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KEY SOFT SKILLS FOR CROSS-SECTORAL YOUTH OUTCOMES



November 2016

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ACRONYMS AND ABBREVIATIONS

CASEL	Collaborative for Academic, Social, and Emotional Skills
CCSR	Consortium on Chicago School Research
CDC	U.S. Centers for Disease Control and Prevention
CVE	Countering violent extremism
DEC	Development Experience Clearinghouse
ETR	Education, Training and Research
HIV	Human Immunodeficiency Virus
HIV/AIDS	Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome
ICRW	International Center for Research on Women
IPV	Intimate partner violence
OECD	Organisation for Economic Cooperation and Development
OVC	Orphans and vulnerable children
PYD	Positive youth development
SCIP	Social cognitive information processing
SRH	Sexual and reproductive health
STI	Sexually transmitted infection
STD	Sexually transmitted disease
USAID	United States Agency for International Development

1. EXECUTIVE SUMMARY

A growing body of evidence recognizes the importance of soft skills in predicting long-term life outcomes, including labor market outcomes as well as social and health behaviors (Heckman et al, 2006; Kautz et al., 2014). Soft skills refer to a broad set of skills, behaviors, and personal qualities that enable people to effectively navigate their environment, relate well with others, perform well, and achieve their goals. These skills are applicable across sectors and complement the acquisition of other skills such as technical and academic skills. Although the returns to cognitive and technical skills have long been recognized, recent literature suggests that soft skills rival cognitive skills in their ability to predict positive outcomes. Moreover, evidence suggests that soft skills are more malleable than cognitive skills among adolescents and youth adults (Heckman et al., 2006; Kautz et al., 2014).

Despite growing interest in this topic, however, there is no clear consensus about which soft skills are likely to produce the greatest benefit to youth and to what extent these skills are similar or different across key outcome areas. This report aims to identify the core soft skills that would create positive outcomes across important areas of youth's lives, including workforce success, violence prevention, and sexual and reproductive health (SRH). The hypothesis tested by this research is that there is a common set of soft skills that lead to positive outcomes across multiple domains.

The current research builds on the United States Agency for International Development's (USAID's) prior investments in understanding the evidence that soft skills predict workforce success (see Lippman et al., 2015). Lippman and colleagues (2015) examined the relationship between soft skills and key workforce outcomes, including employment, performance on the job, wages, and entrepreneurial success, with a particular focus on youth and entry-level workers. As a result of the analysis, the authors identified five critical soft skills that international youth development programs could commonly target to improve workforce outcomes. The report found that the soft skills most likely to increase odds of youth success across all key workforce outcomes include: self-control, positive self-concept, social skills, communication, and higher order thinking skills.

In addition to workforce development, violence prevention and sexual and reproductive health (SRH) have received considerable attention by international youth development programs and donors, including USAID. Donors are making major investments to support youth, particularly in conflict-affected environments, and in regions where fertility and/or HIV infection rates among adolescents remain high. The present study conducted an extensive review of the soft skills literature as it relates to these two areas of interest, with the ultimate goal of better understanding which soft skills most effectively contribute to positive outcomes for youth across all three of these outcome areas. Three skills were identified as having

strong support across all three outcomes—positive self-concept, self-control, and social skills—while additional skills emerged as critical for one or two of the three outcome areas.

The authors of this study reviewed many types of resources, including rigorous empirical studies, meta-analyses, literature reviews, and qualitative literature. The authors also consulted experts in the field, including practitioners and researchers. The evidence gathered included resources that examined the relationship between soft skills and violence prevention outcomes, including general aggressive behavior, bullying and cyberbullying, violent crime, group and gang-related violence, and intimate partner violence (IPV). In addition, resources were gathered that analyzed the relationship between soft skills and key SRH outcomes, including risky and protective sexual behaviors, pregnancy and birth, HIV and sexually transmitted infections (STIs), and gender-based violence.

The present report follows the definitions outlined by Lippman and colleagues (2015) and attempts to align it with the terminology used in the violence prevention and SRH fields. To draw conclusions about the most-supported soft skills within and across domains, the methodology used for screening the literature also followed the methodology and procedures used by Lippman and colleagues (2015). This approach aimed to ensure consistency and comparability across fields. The challenges encountered in integrating terminology across fields and incorporating regional, gender-related, and age-related considerations are discussed.

After the evidence was compiled, a set of criteria was applied to arrive at the list of recommended skills. Criteria included: the breadth and quality of research, stakeholder support, regional diversity of the studies, and malleability (whether a skill can be improved) of the soft skills. As a result, the recommended skills enjoy strong and diverse support from the literature and among stakeholders and are developmentally appropriate and can be shaped during ages 12–29.

1.1 Soft Skills for Youth Development: Top Supported Skills Across Sectors

Three critical soft skills were among the top five supported across each of the three domains (workforce, violence prevention, and SRH) and emerged as the most likely to increase the odds of youth success: positive self-concept; self-control; and higher order thinking skills. Two skills also garnered strong cross-sectoral support because they were among the top 10 skills across all three domains and among the top 5 skills across two of the three domains: Communication received major support from the workforce and SRH literature, while social skills received major support from the workforce and violence prevention literature. Two additional skills emerged from the review of the SRH and violence prevention literature that were particularly important to those specific fields: empathy emerged as an important skill in the violence prevention literature, while goal orientation emerged as a critical skill in the SRH literature.

1.2 Most Highly Supported Cross-Sectoral Soft Skills

Figure 1. Cross-Sectoral Skills for Youth Development: Top Supported Skills Across Fields



Positive self-concept refers to “a realistic awareness of oneself and one’s abilities that reflects an understanding of his/her strengths and potential (and hence, is, positive)” (Lippman et al., 2015). In addition to being an important intrapersonal skill for workforce success, positive self-concept is supported by empirical evidence and experts in the field as an important skill for preventing different forms of youth violence. Positive self-concept enables youth to walk away from a fight, or successfully navigate challenging tasks and situations at work. Experts highlight that the effects of positive self-concept on violence prevention outcomes may operate through different mechanisms and may differ depending on the context.

In the SRH literature, positive self-concept is frequently referred to as “self-efficacy” related to specific sexual behaviors, such as using a condom or asking a partner to use a condom. There is overwhelming support in the empirical literature, from quantitative and qualitative studies, programmatic gray literature, and adolescent SRH experts, to indicate that positive self-concept is related to the SRH outcomes of interest. Of all the skills examined in the SRH literature, positive self-concept garnered the most support.

Self-control refers to one’s ability to control and regulate oneself. This includes one’s ability to control impulses, delay gratification, direct and focus attention, and regulate and modulate emotions and behaviors. Self-control is highly supported by the literature as related to workforce outcomes. In the violence prevention and psychology literature, a distinction between two important aspects of self-control is emphasized: self-control of behavior, and self-control of emotion. Self-control is key for managing impulsivity that is linked with aggression and gang membership. Of all of the youth soft skills examined, self-control had the most support of all in the violence prevention literature across outcomes and types of literature. The association between both types of self-control and youth violence prevention was also highly supported in the expert consultations.

The SRH literature understands self-control as the ability to regulate and refrain from risky sexual behaviors (e.g., youth’s ability to exert control to use condoms in sexual situations). Self-control builds on youth’s positive self-concept since it requires youth to have some level of confidence and efficacy in their ability to exert control in a potentially risky situation. Like positive self-concept, self-control is well-researched and well-supported skill in the SRH literature, although the results are heavily empirical and not as regionally diverse.

Higher order thinking skills include problem solving, critical thinking, and decision making. They refer to the “ability to identify an issue and take in information from multiple sources to evaluate options in order to reach a reasonable conclusion” (Lippman et al., 2015). Higher order thinking is sought by employers and is critical for workforce success. Higher order thinking skills also garnered considerable support from the literature as important skills in the prevention of youth violence. Important higher order thinking skills for violence prevention often include accurately interpreting others’ behaviors and using non-aggressive problem solving strategies. When higher order thinking skills are included in studies, the findings are generally positive and consistent. However, research on discrete higher order thinking skills is not as prevalent as the research on self-control, social skills, and empathy.

The SRH literature reviewed addressed decision-making and problem-solving skills and their linkage to SRH related outcomes. Critical thinking, however, did not emerge in this literature. The notion of “social problem solving,” or the type of problem solving that occurs in relationships emerged as important, in addition to decision making.” Higher order thinking skills come into play when a young person conducts a cost accounting exercise that leads to long-term goals rather than short-term benefits in their choices of sexual and reproductive behaviors (e.g., the decision to use contraception can be characterized as a rational choice that weights the cost and benefits of pregnancy versus non-pregnancy).

1.3 Additional Soft Skills with Strong Cross-Sectoral Support

Social skills are related to getting along with others. Social skills allow youth to interact productively in social contexts and to respond to emotions or conflict in socially appropriate, non-aggressive ways. Social skills can be generally conceptualized as the ability to interact positively and pro-socially with others. Social skills predict workforce outcomes and are highly sought by employers. In the violence prevention literature, social skills are operationalized as including “interpersonal skills,” the ability to take prosocial approaches to conflicts, engaging positively with others, and the positive attribution of others’ intentions. The evidence for a link between youth’s social skills and violence prevention outcomes in the literature is strong and appears consistently across all categories of outcomes and contexts. Researchers and practitioners also endorsed social skills as essential for youth violence prevention.

Communication refers to one’s ability to effectively express and understand knowledge and ideas. Modes of communication include listening, verbal, non-verbal, and written communication. Communication skills are related to workforce outcomes and are the most frequently sought skill among employers. Within the SRH literature, a distinction between two aspects of communication is evident: communication with parents and communication with partners. Between partners, communication related to sexual behavior often takes the form of negotiating sexual initiation and use of contraception, including condoms. There is strong evidence that communication skills are positively related to SRH outcomes.

1.4 Skills Specific to Violence Prevention and Sexual and Reproductive Health

Empathy refers to “the affective and cognitive ability to feel and understand what someone else is feeling” (Lippman et al., 2014a). Some violence prevention literature distinguishes types of empathy, with “cognitive empathy” referring to one’s ability to cognitively take another’s perspective and identify their state of mind, while “affective empathy” refers to the ability to share in another’s emotional state (Caravita, di Blasio, and Salmivalli, 2008). Across the literature reviewed, there is more evidence linking affective empathy with violence prevention outcomes in youth than cognitive empathy.

Goal orientation is defined as the motivation and ability to make viable plans and take action toward desired goals (Lippman et al., 2014a). Goal orientation was conceptualized in the workforce and SRH literature as educational and career aspirations, expectations about one’s ability to achieve specific accomplishments in the future, goal setting and planning skills. Goal orientation is closely tied with positive self-concept, since it relates to individuals’ beliefs about their abilities to accomplish specific goals. Goal-orientation was supported by the literature as related to three of the SRH outcomes studied for youth and was endorsed by some experts.

1.5 Recommendations

This study confirms that developing a core set of soft skills holds promise as an effective strategy to promote positive outcomes for youth, including workforce success, violence prevention, and SRH. Despite different orientations and different literatures across these three fields, a common set of skills identified enjoy robust and high-quality evidence linking them to each set of outcomes, as theory and prior evidence would suggest. A substantive contribution of this study was to harmonize terminology across fields, building upon the report *Key “Soft Skills” That Foster Youth Workforce Success*.

The findings of this research have implications for designing, implementing, and evaluating different youth development programs and policies. The top five skills identified enjoy the most support across the three domains analyzed, have been found by research to be malleable and as such we recommend these as targets for cross-sectoral youth development programming. Programs that are designed to focus on or include this core set of skills can be assured that they are focusing on the skills that are well supported by evidence to improve outcomes across these three domains of youth development. In addition to the top five, we recommend empathy for inclusion in youth violence prevention programs and goal orientation for inclusion in youth SRH programs, based on the strength of the domain-specific evidence for those skills.

The following recommendations for programming emerged from the literature review and analysis:

- Align youth development programs focused on workforce development, violence prevention, and SRH with the key soft skills recommended in this review.
- Introduce soft skill development strategies as early as appropriate and reinforce as youth age.
- Provide youth with opportunities to practice soft skills across the different types of contexts they will need them for.
- Provide content knowledge that is needed in order to support the practice of soft skills in specific contexts.
- Develop soft skills through a positive youth development approach that also recognizes and engages other personal characteristics, norms and attitudes, important relationships and settings in a youth's life, as well as the broader social context.

Based on the gaps identified during the literature review, the following are recommended to strengthen the field's capacity to effectively measure soft skills:

- Measures of the key soft skills identified in this paper are needed for the purposes of individual growth, program implementation, and evaluation that are valid and reliable, easy to administer, and appropriate for international youth development programs.
- The key soft skills identified in this paper need to be measured together in the same instrument in order to analyze how they relate to each other and to outcomes.
- Common definitions and measures of skills need to be used across studies and programs to build the evidence in the field around what works to foster these skills for different populations, and to further understand how they are related to youth outcomes.
- Measures that are positively formulated as the presence, rather than the absence of a key soft skill, need to be included more often in studies on violence prevention and SRH.
- Research that cuts across youth development domains and contexts is needed to understand how skills lead to positive outcomes, since most research is currently siloed by sector (workforce, violence prevention, SRH).
- Key soft skill measures need to be included in more studies addressing the multiple factors which affect youth outcomes¹, using appropriate analytical techniques to differentiate separate effects, in order to understand the interrelationships between skills and other factors and their relationships to outcomes.

Finally, this report also puts forward the following recommendations for future research:

- Rigorous program evaluations that investigate the separate and combined effects of individual soft skills on outcomes are needed.
- Qualitative research on how youth understand, interpret, value, develop, and use soft skills is needed for both program design and measurement purposes.

¹ See Figure 3 (Individual and Contextual Factors Contributing to Youth Development Outcomes) on p. 12 for examples.

- Research on how soft skills, positively formulated, lead to positive outcomes, is needed in the fields of violence prevention and SRH.
- More research in non-U.S. contexts, particularly in low- and middle-income countries, is needed.
- Disaggregating data on the relationship between a soft skill and an outcome by age and gender is rare, and needs to be done consistently in studies.
- Young adolescents and young adults are underrepresented in the research; in addition to special populations such as married women and OVC need to be included in the research on soft skills and SRH
- More research on the relationship of soft skills to violent crime, violent extremism, and intimate partner violence, as well as gender-based violence and sexual and reproductive biological outcomes is needed.

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2. INTRODUCTION

2.1 Purpose

This paper seeks to identify which soft skills enjoy the most support for predicting positive outcomes for youth across the three fields of workforce development, violence prevention, and SRH.² Soft skills are a broad set of skills, behaviors, and personal qualities that enable people to effectively navigate their environment, relate well with others, perform well, and achieve their goals (Lippman et al., 2015). These skills are applicable across development sectors and complement the acquisition of other skills such as technical and academic skills. Although many types of skills are useful, it has been shown that soft skills rival cognitive skills (i.e., IQ or fluid intelligence) in their ability to predict positive outcomes, including labor market outcomes as well as social and health behaviors. Moreover, evidence suggests that soft skills are more malleable than cognitive skills among adolescents and youth adults (Heckman et al, 2006; Kautz et al., 2014). Further, soft skills development can be an effective strategy to level the playing field for young people who have not attended or completed formal education, since soft skills development typically accompanies educational attainment. (Heckman and Rubenstein, 2001). Soft skills can be deployed by youth in every area of their lives to improve their sense of self, relationships, and opportunities, as well as to successfully negotiate their transition to adulthood.

Experts in youth development have called for integrated youth programs that address multiple areas of problem behavior and prevention with single interventions (Kim, Guerra, and Williams, 2008). Currently, youth development programs target a variety of skills, which emerge from research, practitioner wisdom, educators, the needs of employers or other agencies in a specific community, or the interests of a funder or program developer.

