or cover every piece of the model. The study team developed these models with the expectation that grantees could provide APS programming effectively without covering every topic, fully implementing every program design and implementation approach, or targeting every outcome. Instead, grantees should tailor their APS programming based on the circumstances they face, including their population and setting, available resources, and past experiences delivering programming.

At the same time, although grantees should work within their context, they should also ensure that their selected APSs are well covered. Although the models cannot and do not quantify amounts of time to spend on each topic, grantees should cover the APSs with enough breadth and depth, and provide a sufficient level of programming, to plausibly improve youth outcomes. Providing only a light touch on each APS is unlikely to result in the intended outcomes. In addition, research on evidence-based programming more broadly has concluded that sufficient amounts of programming are needed to have an impact, but additional research is needed to quantify what sufficient programming is in the context of PREP and the APSs (Hammond et al. 2007; Lundgren and Amin 2015; Child Trends 2014).

The program design and implementation section in each model recommends strategies grantees should consider, many of which involve tailoring programs. These strategies have different levels of evidence that they are effective, but they present potential ways for programs to prepare and deliver APS programming that fits the settings and needs of their youth. Key points from these sections include:

Grantees should tailor programming to meet the needs of their target population of youth. Grantees should consider tailoring their program based on multiple dimensions of their target population. A few examples of when it might be appropriate to tailor programming to a particular youth population include:

- **Age**. Grantees might serve youth of different ages, ranging from middle school to high school to older adolescents. This may be especially challenging for grantees who serve different ages of youth simultaneously, though grantees could try strategies such as combining age groups for some activities so youth can learn from each other.

- **Developmental level**. Grantees should also consider that youth at the same age may be at different developmental stages, and therefore the topics and content may not be appropriate for all youth based on age alone. Programming should consider not only youths' ages but also where youth are developmentally.

- **Gender**. Participants' gender is also an important consideration for grantees, who need to decide whether to provide combined or separate programming to boys versus girls for some or all APSs. For example, grantees may choose to discuss sensitive topics in single-gender groups instead of in integrated gender groups.

- **Living arrangements**. Grantees should be especially careful to adapt their programming to youth who do not live with one or both parents, especially where the APS suggests involving parents, caregivers, or trusted adults.

Grantees should tailor their programs to the settings in which they provide programming.
Grantees might work in school systems, where they provide in-school or after-school programming, or in other community settings, such as YMCAs or homeless shelters. Logistical aspects of APS programming, such as the schedule and length of sessions, might have to be adjusted to fit the setting. For example, grantees providing in-school programming have to fit sessions within the school's class period time, which might be as short as 50 minutes. Grantees might also need the partners with authority over these settings to approve APS content before grantees can deliver it. For example, in many school settings, district leaders or the school board must approve programming ahead of time, and sensitive topics may be controversial.

Other grantees might work in specialized settings, including alternative schools, residential or transitional-living settings, and juvenile justice settings, or serve a specialized population not specific to a setting, such as pregnant and parenting youth. These youth might need APS programming specifically tailored to the challenging circumstances of their lives; they might also need more intensive programming or supplemental services, compared to other youth. These settings also present logistical issues. For example, grantees delivering PREP in juvenile justice facilities might not be able to use the same technology or equipment they could elsewhere. Because many youth have short stays and quick transitions in and out of alternative schools or residential settings, grantees might need to condense programming into a smaller number of longer sessions that can be delivered within a brief time frame.

APS programming should actively engage youth. For APS programming to be effective, it should be interactive and participatory, and involve building skills and providing opportunities to practice those skills safely in real-life situations and experiences. As described in the unified framework, a key principle of the PYD approach required of PREP grantees is engaging youth in their communities. There are multiple opportunities for actively engaging youth in APS programming. Grantees can offer role-playing opportunities, use social media and technology to engage youth in a variety of formats, or turn activities into games to help youth have fun while reinforcing APS lessons. Grantees have developed an array of APS-tailored strategies for

engaging youth, such as a "date night" event on how to have a fun and safe date (healthy relationships); a board game activity on how to budget needs and wants (financial literacy); and college fairs and visits (educational and career success). Grantees should think creatively about how to actively engage youth in ways that reinforce the lessons being taught, and thereby improve youth outcomes.

Grantees should carefully consider the feasibility of engaging parents, caregivers, and other trusted adults. Parents and caregivers are uniquely influential in youths' lives, and along with other trusted adults, they can support and protect youth during their transition to adulthood. Grantees can use a number of strategies to engage these important adults, such as assigning youth to discuss APS-related topics with them at home or outside of PREP programming, involving them directly in the APS programming provided to youth, or providing separate APS activities through education for parents, caregivers, and trusted adults. This is most relevant for the parent-child communication APS but also applies to the other APSs. For example, for the educational and career success APS, grantees could engage parents in their child's postsecondary planning, or for the healthy life skills APS, grantees could encourage parents to model the skills discussed during programming.

These approaches can have several advantages for parents and youth. Gaining parental buy-in and engagement can help parents communicate their values and expectations to youth, give parents more knowledge and confidence to reinforce values and lessons from the APS topics, and help parents continue supporting youth. However, grantees face several challenges and barriers to engaging parents, caregivers, and trusted adults. First, not all youth live with their parents (for example, youth in foster care or incarcerated youth). Other caregivers serving in a parental role or other trusted adults could get involved, and grantees should take an inclusive view of which adults to engage. However, other adults might not be able to play the same role that a parent or another caregiver in a parental role would. It also might not be advisable to engage some parents or caregivers. For example, parents might have their own discomfort with money or be involved in an unhealthy relationship, and feel unable to help their children with those subjects. Some youth might not feel comfortable discussing sensitive topics with their parents, such as their decisions in dating relationships.

Logistically, getting parents and other adults to attend PREP activities can be difficult given parents' work schedules and other demands on their time. Grantees also might not have sufficient resources to provide additional activities for parents and other adults. For example, a grantee that provides APS programming during the school day would probably need to add evening activities that parents could attend. However, they might not have enough staff time or funding or have space to provide those additional activities.

Staffing PREP programs should account for APS programming. Currently, the same staff often deliver both sexual health and APS content under PREP. This can be advantageous because staff can cover overlapping topics, connect topics across APSs, and have more time to get to know and connect with the youth they serve. Many skills necessary for this work, such as those related to facilitation and classroom management, are relevant to both PREP programming and the APSs. However, staff will also need content knowledge about the APS and in some cases APS-specific skills, such as in modeling healthy relationships. Grantees should not assume that training required for the PREP/curriculum for the prevention of pregnancy and STIs is sufficient

for delivering APS programming. Instead, staff who deliver APS programming should have training so they have the skills and knowledge to teach the relevant APS materials and to answer participants' questions about the topics. Grantees can also bring in guest speakers to cover specific topics or provide supplemental activities. Using guest speakers can be especially helpful for topics or activities that require specialized expertise, such as discussing credit and debt for the financial literacy APS or covering mental health topics for the adolescent development APS.

C. Future steps

This multi-year study was funded to develop and refine conceptual models for all six APSs and a unified framework. During interviews and stakeholder reviews, current PREP grantees and providers requested guidance and support beyond what the models are intended to address. They wanted to know how much programming to provide for each APS—that is, how many hours of content to devote to each APS; how many of the topics listed under each APS to provide; and how much detail to cover for each topic within an APS. Grantees and providers also wanted to know where to find evidence-based or evidence-informed curricula to use for their APS programming, and how to adapt those materials to their target populations and program settings. Some asked how to integrate APS programming into their evidence-based curriculum for the prevention of pregnancy and STI prevention among youth without affecting fidelity. Others wanted to know how to provide enough programming on both pregnancy and STI prevention and APSs given the time constraints in many of their program settings. Others requested resources on training facilitators and other staff. Some grantees also sought guidance on assessing the quality of their APS programming.

Although the present study was not designed to answer these questions, additional steps, described below, could provide further support to grantees about implementation of APSs in PREP.

Develop resources to help grantees deliver APS programming. Part of this step would be to develop resources related to the guidance grantees requested. This could involve additional research to develop recommendations related to the amount of programming on each APS needed to achieve the intended youth outcomes. It could also include guidance on how to adapt materials or integrate them into existing programming without affecting fidelity.

As suggested by stakeholders, another part of this step could involve providing additional resources to support grantees' implementation of the APSs, including guides and lists of evidence-based curricula for the prevention of pregnancy and STIs; lessons or other resources relevant to each APS; case studies and other detailed examples of how PREP grantees include APSs in their programming; and simulations and tools to help them walk through decisions about APS programming. If few APS-focused curricula exist, one step could be to develop new ones aligned with the models. These resources could be informed by additional research on APS programming in PREP, as discussed below.

Conduct additional research on how grantees cover the APSs in PREP programming and on the needed amount of programming. At this time, there is no centralized information on how grantees teach APSs or what topics they cover under each. Although the grantee interviews and stakeholder review collected some information about grantees' current programs, it was limited in scope. Additional research could learn from all grantees and use multiple methods,

such as surveys, interviews, and on-site observations. This information could then be compared to the models to assess alignment, identify where gaps tend to occur, and describe common strategies and promising practices that grantees use to tailor their programming. This research could also help grantees understand what a sufficient amount of APS programming is.

Rigorously examine how much APS programming to provide to achieve the intended outcomes. To address grantee and stakeholder requests for specific guidance on the amount of APS programming to provide, rigorous research could determine the minimum amounts of programming necessary to achieve the intended outcomes. This research should also explore whether or not covering three APSs within PREP is necessary for achieving outcomes, or if more or fewer APSs are needed.

This research could also identify the causal connections between APSs and the enhanced and expanded outcomes. For example, are there causal links between financial literacy programming and enhanced outcomes? What are the impacts of healthy life skills programming on outcomes beyond alcohol and substance abuse, such as adolescent pregnancy and STIs/HIV? Do the identified outcomes still hold true with especially vulnerable populations, such as homeless and runaway youth or pregnant and parenting youth?

While additional research and resources on the APSs would be useful to the field, the models presented in this report represent an important step in refining the definition and delivery of the APSs.

APPENDIX A:

REFERENCES BY CHAPTER

This page has been left blank for double-sided copying.

Chapter I: Introduction

Antle, B.F., D.J. Sullivan, A. Dryden, E.A. Karam, and A. Barbee. "Healthy Relationship Education for Dating Violence Prevention Among High-Risk Youth." *Children and Youth Services Review,* vol. 33, no. 1, 2011, pp. 173–179.

Kerpelman, J.L., J.F. Pittman, F. Adler-Baeder, K.J. Stringer, S. Eryigit, H. Saint-Eloi Cadely, and M.K. Harrell-Levy. "What Adolescents Bring to and Learn from Relationship Education Classes: Does Social Address Matter?" *Journal of Couples and Relationship Therapy,* vol. 9, no. 2, 2010, pp. 95–112.

U.S. Congress. Social Security Act, Section 513. Available at https://www.ssa.gov/OP_Home/ssact/title05/0513.htm. Accessed April 4, 2019.

Zief, Susan, Rachel Shapiro, and Debra Strong. *The Personal Responsibility Education Program (PREP): Launching a Nationwide Adolescent Pregnancy Prevention Effort.* OPRE Report #2013-37. Washington, DC: U.S. Department of Health and Human Services, Office of Planning, Research and Evaluation, Administration for Children and Families, 2013.

Chapter III: Conceptual model for addressing adolescent development in PREP

American Psychological Association. *Developing Adolescents: A Reference for Professionals.* Washington, DC: American Psychological Association, 2002.