Several questions arise for USAID and other funders of international youth development programs, including: *Which skills are likely to produce the greatest benefits for youth? To what extent are those skills similar or different across key outcome areas? What are the potential implications for collaboration across sectors?*

To answer these questions, this paper reviews the evidence on the relationship between soft skills and violence prevention and SRH outcomes, building on prior evidence reviewed on workforce development outcomes (as discussed further below). These areas are of particular interest for USAID and other funders that are making major investments to support youth in many varied conflict-affected environments—including conflict or post-conflict contexts, or places with high levels of crime and violence—and to improve health outcomes for youth, particularly in SRH.

The aim of this study is to identify skills that should be cultivated as part of strategies to create positive outcomes across the three fields of workforce success, violence prevention, and SRH. Skills that emerge as enjoying the most support across sectors are recommended as targets for youth development programming employing a common skills approach. This knowledge can inform and guide the major investments that USAID and other funders make

² See Table 1 on p. 18 for additional terminology used for “soft skills.”

in youth development programs, which increasingly recognize common interests among sectors in cultivating those skills (See Figure 2 below).

Figure 2. Cross-Sectoral Skills for Youth Development



From the youth perspective, earning money, SRH, and violence are not separate, but are interrelated in their lives, with one area of behavior often affecting the others. When youth are able to successfully negotiate their transition to adulthood by avoiding violence and negative SRH outcomes, and are able to find and sustain work, they, as well as their families, employers or enterprises, and communities benefit.

The developmental stages of adolescence and early adulthood tend to be less stable and more complex than other stages of life, as youth explore relationships and opportunities to earn their own livelihoods, and they may leave their families of origin to find jobs or to be with peers in another location. They are more likely to be involved with violence and risky sex at this stage of life; for some, it may be a matter of survival, for others, these behaviors may convey status among social groups.

Too often, however, the systems that youth encounter, and the programs that are created to support their transition to adulthood, are siloed into separate fields. In recognition of the inter-relatedness of all areas of youth's lives, USAID's YouthPower initiative promotes a holistic approach to youth development programs in developing countries.

Complementing the holistic approach advocated by USAID, YouthPower supports a positive youth development (PYD) approach. According to USAID's definition, "PYD engages youth along with their families, communities, and/or governments so that youth are empowered to reach their full potential. PYD approaches build skills, assets, and competencies; foster healthy relationships; strengthen the environment; and transform systems."

This paper builds on USAID's prior investments in understanding the evidence of the association between soft skills and workforce success (see Lippman et al., 2015). That

study reviewed the large evidence base on soft skills and their relationships to workforce success, with a particular focus on youth and entry-level workers. The purpose was to determine which soft skills enjoyed the most evidence that they increased success among youth ages 15–29 in the workforce. To be included, a soft skill had to refer to something that “(a) can be cultivated among youth, (b) can be expressed in the form of behaviors or skills that are observable and measurable, and (c) can be understood by employers, youth program implementers, and researchers alike” (Lippman et al., 2015, p. 15).

The workforce outcomes studied included employment, performance on the job, wages, and entrepreneurial success. The systematic review examined 380 resources, including empirical studies, employer surveys, reports from international expert panels and commissions, as well as input from stakeholders, including employers, youth, and workforce experts in both business and academic settings. Terminology used for skills varied across studies, and these terms were harmonized and consensus definitions were developed so that findings could be tabulated across studies. Criteria were applied to prioritize the skills, including the breadth and quality of the research supporting each skill, the contextual diversity of the evidence for each skill, and evidence that the skills were malleable and developmentally appropriate for those ages 15–29.³ A database was released with the report as well as detailed appendices (<http://www.childtrends.org/?publications=key-soft-skills-that-foster-youth-workforce-success-toward-a-consensus-across-fields>).

Five skills emerged with the strongest evidence for workforce success: social skills, higher order thinking skills, self-control, positive self-concept, and communication skills. These skills were also validated by work by other key organizations in the field, such as the World Bank and the Collaborative for Academic, Social, and Emotional Skills (CASEL).

This report will similarly present the evidence on soft skills and their relationship to violence prevention and SRH outcomes, and note the similarities and differences with the workforce evidence base. It uses the same methodology and terminology developed for the workforce success report to ensure comparability across the three fields.

Though this paper focuses specifically on the skills dimension of PYD, it recognizes that youth cannot learn or develop skills in a vacuum: Skills must be built through relationships, experiences, and learning environments across the varied contexts in which youth live, including families, schools, jobs, and community organizations.

2.2 Why a Common Skills Approach to Improving Outcomes?

The science of adolescent and young adult development provides theory and evidence that suggests that there is a common and mutually reinforcing set of soft skills or personal qualities that foster success in the workforce, protect against violent behavior, promote SRH, and predict thriving in other domains of life. Practical realities such as the interrelatedness of how skills are learned and expressed, as well as youth’s preferences for programming that provides opportunities to learn relevant skills instead of focusing on the avoidance of risky

³ See the Methodology section on p. 21 of that paper (Lippman et al., 2015) for more detail on this process.

behaviors, provide further rationale for a common skills approach to holistic youth programming.

Soft skills development forms an integral part of PYD approaches, by nurturing individual strengths that enable youth to negotiate multiple contexts and relationships. Since the 1990s, the youth development field has been transformed by a theoretical shift away from preventing problems toward promoting positive outcomes, as embodied by the PYD approach. Describing the earlier prevention approach, Pittman et al. (2003) stated, “We have reduced the challenge of youth development to a series of problems to be solved, leaving the core inputs for development and engagement—supports and opportunities—to be addressed in a catch-as-catch-can fashion” (p. 19).

PYD, in contrast, emphasizes cultivating individual strengths as well as providing the contextual support throughout family, educational, and community institutions that will facilitate a successful transition to adulthood. A developmental systems approach, which forms the theoretical basis of PYD, theorizes that when youth learn to regulate themselves and make positive decisions, they are able to negotiate the relationships in their environment for optimal development. A thriving young person naturally avoids or minimizes negative risky behaviors across the board and in every context with which they interact (Lerner, 2003). This shift in focus—away from addressing disconnected problems and toward promoting a broad set of inter-related outcomes through developing assets and engaging youth—provides the rationale for cross-sectoral youth programming emphasizing a set of common soft skills (Pittman et al., 2003).

Landmark guidance for youth development programs from the National Research Council and Institute of Medicine Committee on Community Level Programs for Youth in 2002 rejected the notion that programs should focus exclusively on either preventing problems, such as violence and risky sex or on promoting positive development. Instead, they suggested that both approaches have a role, depending on the level of focused help a young person needed to avoid obstacles. The report identified soft skills (termed “personal assets”) as key to both approaches, and recommended that youth programs focus on those skills (including good decision-making skills, critical thinking and reasoning, positive self-regard, confidence, emotional self-regulation, conflict resolution, planfulness, moral character) that are linked by evidence to positive outcomes across domains of youth development.

Over the following 14 years, the evidence continued to build on the importance of specific skills for later outcomes. The rigor of the evidence improved dramatically with results from longitudinal studies that adjusted for factors that are related to either the skill or the outcomes of interest. For example, several reviews of the literature across outcome areas have found that self-control and positive self-concept prevent crime, delinquency, risky sexual behaviors, and unemployment, and promote better health outcomes and workforce success in adulthood (Fitzsimons and Finkel, 2011; Goodman et al., 2015; Lippman et al., 2014; National Research Council, 2012). Cross-country longitudinal analyses by the Organisation for Economic Cooperation and Development (OECD) across domains of outcomes found that, in general, social and emotional skills predicted high social returns and medium labor market returns; cognitive skills, by comparison, predicted high labor market returns and medium social returns (OECD, 2015).

Another reason to expect that a common set of skills will lead to positive cross-sectoral outcomes is that skills beget skills (OECD, 2015). In other words, skills interact with each other and support each other, leading to the development of new or higher level skills. As noted in the review of workforce literature, positive self-concept and self-control facilitate the

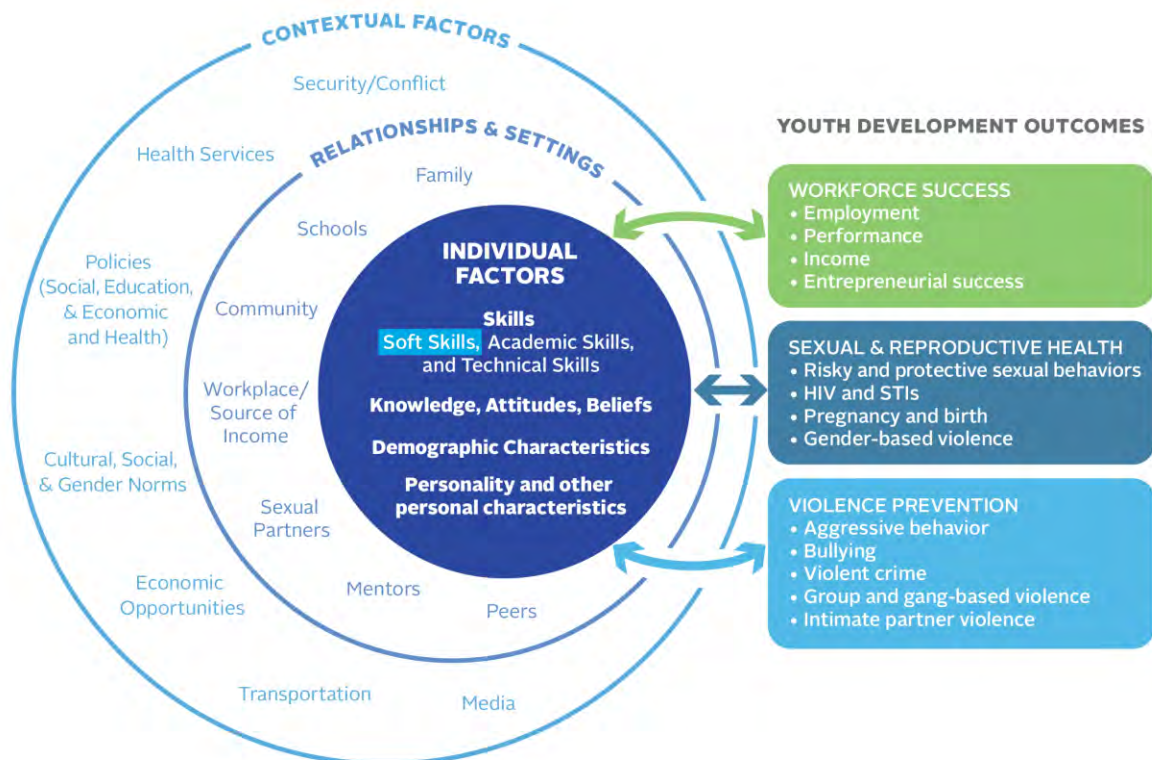
development of higher levels of social skills, communication, and higher order thinking skills, and in turn, proficiency in these skills supports self-control and positive self-concept. (Lippman et al., 2015).

Finally, practitioners report that youth prefer to attend programs that teach them useful skills that will help them in their lives, rather than those that tell them to avoid a specific problem behavior (Moore et al., 2010). Soft skill-based programming is therefore likely to be more effective simply because it attracts and retains youth who are engaged in learning about and practicing useful skills.

2.3 Contributing Factors to Youth Development Outcomes

Although individual-level soft skills are the focus of this paper, it is important to acknowledge that a multitude of other individual, relational, and contextual factors interact to influence youth workforce success, SRH, and violence prevention. It is important to emphasize that it will be difficult for youth to develop soft skills in the absence of a supportive, enabling environment. A socio-ecological model of human development recognizes that youth development over time represents an interaction between the individual, including their biological, intellectual, and emotional characteristics and skills (inner circle); their surrounding environment, including youth’s family, peers, school, workplace, and close relations (middle circle); the larger societal context in which they live (outer circle) (Bronfenbrenner and Ceci, 1994). The model below (Figure 3) situates soft skills among various other contributing factors to youth development at distinct levels of ecology.

Figure 3. Individual and Contextual Factors Contributing to Youth Development Outcomes



Among individual factors, soft skills include *intrapersonal* skills (within the individual), *interpersonal* skills (between individuals), and cognitive skills (thinking and reasoning) (National Research Council, 2012). Each soft skill is actually a cluster of skills that draws upon capacities in all of these areas to some degree, so categorizing a skill as one or the other involves some judgement about which area is most salient. Such categories can be helpful in organizing the study of soft skills and in structuring programs.

Soft skills are defined differently from academic and technical skills, but they are foundational to and complement academic and technical skills. Soft skills are also distinguished from knowledge, attitudes, and beliefs. Knowledge includes the disciplinary, interdisciplinary, and practical content that is necessary to understand something. Attitudes are individual psychological tendencies that involve a positive or negative evaluation of something, and they influence behavior (Eagly and Chaigen, 1993). Attitudes can be changed and are considered less enduring and stable than other personality attributes such as temperament (Bohner, 2002). Beliefs are convictions that something is true or exists, and they can involve trust or faith in someone or something.

Social norms, or beliefs about what people think is typical and appropriate within their group, also play a central role in shaping individual-level behavior. Social norms are critical drivers of an individual's actions, creating boundaries regarding the types of behaviors a person will engage in. Social and gender norms around appropriate behaviors for men and women, for example, may affect the level and normalization of IPV within a community. Furthermore, a woman's ability to make decisions about her sexual health and to access health services or engage in work outside of the home might be determined by social norms (Alexander-Scott et al., 2016; Heise, 2011; Pradhan and Sundar, 2006; Cehat, 2001; Sasendran Pallikadavathi, 2003; UNDP, 2003). This interplay between social norms and individual behavior speaks to the need to engage the larger community in interventions in addition to introducing new knowledge and skills to individual youth, so that youth have the support and buy-in of adults around them.

In addition to the normative environment, a youth's physical environment affects individual-level behaviors. Plourde et al. point to research that finds that neighborhood characteristics such as poor sanitation and presence or absence of health facilities, as well as a lack of adequate housing and safe spaces, are correlated with higher rates of pregnancy, HIV, and STIs among youth (citing Brahmabatt et al., 2014; Burns and Snow, 2012; Mmari et al., 2014). Likewise, research on youth violence has found that poor housing conditions and limited services and opportunities for youth affect the type and magnitude of violence in that community (Haynie et al., 2006; Markowitz, 2003; Greene, 1998). This unequal distribution of power and resources as well as disrupted social networks, reflected in neighborhood characteristics, increase a youth's vulnerability to engage in risky sexual behaviors and may also lower their opportunity cost for engaging in violence.

A review of all of the various influences on youth outcomes is outside of the scope of this paper, however, it is important to acknowledge the importance of relationships and settings as well as the broader contextual factors in society that influence youth outcomes, as suggested by Figure 3.

3. RESEARCH LANDSCAPE

3.1 State of the Field: Where is the Prior Evidence?

The current study builds upon the evidence reviewed and presented in the prior report on *Key “Soft Skills” for Youth Workforce Success*, which found that five soft skills—among a broader universe—enjoyed the most support in promoting positive workforce outcomes, including employment, performance on the job, income and wages, and entrepreneurial success. The five were social skills, higher order thinking skills (including problem solving, critical thinking, and decision making), self-control, positive self-concept, and communication. In addition to the literature on soft skills and workforce outcomes, a body of research links soft skills with violence prevention and SRH outcomes—although in many cases, the literature explores the relationship between a *lack* of soft skills and *negative* outcomes. This study conducted a broad review of the soft skills literature as it relates to these two areas of interest, with the ultimate goal of better understanding which soft skills contribute most effectively to positive outcomes for youth across all three of these outcome areas.

Several key works have identified cross-cutting soft skills that can serve as protective factors for youth and that affect multiple behaviors. Guerra and Bradshaw’s text *Linking the Prevention of Problem Behaviors and Positive Youth Development* identifies five cross-cutting core competencies and relates these to violence prevention and SRH, among other outcomes. These core competencies, which relate closely to the five found in the above-mentioned workforce success study, include: (1) a positive sense of self, (2) self-control, (3) decision-making skills, (4) a moral system of belief, and (5) prosocial connectedness. These core competencies also align with content within other models of PYD, such as the Collaborative for Academic, Social, and Emotional Learning (CASEL) Core Social and Emotional Learning Competencies.