Bandy, Tawana. "What Works for Male Children and Adolescents: Lessons from Experimental Evaluations of Programs and Interventions." Fact Sheet. *Child Trends,* Publication #2012-22, August 2012.

Baumeister, Roy F., Jennifer D. Campbell, Joachim I. Krueger, Kathleen D. Vohs, David L. DuBois, and Heather D. Tevendale. "Applying Social Psychology: Are Self-Esteem Programs Misguided?" In *Taking Sides: Clashing Views in Social Psychology,* 2nd edition, edited by Jason Nier. New York: McGraw-Hill, 2007, pp. 92–115.

Bell, Kelly, Mary Terzian, and Kristin Moore. "What Works for Female Children and Adolescents: Lessons from Experimental Evaluations of Programs and Interventions." Fact Sheet. *Child Trends,* Publication #2012-23, August 2012.

Brooke-Weiss, Blaire, Haggerty, Kevin P., Fagan, Abigail A., Hawkins, J. David, and Cady, Rick. "Creating Community Change to Improve Youth Development: The Communities That Care System." The Prevention Researcher, 2008, 15(2): 21-24.

Catalano, Richard F., M. Lisa Berglund, Jean A.M. Ryan, Heather S. Lonczak, and J. David Hawkins. "Positive Youth Development in the United States: Research Findings on Evaluations of Positive Youth Development Programs." *Annals of the American Academy of Political and Social Science,* vol. 591, no. 98, 2004.

Catalano, Richard F., Lorrie E. Gavin, and Christine M. Markham. "Future Directions for Positive Youth Development as a Strategy to Promote Adolescent Sexual and Reproductive Health." *Journal of Adolescent Health,* vol. 46, no. 3, supplement, 2010, pp. S92–S96.

Centers for Disease Control and Prevention. "Adolescence: Preparing for Lifelong Health and Wellness." Washington, DC: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, August 2015. Available at https://www.cdc.gov/grand-rounds/pp/2015/20150818-adolescent-wellness.html. Accessed April 4, 2019.

Chapman, Erin N., and Ronald Werner-Wilson. "Does Positive Youth Development Predict Adolescent Attitudes about Sexuality?" *Adolescence,* vol. 43, no. 171, 2008, pp. 505–523.

Community Preventive Services Task Force. "Prevention of HIV/AIDS, Other STIs, and Pregnancy: Youth Development Behavioral Interventions Summary Evidence Tables." Washington, DC: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Community Preventive Services Task Force, April 2008.

Durlak, Joseph A., Roger P. Weissberg, and Molly Pachan. "A Meta-Analysis of After-School Programs that Seek to Promote Personal and Social Skills in Children and Adolescents." *American Journal of Community Psychology,* vol. 45, no. 3-4, 2010, pp. 294–309.

Eichas, Kyle, Richard E. Albrecht, Arlen J. Garcia, Rachel A. Ritchie, Aida Varela, Arlene Garcia, Roberto Rinaldi, Rebecca Wang, Marilyn J. Montgomery, Wendy K. Silverman, James Jaccard, and William M. Kurtines. "Mediators of Positive Youth Development Intervention Change: Promoting Change in Positive and Problem Outcomes?" *Child and Youth Care Forum,* vol. 39, no. 4, 2010, pp. 211–237.

Family and Youth Services Bureau. "Putting Positive Youth Development into Practice: A Resource Guide." Washington, DC: U.S. Department of Health and Human Services; Administration for Children and Families; Administration on Children, Youth, and Families; Family and Youth Services Bureau, February 2007.

Gambone, Michelle Alberti, and James P. Connell. "The Community Action Framework for Youth Development." *Prevention Researcher,* vol. 11, no. 2, 2004, pp. 17–20.

Gavin, L. "Positive Youth Development: A Strategy to Promote Adolescent Reproductive Health." Presented at the Second Annual OAH/ACYF Teenage Pregnancy Prevention Grantee Conference, Baltimore, Maryland, March 12–14, 2012.

Gavin, Loretta E., Richard F. Catalano, Corinne David-Ferdon, Kari M. Gloppen, and Christine M. Markham. "A Review of Positive Youth Development Programs that Promote Adolescent Sexual and Reproductive Health." *Journal of Adolescent Health,* vol. 46, no. 3, supplement, 2010, pp. S75–S91.

Gavin, Lorrie E., Richard F. Catalano, and Christine M. Markham. "Positive Youth Development as a Strategy to Promote Adolescent Sexual and Reproductive Health." *Journal of Adolescent Health,* vol. 46, no. 3, supplement, 2010, pp. S1–S6.

Gloppen, Kari M., Corinne David-Ferdon, and Jessica Bates. "Confidence as a Predictor of Sexual and Reproductive Health Outcomes for Youth." *Journal of Adolescent Health,* vol. 46, no. 3, supplement, 2010, pp. S42–S58.

Gomez, Brendan J., and Patricia M. Ang. "Promoting Positive Youth Development in Schools." *Theory into Practice,* vol. 46, no. 2, 2007, pp. 97–104.

Guerra, Nancy G., and Catherine P. Bradshaw. "Linking the Prevention of Problem Behaviors and Positive Youth Development: Core Competencies for Positive Youth Development and Risk Prevention." *New Directions for Child and Adolescent Development,* no. 122, 2008, pp. 1–17.

Hamilton, Stephen F., Mary Agnes Hamilton, and Karen Pittman. "Principles for Youth Development." In *The Youth Development Handbook: Coming of Age in American Communities,* edited by Stephen F. Hamilton and Mary Agnes Hamilton. Thousand Oaks, CA: Sage Publications, 2004, pp. 3–22.

Harper Browne, Charlyn. *Youth Thrive: Advancing Healthy Adolescent Development and Well-being.* Washington, DC: Center for the Study of Social Policy, September 2014.

House, Lawrence D., Jessica Bates, Christine M. Markham, and Catherine Lesesne. "Competence as a Predictor of Sexual and Reproductive Health Outcomes for Youth: A Systematic Review." *Journal of Adolescent Health,* vol. 46, no. 3, supplement, 2010a, pp. S7–S22.

House, Lawrence D., Trisha Mueller, Belinda Reininger, Kathryn Brown, and Christine M. Markham. "Character as a Predictor of Reproductive Health Outcomes for Youth: A Systematic Review." *Journal of Adolescent Health,* vol. 46, no. 3, supplement, 2010b, pp. S59–S74.

Institute of Medicine and National Research Council. "The Science of Adolescent Risk-Taking: Workshop Report." Committee on the Science of Adolescence. Washington, DC: National Academies Press, 2011.

Kirby, Douglas, and Gina Lepore. *A Matrix of Risk and Protective Factors Affecting Teen Sexual Behavior, Pregnancy, Childbearing and Sexually Transmitted Disease.* Washington, DC: National Campaign to Prevent Teen and Unplanned Pregnancy, 2007.

Markham, Christine M., Donna Lormand, Kari M. Gloppen, Melissa F. Peskin, Belinda Flores, Barbara Low, and Lawrence D. House. "Connectedness as a Predictor of Sexual and Reproductive Health Outcomes for Youth." *Journal of Adolescent Health,* vol. 46, no. 3, supplement, 2010, pp. S23–S41.

Mohatt, N.V., A.B. Thompson, N.D. Thai, and J.K. Tebes. "Historical Trauma as Public Narrative: A Conceptual Review of How History Impacts Present-Day Health." *Social Science & Medicine,* vol. 106, April 2014, pp. 128–136.

Nagaoka, Jenny, Camille A. Farrington, Stacy B. Ehrlich, and Ryan D. Heath. "Foundations for Young Adult Success: A Developmental Framework. Concept Paper for Research and Practice." University of Chicago Consortium on Chicago School Research, June 2015.

National Research Council, and Institute of Medicine. *Community Programs to Promote Youth Development.* Washington, DC: National Academies Press, 2002.

National Research Council, and Institute of Medicine. *Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities.* Washington, DC: National Academies Press, 2009.

Patton, George C., and Russell Viner. "Pubertal Transitions in Health." *The Lancet,* vol. 369, no. 9567, 2007, pp. 1130–1139.

Pittman, Karen, Merita Irby, Joel Tolman, Nicole Yohalem, and Thaddeus Ferber. *Preventing Problems, Promoting Development, Encouraging Engagement: Competing Priorities or Inseparable Goals?* Based on K. Pittman, K. and M. Irby, *Preventing Problems or Promoting Development?*, 1996. Washington, DC: Forum for Youth Investment, Impact Strategies, 2003.

Sawyer, Susan, Rima Afifi, Linda Bearinger, Sarah-Jayne Blakemore, Bruce Dick, Alex Ezeh, and George Patton. "Adolescence: A Foundation for Future Health." *The Lancet,* vol. 379, no. 9826, 2012, pp. 1630–1640.

Scales, Peter, Peter Benson, Sabrina Oesterle, Karl Hill, J. Davis Hawkins, and Travis Pashak. "The Dimensions of Successful Young Adult Development: A Conceptual and Measurement Framework." *Applied Developmental Science,* vol. 29, no. 3, 2016, pp. 150-174.

Singson, J. "Peer mentoring: Harnessing Positive Influence." Administration on Children Youth and Families, Family and Youth Services Bureau, July 2015. Available at https://teenpregnancy.acf.hhs.gov/sites/default/files/resource-files/TipSheetPeerMentoringFINAL_508Compliant.pdf. Accessed April 4, 2019.

Steinberg, L. "Risk Taking in Adolescence: New Perspectives from Brain and Behavioral Science." *Current Directions in Psychological Science,* vol. 16, no. 2, 2007, pp. 55–59.

Steinberg, L., and Morris A. Sheffield. Adolescent Development: Understanding Adolescent Development in Context. *Annual Review of Psychology,* vol. 52, no. 83, 2001, pp. 83–110.

Steiner-Adair, Catherine, and Lisa Sjostrom. *Full of Ourselves: A Wellness Program to Advance Girl Program, Health, and Leadership*. New York: Teachers College Press, 2006.

Tsang, Sandra K.M., Eadaoin K.P. Hui, and Bella C.M. Law. "Self-Efficacy as a Positive Youth Development Construct: A Conceptual Review." *Scientific World Journal,* vol. 2012, 2012.

World Health Organization. "Topics at a Glance: Adolescent Health." Available at http://www.who.int/maternal_child_adolescent/topics/adolescence/dev/en/. Accessed December 13, 2016.

Youngblade, Lise M., Christina Theokas, John Schulenberg, Laura Curry, I-Chan Huang, and Maureen Novak. "Risk and Promotive Factors in Families, Schools, and Communities: A Contextual Model of Positive Youth Development in Adolescence." *Pediatrics,* vol. 119, 2007, pp. S47–S53.

Zarrett, Nicole, and Richard Lerner. "Ways to Promote the Positive Development of Children and Youth." Child Trends Research-to-Results Brief, February 2008. Available at https://www.childtrends.org/wp-content/uploads/01/Youth-Positive-Devlopment.pdf. Accessed April 4, 2019.

Chapter IV: Conceptual model for addressing educational and career success in PREP

Afterschool Alliance. "Afterschool: Supporting Career and College Pathways for Middle School Age Youth. MetLife Foundation Afterschool Alert. Issue Brief no. 46." Washington, DC: Afterschool Alliance, 2011.

Afterschool Alliance. "Afterschool Fosters Success in School. MetLife Foundation Afterschool Alert. Issue Brief no. 31." Washington, DC: Afterschool Alliance, 2008.

Ameen, Edward J., and Debbiesiu L. Lee. "Vocational Training in Juvenile Detention: A Call for Action." *Career Development Quarterly,* vol. 60, no. 2, 2012, pp. 98–108.