Overall, however, the literature on “risk” behaviors such as violence and risky sexual behaviors has taken a problem-based rather than a PYD approach—with a few exceptions such as the Guerra and Bradshaw text cited above. Thus, findings on relationships among risk or problem behaviors provide an important foundation for our study. In particular, there is empirical support for the theory that risk or problem behaviors are inter-related, and share common risk factors, which can be understood as the absence of assets or protective factors (i.e. soft skills). Several studies have demonstrated a “higher order factor” that can account for the variation in individual problem or risky behaviors, including substance abuse, risky sexual behaviors, delinquency, crime, and poor school performance (Donovan and Jessor, 1985; McGee and Newcomb, 1992). Building on this work, additional studies have identified cross-cutting individual-level factors, including impulsivity, poor coping skills, and low self-regard that are associated with multiple risk behaviors. Cooper et al. (2003) tested this idea and found impulsivity and avoidance coping to be risk factors that explain a “common tendency toward risk-taking” (p. 391).

In research and practice, however, areas of risk in youths’ lives more often are targeted separately and counterintuitively by researchers in different fields, including psychology, health, sociology, criminology, and prevention science and education. This can explain the distinct literatures reviewed that, though overlapping in some regards, are distinct.

Violence Prevention

The broad outcome areas within violence prevention that were the focus of the review included bullying, IPV, gang and group violence, violent crime, and general aggressive behavior.⁴ This review considered perpetration of each of these types of violence, not victimization. The majority of the literature reviewed fell into the aggressive behavior category, which includes variables such as fighting and peer aggression—in other words, aggressive or violent behavior that is not criminal. The literature linking soft skills to more extreme variants of violence, such as violent crime and violent extremism is limited, which is expected because of the difficulty of gathering data on these outcomes.

Certain soft skills were not as well-covered in the literature as expected. In particular, there was a noticeable gap in the literature on communication skills and their relationship to violence prevention outcomes. Higher order thinking skills were supported as an important skill for preventing violence, but not to the extent expected, given their importance in the social cognitive information processing theories that inform the violence prevention literature.

This review found that the large majority of the violence prevention literature focuses on the lack of particular soft skills, or “risk factors” for perpetrating violence, rather than on the presence of soft skills, or protective factors for preventing youth violence. In reality, this literature tells us more about how a lack of soft skills leads to violence, rather than how the presence of soft skills prevents it. For example, rather than measuring the above outcomes as related to the presence of a skill, such as high self-control skills, researchers focus on the lack of self-control, as measured by impulsivity, emotional dysregulation, and lack of self-control.

Overall, the literature is heavily based in the United States.⁵ This review uncovered only five studies on soft skills and violence prevention outcomes in the Asia/Pacific region, and only five studies on soft skills and violence prevention outcomes in the sub-Saharan Africa region. From Latin America and the Caribbean, only two studies were found on soft skills and violence prevention outcomes. Interestingly, the review did not uncover any empirical research on soft skills in relation to gang violence prevention in Latin America, which is surprising given that this is a region of the world with high levels of gang conflict. Employability programming in Latin America (and other regions) may, however, impact violence prevention outcomes even if violence prevention is not an explicit goal of the program. For example, according to one expert interviewed, youth who participated in an employability program in Honduras reported that the skills imparted through the program prevented them from joining gangs (Nadia Moreno, personal communication, June 3, 2016). More detailed impact evaluation results (forthcoming) may tell us more about which skills affected both workforce and violence prevention outcomes.

⁴ See Appendix A for more information on how these outcomes are defined in the literature.

⁵ In order to be included in our analysis, a piece of literature had to identify a soft skill, a relevant outcome, and, importantly, establish a relationship between the two. See the Methodology section, beginning on p. 25, for more details on inclusion criteria.

Sexual and Reproductive Health

The outcome areas that were targeted in the review of the SRH literature included sexual behaviors and intentions (conceptualized as either “risky sexual behaviors” or “protective sexual behaviors”), pregnancy and birth-related outcomes, HIV and STIs, and gender-based violence.⁶ Most of the literature linking soft skills to these outcomes focused on risk or protective sexual behaviors, specifically around contraception use. A significant amount of this literature considers the notion of condom or contraception use self-efficacy, which generally can be understood as youth’s beliefs and confidence regarding whether or not they’re capable of using a condom or contraception in a sexual situation.

It is notable that, although several studies examined HIV or other STIs as distal outcomes, the actual outcomes measured were most often related sexual behaviors (such as condom or contraception use), pointing to the difficulty of measuring biological outcomes in this field. It is important to acknowledge that, where research linking soft skills to biological outcomes exists, the conclusions that can be drawn about a direct relationship are more tenuous. This is because the relationship between soft skills and biological outcomes is mediated by behavioral outcomes, as well as other factors outside of an individual’s control. There was little literature linking soft skills and gender-based violence; most of the evidence in this area points to the importance of empathy and personality facets that correspond to the soft skills “social skills” and “positive attitude”⁷ for preventing the perpetration of gender-based violence (Tharp et al., 2012; Voller and Long, 2009).

In contrast to the violence prevention literature, the SRH literature includes a mix of protective and risk factors. For example, a number of studies considered “positive self-esteem,” and high “self-efficacy,” which is expected, due to the frequent use of Bandura’s (1994) self-efficacy framework. Many of the variables around communication were also framed positively, in terms of “high levels of communication,” or assertiveness in communication. However, this literature was not exclusively positive; it also included the types of risk factors that came up in the violence prevention literature, especially in relation to self-control, such as impulsivity and risk-seeking/proneness.

Geographically, the overwhelming majority of the SRH studies were conducted in the United States. A total of 17 studies covered sub-Saharan Africa, although West Africa was under-represented. Given the relative vulnerability of youth and the high risk of adolescent sexual activity in this region it was surprising that there were so few studies addressing these personal qualities. Only one study from Asia (China) fit the criteria for this study and was included in this analysis. As more than 60 percent of the world’s young people live in the Asia/Pacific region, this was also a surprising finding (“Regional Overview of Youth in Asia and the Pacific”).

⁶ Examples of “protective sexual behaviors” include consistent condom/contraception use, intention to use condoms/contraception, later sexual debut, and a lower percentage of unprotected sex acts. Examples of “risky sexual behaviors” include sex without a condom/contraception, early sexual initiation, multiple partnering, and intergenerational sex. See Appendix A for more information on how these outcomes are defined in the literature.

⁷ See p. 19 of this report and Appendix E of *Key “Soft Skills” that Foster Youth Workforce Success* for more detail on how personality facets were cross-walked with soft skills.

Patterns across Fields

Much of the evidence-based literature linking soft skills and violence prevention as well as SRH outcomes is rigorous and uses advanced research methods. The increasing popularity of longitudinal methodologies and analyses, as well as the use of large, nationally representative population samples such as the National Longitudinal Study of Adolescent to Adult Health (Add Health) sample, was evident. Mediation models were also frequently used in the literature, helping to clarify where soft skills fit into other factors that influence violence prevention and SRH outcomes.

Despite the methodological strength of this literature, the focus on risk over protective factors in the violence prevention literature, and, to some extent the SRH literature is problematic, since for many soft skills there may be a “threshold effect” whereby a certain amount of the skill is necessary for the skill to have a protective effect against perpetrating violence. Most of the studies included in this review described instead how the absence of a skill leads to negative outcomes. However, a handful of studies examined the buffering effects of specific skills by looking at youth with skill levels in the top quartile (Resnick et al., 2004). For example, female youth in the top quartile for self-esteem skills experienced the protective effect of this skill, whereas typical levels of self-esteem had no protective effects.

Although there are many available program evaluation documents that examine the effectiveness of multi-component programs on violence prevention and SRH outcomes, our review noted a lack of program evaluation literature that was able to tease apart the individual contribution of a particular soft skill on the outcome of interest. Some evaluations did measure soft skill development throughout the program but did not include an analysis of the relationship between a specific soft skill and a behavioral or biological program outcome. Therefore, it was impossible to determine whether the program’s effectiveness was due to any particular component or soft skill.

3.2 Challenges: Aligning Terminology Across Fields

The soft skills discussed in this report differ in how they are implemented across contexts, as well as how they are defined and measured across fields. Harmonizing skill definitions across fields is possible, but ultimately, it is critical to understand a skill in context.

This review attempts to provide coherence to the different terminology used across the three fields of workforce success, violence prevention, and SRH. Because of the diversity of literature on the topic, it can be challenging to integrate terminology within each of the three fields, as well as across them. It is also important to recognize the diversity of terminology used to describe “soft skills” alone. The table below presents the terminology for soft skills used across the three domains. It is important to acknowledge that not all “assets” are soft skills—some may be social assets or financial assets. Likewise, some risk and protective factors are soft skills, but others may be at different levels of analysis (for example, at the family or community level) or refer to individual-level factors that are not soft skills, like biology.

Table 1. Soft Skills Terminology Across Fields

Workforce Success Literature	Violence Prevention and SRH Literatures
21 st century skills	Psychosocial attributes/correlates/predictors
Life skills	Life skills
Essential skills	Risk/protective factors
Behavioral skills	Youth assets
Non-cognitive skills	Social/socio-emotional skills
Youth development assets	Social cognitive skills
Workplace/work readiness competencies	Personality factors
Social-emotional learning (SEL) skills	
Transferrable skills	
Employability skills	
Character skills/strengths	

The findings in the workforce success report integrate data from the academic disciplines of psychology, sociology, and economics, as well as the fields of PYD and organizational and workforce development. For a more detailed look at the different terms that emerge from these different literatures, see Appendix D, “Terms from Multiple Disciplines,” of *Key “Soft Skills” that Foster Youth Workforce Success*.

Violence Prevention

The findings in the violence prevention literature draw from the academic fields of psychology as well as public health, criminology, and field-based violence prevention interventions (including programmatic areas such as countering violent extremism, gang risk reduction, anti-bullying, and school-based violence).

It is important to recognize that, even when classified under the same soft skill term (such as “social skills”), there are slight differences in the measurement and meaning of similar variables. For example, in the violence prevention literature this is reflected in the frequent use of “impulsivity” and “risk-taking” to describe facets of self-control. Impulsivity, for example, might be measured with an item such as “It’s important to think before you act” (Hemphill, Heerde, and Scholes-Balog, 2016). “Low self-control,” on the other hand, is a broader concept that includes impulsivity, but may also refer to “insensitivity, preference of physical activity, risk-taking tendency, short sightedness, and nonverbal orientation” (Moon and Alarid, 2015). In another article, a lack of self-control was understood as “impulsive, self-centered, and short-tempered,” as well as referring to individuals who “choose simple tasks over complex ones, enjoy taking risks, and prefer physical activities over mental exertion” (Unnever and Cornell, 2003). For the sake of comparability across fields, impulsivity, risk-taking, and poor self-control were considered “self-control” (reverse-coded); however, it is important to acknowledge these differences.

Sexual and Reproductive Health

The findings in the SRH literature draw primarily from the fields of public health and psychology, as well as from programming for adolescent and youth SRH (including programmatic areas such as teen pregnancy prevention, HIV/AIDS and STI prevention and awareness, contraceptive use, and gender-based violence). More recently, research on youth SRH has begun to draw on the Big Five model of personality factors to establish connections between personality and SRH outcomes. Evidence linking the Big Five factors, especially “conscientiousness,” to positive workforce outcomes is robust, while the evidence base linking these factors, especially “extraversion,” and “agreeableness,” to SRH outcomes is growing.

The Big Five model is composed of five factors: openness, conscientiousness, extraversion, agreeableness, and neuroticism/emotional stability. Each of these factors is broken down into facets, some of which are more stable personality traits and others that correspond to more malleable soft skills (see Lippman et al., 2015). The report on *Key “Soft Skills” that Foster Youth Workforce Success* laid the groundwork for harmonizing findings on personality and findings on soft skills by cross-walking the personality facets of each of the Big Five factors to their soft skill counterparts. See Appendix E of that report for more detail on this process.

As with the violence prevention literature, authors may use similar terminology to refer to different concepts across the diverse SRH research base. “Self-efficacy” is one example. Self-efficacy might refer to one’s knowledge regarding a certain practice, such as condom use, whereas in other cases, it can refer to one’s confidence to enact the knowledge. In other contexts, it can mean one’s ability to plan ahead and use self-control to be able to put knowledge (about contraception, for example) into practice (see Kirby, 2002; Peltzer, 2000; and England et al., 2016, for examples). In each of these cases, the measure in use was considered and the skill term was classified accordingly. Where self-efficacy was used to refer to knowledge rather than a skill, it was considered out of scope.

Integration Across Fields

Considering the diversity of terminology within each of these three fields, it is not surprising that it would be challenging to integrate terminology across them. This report follows the definitions outlined in the workforce success paper (see Appendix H of *Key “Soft Skills” that Foster Youth Workforce Success*) and attempts to align the terminology used in the violence prevention and SRH fields. However, not all terms fit neatly and in a few cases require a slight adaptation of the original definitions in order to work across fields (See Appendix B for the revised definitions).

Self-control, for example, is a skill term that is highly contextual. In the context of workforce success, self-control refers to someone’s “ability to focus on tasks and manage behavior despite distractions or incentives to do otherwise” (Lippman et al., 2015). In the contexts of violence prevention and SRH, it means something slightly different. The difference boils down to how the notion of risk-taking is conceptualized across different fields. Specifically, it is necessary to distinguish between positive forms of risk-taking, more likely to emerge in the workplace, and negative risk-taking, which can mean a lack of self-control.

In an entrepreneurial context, modest risk-taking may be productive. In fact, a longitudinal study (Zhang and Arvey, 2009) finds that “modest” rule-breaking in adolescence is a predictor of entrepreneurial success among men. However, in the SRH and violence prevention literatures, risk-taking is generally seen as negative and potentially related to

problematic or risky behavioral outcomes. For example, one measure of risk-taking from the violence prevention literature was “doing things you aren’t supposed to do” (Herrenkohl, Lee, and Hawkins, 2012). Thus, risk-taking and risk proneness were coded as “self-control” in the violence prevention and SRH literatures, where they were coded as “initiative-taking” in the workforce literature. However, all three of these literatures refer to a similar range of self-regulatory skills and draw from the research on neurobiological readiness, which ties development of self-control to development of the prefrontal cortex (Guerra and Cunningham, 2014).

It is also important to understand terminology in the context in which it is used in a study. The soft skills that emerge in these three literatures change in how they are used across contexts, as well as how they are defined and measured across fields. For example, “positive self-concept,” or a “realistic awareness of oneself and one’s abilities that reflects an understanding of his/her strengths and potential” is a skill that is highly contextual and relates strongly to the action that is being performed (Lippman et al., “Appendices,” p. 84). In the context of workforce, it might refer to being able to recognize one’s strengths in terms of specific work-related tasks. In the SRH literature, self-efficacy is frequently used in relation to condom or contraception use to describe an individual’s confidence in his or her ability to use a condom or contraception (Peltzer, 2000). Similarly, one study from the violence prevention literature referred to “self-efficacy for preventing IPV,” which is described as a person’s confidence in their ability to refrain from using violence within the context of a romantic relationship (Flisher et al., 2007). All these notions were classified as “positive self-concept,” but it is necessary to understand that they refer to different actions.

3.3 Challenges: Variation in Contexts

Youth demonstrate soft skills in different ways across regional, cultural and other contexts.

The majority of existing empirical research on violence prevention comes from the United States, Europe, and other developed countries. Studies from Estonia, South Korea, China, Mexico, Turkey, Israel, Singapore, Jamaica, South Africa, Somalia, and Liberia were reviewed within the violence prevention literature. A number of studies covered SRH outcomes in South Africa, Kenya, Zambia, Tanzania, Botswana, and other sub-Saharan African countries; evidence was also found from Brazil, China, and the Caribbean. (However, although there is some representation of these regions, they are hardly well represented relative to the United States and other developed countries.) Through conducting interviews with experts in both fields and reviewing programmatic gray literature, the empirical but heavily Western-focused findings were supplemented with sources from other geographic areas, specifically developing country and conflict-affected contexts that were not represented in the empirical literature.

Regional and cultural context affect both how and which types of violence and SRH outcomes are most studied, which soft skills will be the most important, and how these soft skills may present themselves differently. Further, the type of skill that will be the most critical for preventing violence and promoting positive SRH outcomes will depend on the context. One useful way to think about this is in terms of how the culture “type” affects the expression of violence as well as the appropriate response to violence (see Leung and Cohen, 2011). In some cultures, retaliation to aggression might be a positive and expected norm, whereas in other cultures, the expression of anger might have a negative

consequence. Norms around expressing anger may also differ depending on social status (Karin Frey, personal interview).

Even more specifically, physical location and the security environment also affects the type of violence that is most prevalent. Gender-based violence tends to occur and be studied in the home, whereas bullying occurs most frequently at school, while gang violence occurs in the larger community. It is important to acknowledge how, in situations where violence has become normal, the nature of IPV may be affected as well. Boxer and colleagues (2013) found that in Palestine, for example, in-group violence increased among youth as a result of exposure to violence. Likewise, the disruption of livelihoods and security that characterize emergency contexts increase adolescent girls' and young women's vulnerability to rape and sexual exploitation as well as the risk and prevalence of sexual violence.

Ultimately, it is important to note that youth demonstrate soft skills in different ways across contexts. Cultural notions about the individual's place within society color how the skill is understood, articulated, and enacted. One paper reviewed, for example, considered the notion of "collective self-esteem," which highlights "the positive feeling of one's social identity" (Lim and Chang, 2009). Understanding the cultural variants of soft skills, particularly in collectivist societies that are found in developing countries, is an important consideration in designing programs and measuring skills.

3.4 Challenges: Gender Considerations

Gender differences emerge among youth by violence and SRH outcomes, and some (but not all) soft skills have been found to vary depending on gender.

Violence Prevention

The reviewed studies support the view that gender plays a role in determining how soft skills contribute to violence prevention and SRH outcomes. It is clear that violence prevention and SRH outcomes differ by gender, but it is less clear how gender interacts with skills to affect outcomes. Many of the studies reviewed did not present results separately by gender, although, in the SRH literature in particular, they often include gender as a control variable. Overall, more research on soft skills and specific outcomes should disaggregate findings by gender in order to add to the field's understanding of how the skill-outcome relationship may differ by gender and what the underlying mechanisms may be. In this section, we present some of the findings by gender subgroups that did emerge, and we also discuss outcome differences by gender. Because some of these outcomes are more prevalent (or more prevalently measured at least) among males or females, the evidence base on soft skills may tell us more about one group than another.

Findings from Blum and colleagues (2003) indicate that there are important differences in risk and protective factors by gender for juvenile violence. In general, boys have been found to have a greater tolerance for violence, to experience more violence (Artz and Riecken, 1997), and to perpetrate more physical aggression and, to a lesser extent, verbal aggression (Winstock, 2009). The frequency of physical violence in everyday interactions is highest between male peers (Warden and MacKinnon, 2003).

The role of gender in IPV is particularly complex. Although both male and female youth report experiencing dating violence at approximately the same rate, the nature of the violence experienced and the reasons for violence within the relationship are reported to be gender determined, with girls using violence more in self-defense, and boys initiating violence more frequently (Zapanta, Kim, and Messinger, 2010). Therefore, the skills that

might be more important in preventing violence for girls may be different than those that are useful in preventing violence for boys, and gender should be considered when deciding which soft skills are important for violence prevention outcomes. In addition, it is important to note that it is likely more effective to teach soft skills that prevent males' initiation of IPV, rather than skills targeted at female defenders.

Our review found that certain outcomes were researched more heavily among either males or females; this was especially true in the violence prevention literature. Specifically, much of the gang violence literature focuses on male populations. In addition, samples that include recidivism rates or juvenile offenders tend to include males only. In the IPV literature, there tends to be a focus on male-to-female violence perpetration.

The evidence also suggests that skills may present themselves differently by gender and that certain skills may be more important according to gender differences. For example, different interpersonal patterns have been described for adolescent girls and boys, which may affect their attitudes toward and utilization of aggression or violence as a strategy. For instance, the typical peer relationships for adolescent boys are based on status, activity, and include elements of "rough and tumble" play, while girls' relationships with peers have been characterized by high self-disclosure and emotional intimacy (Rose and Rudolph, 2006). In addition, studies show that boys tend to have lower levels of some types of social skills in general, such as "affiliative orientation," meaning oriented toward connection and affiliation with others (Hill and Werner, 2006), and empathy (Waden and MacKinnon, 2003; You, Lee, and Lee, 2005).

Various studies have examined gender in relation to the importance of soft skills for violence prevention outcomes. For example, You, Lee, and Lee (2015) found that cognitive empathy was more important in predicting male bullying frequency, while affective empathy was the more salient predictive factor for female bullying perpetrators. Other studies that have examined soft skills by gender, however, have found that soft skills such as self-control and negotiation skills are equally protective for youth of both genders (Winstock, 2009). Indeed, although McKloskey and Lichter (2003) found higher baseline levels of empathy among girls in their violence-exposed sample, their findings indicate that empathy served equally as a buffer against perpetration of peer and dating violence for both genders.

Sexual and Reproductive Health

Likewise, several SRH outcomes exhibit key gender differences, which may affect which soft skills are most important for these outcomes. In particular, in regions of the world where women's health care access and sexual health rights are dictated by men, women are at higher risk of HIV/STI infection and have lower access to testing and treatment services (Pradhan and Sundar, 2006; Cehat, 2001; Sasendran Pallikadavathi, 2003, UNDP, 2003). A 2006 UNDP report found this to be the case in India, where women have a lower social status and are economically dependent on their husbands (Pradhan and Sundar, 2006). Research from sub-Saharan African also confirms that a lack of financial resources is one barrier women are likely to face in accessing HIV testing services (Musheke et al., 2013).

Aside from the gender disparity in HIV infection due to biological factors—women are twice as likely to be infected through heterosexual sex than men (UNICEF, 2005; Stein and Lousie, 1996; Dixit, 200)—deep-rooted gender inequalities in many parts of the world differentially affect women's sexual decision making as well as their access to testing and treatment services. Where men dictate sexual choices about when to initiate sex and whether or not to use a condom, women may be more likely to be infected. One study from North India found that women who had more autonomy in their relationships with their

husbands were less likely to report STI symptoms (Agrawal et al., 2014). Further, a cross-sectional study of 1,366 women in South Africa found that women who experienced IPV were more likely to test positive for HIV (Dunkle et al., 2004). Overall, it is important to recognize the “ideals with deep roots in social and cultural processes” that drive sexual decision making when designing interventions (Jewkes and Morrell, 2010). Focusing on increasing self-control among young women, for example, may be minimally useful where women have little autonomy in their relationships.

Several articles in the SRH literature looked only at female populations, most of these because they examined pregnancy-related outcomes. Only one article considered males only. Most articles in the SRH literature reported results for both males and females since they considered sexual behavioral outcomes that take place within the context of relationship, such as contraception use.

As in the violence prevention literature, several studies in the SRH literature reported interesting gender differences in the factors influencing SRH outcomes. A study of young men and women in Tanzania that look at consistent condom use found that, for men, the significant factors were self-efficacy for condom use, while for women the important skills were discussing condom use with a partner and self-efficacy to refuse non-safe sex (Babalola, 2006). A study from Croatia found similarly that “sexual assertiveness” and self-efficacy related to condom use is associated with fewer sexual risk behaviors among females but not males (Stulhofer, 2009).

Several empirical articles from the U.S. literature confirm that notions of positive self-concept may be more important for women than men (Kowaleski-Jones and Mott, 1998). Another study considering gender differences in predictors of unprotected sex among homeless youth in the United States found decision making to be a significant factor for males but not females, arguing that this might reflect that homeless girls and young women are dependent on their male counterparts and have limited decision-making within the relationship (Tevendale, 2009). Overall, the differences in these predictors emphasize the program-level need for conducting analyses by gender and designing gender-sensitive research and interventions.

3.5 Challenges: Age Considerations

The literature review focused on youth ages 12–29, but findings for certain outcomes tended to focus on specific age groups; soft skills may differ in their expression across stages of development.

The current study included a review of literature with samples of adolescents and youth ranging from age 12–29. However, because some outcomes occur and are more frequently studied among certain age groups, there is more evidence on the skill-outcome relationship for these age groups than others. The violence prevention literature tends to focus on adolescents and youth ages 12–20 (or perhaps even younger), with less of an emphasis on the emerging adulthood period of 21–29. However, the typical ages of the sample investigated varied by the violence outcome category. In general, more “severe” forms of violence were examined as the sample age increased. For example, much of the research on violent crime or gang associations appears to be conducted with youth ages 16 and above, while much of the bullying literature or “less severe” aggression studies include adolescents and youth in the 12- to 18-year-old range. Studies examining IPV in romantic relationships tended to include older teens and young adults ages 15–25. Overall, it is important consider these variations in sample by age when interpreting results.

Similarly, the risk of certain sexual behavioral and biological outcomes increases as youth get older and accumulate more experience and exposure. In fact, other risk factors, including substance use and delinquency have also been shown to increase with age, along with sexual risk-taking. At the same time, younger adolescents (i.e., ages 10–14) who are sexually active may not have the emotional and cognitive readiness to make sound decisions around sexual behaviors, and, therefore, may engage in impulsive decision-making around sex (Belgrave, Marin, and Chambers 2000). Still, it is important to recognize that the majority of sexual activity among very young adolescents is either forced or occurs within the context of early marriage. For all of these reasons, age is frequently included as a control variable in analyses. Likewise, youth SRH programs are often separated by age, as the content differs and is tailored to the developmental stage.

The types of soft skills that were investigated most in the literature reviewed tended to be consistent across ages, although experts and research suggest that there may be changes in how soft skills are conceptualized at various developmental ages. For example, one may have different developmental expectations for the type of self-control a 12-year-old exhibits versus the type of self-control a 22-year-old exhibits, where the expectation tends toward more of a holistic notion of “self-management” (Patrick Tolan, personal interview).

In addition, many of the reviewed studies measured soft skills levels at a young age and compared the trajectory of soft skill development and violence or SRH outcomes at a later age. In these longitudinal studies, the authors often predicted that a child possessing certain soft skills at a younger age would have the skills necessary for a positive developmental trajectory, and that these youth would display lower levels of aggression or other negative outcomes later on. This echoed the general consensus from experts in the field that “the earlier the better” in terms of when adolescents and youth develop the essential soft skills helpful for both violence prevention and promoting positive SRH outcomes (Guerra and Cunningham, 2014).⁸

⁸ See also the section on malleability of soft skills beginning on p. 60.

4. METHODOLOGY

To support consistency and comparability across fields, the methodology used here followed the methodology and procedures used in the report *Key “Soft Skills” That Foster Youth Workforce Success*. The process began with a literature review of soft skills and youth violence prevention and SRH. Then the breadth (across types of literature and domains investigated), empirical rigor, and regional diversity of the research was considered. Stakeholder input was also an important factor in determining which skills would be recommended. A wide range of implementers, practitioners, and researchers were interviewed to learn more about which soft skills are the most important for youth in our domains of interest. Finally, evidence about the malleability (whether a skill can be improved) and deliverability of these skills, along with the developmental appropriateness of these skills for adolescents and youth ages 12–29, were considered.

The most-supported skills from the literature were examined according to their level of quality and breadth of supporting literature, the regional diversity of supporting research, and amount of support from researchers and practitioners. The recommended skills enjoy strong and diverse support from the literature and among stakeholders and are developmentally appropriate and malleable during ages 12–29.

Literature Review Search Strategy

The first step of this project was an extensive review of the academic literature, supplemented by a review of organizational gray literature. The reviewed literature covered evidence from a variety of domains. For violence prevention, these included psychology as well as public health, criminology, and field-based violence prevention interventions (including programmatic areas such as countering violent extremism, gang risk reduction, anti-bullying, and school-based violence). The reviewed SRH literature covered evidence from public health and psychology, as well as programming for youth SRH (including programmatic areas such as teen pregnancy prevention, HIV/AIDS and STI prevention and awareness, and gender-based violence).

The following databases were searched for academic literature (peer-reviewed journal articles and dissertations/theses): Academic Search Premier, Africa Wide Information, Education Full Text, ERIC, Global Health, PsycInfo, and Social Work Abstracts. The search did not restrict by language, allowing it to capture non-English resources. Two articles in Spanish were identified as potentially in scope and translated into English; one of these was in scope.

The gray literature search included a review of programmatic literature that would not have been identified in the search of academic databases. Organizational websites searched for violence prevention resources included: USAID’s Development Experience Clearinghouse (DEC), Mercy Corps, the World Bank, Child Trends, and the U.S. Centers for Disease Control and Prevention (CDC). Organizational websites searched for SRH resources included: USAID’S DEC, Population Council, Pathfinder, the World Bank, the International Council for Research on Women (ICRW) and the CDC. It should be noted, however, that the majority of the articles identified from this search, although thematically relevant, were not coded for inclusion in our data analysis because they did not explicitly identify a relationship between soft skills and our outcomes of interest. Where appropriate, this gray literature was used for contextual background.

Of the studies reviewed, 70 were determined to be in scope for the violence prevention literature, and 95 for the SRH literature. Particular focus was given to literature from developing countries. The inclusion criteria for these studies follow the inclusion criteria used in the workforce success report:

- recency: published within the last 25 years (extended slightly from the criteria for the workforce report since several key pieces in the violence prevention literature are from the early 1990s)
- include a specific soft skill
- include a specific SRH or violence prevention outcome
- identify a relationship between the soft skill and the outcome

Specific outcome areas or “buckets” were developed to organize the violence prevention and SRH literature.⁹ These outcome areas reflect distinct trends within the literature and within programs. The violence prevention outcome areas included:

- general aggressive behavior
- bullying and cyberbullying
- violent crime
- group and gang-related violence
- intimate partner violence (IPV)

The SRH outcome areas included:

- both risky and protective sexual behaviors (such as contraceptive use, number of partners, and age at sexual debut)
- pregnancy and birth-related outcomes
- HIV- and STI-related outcomes
- gender-based violence

This review distinguished between IPV and gender-based violence by considering the perpetration of physical forms of violence in the violence prevention literature and the perpetration of sexual violence in the SRH literature; there were a few cases of overlap. One article, for example, considered a dating violence “scale,” which consisted of verbal-emotional violence; physical violence; sexual violence; and threatening violence (Gómez et al., 2014). This article was grouped with the violence prevention literature, and the dating violence outcome was coded as “intimate partner violence,” since three of the four “sub-outcomes” were in scope according to our violence prevention terminology. In another article (Banyard, 2006), the author considered “physical coercion” and “sexual coercion” separately; in this case, “physical coercion” was coded as IPV within the violence prevention literature, and “sexual coercion” was coded as gender-based violence within the SRH literature.

It is important to note here that the search for literature on gender-based violence-related outcomes was not restricted to perpetration of violence but also included reducing vulnerability to gender-based violence (i.e., victimization). Our definition of gender-based violence closely follows a USAID definition, which is “violence directed at an individual based on biological sex, gender identity or socially defined norms of masculinity and

⁹ See Appendix A for more information on how these outcomes were defined in the literature.

femininity.” The inclusion of both perpetration and victimization is a departure from our approach to the violence prevention literature, where only perpetration-related outcomes were considered. Victimization from gender-based violence is an important SRH outcome, however. Linking soft skills to reducing vulnerability to gender-based violence is certainly challenging, as it involves a number of other mediating variables, such as financial independence, and we only found one study that established this type of relationship (see Khan, Mishran, and Morankar, 2005). Thus, the majority of studies reviewed that included gender-based violence-related outcomes refer to sexual violence (specifically, rape and sexual assault).