Bailey, Deryl F., and Mary E. Bradbury-Bailey. "Empowered Youth Programs: Partnerships for Enhancing Postsecondary Outcomes of African American Adolescents." *Professional School Counseling*, vol. 14, no. 1, 2010, pp. 64–74.

Berger, Ron, Sheldon Berman, Joshua Garcia, and John Deasy. "A Practice Agenda in Support of How Learning Happens." Washington, DC: The Aspen Institute National Commission on Social, Emotional, and Academic Development, January 15, 2019.

Bowen, Gary L., Roderick A. Rose, Joelle D. Powers, and Elizabeth J. Glennie. "The Joint Effects of Neighborhoods, Schools, Peers, and Families on Changes in the School Success of Middle School Students." *Family Relations*, vol. 57, no. 4, 2008, pp. 504–516.

Bronfenbrenner, Urie, and Pamela A. Morris. "The Bioecological Model of Human Development." In *Handbook of Child Psychology,* edited by Richard M. Lerner and William Damon. Hoboken, NJ: John Wiley & Sons, 2006.

Centers for Disease Control and Prevention. "School Connectedness: Strategies for Increasing Protective Factors Among Youth." Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2009.

Costello, Cynthia B. "Pathways to Postsecondary Education for Pregnant and Parenting Teens. Working Paper #C418." Washington, DC: Institute for Women's Policy Research, 2014.

Dumka, Larry E., Nancy A. Gonzales, Darya D. McClain, and Roger E. Millsap. "Family, Culture, Gender, and Mexican American Adolescents' Academic Success." In *Gender Roles in Immigrant Families,* edited by Susan S. Chuang and Catherine S. Tamis-LeMonda. New York: Springer Science and Business Media, 2013.

Dupper, David R. "Guides for Designing and Establishing Alternative School Programs for Dropout Prevention." In *The School Practitioner's Concise Companion to Preventing Dropout and Attendance Problems*. New York: Oxford University Press, 2008.

Durlak, Joseph A., Celene E. Domitrovich, Roger P. Weissberg, and Thomas P. Gullotta, editors. *Handbook of Social and Emotional Learning: Research and Practice.* New York: Guilford Press, 2015.

Dweck, Carol S. *Mindset: The New Psychology of Success*. New York: Random House, 2006.

Fishman, Barry, Stephanie Teasley, and Steven Cederquist. *Micro-Credentials as Evidence of College Readiness: Report of an NSF Workshop.* Ann Arbor, MI: University of Michigan, 2018.

Franklin, Cynthia, Katherine L. Montgomery, Victoria Baldwin, and Linda Webb. "Research and Development of a Solution-Focused High School." In *Solution-Focused Brief Therapy: A Handbook of Evidence-Based Practice,* edited by Eric E. McCollum, Wallace J. Gingerich, Cynthia Franklin, and Terry Trepper. New York: Oxford University Press, 2012.

Hammond, Cathy, Dan Linton, Jay Smink, and Sam Drew. "Dropout Risk Factors and Exemplary Programs: A Technical Report." Anderson, SC: National Dropout Prevention Center/Network, 2007.

Healthy Teen Network. "A Policy Platform to Promote Health and Success Among Young Families." Baltimore, MD: Healthy Teen Network, 2009.

Henderson, Anne T., and Karen L. Mapp. "A New Wave of Evidence: The Impact of School, Family, and Community Connections on Student Achievement. Annual Synthesis 2002." Austin, TX: National Center for Family and Community Connections with Schools, 2002.

Hooker, Sarah, and Betsy Brand. "Success at Every Step: How 23 Programs Support Youth on the Path to College and Beyond." Washington, DC: American Youth Policy Forum, 2009. Available at https://www.aypf.org/resource/successateverystep. Accessed June 14, 2017.

Hopson, Laura M., Eunju Lee, and Ning Tang. "A Multi-Level Analysis of School Racial Composition and Ecological Correlates of Academic Success." *Children and Youth Services Review,* vol. 44, 2014, pp. 126–134.

Jensen, Eric. *Teaching With Poverty in Mind: What Being Poor Does to Kids' Brains and What Schools Can Do About It.* Alexandria, VA: ASCD, 2009.

Krauss, Stephanie Malia, Karen J. Pittman, and Caitlin Johnson. "Ready by Design: The Science (and Art) of Youth Readiness." The Forum for Youth Investment, March 2016.

Little, Priscilla, and Erin Harris. "A Review of Out-of-School Time Program Quasi-Experimental and Experimental Evaluation Results. Out-of-School Time Evaluation Snapshot." Cambridge, MA: Harvard Family Research Project, 2003.

Mallett, Christopher A. "The School Success Program: Improving Maltreated Children's Academic and School-Related Outcomes." *Children & Schools,* vol. 34, no. 1, 2012, pp. 13-26.

McNair, Renae, and H. Durell Johnson. "Perceived School and Home Characteristics as Predictors of School Importance and Academic Performance in a Diverse Adolescent Sample." *North American Journal of Psychology,* vol. 11, no. 1, 2009, pp. 63–84.

National Research Council. "Engaging Schools: Fostering High School Students' Motivation to Learn." Committee on Increasing High School Student's Engagement and Motivation to Learn. Board on Children, Youth and Families, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press, 2004.

National Research Council, and Institute of Medicine. "Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities." Washington, DC: The National Academies Press, 2009, pp. 64–69.

Olguin, David L., and Jeanmarie Keim. "Using Stakeholders as Career Bridges to Advance Students' Academic Performance: How Would You Like Your Stake?" *Journal of School Counseling,* vol. 7, 2009, pp. 1–22.

Policy Studies Associates. "Expanded Schools: Developing Mindsets to Support Academic Success: Research Brief." New York: ExpandED Schools (formerly TASC), 2014.

Princiotta, Daniel, and Ryan Reyna. "Achieving Graduation for All: A Governor's Guide to Dropout Prevention and Recovery." Washington, DC: NGA Center for Best Practices, 2009.

Ruffolo, Mary C. "Enhancing Skills of Students Vulnerable to Underachievement and Academic Failure." In *The School Practitioner's Concise Companion to Preventing Dropout and Attendance Problems,* edited by Cynthia Franklin, Mary Beth Harris, and Paula Allen-Meares. New York: Oxford University Press, 2008.

Scales, Peter C., Peter L. Benson, and Eugene C. Roehlkepartain. "Adolescent Thriving: The Role of Sparks, Relationships, and Empowerment." *Journal of Youth and Adolescence,* vol. 40, no. 3, 2011, pp. 263–277.

Shuger, Lisa. "Teen Pregnancy and High School Dropout: What Communities Can Do to Address These Issues." Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy, 2012.

Stanard, Pia, Faye Z. Belgrave, Maya A. Corneille, Karen D. Wilson, and Kristal Owens. "Promoting Academic Achievement: The Role of Peers and Family in the Academic Engagement of African American Adolescents." *Journal of Prevention & Intervention in the Community*, vol. 38, no. 3, 2010, pp. 198–212.

Thornton, Bill, and Jafeth E. Sanchez. "Promoting Resiliency Among Native American Students to Prevent Dropouts." *Education,* vol. 131, no. 2, 2010, pp. 455–464.

Vacca, James S. "Breaking the Cycle of Academic Failure for Foster Children—What Can the Schools Do to Help?" *Children and Youth Services Review,* vol. 30, no. 9, 2008, pp. 1081-1087.

Vandell, Deborah L., Elizabeth R. Reisner, and Kim M. Pierce. "Outcomes Linked to High-Quality Afterschool Programs: Longitudinal Findings from the Study of Promising Afterschool Programs." Washington, DC: Policy Studies Associates, 2007.

What Works Clearinghouse. "Dropout Prevention. What Works Clearinghouse Topic Report." Washington, DC: U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse, 2007.

Yonezawa, Susan, Makeba Jones, and Francine Joselowksy. "Youth Engagement in High Schools: Developing a Multidimensional, Critical Approach to Improving Engagement for all Students." *Journal of Educational Change,* vol. 10, no. 2-3, 2009, pp. 191–209.

Chapter V: Conceptual model for addressing financial literacy in PREP

Banniter, Rosella, Philip Heckman, and Susan Sharkey. *National Standards in K-12 Personal Finance Education,* fourth edition. Washington, DC: Jump$tart Coalition for Personal Financial Literacy, 2015.

Bhattacharya, Radha, Andrew Gill, and Denise Stanley. "The Effectiveness of Financial Literacy Instruction: The Role of Individual Development Accounts Participation and the Intensity of Instruction." *Journal of Financial Counseling and Planning,* vol. 27, no. 1, 2016, pp. 20–35.

Brown, Alexandra, J.M. Collins, Maximilian D. Schmeiser, and Carly Urban. "State Mandated Financial Education and the Credit Behavior of Young Adults." Finance and Economics Discussion Series Working Paper #2014-68, Board of Governors of the Federal Reserve System (U.S.), 2014.

Brown, Meta, John Grigsby, Wilbert van der Klaauw, Jaya Wen, and Basit Zafar. "Financial Education and the Debt Behavior of the Young." *Review of Financial Studies,* vol, 29, no. 9, September 2016, pp. 2490–2522

Carlin, Bruce I., and David T. Robinson. "Financial Education and Timely Decision Support: Lessons from Junior Achievement." *American Economic Review,* vol. 102, no. 3, 2012, pp. 305–308.

Consumer Financial Protection Bureau. "Youth Financial Education Curriculum Review, Report and Tool." Consumer Financial Protection Bureau, October 2015.

Danes, S.M., M.C. Rodriguez, and K.E. Brewton. "Learning Context When Studying Financial Planning in High Schools: Nesting of Student, Teacher, and Classroom Characteristics." *Journal of Financial Counseling and Planning,* vol. 24, no. 2, 2013, pp. 20–36.

Drever, Anita I., Elizabeth Odders-White, Charles W. Kalish, Nicole Else-Quest, Emily M. Hoagland, and Emory N. Nelms. "Foundations of Financial Well-being: Insights into the Role of Executive Function, Financial Socialization, and Experience-Based Learning in Childhood and Youth." *Journal of Consumer Affairs,* vol. 49, no. 1, 2015, pp. 13–38.

Edelstein, Sara, Christopher Lowenstein. "Supporting Youth Transitioning Out of Foster Care. Issue Brief 2: Financial Literacy and Asset Building Programs." OPRE Report no. 2014-69. Washington, DC: Urban Institute, December 2014.

Federal Deposit Insurance Corporation. "Money Smart for Grades 9–12 and Ages 18–20: Parent/Caregiver Guide." Washington, DC: Federal Deposit Insurance Corporation, n.d.

Franklin, Iris E. "Expanded Financial Literacy Unit Helps Students Make Wise Choices." *Journal of Family and Consumer Sciences,* vol. 99, no. 1, 2007, pp. 17–18.

Grohmann, Antonia, Roy Kouwenberg, and Lukas Menkhoff. "Childhood Roots of Financial Literacy." *Journal of Economic Psychology,* vol. 51, 2015, pp. 114–133.

Hines, Steven L., Lyle Hansen, and Christi Falen. "So, You Want to Move Out?!—An Awareness Program of the Real Costs of Moving Away from Home." *Journal of Extension,* vol. 49, no. 1, 2011, pp. 1–4.

Hoeve, M., G.J.J.M. Stams, M. Van Der Zouwen, M. Vergeer, K. Jurrius, and J.J. Asscher. "A Systematic Review of Financial Debt in Adolescents and Young Adults: Prevalence, Correlates and Associations with Crime." *Plos One,* vol. 9, no. 8, 2014,

Iowa State University Extension and Outreach. "High School Financial Planning Program." Ames, IA: Iowa State University, n.d.