The skills were grouped according to the categories that were determined through the previous work on workforce success. For example, perspective taking, planning skills, and decision-making skills were all categorized under the “higher order thinking skills” category. For the most part, these categories were workable, with the exception of “communication,” which required some adaptation to fit the SRH literature, and “self-control,” which had to be adapted to include variables related to “risk-taking” and “risk proneness.” See Appendix B for definitions of the soft skills and examples of how they appear in different contexts.

Publications that met the above inclusion criteria were evaluated for methodological rigor and organized by outcome area. Methodological rigor considered sample size, sample representativeness, the use of control variables, and whether the study was longitudinal or cross-sectional. These indicators guided our classification of empirical studies according to a quality code. Meta-analyses and literature reviews were also covered. Conceptual frameworks and program evaluations were included if they were available.

Stakeholder feedback was gathered from academic area experts, practitioners in the field, and program coordinators working in programs relevant to these areas. The stakeholders were identified by reading key articles and recommendations from other experts. Semi-structured key informant interviews were conducted over the telephone with 16 stakeholders, 8 with violence prevention experts and 8 with SRH experts (see Appendix E for an interview guide). One researcher conducted the interview and a second researcher took notes. After the interview, the notes were expanded and coded by the skills endorsed by the stakeholder. Finally, the number of stakeholders that endorsed each skill was tallied across all 16 interviews.

In addition, this review gathered information on the geographical coverage of the available evidence for each skill. The skill received a point for every region in which that skill was endorsed. The skill received four points if four or more regions were covered. World regions included: Asia, Latin America and the Caribbean, Middle East/North Africa, sub-Saharan Africa, Eastern Europe, and “other developed” countries (Western Europe, Canada, United States, Australia, New Zealand).

Tables 3 and 5 summarize the above data, including the quality of the literature, the amount of stakeholder support, and the regional diversity demonstrated by each of the top skills.

The reviewed violence prevention literature fell into five categories:

- empirical studies
- meta-analyses and literature reviews
- stakeholder support
- program evaluations (only one program evaluation reviewed met the criteria)
- other qualitative literature, such as symposium and working group recommendations

The reviewed SRH literature fell into five categories:

- empirical studies
- meta-analyses and literature reviews
- stakeholder support
- conceptual frameworks
- other qualitative literature (such as organizational research reports)

Incorporation of Big Five Personality Factors

As detailed in the report *Key “Soft Skills” that Foster Youth Workforce Success*, the Big Five Personality Factors have been found to be cross-culturally relevant and malleable (Kyllonen et al., 2009; Mike et al., unpublished; Ng, 2015; Roberts, Walton, and Viechtbauer, 2006; Schmitt et al., 2007; Woo et al., 2014; Zecca et al., 2012, cited in Lippman et al., 2015). The five personality factors are each composed of sub-facets, some of which can be understood as corresponding to soft skills that are malleable and discrete, while others are more accurately understood as innate personality factors less susceptible to change (Lippman et al., 2015, p. 14). The workforce success report mapped out those facets that align with recognizable soft skills (see Appendix E of that paper for a more detailed explanation). This reports draws upon that work to map the personality factors that emerged in the SRH literature (none emerged in the violence prevention literature) onto our soft skills of interest.

Selection of Key Soft Skills

Step 1. Review findings from the literature

The first step in the selection of the key soft skills for both youth violence prevention and adolescent and youth SRH was a count of the number of positive findings linking each skill to one or more of the youth violence and SRH outcomes. This tally drew on the database of 165 studies that met our review criteria and were coded according to the quality of the piece of literature, the outcome(s) described, and the applicable soft skill.

To arrive at a set of soft skills, the research team focused on the most-supported skills across all five outcome categories in the two sets of literature reviewed. Five skills had the highest number of supportive findings across this literature. Some of these skills also had counterintuitive findings, meaning that youth with high levels of the skill were more likely to engage in violence or risky sexual behaviors. Most skills also demonstrated some mixed findings (meaning that there were mixed results for different subgroups) and null findings.

Some of these skills had broader support across youth violence prevention and SRH outcomes than others. For instance, self-control was an important skill across all five outcome categories in the violence prevention literature, while positive self-concept was not as well-supported for two of the five violence prevention outcomes. Likewise, in the SRH literature, there was little overall evidence available on HIV/STI-related outcomes, which meant that only two skills (positive self-concept and self-control) had coverage across all five of the SRH outcome buckets. It is also interesting that the top skills for the gender-based violence outcome bucket (empathy, positive attitude, and social skills) did not align with any of the top five overall skills for SRH outcomes. See the results section below for a more detailed discussion.

Step 2: Consider the breadth, quality, and contextual diversity of research and stakeholder input

Next, the research team examined several elements of the quality of support for the skills that rose to the top in the first step. These elements were:

- The **breadth** of the support: This refers to if whether the skill has been investigated using different methodologies (empirical, qualitative, literature reviews, etc.); whether the skill was also supported by experts in the field and program stakeholders; and the number of youth violence and SRH outcome categories with which the skill was positively associated.
- The **quality** of the support: This refers to the average level of rigor across the studies according to the criteria presented in the methodology.
- The **regional diversity**: This refers to the number of world regions covered by the skill.

The corresponding scores for each element can be found in Tables 3 and 5 (see Results section below).

Step 3: Consider the malleability of the skills and developmental stage

The final step was to consider malleability and the developmental appropriateness of the skills examined. Malleability refers to whether a skill can be improved during the ages of 12–29. Malleability is particularly important given the unequal access to opportunities experienced by youth in low-resource contexts. It is important to know that the top skills can be developed among youth, even those who have not had the opportunity to receive an education or who have experienced chronic poverty and exposure to violence and trauma.

Building on evidence presented in the report on *Key “Soft Skills” that Foster Youth Workforce Success*, the research team found evidence from experimental studies, program evaluations, and the developmental literature that all of the top skills are malleable among youth. Key research experts as well as practitioners working in the field indicated that they have found these skills to be malleable as well. This current report extends the previous evidence base with targeted research on the malleability of empathy and goal orientation, since these skills were not covered in the previous review on key soft skills for youth workforce success.

5.RESULTS

5.1 Top Skills Across Sectors

Our review of the literature strongly validated the cross-sectoral importance of all five skills identified by the report *Key “Soft Skills” that Foster Youth Workforce Success* as enjoying the most support for predicting positive workforce outcomes. Three skills—positive self-concept, self-control, and higher order thinking skills—were among the top five skills supported across each of the three domains (workforce, violence prevention, and SRH). Communication and social skills received support across all three domains and were among the top five for two of the three domains.

Two additional skills emerged from the review of SRH and violence prevention that were particularly important to those fields, although not present among the top 10 skills for youth success in the workforce. Empathy emerged as the skill with received the third strongest base of support in the violence prevention literature, while goal orientation emerged as the skill that received the fourth strongest base of support in the SRH literature. Figure 4 shows all seven skills according to outcome area.

Figure 4. Cross-Sectoral Skills for Youth Development: Top-Supported Skills Across Fields

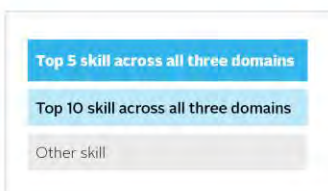


A more comprehensive presentation is shown in Table 2 below, which lists the top 10 skills by outcome area. The seven skills which emerged across all three domains are highlighted in light blue and dark blue. See the table legend for a more detailed explanation.

Table 2

Most Supported Skills in the Literature Within the Domains of Workforce Success, Violence Prevention, and Sexual and Reproductive Health

WORKFORCE SUCCESS	VIOLENCE PREVENTION	SEXUAL AND REPRODUCTIVE HEALTH
Social skills	Self-control	Positive self-concept
Higher order thinking skills	Social skills	Self-control
Self-control	Empathy	Communication
Positive self-concept	Higher order thinking skills	Goal orientation
Communication	Positive self-concept	Higher order thinking skills
Hardworking & dependable	Integrity/ethics	Integrity/ethics
Self-motivation	Resilience	Positive attitude
Teamwork	Communication	Social skills
Responsibility	Responsibility	Responsibility
Positive attitude	Positive attitude	Empathy



Why and how do these skills lead to these outcomes? The current literature offers some hypotheses about how soft skills are linked to workforce success, SRH, and violence prevention outcomes. Although there is abundant evidence that youth soft skills contribute to youth success across all of these domains, evidence is less clear regarding why or how these skills are important. Several commonly used models in each field provide support for hypotheses linking soft skills and our outcomes of interest, however.

Youth violence has so many causes and can take so many different forms that no one over-arching model or framework links soft skills with youth violence prevention (Sullivan et al., 2008). The social-cognitive information processing (SCIP) theory, however, focuses on the

role of cognitive processing and beliefs that lead to behavior (Crick and Dodge, 1994), and some social developmental models emphasize the skills, competencies, and prosocial aspect of youth development as relevant protective factors against youth violence (Hawkins et al., 1992). It is also important in the field of youth violence to consider whether aggressive behavior is proactive (instrumental) or reactive (in response to a situation).

In the SRH field, several models are frequently used to explain youth sexual behaviors at the individual level. These focus on the link between youth beliefs and their actions and include social cognitive theory (Bandura 1986, 1989), the theory of reasoned action (Ajzen and Fishbein, 1980; Fishbein and Ajzen 1975), the theory of planned behavior (Ajzen, 1985, 1991), and the health belief model (Montgomery et al., 1989).

The current workforce literature presents little evidence as to how soft skills impact workforce outcomes, although their importance is well-established (Kautz et al., 2014; Conley, 2010; ACT, Inc., 2007). The report on *Key “Soft Skills” for Youth Workforce Success* proposed several hypotheses linking soft skills and workforce success. Even before reaching the workforce, youth with soft skills such as conscientiousness, persistence, and self-efficacy have an advantage in the job search, since they are more likely to continue with their job search in the face of challenges. Further, soft skills, especially self-confidence, are important for retaining a position. Having an orientation to learn and being able to adapt to feedback is critical for succeeding on the job. In addition, “interpersonal skills such as communication and intrapersonal skills such as self-regulation, self-image, and self-efficacy enable this self-perpetuating learning process called ‘deep learning,’” described in a National Academy of Sciences study (Pellegrino and Hilton, 2012). Employers may be more likely to invest in individuals with soft skills, perceiving that they are more likely to take advantage of training opportunities.

Below the soft skills that accumulated the most support across workforce success, SRH, and youth violence literature are discussed in depth. These soft skills are positive self-concept, self-control, and higher order thinking skills. Hypothesized linkages among these three soft skills and the three outcome domains are explored.

Positive Self-Concept

The notion of self-efficacy may help explain linkages between positive self-concept and violence prevention outcomes. Research using the social-cognitive information processing model finds that differences in self-schema (or youth’s perception of their ability to enact behaviors) may be important. For example, youth’s confidence in their ability to fight or walk away from a fight may inform their decision making about whether or not to engage in aggressive behavior.

It is important to consider how positive self-concept may be related to identity. If a youth identifies and receives status or self-esteem from being seen as “tough,” the youth may be rewarded in certain contexts, such as within gangs; the youth’s aggressive behavior may then reinforce that identity. Conversely, self-esteem that comes from prosocial values may lead to decreased participation in aggression for youth. Overall, notions of the self are complicated and seem to play out differently depending on the type of context and the type of aggression. For example, one study found that high self-esteem among a low-income high-risk sample of youth was associated with positive violence prevention outcomes for youth (Leff et al., 2014), while another study found that youth with high levels of self-efficacy were more likely to become involved in using force or political violence to achieve their goals (Mercy Corps, 2013).

Positive self-concept, especially when it relates to beliefs about one's ability or efficacy to perform a specific behavior (e.g., using a condom or asking a partner to use a condom) can prevent risky sexual behaviors. The idea of "contraceptive use self-efficacy" draws on the theories of reasoned action and planned behavior as well as Bandura's related self-efficacy theory. These theories suggest that individuals' beliefs about their ability to cause something to happen determines that behavior (some examples encountered in this review include Reitman et al., 1996; Villaruel et al., 2004; Widman, 2014; Longmore et al., 2003). In other words, youth who are confident that they can convince a partner to use a condom are more likely to use a condom.

The linkages between self-esteem and sexual risk-taking are not entirely clear, however. Charles and Blum (2008) suggest this may be because there is no one measure of self-esteem that works for all adolescents. For example, a number of studies reviewed in this study reported mixed or null effects of self-esteem on risky sexual behavior. One study found that girls aged 14–18 who reported "feeling like a failure" (which reflects a negative self-concept) were more likely to have ever had sex, but that the opposite was true for boys. Given these mixed findings by gender, Charles and Blum (2008) highlight the importance of considering how more specific facets of self-concept, such as identities around ethnicity and body image, may relate to sexual behaviors and gender norms.

In the workforce, youth with a positive self-concept have the self-confidence and self-efficacy needed to tackle and persist in challenging and novel tasks and to exhibit leadership in relating to others. One key element of positive self-concept is self-awareness (i.e. understanding one's strengths and limitations), a quality that is especially important when working in teams of people with a mix of capabilities. Individuals who are confident in their abilities and who have a strong sense of self-efficacy are capable of listening to and incorporating both positive and critical feedback (Lippman et al., 2015, p. 19).

Self-Control

There is strong evidence supporting the association between self-control (both emotional regulation and behavioral self-control) and aggressive behavior in childhood and adolescence. The social-cognitive information processing models prove useful in understanding self-control and youth aggression. According to these models, youth who tend to react impulsively to provocation in their environment tend to be more reactively aggressive; youth who have high levels of emotional dysregulation may also be influenced by this emotion when interpreting social cues in their environment and accessing and deciding on responses. Reactive aggressors may be less able to control their emotions and, therefore, attribute hostile motives to others and have difficulty generating appropriate, non-violent responses to social cues.

In terms of proactive (or instrumental) aggression, SCIP models would suggest that youth need some level of self-control to plan and implement controlled processing when carrying out instrumentally aggressive behavior, while reactively aggressive behavior is more clearly linked to low emotional and behavioral regulation (Sullivan et al., 2008). Several studies have linked low self-control with bullying behavior (Unnever and Cornell, 2003) and physical aggression (Moon and Alarid, 2015) among youth. Self-control may also play a role in youth's ability to resist or refuse participation in certain activities, including gang activities. Hill et al. (2006) found that poor refusal skills, in fact, were linked with gang membership and violence.

The impact of self-control on sexual behavior is informed by the theory of planned behavior. The theory of planned behavior suggests that individuals' intentions determine their

behaviors; these intentions are determined by attitudes, norms, and “perceived control” over the behavior. The perceived control piece is where self-control is at play: if youth believe that they can control themselves when they are sexually excited, they are more likely to take protective steps, like using a condom. However, it is critical to recognize the role that gender norms play here as well. In some contexts, the woman may not feel that it is appropriate for her to have input on sexual decision making or to refuse a condom.

Research also supports a relationship between a related facet of self-control, “risk proneness,” or the “propensity to be attracted to potentially risky activities” and sexual risk-taking. Youth with a higher tolerance for risk may choose not to exercise self-control and instead seek out risky behaviors for fun (Crockett et al., 2006).

Youth self-control skills support a range of positive workforce outcomes. Emotional regulation is crucial in almost any occupation or workplace environment that requires navigating stressful situations and relating to others effectively. Self-control is also manifested in workplace behaviors that are key to individual productivity, such as effective time-management and avoiding distractions. Employer surveys consistently find that employers place high value on self-management and self-control. Self-control may also be especially important for entrepreneurs, as they are accountable only to themselves (and potentially to investors) (Lippman et al., 2015, p. 20).

Higher Order Thinking Skills

Higher order thinking skills, and specifically those involving decision making and planning are central in social-cognitive information processing models of youth aggression (Sullivan et al, 2008). These models explain that youth must take decision-making steps that reflect how youth interpret the actions of others; youth must also be able to think critically and plan a non-aggressive response. Aggressive youth are less likely to value prosocial responses and have a greater likelihood of selecting aggressive planning responses than nonaggressive youth (Crick and Dodge, 1994). For example, Keltikangas-Jarvinen (2002) found that Finnish adolescents who used aggressive problem-solving strategies scored higher on measures of aggressive behaviors than youth who did not use these aggressive models for problem solving. In addition, Lösel and Farrington (2012) found that youth who exhibited sound planning behavior and who had non-aggressive cognitive models had lower rates of violent crime outcomes.

Charles and Blum (2008) outline several key aspects of decision making and problem solving that inform sexual behaviors: “having the relevant information, weighing the alternatives, and committing to the decision.” The notion of “social problem solving,” or problem solving that occurs in daily life, suggests that individuals must be able to generate a variety of solutions in potentially stressful social situations, including high-risk sexual encounters.

Another relevant theory is Luker’s notion of “cost accounting,” which suggests that the decision to use contraceptives is a rational choice that weighs the costs and benefits of pregnancy versus non-pregnancy. However, where young women perceive that there are more benefits—positive attention and improved social status—than disadvantages of early pregnancy (Geronimus and Korenman, 1991), becoming pregnant at an early age may represent a socially adaptive behavior. This decision making may also be influenced by inequitable gender norms that pressure women to conform to a prescribed role.

In the workforce, higher order thinking skills are essential for solving complex problems, making sound decisions, anticipating challenges, and understanding likely consequences of

actions. Employees who are able to think critically and problem solve are able to help their company improve its processes (Soland, Hamilton, and Stecher, 2013). Related skills such as situational judgment, creating/conceptualizing, and analyzing/interpreting are found to be positively related to job performance (Bartram, 2005; Hogan and Holland, 2003; McDaniel et al., 2001).

5.2 Findings from the Violence Prevention Literature

Top Five Skills

Based on our review of the violence prevention literature, a set of key soft skills for youth violence prevention was identified because they received the most support across all domains of the literature, including aggressive behaviors, bullying, violent crime, group or gang violence, and IPV. These skills were identified as key to preventing violence in the empirical literature, qualitative research, and among key stakeholders. They were identified as skills that can be targeted, as malleable in youth, and as skills that are optimal for focus in violence prevention programs. As represented in Table 3 below, the top five skills that the review identified were, in descending order: **1) self-control, 2) social skills, 3) empathy, 4) higher order thinking skills, and 5) positive self-concept.** It is important to note that these skills also interact with and build upon one another and other skills in their contribution to the prevention of violence.

Table 3

Most Supported Skills by Outcome in the Violence Prevention Literature

	ALL OUTCOMES	AGGRESSIVE BEHAVIOR	BULLYING/ CYBERBULLYING	INTIMATE PARTNER VIOLENCE	VIOLENT CRIME	GROUP/GANG VIOLENCE
1	Self-control	Self-control	Self-control	Social skills	Self-control	Self-control
2	Social skills	Social skills	Empathy*	Empathy* Self-control*	Empathy	Social skills
3	Empathy	Empathy			Communication Integrity/ethics	Positive self-concept Empathy
4	Positive self-concept	Positive self-concept			Social skills* Higher order thinking skills*	Integrity/ethics* Responsibility*
5	Higher order thinking skills	Higher order thinking skills				

* skills with less than 3 positive empirical findings

Note: Cells that contain more than one skill indicate that multiple skills received the same amount of empirical support.

These top five skills are discussed in detail below, and align with the top five skills identified in the workforce success paper and the SRH review. Each skill is a cluster of sub-skills that are grouped into an overarching category for the sake of simplicity.

As mentioned above, the key soft skills recommended for focus in youth violence prevention programs include **self-control, social skills, empathy, higher order thinking skills, and positive self-concept.** As demonstrated in Table 4, all of these skills have met the criteria listed above and have been linked with positive youth violence prevention outcomes. They are discussed in more detail below.

Table 4

Evidence for Criteria for Selecting Soft Skills for Youth from the Violence Prevention Literature

VIOLENCE PREVENTION	FINDINGS FROM LITERATURE ONLY				BREADTH AND QUALITY				REGIONAL DIVERSITY (0–4)	MALLEABILITY			
	Positive	Mixed	Negative	Null	Types of Literature (0/5–5/5)	Stakeholder Support (0/8–8/8)	Average Quality (0–3)	# of Outcomes (0–5)		Early childhood	Middle childhood	15–18	19–29
Self-control	36	1	1	16	3/5	7/8	1.3	5	4	✓	✓	✓	✓
Social skills	21	0	2	13	2/5	5/8	1.7	5	4	✓	✓	✓	✓
Empathy	22	1	1	6	2/5	3/8	1.4	5	3	✓	✓	✓	✓
Higher order thinking skills	9	0	0	0	4/5	2/8	1.9	5	3	✓	✓	✓	✓
Positive self-concept	10	1	5	9	4/5	2/8	1.3	5	4	✓	✓	✓	✓

1) Self-control refers to the ability to control and regulate oneself. This includes one’s ability to control impulses, delay gratification, direct and focus attention, and regulate and modulate emotions and behaviors (Lippman et al., 2015, “Appendices,” p. 81). In the violence prevention and psychology literature, a distinction between two important aspects of self-control is emphasized: self-control of behavior and self-control of emotion (the latter is often referred to as “emotion regulation”). The association between both types of self-control and youth violence prevention was highly supported in the literature and in the expert consultations.

KEY TAKE-AWAY:

The link between self-control and violence prevention has the strongest and most extensive support in the literature.

The violence prevention literature often refers to self-control as “lack of impulsivity,” “lack of response inhibition,” “impulsivity,” “risk-seeking,” “affect dysregulation,” and “behavioral control.” In practice, children and youth with the skill of self-control are able to regulate their emotions and delay impulsive behavior in order to calm down before acting aggressively, even in tense or high-stakes conflict or emotional situations. Across all outcomes, self-control was cited by 22 empirical studies and 3 meta-analyses as positively related to violence prevention outcomes. As can be seen in Table 4 (above), there were 36 total positive findings for self-control, 1 mixed finding, 1 negative finding, and 16 null findings.

Aggressive Behaviors. Twelve studies (11 of these empirical and one literature review) found self-control to be linked to aggressive behaviors in youth. Nine of these studies examined this skill as the *lack* of self-control and as a risk factor for aggressive behaviors. In addition, one qualitative study entitled, “Reducing Crime and Violence: Experimental Evidence on Adult Noncognitive Investments in Liberia” also found an association between self-control (“self-regulation” in the study) and the prevention of aggressive behaviors in youth. Many of the empirical studies that examined the link between self-control and aggressive behaviors in youth were international, including studies from Jamaica (Meeks, Powell, and Grantham-McGregor, 2007), Israel (Winstock, 2003), China (Wang et al., 2012), and Turkey (Oner et al., 2013). One study from Taiwan (Chen and Astor, 2010) examined “Western” risk factors for youth violence to determine if these were applicable in Asian culture, and found that lack of impulse control was linked with school violence outcomes for

a group of over 3,000 Taiwanese middle school students. Similarly, a study by Oner and colleagues (2013) found that high impulsivity was associated with youth aggression in nationally representative sample of Turkish high school students.

Bullying. Two empirical studies supported a connection between self-control and bullying or cyberbullying outcomes for youth. These studies were all cross-sectional studies that focused on middle school-aged students (6th–9th grades). One recent study by Moon and Alarid (2015) found that youth with low self-control were more likely to physically and psychologically bully. Another cross-sectional study conducted with middle school youth in Virginia found an association between low self-control and bullying outcomes (Unnever and Cornell, 2003).

Gang and Group Violence. Self-control was linked with gang or group violence in five empirical studies included in this review and one “review of the research” qualitative paper. These studies were mostly based in the United States, although one study examined violence among a nationally representative sample of high school students in Turkey (Oner et al., 2013). Three of these studies were quite rigorous, examining longitudinal findings in samples of over 800 youth participants (Dmitrieva et al., 2014; Esbensen et al., 2009; Hill et al., 1999).

Intimate Partner Violence. The evidence supporting the link between self-control and the outcome of IPV consisted of only two studies in this review. One cross-sectional study conducted in Spain examined the link between tolerance for frustration and externalizing problems and dating violence among 14- to 20-year-old youth (Gomez, Delgado, and Gomez, 2014). In addition, a U.S.-based review of risk and protective factors in IPV suggested a link between self-control and the outcome of IPV (Moore et al., 2015).

Violent Crime. Four empirical studies and two literature reviews found a significant positive relationship between self-control and violent crime outcomes for youth. With the exception of one finding (“inhibition ability”), the findings in this review were examinations of the risk-factor aspect of self-control, or in other words the lack of self-control and the positive connection with violent crime outcomes. Risk-seeking, impulsivity, lack of emotional regulation, and thrill-seeking are forms of this lack of self-control that seem to be associated with this outcome for youth. The review included numerous longitudinal studies that examine the link between self-control skills and violent crime over time, often with samples ages 13–18 years old. The vast majority of these studies were conducted in the United States, although one study examined risk factors for violent behaviors in South Africa (Van der Mewe and Dawes, 2007).

Input from Experts. Self-control skills were frequently endorsed in our expert consultations. The experts emphasized that skills such as anger management, emotion regulation, constraint during difficult situations, and the ability to calm down and think before acting are essential skills for youth violence prevention. One expert pointed to self-control as “obviously the number one skill” that would help youth to avoid violence (Nancy Guerra, personal communication, March 17, 2016). Another stakeholder commented that the skill of self-control is important across the developmental trajectory for youth, and that the consequences of lack of self-regulation and impulsivity generally become more serious as youth develop (Linda Dahlberg, personal communication, April 8, 2016). Another stakeholder described how self-control can be conceptualized differently when youth are younger (as self-control) and then becomes more about self-management and emotion regulation skills as youth develop (Patrick Tolan, personal communication, April 7, 2016). This expert noted his belief that perhaps what makes the difference between aggressive and non-aggressive youth in the “long-term” is this self-control skill—the ability for youth to think

about the consequences of their actions, and live through the moment of unpleasant feelings without acting out aggressively.

Experts noted that there is evidence that the skill of self-control is malleable in youth, and that programs that help them practice dealing with frustration appropriately are helpful. Programs that help youth to identify their emotions and then slow down, think, and not act impulsively would improve self-control, and mindfulness interventions may increase these self-regulation skills as well. Experts also noted that with self-control, the type of aggression is important—self-control is likely more useful in situations where reactive aggression (reacting to a highly charged situation) rather than instrumental aggression (using aggression to get a desired outcome) is relevant.

Strength of the Evidence. Of all of the youth soft skills examined, self-control had the most support of all in the literature across outcomes and types of literature. Twenty-two empirical studies positively and significantly linked self-control and youth violence outcomes. Of these, 19 were very rigorous or moderately rigorous studies and 3 were less rigorous. Three literature reviews also linked self-control and violence outcomes for youth.

There were, however, some mixed findings regarding this association as well. One study (Winstock, 2003) found a counter-intuitive positive association between high self-control and youth violence outcomes. This study tested a model of aggression with youth in Israel. In addition, one study on affect dysregulation in high-risk adolescent males (Penney and Moretti, 2010) found mixed findings, and 10 studies found no association in either direction between self-control and youth violence outcomes. In particular, several studies found null associations between self-control and violent crime outcomes. It is clear that as a whole the literature supports self-control as an important skill for youth in the prevention of violence.

2) Social skills refer to skills that are related to getting along with others, including: respecting and expressing appreciation for others, demonstrating context-appropriate behavior, and being able to resolve conflict (Lippman et al., 2015, “Appendices,” p. 73). Social skills allow youth to interact productively in social contexts and to respond to emotions or conflict in socially appropriate, non-aggressive ways. Social skills can be generally conceptualized as the ability to interact positively and pro-socially with others. The evidence for a link between youth’s social skills and violence prevention outcomes in the literature is strong and appears consistently across all categories of outcomes and contexts.

KEY TAKE-AWAY:

The link between social skills and violence prevention is generally strong across a range of outcomes.

Social skills are operationalized in the violence prevention literature as including “interpersonal skills,” the ability to take prosocial approaches to conflicts, engage positively with others, and give positive attribution to others’ intentions. Across all outcomes, social skills were significantly positively linked to violence prevention outcomes in 17 empirical studies and 1 meta-analysis. Social skills received 22 positive findings and 13 null findings (see Table 4 for details).

Aggressive Behaviors. Nine studies examined the relationship between social skills and aggressive behavior in youth, although in the majority of cases the actual relationship the authors indicated was between the opposite of a positive skill (such as “approval for aggressive strategies”) and the presence of aggressive behaviors in youth. Seven of these

were empirical studies, and one was a meta-analysis. Two of these studies included samples of juvenile offenders either in detention facilities or on probation, and found a link between negative social skill abilities and subsequent aggressive behaviors in these youth (Smith et al., 2015; Stickle, Kirkpatrick, and Brush, 2009). One particularly interesting study examined affiliative orientation (willingness to connect pro-socially with others) in a cross-sectional study of 3rd–12th graders in the Northwest United States. It examined the extent to which these skills differentially impact subsequent aggressive behaviors when youth have high or low scores on positive identification and affiliation with their school environment, depending on gender. The study found that when youth have a positive affiliation with school, the social skills are related to aggression prevention in boys but did not have an impact on girls' behaviors. When youth had a low school affiliation score, social skills had a positive impact on youth of both genders (Hill and Werner, 2006).

Bullying. Only one study examined the relation between social skills and bullying prevention. The author examined the association between these variables in a sample of over 1,000 13- to 20-year-old adolescents and youth in Cyprus and Turkey (Bayraktar, 2012). The author found that low social cognitive abilities were positively related to overt bullying behaviors. This finding was reverse coded for our purposes.

Gang and Group Violence. Four studies in this review pointed to the importance of social skills for the prevention of group and gang violence. These four studies examined the effect of social skills on gang membership or gang involvement in the United States or in the United Kingdom. In addition, all of these studies examined the effect of a negative social skill construct (such as “antisocial behavior”) on the outcome and were reverse coded.

Intimate Partner Violence. Two international empirical studies found an association between social skills and IPV. One study examined the effect of positive conflict resolution engagement on verbal-emotional abuse in relationships (Antonio and Hokoda, 2009) in Mexico and found that a calm and compromise-oriented conflict resolution style led to decreased verbal and emotional abuse in dating relationships, although it did not serve as a protective factor against physical abuse in these relationships. Another study (Calvete et al., 2016) found an association between the lack of various social skills and cross-sectional IPV outcomes.

Violent Crime. Three empirical studies examined the link between youth social skills and violent crime or offending. One study by Deschenes and Esbensen (1999) examined gender specifically and linked prosocial peer commitment skills with violent crime prevention for both male and female high school youth. Another longitudinal study of middle and high-school students in the United States found that a lack of certain social skills related to ethicality was associated with violent crime perpetration (Esbensen et al., 2009).

Input from Experts. The importance of social skills for the prevention of violence was endorsed by many experts in the field. One expert noted the importance of recognizing social cues and learning healthy relationship skills, especially for the prevention of IPV (Berit Kieselbach, personal communication, March 24, 2016). Another expert noted that skills around caring and respectful behavior and conflict management skills were essential for violence prevention (Linda Dahlberg, personal communication, April 8, 2016). Other experts pointed to the social cognitive skills such as interpersonal skills and adeptness with social cues as helpful (Eric Dubow, personal communication, April 20, 2016; Berit Kieselbach, personal communication, Berit Kieselbach, personal communication, March 25, 2016). The consulted stakeholders agreed that social skills were malleable for youth, although one expert noted that for social skills (along with other soft skills), “the younger the better” in

terms of when is the ideal timing to teach these skills (Karen Towers, personal communication, May 26, 2016).