Johnson, E., and M.S. Sherraden. "From Financial Literacy to Financial Capability Among Youth." *Journal of Sociology and Social Welfare,* vol. 34, no. 3, 2007, pp. 119–145.

Letkiewicz, Jodi C., and Jonathan J. Fox. "Conscientiousness, Financial Literacy, and Asset Accumulation of Young Adults." *Journal of Consumer Affairs,* vol. 48, no. 2, 2014, pp. 274–300.

Loke, Vernon, Laura Choi, and Margaret Libby. "Increasing Youth Financial Capability: An Evaluation of the MyPath Savings Initiative." *Journal of Consumer Affairs,* vol. 49, no. 1, 2015, pp. 97–126.

Lusardi, Annamaria, and Peter Tufano. "Debt Literacy, Financial Experiences, and Overindebtedness." *NBER Working Paper no. 14808,* 2009.

Lusardi, Annamaria, Olivia S. Mitchell, and Vilsa Curto. "Financial Literacy Among the Young." *Journal of Consumer Affairs,* vol. 44, no. 2, 2010, pp. 358–380.

McCormick, Martha H. "The Effectiveness of Youth Financial Education: A Review of the Literature." *Journal of Financial Counseling & Planning,* vol. 20, no. 1, 2009, pp. 70–83.

Miller, M., J. Reichelstein, C. Salas, and B. Zia. "Can You Help Someone Become Financially Capable? A Meta-Analysis of the Literature." *World Bank Research Observer,* vol. 30, no. 2, 2015, pp. 220–246.

Moffitt, T.E., L. Arseneault, D. Belsky, N. Dickson, R.J. Hancox, H. Harrington, R. Houts, R. Poulton, B.W. Roberts, S. Ross, M.R. Sears, W.M. Thomson, and A. Caspi. "A Gradient of Childhood Self-Control Predicts Health, Wealth, and Public Safety." *Proceedings of the National Academy of Sciences of the United States of America,* vol. 108, no. 7, 2011, pp. 2693–2698.

National Research Council, and Institute of Medicine. "Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities." Washington DC: National Academies Press, 2009, pp. 64–69.

Newcomb, Sarah. *Loaded: Money, Psychology, and How to Get Ahead Without Leaving Your Values Behind.* Hoboken, NJ: John Wiley & Sons, 2016.

Practical Money Skills. Money Matters Curriculum. Available at https://www.practicalmoneyskills.com/foreducators/lesson_plans/lev9-12/TG_Lesson1.pdf. Accessed December 13, 2016.

President's Advisory Council on Financial Literacy. "2008 Annual Report to the President." U.S. Department of the Treasury, 2009. Available at https://www.treasury.gov/about/organizational-structure/offices/Domestic-Finance/Documents/exec_sum.pdf. Accessed December 13, 2016.

Serido, Joyce, Soyeon Shim, and Chuanyi Tang. "A Developmental Model of Financial Capability: A Framework for Promoting a Successful Transition to Adulthood." *International Journal of Behavioral Development,* vol. 37, no. 4, 2013, pp. 287–297.

Shim, Soyeon, Jing J. Xiao, Bonnie L. Barber, and Angela C. Lyons. "Pathways to Life Success: A Conceptual Model of Financial Well-being for Young Adults." *Journal of Applied Developmental Psychology,* vol. 30, no. 6, 2009, pp. 708–723.

Tang, Ning, and Paula C. Peter. "Financial Knowledge Acquisition Among the Young: The Role of Financial Education, Financial Experience, and Parents' Financial Experience." *Financial Services Review,* vol. 24, no. 2, 2015, pp. 119–137.

Totenhagen, Casey J., Deborah M. Casper, Kelsey M. Faber, Leslie A. Bosch, Christine B. Wiggs, and Lynne M. Borden. "Youth Financial Literacy: A Review of Key Considerations and Promising Delivery Methods." *Journal of Family and Economic Issues,* vol. 36, no. 2, 2015, pp. 167–191.

Van Campenhout, Geert. "Revaluing the Role of Parents as Financial Socialization Agents in Youth Financial Literacy Programs." *Journal of Consumer Affairs,* vol. 49, no. 1, 2015, pp. 186–222.

Varcoe, Karen P., Allen Martin, Zana Devitto, and Charles Go. "Using a Financial Education Curriculum for Teens." *Journal of Financial Counseling and Planning,* vol. 16, no. 1, 2005, pp. 63–71.

Walstad, William B., Ken Rebeck, and Richard A. Macdonald. "The Effects of Financial Education on the Financial Knowledge of High School Students." *Journal of Consumer Affairs,* vol. 44, no. 2, 2010, pp. 336–357.

Xiao, Jing J., Cheng Chen, and Lei Sun. "Age Differences in Consumer Financial Capability." *International Journal of Consumer Studies,* vol. 39, no. 4, 2015, pp. 387–395.

Chapter VI: Conceptual model for addressing healthy life skills in PREP

Amodeo, Maryann, and Mary E. Collins. "Using a Positive Youth Development Approach in Addressing Problem-Oriented Youth Behavior." *Families in Society,* vol. 88, no. 1, 2007, pp. 75–85.

Bandura, Albert. "Self-Efficacy: Toward a Unifying Theory of Behavioral Change." *Psychological Review,* vol. 84, no. 2, 1977, p. 191.

Bandura, Albert, and Richard H. Walters. "Social Learning Theory." Englewood Cliffs, NJ: Prentice-Hall, 1977.

Botvin, Gilbert J., and Kenneth W. Griffin. "Life Skills Training: A Competence Enhancement Approach to Tobacco, Alcohol, and Drug Abuse Prevention." In *Handbook of Adolescent Drug Use Prevention: Research, Intervention Strategies, and Practice,* edited by Lawrence M. Scheier. Washington, DC: American Psychological Association, 2015.

Bronfenbrenner, Urie, and Pamela A. Morris. "The Bioecological Model of Human Development." In Handbook of Child Psychology, Hoboken, NJ: John Wiley & Sons, 2006. Collaborative for Academic, Social, and Emotional Learning. "Core SEL Competencies." 2017. Available at https://casel.org/core-competencies/. Accessed March, 5, 2019.

Cornell, Katherine H. "Adolescent Pregnancy and Parenthood." In *Crisis Counseling, Intervention, and Prevention in the Schools,* 3rd edition, edited by Jonathan Sandoval. New York: Routledge/Taylor & Francis Group, 2013.

Epstein, Jennifer A., and Gilbert J. Botvin. "The Moderating Role of Risk-Taking Tendency and Refusal Assertiveness on Social Influences in Alcohol Use Among Inner-City Adolescents." *Journal of Studies on Alcohol,* vol. 63, no. 4, 2002, pp. 456–459.

Epstein, Jennifer A., Kenneth W. Griffin, and Gilbert J. Botvin. "A Model of Smoking among Inner-City Adolescents: The Role of Personal Competence and Perceived Social Benefits of Smoking." *Preventive Medicine,* vol. 31, no. 2, 2000a, pp. 107–114.

Epstein, Jennifer A., Kenneth W. Griffin, and Gilbert J. Botvin. "Role of General and Specific Competence Skills in Protecting Inner-City Adolescents from Alcohol use." *Journal of Studies on Alcohol,* vol. 61, no. 3, 2000b, pp. 379–386.

Epstein, Jennifer A., Kenneth W. Griffin, and Gilbert J. Botvin. "Competence Skills Help Deter Smoking Among Inner City Adolescents." *Tobacco Control,* vol. 9, no. 1, 2000c, pp. 33–39.

Family and Youth Services Bureau. "Adolescent Pregnancy Prevention Tip Sheet: Healthy Life Skills." June 2016. Available at https://teenpregnancy.acf.hhs.gov/sites/default/files/resource-files/APS_Fact_Sheet_Healthy_Life_Skills_6316_final.pdf. Accessed May 18, 2017.

Forneris, Tanya, Steven J. Danish, and David L. Scott. "Setting Goals, Solving Problems, and Seeking Social Support: Developing Adolescents' Abilities Through a Life Skills Program." *Adolescence,* vol. 42, no. 165, 2007, pp. 103–114.

Foxcroft, David R., and Alexander Tsertsvadze. "Universal School-Based Prevention Programs for Alcohol Misuse in Young People." *Cochrane Database of Systematic Reviews,* no. 5, 2011.

Fuxman, Shai, Sabrina De Los Santos, Daniel Finkelstein, Mary K. Landon, and Lydia O'Donnell. "Sources of Information on Sex and Antecedents of Early Sexual Initiation Among Urban Latino Youth." *American Journal of Sexuality Education,* vol. 10, no. 4, 2015, pp. 333–350.

Gates, Simon. "Interventions for Prevention of Drug use by Young People Delivered in Non-School Settings." *Cochrane Database of Systematic Reviews,* no. 1, 2008.

Gfroerer, Kelly, Jane Nelsen, and Roy M. Kern. "Positive Discipline: Helping Children Develop Belonging and Coping Resources Using Individual Psychology." *Journal of Individual Psychology,* vol. 69, no. 4, 2013, pp. 294–304.

Gillespie, A., J.T. Jones, D. Clarke, D. Bundy, and S. Lee. "Skills for Health. Skills-Based Health Education Including Life Skills: An Important Component of a Child-Friendly/Health-Promoting School." World Health Organization Information Series on School Health, Document 9, 2003.

Goleman, Daniel. "The Secret to Success." *Education Digest: Essential Readings Condensed for Quick Review,* vol. 74, no. 4, 2008, pp. 8–9.

Graves, Kelly N., Annette Sentner, Jean Workman, and Wanda Mackey. "Building Positive Life Skills the Smart Girls Way: Evaluation of a School-Based Sexual Responsibility Program for Adolescent Girls." *Health Promotion Practice,* vol. 12, no. 3, 2011, pp. 463–471.

Griffin, Kenneth W., Gilbert J. Botvin, and Tracy R. Nichols. "Effects of a School-Based Drug Abuse Prevention Program for Adolescents on HIV Risk Behavior in Young Adulthood." *Prevention Science,* vol. 7, no. 1, 2006, p. 103.

Haskins, Ron, and Isabel Sawhill. *Creating an Opportunity Society.* Washington, DC: Brookings Institution Press, 2009.

Jennings, Louise B., Deborah M. Parra-Medina, Deanne K. Hilfinger-Messias, and Kerry McLoughlin. "Toward a Critical Social Theory of Youth Empowerment." *Journal of Community Practice,* vol. 14, no. 1-2, 2006, pp. 31–55.

Jessor, Richard, and Shirley L. Jessor. "Problem Behavior and Psychosocial Development: A Longitudinal Study of Youth." New York: Academic Press, 1977.

Kirby, D. "Emerging Answers 2007: Research Findings on Programs to Reduce Teen Pregnancy and Sexually Transmitted Diseases." Washington, DC: National Campaign to Prevent Teen and Unplanned Pregnancy, 2007.

Mangrulkar, Leena, Cheryl V. Whitman, and Marc Posner. *Life Skills Approach to Child and Adolescent Healthy Human Development.* Pan American Health Organization, Division of Health Promotion and Protection, Family Health and Population Program, Adolescent Health Unit, 2001.

Mears, Cortney. "News Brief." *Psychiatric Times,* vol. 24, no. 13, 2007, p. 64.