Strength of the Evidence. Overall, the strength of the empirical evidence examined here provides strong support for the importance of youth social skills in achieving youth violence prevention. In total, the literature review provided 21 positive findings across 17 empirical studies and 1 literature review. There were two instances of counter-intuitive negative findings and there were 13 instances of “null” or “no relationship” findings in the association between social skills and youth violence. The bulk of the empirical evidence supports a relationship between social skills and youth violence outcomes, however, and researcher and practitioners endorsed social skills as essential for youth violence prevention.

3) Empathy refers to “the affective and cognitive ability to feel and understand what someone else is feeling” (Lippman et al., 2014a). The field of violence prevention and psychology generally defines the skill of empathy as “the ability to understand and share another’s emotional state or context” (Cohen and Strayer, 1996). Some violence prevention literature distinguishes types of empathy, with “cognitive empathy” referring to one’s ability to cognitively take another’s perspective and identify their state of mind, while “affective empathy” refers to the ability to share in another’s emotional state (Caravita, di Blasio, and Salmivalli, 2008). There is some evidence that this “cognitive empathy” or social intelligence skills might not serve to inhibit aggression, and may in fact allow youth to manipulate and control others more easily (Sutton, 1999). In this review, empathy was associated with aggressive behaviors across all five outcome categories. The empirical support for empathy included 22 positive findings and 8 null, mixed, or negative findings across the review (see Table 4 above).

KEY TAKE-AWAY:

The ability to empathize with others is strongly linked to violence prevention outcomes.

Aggressive Behaviors. The literature reviewed identified seven empirical studies that examined the association between empathy and aggressive behaviors, and one meta-analysis. Of particular note, Vachon, Lynam, and Johnson (2014) conducted a meta-analysis of the empathy and aggression literature across 106 different study findings to determine whether deficits in empathy are associated with aggressive behavior. They found a positive link between lack of empathy and physical and verbal aggression across 106 different study findings, although the authors describe the strength of this association as “surprisingly weak.” In addition, an empirical study found a link between low levels of empathy and physical peer aggression among a group of over 1,000 adolescent males and females in rural China (Wang et al., 2012). Two studies in particular analyzed the relationship between empathy and aggression when youth experienced stressful situations such as parental marital violence in the home (McCloskey and Lichter, 2003) or differential levels of parental support (Van et al., 2012). Both studies found that high levels of empathy can serve as a protective factor against aggression toward others.

Bullying. Only one study connected empathy with positive findings for bullying prevention. This study by You, Lee, Lee, and Kim (2015) was a cross-sectional study of middle school students in South Korea. Interestingly, this study found both cognitive empathy and affective empathy to be positively associated with bullying prevention outcomes for these youth, but that cognitive empathy seemed to be a more important skill for males, while affective empathy was associated with bullying prevention in females.

Gang and group violence. Two empirical studies conducted in the United States found positive links between empathy and the outcome of keeping youth out of gangs. One seven-year longitudinal study found that previously adjudicated male youth who had low psychological maturity, including low ability to take others' perspectives, were more likely to become low-level gang members than those with higher perspective scores (Dmitrieva et al., 2014). A cross-sectional study that compared a high-risk Mexican-American community sample of adolescent males and gang members (Valdez, Kaplan, and Codina, 2000) found that the gang member youth scored twice as high on measures of lack of empathy for others.

Intimate Partner Violence. Two empirical studies examined the relationship between empathy and IPV. A recent study from Spain (Calvete et al., 2016) found that empathy scores were negatively related to reported dating aggression. McCloskey and Lichter (2013) longitudinally examined a sample of youth who had previously been exposed to marital violence in the home, and found that youth with higher empathy scores were less likely to engage in dating aggression.

Violent Crime. Two empirical studies and one literature review examined the relation between empathy and violent crime committed by youth. One large study of over 5,000 American youth (Deschenes and Ebsensen, 1999) found that guilt toward violence was negatively associated with violent offending in the sample of 8th grade youth. Low individual guilt also was supported as linked with youth violent offending in a South African review of the literature (Van and Dawes, 2007).

Input from Experts. Experts in the field also support the importance of empathy skills in preventing youth violence. One expert described empathy as among other skills (social problem-solving, emotional regulation, and communication) that “rise to the top” as being key for violence prevention. Another expert mentioned the importance of the “normative piece,” describing this using several terms: moral system of belief, empathy, and caring about others. During a USIP panel discussion, Emile Bruneau, a social and cognitive scientist, noted that empathy ideally should be “universal empathy” in order to decrease in-group/out-group biases and avoid empathy exclusively for one’s own group that might drive violence such as gang violence or terrorist violence (Bruneau et al., 2016).

Strength of the Evidence. Although there has been some controversy in the literature regarding the effect of empathy on youth violence behaviors, it appears that overall empathy is an important skill for youth. Across the literature reviewed, there is more evidence linking affective empathy with violence prevention outcomes in youth than cognitive empathy. This is seemingly because it is possible to understand another’s emotions but not connect with them or feel them, and therefore use that cognitive understanding simply to be more effective at being aggressive. It appears that the ability to share in another’s emotional and psychological state and take their perspective appears to be an important one for youth. In addition, the skill of empathy is often conceptualized and researched in a PYD context (i.e., high empathy scores as a protective factor rather than low empathy as a risk factor).

However, the empathy literature does have some mixed findings. One study on the association between empathy and bullying in Italy (Caravita et al., 2009) revealed mixed findings regarding the effects of affective empathy on the outcome, and found negative findings regarding cognitive empathy and bullying, implying that youth with high levels of cognitive empathy or the ability to understand others’ mental states, may in fact be more effective bullies. In addition, there were six null findings in the empathy literature reviewed here. Despite these mixed pieces of evidence, there remains strong support for empathy as an important skill in this domain.

4) Higher order thinking skills encompass problem solving, critical thinking, and decision making. These skills may be reflecting the same underlying skill set, which is the ability to take in information from multiple sources, identify the issue(s), evaluate potential options, and reach an appropriate conclusion (Stein, 2000; Lippman et al., "Appendices," 2015, pp. 77-78). The violence prevention literature often defines higher order thinking skills (as conceptualized above) as problem solving, critical thinking skills, sound planning behavior, and the ability to make good decisions. Specifically, important higher order thinking skills for violence prevention include skills in using non-aggressive problem solving strategies and being able to make good decisions and use sound planning behavior. Higher order thinking skills received empirical support from nine positive findings, and there were no null, mixed, or negative findings (see Table 4).

KEY TAKE-AWAY:

Youth who demonstrate higher order thinking skills are more likely to be able to avoid violence.

Aggressive Behaviors. Two empirical studies and one literature review found a significant relationship between higher order thinking skills and youth aggressive behavior. Both empirical studies were conducted in Finland with adolescents (Keltikangas-Jarvinen, 2002; Pakaslahti and Keltikangas-Jarvinen, 1996) and found that aggressive problem solving strategies were positively related to aggression. A literature review by Boxer and colleagues (2005) found that for elementary age to adolescent children, interpreting the behavior of others accurately and learning to use non-aggressive problem-solving strategies was negatively related to youth violence.

Bullying. One empirical study conducted by Cheng (2014) in Taiwan with over 800 male and female adolescents found that the ability to use problem-solving coping strategies was negatively related to indirect or direct bullying. This was the only piece of literature in the review that linked higher order thinking skills and bullying outcomes.

Gang and Group Violence. No empirical articles were coded for gang or group violence and the association with higher order thinking skills. However, the importance of higher order thinking skills to group violence was represented by four qualitative articles that linked these skills with the prevention of violent extremism in particular. For instance, one "good practices" document for countering violent extremism (CVE; Abu Dhabi Memorandum on Good Practices for Educating and Countering Violent Extremism) noted the importance of educating youth in higher order thinking skills of the ability to make decisions, the ability to think clearly, and the ability to solve problems in order to prevent violent extremism. In addition, two unique collaborative workshops held by experts in CVE (lines 198, 199-citations) reported that experts in the field found lack of critical thinking to be related to violent extremism, and suggested enhancing logic and problems-solving skills as potentially helpful for CVE programming.

Intimate Partner Violence. Overall, the literature on the link between higher order thinking skills and IPV was sparse. One empirical study of over 1,000 Spanish adolescents and youth ages 13–17 found that aggressive response access was related to a young person's likelihood of perpetrating dating violence.

Violent Crime. In the outcome area of youth violent crime, a literature review conducted by Lösel and Farrington (2012) concluded that sound planning behavior and non-aggressive

cognitive schema both serve as protective factors for youth for the prevention of violent crime. Overall the literature in this area was lacking.

Input from Experts. Many higher order thinking skills were endorsed by experts in the field as important for violence prevention. Experts mentioned aspects of higher order thinking skills such as decision-making abilities, the ability to organize one's thoughts, means/ends thinking, and general cognitive skills. One expert noted that social problem-solving skills may have an impact on milder forms of aggression among low-risk youth, but that in instances of more severe aggression, these skills on their own would not be protective (Patrick Tolan, personal communication, April 7, 2016).

Strength of the Evidence. When higher order thinking skills are included in studies, the findings are generally positive and consistent. However, research on discrete higher order thinking skills is not as prevalent as the research on self-control, social skills, and empathy. This may be because the violence prevention literature draws on social information processing and social cognitive theory, which refers to constructs such as "knowledge structures," and "social scripts" that, while similar to the category of higher order thinking skills, were not considered discrete skills in this research. Therefore, many models in the literature test similar ideas but were not considered soft skills.

5) Positive self-concept is defined generally as a realistic awareness of oneself and one's abilities that reflects an understanding of strengths and potential, and is, therefore, positive (Lippman et al., "Appendices," p. 84, 2015). In the youth psychology literature, high self-concept is linked to a variety of positive outcomes for youth, including positive physical and mental health, and positive social and emotional development (Leff et al., 2014). However, there has been some controversy in the literature about the role of positive self-concept (and self-esteem in particular) in aggressive behaviors in youth, with some literature indicating that low self-esteem contributes to violence, while other studies point to high and unstable self-esteem as more likely to contribute to violence outcomes (Lim and Chang, 2009). In the youth violence prevention literature, positive self-concept is often conceptualized by terms such as self-esteem, self-perception, self-efficacy, positive sense of identity, and self-concept. As can be seen in Table 4, positive self-concept received support from ten positive findings; the literature search also found nine null findings, five negative findings, and one mixed finding.

KEY TAKE-AWAY:

The literature demonstrates that youth's positive self-concept and violence prevention are linked, although the findings are less consistent than for the other skills.

Aggressive Behaviors. Three empirical studies supported an association between positive self concept and aggressive behaviors in youth. One study in the United States (Smith et al., 2015) found that both low self-esteem and inflated self-perceptions with aggression were associated with aggressive behaviors in a sample of adolescent male juvenile offenders. This study also found that the perceptual bias independently predicted changes in the levels of aggression in the youth over time. In addition, a study by Leff and colleagues (2014) found that low-income male and female adolescents who endorse higher levels of self-esteem are less likely to be aggressive. A study in the United Kingdom also linked low self-esteem with the participation of youth in fighting and other aggression (Shepherd and Sutherland, 2002).

Bullying. One empirical study conducted with adolescent boys and girls in Turkey and Cyprus (Bayraktar, 2012) supported an association between lack of academic self-efficacy in the youth and overt bullying behaviors.

Gang and Group Violence. Positive self-concept appears to be well-studied in the gang and group violence literature, however findings have been generally inconsistent. Three empirical studies have found a link between young peoples' positive self-concept and gang and group violence outcomes. In one empirical study, Dmitrieva and colleagues (2014) found interesting and mixed results regarding self-esteem skills. Their study with low-income and at-risk youth found that low self-esteem predicted gang membership at a younger age, but that higher self-esteem predicted being a gang leader during young adulthood. Another study that utilized data from the Rochester Youth Development Study of high-risk youth in the United States, found that for females, low self-expectations for doing well in school predicted gang membership, while this same skill did not have any effect on participation for male youth (Bjerregaard and Smith, 1993). A study of black adolescents in the United States (Maxson, Whitlock, and Klein, 1998) found that delinquent self-concept was positively associated with gang membership, even above and beyond the opposite effects of a positive self-concept.

Intimate Partner Violence. Only one study in the literature reviewed investigated the relationship between positive self-concept and IPV in South Africa (Flisher et al., 2007). This study found no association between self-efficacy regarding the prevention of violence and IPV.

Violent Crime. Three empirical studies and one literature review supported an association between positive self-concept and violent crime in youth. However, these studies either provided negative findings (higher self-concept was associated with higher levels of violent crime) or had null or mixed findings. Overall, there did not appear to be much evidence that positive self-concept was associated with lower levels of violent crime for youth.

Input from Experts. Experts nominated elements of positive self-concept numerous times during interviews as helpful for violence prevention, including global self-worth and self-esteem. Consistent with the empirical and qualitative evidence, however, experts also indicated that higher self-concept could sometimes be associated with higher rates of violence. It was also noted that self-confidence could be used in unhealthy ways in terms of gang leadership, and that youth "could feel good or bad about [themselves] and still be violent" (Nancy Guerra, personal communication, March 3, 2017). Experts also noted that successful aggressors often have inflated self-esteem. Another expert noted that what is important is that youth have a grounded, strong sense of self and enough self-efficacy that they are resilient, without contributing to an inflated sense of self (Catherine Bradshaw, personal communication, April 20, 2017). Another expert noted that the aspect of positive self-concept that is related to self-efficacy may be more important than a sense of self-liking for youth violence prevention (Patrick Tolan, personal communication, April 7, 2016). Overall, evidence from the field also appears somewhat mixed in terms of the effect of positive self-concept on violence prevention.

Strength of the Evidence. According to the empirical evidence and support from experts in the field, positive self-concept is an important skill for preventing different forms of youth violence. There appear to be some conflicting findings, however, regarding the mechanism of how positive self-concept influences different types of aggressive behaviors and outcomes. In general, feedback received from experts in the field supported this finding that positive self-concept is generally helpful for youth, but that the effects of positive self-concept may differ depending on the context.

Other skills of importance

Other skills of importance for youth that did not make it into the top five skills but still received support from stakeholders and the empirical literature include Integrity/Ethics (nine positive findings), communication skills (six positive findings), and resilience (five positive findings). Positive associations were found between youth communication skills such as “communicates thoughts clearly,” “language competence,” and “good caregiver communication” and lower levels of youth violence. Moreover, resilience appeared to be an important skill—several studies identified a lack of resilience skills (such as “low coping abilities” and “greater distress in aggression situations”) as linked to violence outcomes for youth.

In particular, there was significant support for the skill of integrity/ethics as important for youth violence prevention. This skill is closely related to “moral system of belief,” which has been included in various frameworks of core competencies for youth violence prevention (Dodge and Rabiner, 2004; Sullivan et al., 2008). Integrity/ethics can also be conceptualized through Crick and Dodge’s (1994) SCIP model, which emphasizes conceptions about moral versus nonmoral boundaries and acceptability of aggression. The concept of a moral system of belief has also been conceptualized as closely related to the construct of empathy (Sullivan, Farrell, Bettencourt, & Helms, 2008). Integrity/ethics had nine positive empirical findings across four of the five outcome areas. “Moral neutralization” and “moral disengagement” (Deschenes and Esbensen, 1999; Paciello et al., 2008) appear to be related to violence perpetration, while positive moral ethics, such as “belief in the moral order,” appear to be a protective factor against youth violence (Hemphill, Heerde, and Scholes-Balog, 2016). In addition, consulted stakeholders emphasized the role of moral integrity or a moral system of belief in the prevention of violence. One consulted expert stated that a strong sense of moral integrity was essential to keep youth from engaging in rebellions and political violence. Another consulted expert noted that youth can have many of the other skills such as self-regulation, good problem solving skills, and good social skills and yet still be an excellent gang leader due to the incorporation of these skills and lack of moral integrity (Nancy Guerra, personal communication, March 17, 2016). In these circumstances, it would be a youth’s moral system of belief that would keep him or her from using the other skills to enact violence rather than abstain from it. Further research on the construct of integrity/ethics and its relation to youth violence prevention to tease apart the underlying mechanisms and impact of this soft skill is warranted.