Minnis, A.M., E. Vandommelen-Gonzalez, E. Luecke, W. Dow, S. Bautista-Arredondo, and N.S. Padian. "Yo Puedo—A Conditional Cash Transfer and Life Skills Intervention to Promote Adolescent Sexual Health: Results of a Randomized Feasibility Study in San Francisco." *Journal of Adolescent Health,* vol. 55, no. 1, 2014, pp. 85–92.

Nangle, D.W., and D.J. Hansen. "Relations Between Social Skills and High-Risk Sexual Interactions Among Adolescents. Current Issues and Future Directions." *Behavior Modification,* vol. 17, no. 2, 1993, pp. 113–135.

National Research Council, and Institute of Medicine. *Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities.* Washington, DC: National Academies Press, 2009.

National Research Council, and Institute of Medicine. *The Relevance of Models of Adolescent Decision Making to the Analysis of Positive Development Processes and Pathways to Risk Prevention.* Washington, DC: National Academies Press, 2004.

O'Neil, James M., and Melissa L. Lujan. "Preventing Boys' Problems in Schools Through Psychoeducational Programming: A Call to Action." *Psychology in the Schools,* vol. 46, no. 3, 2009, pp. 257–266.

Pittman, Karen J., Merita Irby, Joel Tolman, Nicole Yohalem, and Thaddeus Ferber. *Preventing Problems, Promoting Development, Encouraging Engagement.* Washington, DC: Forum for Youth Investment, 2003.

Reivich, Karen. "Promoting Self-Efficacy in Youth." *Communique,* vol. 39, no. 3, 2010, p. 1.

Rodgers, Caryn R.R. "The Moderating Effects of School and Family Bonding on the Effectiveness of the Life Skills Training Program." Doctoral dissertation. New York: St. John's University, 2005.

Silverman, Jay G., Raj, Anita, Mucci, Lorelai A., and Hathaway, Jeanne E. "Dating Violence Against Adolescent Girls and Associated Substance Use, Unhealthy Weight Control, Sexual Risk Behavior, Pregnancy, and Suicidality." *Journal of the American Medical Association*, vol. 286, no. 5, 2001, pp. 572-579.

Spencer, Margaret B., and Brian Tinsley. "Identity as Coping: Assessing Youths' Challenges and Opportunities for Success." *Prevention Researcher,* vol. 15, no. 4, 2008, pp. 17–21.

Spring, Kimberly, Robert Grimm Jr., and Nathan Dietz. "Community Service and Service-Learning in America's Schools." Washington, DC: Corporation for National and Community Service, Office of Research and Policy Development, 2008.

Strasburger, Victor, and Sarah Brown. "Sex Education in the 21st Century." *Journal of the American Medical Association,* vol. 312, no. 2, 2014, pp. E1–E2.

What Works Clearinghouse. "Wyman Teen Outreach Program (TOP). What Works Clearinghouse Intervention Report." U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse, January 2009.

Zand, Debra H., Nicole Thomson, Richard Cervantes, Rachele Espiritu, Donna Klagholz, Laura LaBlanc, and Andrea Taylor. "The Mentor-Youth Alliance: The Role of Mentoring Relationships in Promoting Youth Competence." *Journal of Adolescence,* vol. 32, no. 1, 2009, pp. 1–17.

Chapter VII: Conceptual model for addressing healthy relationships in PREP

Ayers, Jim, and Susan Davies. "Adolescent Dating and Intimate Relationship Violence: Issues and Implications for School Psychologists." *School Psychology Forum,* vol. 5, no. 1, 2011, pp. 1–12.

Bowlby, John. *Attachment and Loss, Vol. 1: Attachment.* New York: Basic Books, 1969.

Bowlby, John. *Attachment and Loss, Vol. 2: Separation, Anxiety and Anger*. New York: Basic Books, 1973.

Bowlby, John. *Attachment and Loss, Vol. 3: Loss, Sadness and Depression.* New York: Basic Books, 1980.

Briggs, Michael, Lauren Grella, Tessa A. Burton, Megan Yarmuth, and Trish Taylor. "Understanding and Engaging Key Influencers of Youth in High-Risk Urban Communities: A Review of the Literature." *Social Marketing Quarterly,* vol. 18, no. 3, 2012, pp. 203–220.

Caspi, Avshalom. "Personality in the Life Course." *Journal of Personality and Social Psychology,* vol. 53, no. 6, 1987, pp. 1203–1213.

Card, Noel A. "Antipathetic Relationships in Child and Adolescent Development: A Meta-Analytic Review and Recommendations for an Emerging Area of Study." *Developmental Psychology,* vol. 46, no. 2, 2010, pp. 516–529.

Leiderman, Sally, with Cari Almo. "Interpersonal Violence and Adolescent Pregnancy: Prevalence and Implications for Practice and Policy." Baltimore, MD: Center for Assessment and Policy Development and Healthy Teen Network, 2006.

Child Trends. "Unpublished Program Guide and Logic Model for Healthy Marriage Relationship Education Programs Serving High-school Aged Adolescents." Submitted to the Office of Planning, Research, and Evaluation as part of the Healthy Marriage and Relationship Education Models and Measures project, 2014.

Civic, Diane. "College Students' Reasons for Nonuse of Condoms Within Dating Relationships." *Journal of Sex & Marital Therapy,* vol. 26, no. 1, 2000, pp. 95–105.

Claxton, Shannon E., and Manfred H.M. van Dulmen. "Casual Sexual Relationships and Experiences in Emerging Adulthood." *Emerging Adulthood,* vol. 1, no. 2, 2013, pp. 138-150.

Collins, W. Andrew, Deborah P. Welsh, and Wyndol Furman. "Adolescent Romantic Relationships." *Annual Review of Psychology,* vol. 60, 2009, pp. 631–652.

Connolly, Jennifer, Debra Pepler, Wendy Craig, and Ali Taradash. "Dating Experiences of Bullies in Early Adolescence." *Child Maltreatment,* vol. 5, no. 4, 2000, pp. 299–310.

Connolly, Jennifer, Wendy Craig, Adele Goldberg, and Debra Pepler. "Mixed-Gender Groups, Dating, and Romantic Relationships in Early Adolescence." *Journal of Research on Adolescence,* vol. 14, no. 2, 2004, pp. 185–207.

Cooksey, Elizabeth C., Frank L. Mott, and Stefanie A. Neubauer. "Friendships and Early Relationships: Links to Sexual Initiation Among American Adolescents Born to Young Mothers." *Perspectives on Sexual and Reproductive Health,* vol. 34, no. 3, 2002, pp. 118-126.

De Koker, P., C. Mathews, M. Zuch, S. Bastien, and A.J. Mason-Jones. "A Systematic Review of Interventions for Preventing Adolescent Intimate Partner Violence." *Journal of Adolescent Health,* vol. 54, no. 1, 2014, pp. 3–13.

East, Leah, D. Jackson, L. O'Brien, and K. Peters. "Use of the Male Condom by Heterosexual Adolescents and Young People: Literature Review." *Journal of Advanced Nursing,* vol. 59, no. 2, 2007, pp. 103–110.

Ehrhardt, Anke A., T.M. Exner, S. Hoffman, I. Silberman, C.S. Leu, S. Miller, and B. Levin. "A Gender-Specific HIV/STD Risk Reduction Intervention for Women in a Health Care Setting: Short-and Long-term Results of a Randomized Clinical Trial." *AIDS Care,* vol. 14, no. 2, 2002, pp. 147–161.

Elder, Glen H. "The Life Course as Developmental Theory." *Child Development,* vol. 69, no. 1, 1998, pp. 1–12.

Farley, Julee P., and Jungmeen Kim-Spoon. "The Development of Adolescent Self-Regulation: Reviewing the Role of Parent, Peer, Friend, and Romantic Relationships." *Journal of Adolescence,* vol. 37, no. 4, 2014, pp. 433–440.

Flood, Michael. "Lust, Trust and Latex: Why Young Heterosexual Men Do Not Use Condoms." *Culture, Health & Sexuality*, vol. 5, no. 4, 2003, pp. 353–369.

Gardner, Margo, and Laurence Steinberg. "Peer Influence on Risk Taking, Risk Preference, and Risky Decision Making in Adolescence and Adulthood: An Experimental Study." *Developmental Psychology,* vol. 41, no. 4, 2005, pp. 625–635.

Giordano, Peggy C., Wendy D. Manning, and Monica A. Longmore. "Affairs of the Heart: Qualities of Adolescent Romantic Relationships and Sexual Behavior." *Journal of Research on Adolescence,* vol. 20, no. 4, 2010, pp. 983–1013.

Gorrese, Anna. "Peer Attachment and Youth Internalizing Problems: A Meta-Analysis." *Child & Youth Care Forum,* vol. 45, no. 2, 2016, pp. 177–204.

Guilamo-Ramos, V., J.J. Lee, L.M. Kantor, D.S. Levine, S. Baum, and J. Johnsen. "Potential for Using Online and Mobile Education with Parents and Adolescents to Impact Sexual and Reproductive Health." *Prevention Science,* vol. 16, no. 1, 2015, pp. 53–60.

Guzman, L., E. Ikramullah, J. Manlove, K. Peterson, and H.J. Scarupa. "Telling It Like It Is: Teen Perspectives on Romantic Relationships." Research brief. Bethesda, MD: Child Trends, 2009.

Hazan, Cindy, and Phillip Shaver. "Romantic Love Conceptualized as an Attachment Process." *Journal of Personality and Social Psychology,* vol. 52, no. 3, 1987, pp. 511–524.

Holcombe, Emily, Suzanne Ryan, and Jennifer Manlove. "Discussions About Contraception or STDs Prior to Sex." Fact sheet. Bethesda, MD: Child Trends, 2008.

Jeon, Kwon Chan, and Patricia Goodson. "US Adolescents' Friendship Networks and Health Risk Behaviors: A Systematic Review of Studies Using Social Network Analysis and Add Health Data." *PeerJ,* vol. 3, 2015, p. e1052.

Jones, Krista, Patricia Eathington, Kathleen Baldwin, and Heather Sipsma. "The Impact of Health Education Transmitted via Social Media or Text Messaging on Adolescent and Young Adult Risky Sexual Behavior: A Systematic Review of the Literature." *Sexually Transmitted Diseases,* vol. 41, no. 7, 2014, pp. 413–419.

Josephson, Wendy L., and Debra Pepler. "Bullying: A Stepping Stone to Dating Aggression?" *International Journal of Adolescent Medicine and Health,* vol. 24, no. 1, 2012, pp. 37–47.

Kachur, R., J. Mesnick, N. Liddon, C. Kapsimalis, M. Habel, C. David-Ferdon, K. Brown, K. Gloppen, H. Tevendale, D.J. Gelaude, L. Romero, H. Seitz, A.B. Heldman, and J. Schindelar. "Adolescents, Technology and Reducing Risk for HIV, STDs and Pregnancy." Atlanta, GA: Centers for Disease Control and Prevention, 2013.

Karney, Benjamin R., Megan K. Beckett, Rebecca L. Collins, and Rebecca Shaw. *Adolescent Romantic Relationships as Precursors of Healthy Adult Marriages: A Review of Theory, Research, and Programs.* Santa Monica, CA: RAND Corporation, 2007.

Kelley, Stephanie S., Elaine A. Borawski, Susan A. Flocke, and Kevin J. Keen. "The Role of Sequential and Concurrent Sexual Relationships in the Risk of Sexually Transmitted Diseases Among Adolescents." *Journal of Adolescent Health,* vol. 32, no. 4, 2003, pp. 296-305.

Kirkman, Maggie, Doreen Rosenthal, and Anthony M.A. Smith. "Adolescent Sex and the Romantic Narrative: Why Some Young Heterosexuals Use Condoms to Prevent Pregnancy but Not Disease." *Psychology, Health & Medicine,* vol. 3, no. 4, 1998, pp. 355–370.

Lawner, Elizabeth, and Mary Terzian. "What Works for Bullying Programs: Lessons from Experimental Evaluation of Programs and Interventions." Research Brief No. 2013–39. Bethesda, MD: Child Trends, 2013.

Lenhart, Amanda, Monica Anderson, and Aaron Smith. *Teens, Technology and Romantic Relationships: From Flirting to Breaking Up, Social Media and Mobile Phones Are Woven into Teens' Romantic Lives.* Washington, DC: Pew Research Center, October 2015.

Lewandowski, G.W. Jr., N. Nardone, and A.J. Raines. "The Role of Self-Concept Clarity in Relationship Quality. *Self and Identity,* vol. 9, no. 4, 2010, pp. 416–433.

Lundgren, Rebecka, and Avni Amin. "Addressing Intimate Partner Violence and Sexual Violence Among Adolescents: Emerging Evidence of Effectiveness." *Journal of Adolescent Health,* vol. 56, no. 1, 2015, pp. S42–S50.

Malhotra, Krithika, Rosa M. Gonzalez-Guarda, and Emma M. Mitchell. "A Review of Teen Dating Violence Prevention Research: What About Hispanic Youth?" *Trauma, Violence, and Abuse,* vol. 16, no. 4, 2015, pp. 444–465.

Manlove, Jennifer, Suzanne Ryan, and Kerry Franzetta. "Contraceptive use and consistency within teens' most recent sexual relationships." *Perspectives on Sexual and Reproductive Health*, vol. 36, no. 6, 2004, pp. 265-275.

Markham, Christine M., Donna Lormand, Kari M. Gloppen, Melissa F. Peskin, Belinda Flores, Barbara Low, and Lawrence Duane House. "Connectedness as a Predictor of Sexual and Reproductive Health Outcomes for Youth." *Journal of Adolescent Health,* vol. 46, no. 3, 2010, pp. S23–S41.

McIntyre, K.P., B.A. Mattingly, and G.W. Lewandowski. "Self-Concept Clarity and Romantic Relationships." In *Self-Concept Clarity: Perspectives on Assessment, Research, and Applications,* edited by Jennifer Lodi-Smith and Kenneth G. DeMarree (pp. 107–124). Cham, Switzerland: Springer International Publishing AG, 2017.

Moore, K., B. Stratford, S. Caal, C. Hanson, S. Hickman, D. Temkin, H. Schmitz, J. Thompson, S. Horton, and A. Shaw. "Preventing Violence: A Review of Research, Evaluation, Gaps, and Opportunities." Bethesda, MD: Researchgate, 2015.

Moore, K.A., J. Manlove, L. Guzman, and K. Walker. "Reducing Teen Childbearing Among Latinos: An Innovative Anti-poverty Strategy." Bethesda, MD : Child Trends, 2013. Available at https://www.childtrends.org/wp-content/uploads/2018/07/El-Camino-Overview.pdf. Accessed March 12, 2019.

National Research Council, and Institute of Medicine. "Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities." Washington, DC: National Academies Press, 2009, pp. 34–69.

National Research Council, and Institute of Medicine. "The Relevance of Models of Adolescent Decision Making to the Analysis of Positive Development Processes and Pathways to Risk Prevention." Washington, DC: National Academies Press, 2004.

Nickerson, Amanda B., and Richard J. Nagle. "Parent and Peer Attachment in Late Childhood and Early Adolescence." *Journal of Early Adolescence,* vol. 25, no. 2, 2005, pp. 223–249.

O'Leary, K. Daniel, and Amy M. Smith Slep. "A Dyadic Longitudinal Model of Adolescent Dating Aggression." *Journal of Clinical Child and Adolescent Psychology,* vol. 32, no. 3, 2003, pp. 314–327.

Office of Family Assistance. "School of Thought: Healthy Marriage and Relationship Education Matters to Our Youth." Washington, DC: Administration for Children and Families, Office of Family Assistance*,* 2012.

Poobalan, Amudha S., Emma Pitchforth, Mari Imamura, Janet S. Tucker, Kate Philip, Jenny Spratt, Lakshmi Mandava, and Edwin van Teijlingen. "Characteristics of Effective Interventions in Improving Young People's Sexual Health: A Review of Reviews." *Sex Education,* vol. 9, no. 3, 2009, pp. 319–336.

Roehlkepartain, Eugene, Kent Pekel, Amy Syvertsen, Jenna Sethi, Theresa Sullivan, and Peter C. Scales. "Relationships First: Creating Connections that Help Young People Thrive." *Search Institute,* 2017.

Scott, Mindy E., Elizabeth Karberg, Ilana Huz, and Maryjo Oster. "Healthy Marriage and Relationship Education Programs for Youth: An In-Depth Study of Federally Funded Programs." OPRE Report #2017-74. Washington, DC: U.S. Department of Health and Human Services, Office of Planning, Research and Evaluation, Administration for Children and Families, 2017. Available at https://www.acf.hhs.gov/sites/default/files/opre/years_task_46_final_report_finalv2_b508.pdf. Accessed April 11, 2019.

Scott, Mindy E., Kristin A. Moore, Alan J. Hawkins, Karin Malm, and Martha Beltz. "Putting Youth Relationship Education on the Child Welfare Agenda: Findings from a Research and Evaluation Review. Executive Summary." Washington, DC: Child Trends, December 2012.

Skidmore, David, and Emma Hayter. "Risk and Sex: Ego-Centricity and Sexual Behaviour in Young Adults." *Health, Risk & Society,* vol. 2, no. 1, 2000, pp. 23–32.

Storin, Chelsea. "Relationship Education and Pregnancy Prevention: What's the Connection?" Issue brief. Fairfax, VA: National Healthy Marriage Resource Center, 2011.

Strasburger, Victor C., and Sarah S. Brown. "Sex Education in the 21st Century." *Journal of the American Medical Association,* vol. 312, no. 2, 2014, pp. 125–126.

Svanemyr, Joar, Avni Amin, Omar J. Robles, and Margaret E. Greene. "Creating an Enabling Environment for Adolescent Sexual and Reproductive Health: A Framework and Promising Approaches." *Journal of Adolescent Health,* vol. 56, no. 1, 2015, pp. S7–S14.

Tang, Catherine So-kum, Chi-yan Wong, and Antoinette M. Lee. "Gender-Related Psychosocial and Cultural Factors Associated with Condom Use Among Chinese Married Women." *AIDS Education and Prevention,* vol. 13, no. 4, 2001, pp. 329–342.

Tobin, Casey, and Jenny Duncan. "Peer Victimization Among Adolescent Females: A Literature Review of the Significant Causes and Consequences Associated with Relational Aggression." *Alabama Counseling Association Journal,* vol. 33, no. 1, 2007, pp. 20–23.

Tschann, Jeanne M., N. Adler, S.G. Millstein, J.E. Gurvey, and J.M. Ellen. "Relative Power Between Sexual Partners and Condom Use Among Adolescents." *Journal of Adolescent Health,* vol. 31, no. 1, 2002, pp. 17–25.

Vézina, Johanne, and Martine Hébert. "Risk Factors for Victimization in Romantic Relationships of Young Women." *Trauma, Violence & Abuse,* vol. 8, no. 1, 2007, pp. 33–66.

Waters, Everett, Susan Merrick, Dominique Treboux, Judith Crowell, and Leah Albersheim. "Attachment Security in Infancy and Early Adulthood: A Twenty-Year Longitudinal Study." *Child Development,* vol. 71, no. 3, 2000, pp. 684–689.

Weissbourd, Richard, Trisha Ross Anderson, Alison Cashin, and Joe McIntyre. "The Talk: How Adults Can Promote Young People's Healthy Relationships and Prevent Misogyny and Sexual Harassment." Cambridge, MA: Harvard Graduate School of Education, 2017.

Widman, Laura, Seth M. Noar, Sophia Choukas-Bradley, and Diane B. Francis. "Adolescent Sexual Health Communication and Condom Use: A Meta-Analysis." *Health Psychology,* vol. 33, no. 10, 2014, pp. 1113–1124.

Wildsmith, Elizabeth, Jennifer Manlove, Nicole Steward-Streng, and E. Cook. "The Dynamics in Young Adult Romantic Relationships: Important for Success in Love—and in Life." Research brief. Bethesda, MD: Child Trends, 2013.

Chapter VIII: Conceptual model for addressing parent-child communication in PREP

Afifi, Tamara D., Andrea Joseph, and Desiree Aldeis. "Why Can't We Just Talk About It? An Observational Study of Parents' and Adolescents' Conversations About Sex." *Journal of Adolescent Research,* vol. 23, no. 6, 2008, pp. 689–721.

Albert, Bill. *With One Voice: America's Adults and Teens Sound Off About Teen Pregnancy.* Washington, DC: National Campaign to Prevent Teen and Unplanned Pregnancy, 2012.

Aspy, Cheryl B., Sara K. Vesely, Roy F. Oman, Sharon Rodine, LaDonna Marshall, and Ken McLeroy. "Parental Communication and Youth Sexual Behavior." *Journal of Adolescence,* vol. 30, no. 3, 2007, pp. 449–466.

Beckett, Megan K., Marc N. Elliott, Steven Martino, David E. Kanouse, Rosalie Corona, David J. Klein, and Mark A. Schuster. "Timing of Parent and Child Communication About Sexuality Relative to Children's Sexual Behaviors." *Pediatrics,* vol. 125, no. 1, 2010, pp. 34–42.

Centers for Disease Control and Prevention. *School Connectedness: Strategies for Increasing Protective Factors Among Youth.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2009.

Child Trends What Works. *Safer Choices*. Bethesda, MD: Child Trends, 2011.

Child Trends What Works. *Families Talking Together*. Bethesda, MD: Child Trends, October 2012.

Commendador, Kathleen A. "Parental Influences on Adolescent Decision Making and Contraceptive Use." *Pediatric Nursing,* vol. 36, no. 3, 2010, pp. 147–157.

Evans, W. Douglas, Kevin C. Davis, Olivia S. Ashley, Jonathan Blitstein, Helen Koo, Yun Zhang. "Efficacy of Abstinence Promotion Media Messages: Findings from an Online Randomized Trial." *Journal of Adolescent Health,* vol. 45, no. 4, 2009, pp. 409–416.

Fuxman, Shai, Sabrina De Los Santos, Daniel Finkelstein, Mary K. Landon, and Lydia O'Donnell. "Sources of Information on Sex and Antecedents of Early Sexual Initiation Among Urban Latino Youth." *American Journal of Sexuality Education,* vol. 10, no. 4, 2015, pp. 333–350.

Guilamo-Ramos, Vincent, and Alida Bouris. *Parent-Adolescent Communication About Sex in Latino Families: A Guide for Practitioners.* Washington, DC: National Campaign to Prevent Teen and Unplanned Pregnancy, 2008.

Guilamo-Ramos, V., J.J. Lee, L.M. Kantor, D.S. Levine, S. Baum, and J. Johnsen. "Potential for Using Online and Mobile Education with Parents and Adolescents to Impact Sexual and Reproductive Health." *Prevention Science,* vol. 16, no. 1, 2015, pp. 53–60.

Harris, Allyssa L., Melissa A. Sutherland, and M. Katherine Hutchinson. "Parental Influences of Sexual Risk Among Urban African American Adolescent Males." *Journal of Nursing Scholarship,* vol. 45, no. 2, 2013, pp. 141–150.

Hartmann, Katie, Rocío Rivadeneyra, and Maura Toro-Morn. "A Study of Mexican Immigrant Mothers and Adolescent Daughters in the Heartland: "Mi Mamá Nada Más Me Dice Que Me Cuide Mucho" (My Mom Just Tells Me to Take Care of Myself a Lot)." *Journal of Latino-Latin American Studies,* vol. 8, no. 1, 2016, pp. 55–76.

Healthy Teen Network Board of Directors. *Advocacy Resource Guide: Parental Engagement.* Baltimore, MD: Healthy Teen Network, October 2002.

Hutchinson, M. Katherine, and Julie A. Cederbaum. "Talking to Daddy's Little Girl About Sex: Daughters' Reports of Sexual Communication and Support from Fathers." *Journal of Family Issues,* vol. 32, no. 4, 2011, pp. 550–572.

Isaacs, Alyssa M. "Let's Talk About Sex: How Family Communication Patterns and Family Sexual Communication Impact Adolescents' and Emerging Adults' Sexual Outcomes." Doctoral dissertation. Minneapolis, MN: University of Minnesota, 2012.

Jones, Krista, Patricia Eathington, Kathleen Baldwin, and Heather Sipsma. "The Impact of Health Education Transmitted via Social Media or Text Messaging on Adolescent and Young Adult Risky Sexual Behavior: A Systematic Review of the Literature." *Sexually Transmitted Diseases,* vol. 41, no. 7, 2014, pp. 413–419.

Kachur, R., J. Mesnick, N. Liddon, C. Kapsimalis, M. Habel, C. David-Ferdon, K. Brown, K. Gloppen, H. Tevendale, D.J. Gelaude, L. Romero, H. Seitz, A.B. Heldman, and J. Schindelar. *Adolescents, Technology and Reducing Risk for HIV, STDs and Pregnancy.* Atlanta, GA: Centers for Disease Control and Prevention, 2013.

Kalina, Ondrej, Andrea Madarasova Keckova, Daniel Klein, Pavol Jarcuska, Olga Orosova, Jitse P. van Dijk, Sigmen A. Reijneveld. "Mother's and Father's Monitoring Is More Important than Parental Social Support Regarding Sexual Risk Behaviour Among 15-Year-Old Adolescents." *European Journal of Contraception and Reproductive Health Care,* vol. 18, no. 2, 2013, pp. 95–103.

Kirby, Douglas and Gina Lepore. *A Matrix of Risk and Protective Factors Affecting Teen Sexual Behavior, Pregnancy, Childbearing, and Sexually Transmitted Disease.* Washington, DC: National Campaign to Prevent Teen and Unplanned Pregnancy, 2007.

Lenhart, Amanda, Monica Anderson, and Aaron Smith. *Teens, Technology, and Romantic Relationships: From Flirting to Breaking Up, Social Media and Mobile Phones Are Woven into Teens' Romantic Lives.* Washington, DC: Pew Research Center, 2015.

Lohman, Brenda J., and Amanda Billings. "Protective and Risk Factors Associated with Adolescent Boys' Early Sexual Debut and Risky Sexual Behaviors." *Journal of Youth and Adolescence,* vol. 37, 2008, pp. 723–735.

Malacane, Mona, and Jonathon J. Beckmeyer. "A Review of Parent-Based Barriers to Parent-Adolescent Communication About Sex and Sexuality: Implications for Sex and Family Educators." *American Journal of Sexuality Education,* vol. 11, no. 1, 2016, pp. 27–40.

Maria, Diane S., Christine Markham, Paul Swank, Elizabeth Baumler, Sheryl McCurdy, and Susan Tortolero. "Does Parental Monitoring Moderate the Relation Between Parent-Child Communication and Pre-coital Sexual Behaviours Among Urban, Minority Early Adolescents?" *Sex Education,* vol. 14, no. 3, 2014, pp. 286–298.

Mollborn, Stefanie, and Bethany Everett. "Correlates and Consequences of Parent-Teen Incongruence in Reports of Teens' Sexual Experience." *Journal of Sex Research,* vol. 47, no. 4, 2010, pp. 314–329.

Morales-Campos, Daisy Y., Christine Markham, Melissa F. Peskin, and Maria E. Fernandez. "Sexual Initiation, Parent Practices, and Acculturation in Hispanic Seventh Graders." *Journal of School Health,* vol. 82, no. 2, 2012, pp. 75–81.

National Campaign to Prevent Teen and Unplanned Pregnancy. *Ten Tips for Parents to Help Their Children Avoid Teen Pregnancy.* Washington, DC: National Campaign to Prevent Teen and Unplanned Pregnancy, 2008.

National Campaign to Prevent Teen and Unplanned Pregnancy. *Preventing Teen Pregnancy Through Outreach and Engagement: Tips for Working with Parents*. Washington, DC: National Campaign to Prevent Teen and Unplanned Pregnancy, 2012.

National Campaign to Prevent Teen and Unplanned Pregnancy. *Survey Says: October 2016: Parent Power.* Washington, DC: National Campaign to Prevent Teen and Unplanned Pregnancy, 2016.

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. *Ways to Influence Your Teen's Sexual Risk Behavior: What Fathers Can Do.* Atlanta, GA: CDC Division of Adolescent and School Health, 2013.

National Research Council, and Institute of Medicine. "Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities." Washington, DC: National Academies Press, 2009.

National Research Council, and Institute of Medicine. "The Relevance of Models of Adolescent Decision Making to the Analysis of Positive Development Processes and Pathways to Risk Prevention." Washington, DC: National Academies Press, 2004.

Niego, Starr, Alisa Mallari, M.J. Park, and Janette Mince. "Human Sexuality—Values & Choices: A Values-Based Curriculum for 7th and 8th Grades." In *Model Programs for Adolescent Sexual Health: Evidence-Based HIV, STI, and Pregnancy Prevention Interventions,* edited by Josefina J. Card and Tabitha A. Benner. New York: Springer Publishing Company, 2008.

Strasburger, Victor C., and Sarah S. Brown. "Sex Education in the 21st Century." *Journal of the American Medical Association,* vol. 312, no. 2, 2014, pp. 125–126.

Sutton, Madeline Y., Sarah M. Lasswell, Yzette Lanier, and Kim S. Miller. "Impact of Parent-Child Communication Interventions on Sex Behaviors and Cognitive Outcomes for Black/African-American and Hispanic/Latino Youth: A Systematic Review, 1988–2012." *Journal of Adolescent Health,* vol. 54, no. 4, 2014, pp. 369–384.

Teitelman, Anne M., Sarah J. Ratcliffe, and Julie A. Cederbaum. "Parent-Adolescent Communication About Sexual Pressure, Maternal Norms About Relationship Power, and STI/HIV Protective Behaviors of Minority Urban Girls." *Journal of the American Psychiatric Nurses Association,* vol. 14, no. 1, 2008, pp. 50–60.

Terzian, Mary A., and Kassim Mbwana. *What Works for Parent Involvement Programs for Adolescents: Lessons from Experimental Evaluations of Social Interventions.* Publication #2009-49. Bethesda, MD: Child Trends, 2009.

Thoma, Brian C., and David M. Huebner. "Parental Monitoring, Parent-Adolescent Communication About Sex, and Sexual Risk Among Young Men Who Have Sex with Men." *AIDS and Behavior,* vol. 18, no. 8, 2014, pp. 1604–1614.

Tubre, Kristin R. "Adolescent Sexual Attitudes and Behavior: How Important Is Parent Communication and Involvement?" Doctoral dissertation. Virginia Consortium for Professional Psychology (Old Dominion University), 2007.

Usher-Seriki, Kimberly, Mia S. Bynum, and Tamora A. Callands. "Mother-Daughter Communication About Sex and Sexual Intercourse Among Middle- to Upper-Class African American Girls." *Journal of Family Issues,* vol. 29, no. 7, 2008, pp. 901–917.

Wasik, Heather, Jennifer Manlove, Kristin A. Moore, and Elizabeth Mass. *What Works for Adolescent Sexual and Reproductive Health: Lessons from Experimental Evaluations of Programs and Interventions.* Publication #2014-64. Bethesda, MD: Child Trends, December 2014.

Weiss, Dan M. "Parental Communication: Determinants of Sexual Activity in Later Life." Doctoral dissertation. Purdue University, 2011.

Widman, Laura, Sophia Choukas-Bradley, Seth M. Noar, Jacqueline Nesi, and Kyla Garrett. "Parent-Adolescent Sexual Communication and Adolescent Safer Sex Behavior: A Meta-Analysis." *JAMA Pediatrics,* vol. 170, no. 1, 2016, pp. 52–61.

Wikkeling-Scott, Ludmilla. "An Examination of the Influence of Mother-Child Communication and Maternal Monitoring on Sexual Behavior in African American High School Students." Doctoral dissertation. Morgan State University, 2011.

Wilson, Ellen K., Barbara T. Dalberth, Helen P. Koo, and Jennifer C. Gard. "Parents' Perspectives on Talking to Preteenage Children About Sex." *Perspectives on Sexual and Reproductive Health,* vol. 42, no. 1, 2010, pp. 56–63.

Yang, Hongmei, Bonita Stanton, Xiaoming Li, Lesley Cottrel, Jennifer Galbraith, and Linda Kaljee. "Dynamic Association Between Parental Monitoring and Communication and Adolescent Risk Involvement Among African-American Adolescents." *Journal of the National Medical Association,* vol. 99, no. 5, 2007, pp. 517–524.

Chapter IX: Unified framework for addressing adulthood preparation subjects in PREP

Catalano, Richard F., M. Lisa Berglund, Jean A.M. Ryan, Heather S. Lonczak, and J. David Hawkins. "Positive Youth Development in the United States: Research Findings on Evaluations of Positive Youth Development Programs." *Annals of the American Academy of Political and Social Science,* vol. 591, no. 1, 2004, pp. 98–124.

Family and Youth Services Bureau. "Putting Positive Youth Development into Practice: A Resource Guide." Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, Family and Youth Services Bureau, February 2007.

Gavin, Lorrie E., Richard F. Catalano, and Christine M. Markham. "Positive Youth Development as a Strategy to Promote Adolescent Sexual and Reproductive Health." *Journal of Adolescent Health,* vol. 46, no. 3, supplement, 2010, pp. S1–S6.

Guerra, Nancy G., and Catherine P. Bradshaw. "Linking the Prevention of Problem Behaviors and Positive Youth Development: Core Competencies for Positive Youth Development and Risk Prevention." *New Directions for Child and Adolescent Development,* no. 122, 2008, pp. 1–17.

House, Lawrence D., Jessica Bates, Christine M. Markham, and Catherine Lesesne. "Competence as a Predictor of Sexual and Reproductive Health Outcomes for Youth: A Systematic Review." *Journal of Adolescent Health,* vol. 46, no. 3, supplement, 2010, pp. S7–S22.

Singson, J. "Peer Mentoring: Harnessing Positive Influence." Administration on Children Youth and Families, Family and Youth Services Bureau, July 2015.

Chapter X: Considerations for using conceptual models to select and implement APSs

Child Trends. "Unpublished Program Guide and Logic Model for Healthy Marriage Relationship Education Programs Serving High-school Aged Adolescents." Submitted to the Office of

Planning, Research, and Evaluation as part of the Healthy Marriage and Relationship Education Models and Measures project, 2014.

Hammond, Cathy, Dan Linton, Jay Smink, and Sam Drew. "Dropout Risk Factors and Exemplary Programs: A Technical Report." Anderson, SC: National Dropout Prevention Center/Network, 2007.

Lundgren, Rebecka, and Avni Amin. "Addressing Intimate Partner Violence and Sexual Violence Among Adolescents: Emerging Evidence of Effectiveness." *Journal of Adolescent Health,* vol. 56, no. 1, 2015, pp. S42–S50.

This page has been left blank for double-sided copying.

APPENDIX B:

LITERATURE REVIEW METHODOLOGY TABLES

This page has been left blank for double-sided copying.

The purpose of the literature review was to identify research literature that was representative of, or summarized current knowledge about, each APS. As described in Chapter II, the study team conducted a separate review for each APS, but each review used the same process. The reviews were not designed to provide an exhaustive summary of the knowledge base for the subject. Instead, the study team conducted a targeted review to support development of the conceptual models. The process included (1) searching literature, (2) screening potential documents to select those with most relevance to the conceptual models, (3) reviewing the selected documents, and (4) summarizing findings using a template that aligned with the intended components of the conceptual models. This appendix details the process the team followed through tables that show the databases and websites searched (Tables B.1 and B.2, respectively); the keywords and population parameters used (Table B.3); the total number of articles screened (Table B.4), and the types of information extracted from each article to inform development of the models (Table B.5).

Table B.1. Academic databases searched, by APS

Databases	Adolescent development	Educational and career success	Financial literacy	Healthy life skills	Healthy relationships	Parent-child communication
Academic Search Premier	X	X	X	X	X	X
ERIC and/or Ed Search Complete	X	X		X	X	X
PyscINFO	X		X	X	X	X
SCOPUS	X	X	X	X	X	X
Cochrane Database of Systematic Reviews	X	X	X	X	X	X
EBSCO	X				X	X
OVID	X				X	X
Education Research Complete		X		X		
SocIndex		X		X		
EconLit			X			
Business Source Corporate			X			

Table B.2. Grey literature websites searched, by APS

Websites	Adolescent development	Educational and career success	Financial literacy	Healthy life skills	Healthy relationships	Parent-child communication
American Psychological Association	X	X	X	X		X
ETR	X	X	X	X		X
Healthy Teen Network	X	X	X	X	X	X
Institute of Medicine/National Research Council	X	X	X	X		X
National Campaign to Prevent Teen and Unplanned Pregnancy	X	X	X	X	X	X
ACF/Family and Youth Services Bureau	X	X	X	X		X
Children's Bureau Chaffee Transition to Adulthood or Other Sites Related to the Adolescent Transition to Adulthood	X	X	X	X		X
ACF/Office of Planning, Research, and Evaluation	X	X	X	X		X
Search Institute	X	X	X	X	X	X
Social Development Research Group	X	X	X	X		X
RAND Corporation					X	
ACF/Office of Family Assistance					X	
Dibble Institute/National Healthy Marriage Resource Center					X	
The Making Caring Common Project, Harvard University Graduate School of Education					X	

Table B.3. Keywords used in literature searches

APS	Primary keywords	Secondary keywords	Population parameters
Adolescent development	adolescent development	social independence, healthy attitudes, healthy or positive values, body image, social behaviors, emotional well-being, self-esteem, empowerment, self-determination, empathy, cognitive behavior, sense of self	Adolescents or teenagers or youth or young adults
Educational and career success	education or career success	soft or hard job skills, employment preparation, education engagement, job seeking, independent living, school productivity, workplace productivity, education success, career success, dropout prevention, academic performance, increased school attendance or engagement, continuing education, programming, sexual health	Adolescents or teenagers or youth or young adults
Financial literacy	financial literacy	financial management, financial education, money management, fiscal responsibility, personal finance, basic savings, credit management, spending practices, financial well-being	adolescents or teenagers or youth or young adults
Healthy life skills	life skills	positive behavior, decision making, communication, coping, adaptive behavior, self-management, self-regulation, goal-setting, risky or unhealthy behaviors, self-efficacy, self-determination, negotiation, conflict resolution, interpersonal decisions, programming, sexual health, self-awareness, critical thinking, risk-taking	Adolescents or teenagers or children or youth or young adults or young men or young women or boys or girls or juveniles
Healthy relationships	healthy relationships	relationship building, relationship skills, communication, conflict management, characteristics of a good relationship, friendships, peer relationships, dating, partner violence, building trust, honesty in relationships, respect in relationships, support in relationships, establish boundaries, programming, sexual health	Adolescents or teenagers or youth or young adults
Parent-child communication	parent-child communication	conversation, communication, parent-child relationships, sexual decision making, sexuality, parents' beliefs about sex, youth sexual development, parental monitoring, knowledge of parents' expectations, knowledge of reproductive health, programming	adolescents or teenagers or youth or young adults

Table B.4. Total articles screened and reviewed, by APS

APS	Adolescent development	Educational and career success	Financial literacy	Healthy life skills	Healthy relationships	Parent-child communication
Number of articles identified through searches of academic databases	479	389	87	624	332	558
Number of articles identified through targeted searches of grey literature	20	19	11	20	26	25
Total number of screened articles	**499**	**408**	**98**	**644**	**358**	**583**
Articles initially identified for full review	20	25	24	19	27	31
Additional articles identified through citations in reviewed articles, or foundational or cross-cutting articles	22	12	10	21	33	15
Additional articles identified through expert and stakeholder suggestions	0	3	1	1	6	1
Total articles reviewed	**42**	**40**	**35**	**41**	**66**	**47**

Table B.5. Information extracted from each article to inform model development

Model component	Information extracted
Basic article information	Citation; article type (meta-analysis, empirical, program evaluation or review, theoretical, proposed program model, other)
Precursors	Population demographics; community and socioeconomic context
Theory of change	Theories of change; guiding principles; health or behavioral theories underlying research
Program design and implementation	Program name and description; target population; program setting; implementation systems and infrastructure; community and socioeconomic context
Outcomes	Type of study, if empirical; sample size; outcomes or findings, and evidence supporting outcomes
Other information	Curriculum used; limitations; other relevant articles cited in text

APPENDIX C:

UNIFIED FRAMEWORK TABLES

This page has been left blank for double-sided copying.

Table C.1. Crosswalk of precursors for adulthood preparation subjects

Precursors	Adolescent development	Educational and career success	Financial literacy	Healthy life skills	Healthy relationships	Parent-child communication
Developmental tasks						
Social and emotional skills development*	X	X		X	X	X
Brain and cognitive development*	X	X		X	X	X
Executive functioning, including self-control*			X		X	X
Identity formation*	X	X		X		
Sexual maturation*	X				X	
Communication skills					X	
Problem-solving skills				X		
Conscientiousness			X			
Planfulness and goal setting						X
Risk factors						
Under-resourced neighborhood*	X	X	X	X		
Peer or family involvement in risky behaviors*		X		X	X	
Youth trauma, including neglect, abuse, or bullying*	X			X	X	X
Substance use*	X				X	
Poor mental health*	X			X		
Life challenges (such as foster care, adolescent parent, or homelessness)*		X				X
Limited parental resources*		X	X			
Early dating, older partners, multiple sexual partners					X	
Family stress					X	
Family dysfunction					X	
Interpersonal and family violence*				X	X	
Influenced by norms of relationship violence					X	
Inadequate or inaccurate knowledge about harmful effects of risky behaviors				X		
Inaccurate beliefs about prevalence and social acceptability of risky behaviors				X		

TABLE C.1 (CONTINUED)

Precursors	Adolescent development	Educational and career success	Financial literacy	Healthy life skills	Healthy relationships	Parent-child communication
Poor self-concept (impulsivity)				X		
Role model engagement in risky behaviors				X		
Mass media				X		
Fixed mindset		X				
Low expectations for future		X				
Low parental involvement with youths' learning		X				
Low teacher expectations for youth		X				
Limited financial socialization			X			
Limited access to mainstream financial institutions			X			
Parental lack of acceptance of youths' sexual orientation						X
Harsh parenting						X
Early physical development	X					
Unsafe, disorganized, or under-resourced school		X				
Community and school safety	X					
Protective factors						
Positive relationships with peers and family*	X	X		X	X	X
Involvement in school or community*	X	X		X		
Secure attachment to peers and parents*					X	X
Age-appropriate parental monitoring*				X		X
Positive role-models*				X	X	
Relationships with trusted adults at schools and in community*		X		X		
Religiosity					X	
Positive family values				X		
Growth mindset		X				
Motivation to engage in school		X				
Academic, extracurricular, and career interests		X				
School supportive services		X				
Early financial socialization			X			

TABLE C.1 (CONTINUED)

Precursors	Adolescent development	Educational and career success	Financial literacy	Healthy life skills	Healthy relationships	Parent-child communication
High-quality instruction, teacher-student relationships, and school environment		X				
Access to mainstream financial institutions			X			
History of positive parent-child communication						X
Positive, open interaction style						X
Individual characteristics, such as self-confidence and social and other competencies	X					
Taking developmentally appropriate positive risks, such as trying out for a sports team	X					
Self-concept clarity					X	
Goal setting					X	

*Included in unified framework.

Table C.2. Crosswalk of outcomes for adulthood preparation subjects

Outcomes	Adolescent development	Educational and career success	Financial literacy	Healthy life skills	Healthy relationships	Parent-child communication
Enhanced outcomes						
Short-term						
Attitudes, beliefs, and knowledge about sex, condom/contraceptive use, and STIs/HIV						X
Attitudes, beliefs, and knowledge about sex				X		
Knowledge of safe sex		X				
Sexual activity				X		
Intermediate						
Risky sexual behavior*		X		X	X	X
Abstinence*	X				X	X
Condom and contraceptive use*	X				X	X
Effective communication with sexual partner						X
Number of sexual partners					X	
Frequency of sexual activity	X					
Long-term						
Adolescent pregnancy*	X	X			X	X
STIs/HIV*	X				X	X
Repeat pregnancies		X				
Reproductive health	X					
Expanded outcomes						
Short-term						
Emotional and social well-being*	X	X		X		
Frequency, quality, and content of parent-child communication						X
Financial knowledge and confidence			X			
Engagement with learning and school		X				

TABLE C.2 (CONTINUED)

Outcomes	Adolescent development	Educational and career success	Financial literacy	Healthy life skills	Healthy relationships	Parent-child communication
Having clear plans for the future		X				
Mental health				X		
Knowledge and attitudes related to healthy relationships					X	
Skills related to healthy relationships					X	
Quality of friendships and peer relationships					X	
Bullying, violence					X	
Intermediate						
Delinquency and disruptive behaviors*	X	X	X	X	X	X
Academic achievement*		X				
Emotional and social well-being*					X	X
Substance use*	X			X	X	
High quality parent-child relationships						X
Shared values in parent-child relationship						X
Mental health	X					
Parental engagement						X
Accrual of debt			X			
Savings			X			
Academic effort and habits		X				
School attendance		X				
Physical health	X					
Work experience and skills		X				
Avoidance of/safe exit from unhealthy relationships					X	
Long-term						
Academic achievement*	X			X	X	X
Substance use*						X
Self-sufficiency						X

TABLE C.2 (CONTINUED)

Outcomes	Adolescent development	Educational and career success	Financial literacy	Healthy life skills	Healthy relationships	Parent-child communication
Financial capability			X			
Involvement in criminal activity			X			
High school graduation or GED completion		X				
Postsecondary (academic and/or vocational) enrollment and completion		X				
Gaining and maintaining employment		X				
Earnings		X				
Career growth and job satisfaction		X				
Positive relationships as adults					X	

*Included in unified framework.

This page has been left blank for double-sided copying.