Norms and Attitudes about Violence

Although not a soft skill per se, youth norms and attitudes about violence are closely related to youth soft skills and play an important role in the literature and thinking about youth violence prevention. For example, normative beliefs about aggression and the acceptability of aggression may play an important role in how youth process social information and make decisions about action (higher order thinking skills) and may also relate to youth’s levels of empathy and moral system of belief (Sullivan et al., 2008). Many aggression and youth violence theorists include normative beliefs as part of their violence prevention frameworks (Crick and Dodge, 1994).

Although not included explicitly in this review, norms and attitudes about violence appeared numerous times in the literature throughout the review process. As would be expected, variables such as aggressive beliefs, positive normative beliefs about aggression, antisocial beliefs, positive attitudes supporting aggressive behaviors, and positive normative beliefs about aggression were all associated with increased levels of youth violence. In contrast, believing that aggression is inappropriate or ineffective, prosocial beliefs, negative attitudes

toward delinquency, and prosocial norms were all associated with reduced levels of youth violence. It is important to acknowledge that the literature strongly supports these contextual and environmental norms as important for setting the “culture” or “shared norms” for youth. Stakeholder consultations also confirmed this, and some stakeholders noted that youth develop a way of viewing the world and that when children are exposed to violence or come to believe that it is the norm, this is integrated into their worldview and available reactions.

5.3 Findings from the SRH Literature

Top Five Skills

Based on our review of the SRH literature, a set of key soft skills were identified because they received the most support across all domains of the literature, including protective and risky sexual behaviors, pregnancy and birth, HIV and STIs, and gender-based violence. These skills were identified as key for promoting positive SRH outcomes in the empirical literature, programmatic gray literature, and among key stakeholders. As demonstrated in Table 5 below, they were identified as skills that can be targeted, as malleable in youth, and as skills that are optimal for focus in SRH programs.

As represented in Table 5 below, the top five skills that our review identified were, in descending order: **1) positive self-concept; 2) self-control; 3) communication; 4) goal orientation; and 5) higher order thinking skills.**

The top five skills that our review identified in the above section as related to violence prevention were, in descending order: 1) self-control, 2) social skills, 3) goal orientation, 4) higher order thinking skills, and 5) positive self-concept. Social skills did not emerge among the top five soft skills for SRH outcomes, whereas communication did. Empathy received some support in the SRH literature, but not as much as in the violence prevention literature. A new skill, goal orientation, also emerged in the SRH literature.

It is important to note that these skills also interact with and build upon one another and other skills in their contribution to SRH outcomes.

Table 5

Most Supported Skills by Outcome in the Sexual and Reproductive Health Literature

	ALL OUTCOMES	RISKY SEXUAL BEHAVIORS	PROTECTIVE SEXUAL BEHAVIORS	PREGNANCY & BIRTH	HIV/STIS	GENDER-BASED VIOLENCE
EVIDENCE RANKING 1	Positive self-concept	Self-control	Positive self-concept	Positive self-concept	Self-control	Empathy
2	Self-control	Positive self-concept	Communication	Responsibility		Positive attitude
3	Communication	Communication	Self-control	Goal orientation* Positive attitude* Higher order thinking skills*		Social skills*
4	Goal orientation	Goal orientation	Goal orientation			
5	Higher order thinking skills	Integrity/ethics	Higher order thinking skills			

* skills with less than 3 positive empirical findings

Note: Cells that contain more than one skill indicate that multiple skills received the same amount of empirical support.

These top five skills are discussed in detail below, and align with the five top skills identified in the workforce success paper and the violence prevention review. Each skill is a cluster of sub-skills that are grouped into an overarching category for the sake of simplicity.

The Skills

As mentioned above, the soft skills which garnered the most support in the SRH literature were **positive self-concept, self-control, communication, goal orientation, and higher order thinking skills**. All of these skills have met the criteria listed above, demonstrated in Table 6, and have been linked with positive SRH outcomes. They are discussed in more detail below.

Table 6

Evidence for Criteria for Selecting Soft Skills for Youth from the Sexual and Reproductive Health Literature

SEXUAL AND REPRODUCTIVE HEALTH	FINDINGS FROM LITERATURE ONLY				BREADTH AND QUALITY				REGIONAL DIVERSITY (0-4)	MALLEABILITY			
	Positive	Mixed	Negative	Null	Types of Literature (0/5-5/5)	Stakeholder Support (0/8-8/8)	Average Quality (0-3)	# of Outcomes (0-5)		Early childhood	Middle childhood	15-18	19-29
Positive self-concept	69.7	10	5	58.7	4/5	7/8	1.5	5	4	✓	✓	✓	✓
Self-control	48.4	3	6	29.2	2/5	2/8	1.4	5	4	✓	✓	✓	✓
Communication	41.1	0	9.2	56	4/5	6/8	1.3	4	4		✓	✓	
Goal orientation	15	0	1	11	3/5	2/8	1.6	3	1		✓	✓	✓
Higher order thinking skills	13.3	0	0.3	10.3	2/5	2/8	1.3	4	3	✓	✓	✓	✓

1) Positive self-concept refers to “a realistic awareness of oneself and one’s abilities that reflects an understanding of his/her strengths and potential (and hence, is, positive)” (Lippman et al., “Appendices,” p. 84, 2015). There is overwhelming support in the empirical literature—from 41 pieces of literature reviewed, including 36 quantitative and qualitative studies, 5 meta-analyses and literature reviews, 1 conceptual framework, and endorsement from adolescent SRH experts—to indicate that positive self-concept is related to our SRH outcomes of interest. As indicated in Table 6, this skill received 69.7 positive findings overall, was well-endorsed by stakeholders, and demonstrated breadth of types of literature, outcomes, and regions covered.

In the SRH literature, positive self-concept is frequently referred to as “self-efficacy” related to specific sexual behaviors, such as condom use or the prevention of HIV. This is expected, since many studies build their work on Bandura’s self-efficacy theory, which suggests that individuals’ behaviors result from their beliefs about their competencies to enact those behaviors. The notions of self-esteem and self-confidence also came up in the literature as well as their negative counterparts, such as feeling like a failure (for examples, see Neumark-Sztainer et al., 1997; Goodson et al., 2006; Tevendale et al., 2008; Oman et al., 2013; Kowaleski-Jones and Mott, 1998).

KEY TAKE-AWAY:

The link between positive self-concept and SRH has the strongest and most extensive support in the literature.

Risky Sexual Behaviors. Fifteen pieces of literature identified a relationship between positive self-concept and risky sexual behaviors, such as unprotected sex, early sex, and unreliable contraception use. Ten of these were empirical studies, while one was a meta-analysis, three were literature reviews, and one was a conceptual framework. One of these articles considered the personality factor “neuroticism” (or “emotional stability”), which partially maps onto the soft skill “positive self-concept.”

Most of this literature is from the United States. One article looked at 14- to 18-year-olds in Peru, finding that youth with higher self-esteem were less likely to have ever had sex. U.S. samples included HIV-positive 12- to 24-year-old females; Spanish-speaking Latino adolescents and youth ages 12–18; and 9th–12th graders from U.S. public schools. Two of these empirical studies were longitudinal. One of these, a longitudinal study by Oman et al. (2013) analyzed the effect of 17 youth assets among 1,089 youth (average age of 14.2) over four years on multiple behaviors, finding that youth with lower self-confidence were more likely to engage in sexual intercourse before age 20. In their longitudinal analysis, Ethier and colleagues (2006) found that adolescents with lower self-esteem reported having more partners and more unprotected sex.

The literature reviews that examined positive self-concept and risky sexual behaviors drew on the large body of empirical evidence on this relationship among U.S. adolescents and found greater self-efficacy to refrain from sex, general self-efficacy, and self-esteem to be important protective factors against risky sexual behavior (Kirby, 2002; Santelli and Beilenson, 2002). Santelli points to evidence, however, which demonstrates gender differences: low self-esteem among girls has been found to be related to sexual experience, while high self-esteem among boys has been found, in some cases, to be related to higher levels of sexual activity (Orr, Wilbrandt, and Brack, 1989; Jessor and Jessor 1975; Irwin and Millstein, 1986). Lagana (1999) reviewed the literature on psychosocial correlates of contraceptive practices among sexually active late adolescents, finding lower self-esteem to be an important predictor of unreliable contraception; she also points to an interesting finding from Leadbeater and Aber (1990) that low self-efficacy was the strongest predictor of unprotected sex among males. Finally, Hoyle, Fejfar, and Miller investigate the relationship between personality factors and sexual risk-taking in the United States, finding a small, but still positive relationship between neuroticism (emotional stability) and sexual risk-taking.

Protective Sexual Behaviors. Twenty-nine studies identified a relationship between positive self-concept and protective sexual behaviors, such as contraception use, refusal of unprotected sex, and declining to have sex with older men. It is important to point out that positive self-concept frequently was conceptualized as “self-efficacy” and related to specific sexual behaviors—efficacy to use a condom, efficacy to obtain a condom, efficacy to use birth control, and efficacy to refuse sex if a partner refuses to use a condom (Peltzer, 2000; Sieving et al., 2007; Meekers et al., 2003; Babalola, 2006). More general terms were also used, such as “general self-confidence,” “self-esteem,” and “self-worth” (Salazar et al., 2004; Tevendale et al., 2008; Miller et al., 1999; Sales et al., 2010; Davis, 1999; Oman et al.,

2013). Of these studies, most were empirical, and two were literature reviews. Among the empirical studies, one was longitudinal and analyzed the effect of 17 youth assets among 1,089 youth over four years, finding general self-confidence to be positively associated with birth control use (Oman et al., 2013).

The literature on protective sexual behaviors was more regionally diverse than the literature on risky sexual behaviors. Four studies were based in South Africa; there was also representation from Kenya, Tanzania, Botswana, Madagascar, Mexico, and China. Meekers, Silva, and Klein (2006) examined data from 2,440 adolescents and youth ages 15–24 from Madagascar and found that young peoples' self-efficacy to obtain condoms was positively associated with condom use. A dissertation on intergenerational sexual relationships in Botswana found that girls' feelings of self-worth were important protective factors for saying no to having sex with older men. Other girls emphasized how their desire to "be somebody" kept them from engaging in intergenerational relationships, fearing that dating older men would risk their future. A cross-sectional study of 490 sexually active Chinese students found condom use self-efficacy to be significantly associated with condom use.

Kirby's (2002) review identifies stronger self-image and self-esteem as important determinants of contraception use. Lagana points to substantial evidence which demonstrates the importance of both self-esteem and self-efficacy in predicting contraception (citing Freeman et al., 1984; Herold et al., 1989; Hornick, Doran, and Crawford, 1979; Strecher et al., 1986; Levinson, 1986).

Pregnancy and Birth. Eight studies identified a relationship between positive self-concept and teen or early pregnancy. Skills identified included higher self-esteem, greater positive self-concept, and low self-esteem. Six of these were empirical studies, and two were literature reviews. The empirical studies include a longitudinal analysis of data from a sample of 5,053 "multiethnic" women ages 23–31; a cross-sectional empirical study analyzing data on adolescents and youth ages 14–18 from the Add Health survey; and a qualitative study that analyzed data from 13 in-depth interviews and three focus group discussions with pregnant teenagers in South Africa. One of the interviewees from this project described the relationship between self-esteem and pregnancy as a very direct one:

"...teenage pregnancy is caused by a low self-esteem: we don't believe in ourselves. You will have a colleague who is passing class easily and then you are struggling with studying, you may decide to go and do whatever you want ... you are going to have [a] baby if you don't believe in yourself" (quoted in Kanku and Mash, 2010).

Interestingly, Kowaleski-Jones and Mott's (1998) analysis of Add Health data found that females with high self-esteem were less likely to have had a child, but they found no relationship between self-esteem and having fathered a child for adolescent males.

A literature review that examined risk and protective factors associated with adolescent SRH outcomes in the English-speaking Caribbean found two studies that linked low self-esteem to teenage pregnancy (citing Lerand, Ireland, and Blum, 2003; Baumgartner et al., 2009). A review by Kirby (2002) of more than 250 studies identified "greater positive self-concept" as a protective factor against early/teen pregnancy.

Input from Experts. Seven out of eight adolescent and youth SRH experts we interviewed, including practitioners and researchers, cited positive self-concept as being highly related to SRH outcomes. They described positive self-concept as self-efficacy, self-confidence, self-

esteem, self-empowerment, and relational self-efficacy. Several experts described the foundational importance of positive self-concept: it is such an important skill because it supports youth in other skill areas, such as communication and decision making. One practitioner described self-efficacy as “feeling not only ... [that] I have [the] knowledge but [also that] I know exactly how to do it, I have the power to do it,” and described negotiation, in particular, as very closely tied with self-efficacy (Callie Simon, personal communication, June 17, 2016).

Similarly, another practitioner working with adolescents in South Africa described self-confidence and self-esteem as the most critical skills for adolescent SRH, but again, linked these to negotiation: “I think it would take building self-confidence/self-esteem but also building negotiation skills. Being able to negotiate through that process of ... sexual encounters, how to say no ...” (personal communication, Ashika Pramlal, April 12, 2016). Importantly, one researcher we interviewed described positive self-concept as an area where the SRH field has really “done well,” citing teen pregnancy prevention programs and the Carrera program in particular, which is a well-renowned teen pregnancy prevention program that takes a PYD approach (Vignetta Charles, personal communication, March 22, 2016).

Strength of the Evidence. Of all the skills examined in the SRH literature, positive self-concept overwhelmingly garnered the most support. It is notable that this review did not uncover findings relating positive self-concept to HIV/STIs or gender-based violence; however, this can be understood by looking at the very low number of findings linking soft skills to HIV/STIs and gender-based violence overall.

It is important to point out that five counterintuitive findings linking higher positive self-concept to risky sexual behaviors emerged. A Population Council research brief described community gatekeepers’ beliefs in Uttar Pradesh that increased self-esteem among women would lead to greater assertiveness and challenge norms around women’s traditional roles, thereby leading to gender-based violence perpetrated by those who rejected these changes (Khan, Mishra, and Morankar, 2005). A literature review examining risk and protective factors associated with adolescent SRH outcomes in the English-speaking Caribbean cited one study that found that males with higher self-efficacy were more likely to engage in sexual activity (Pilgrim and Blum, 2012, citing Stallworth, 2004). Another study of 18- to 24-year-olds in Croatia found that condom use self-efficacy was related to risky sexual behaviors among women but was not significant among men (Štulhofer, 2009). Among a study of adolescents ages 14–18 in the United States, males who reported “feeling like a failure” were less sexually active (whereas the reverse was true for females). Finally, a study of a very large sample (77,449) of 9th and 12th grade students in the United States found a positive, but very small, relationship between positive self-concept and sexual activity.

This review also identified 27 studies that found *no* relationship between positive self-concept and SRH outcomes (in other words, the relationship was not statistically significant), and two studies that identified a mixed relationship (these cases indicate where the finding was significant for one subgroup but not another). However, it is clear that positive self-concept is an important skill for youth in determining SRH outcomes. Further research would be useful to clarify when, for whom, and in what context this skill is most important.

2) Self-control “refers to one’s ability to delay gratification, control impulses, direct and focus attention, manage emotions, and regulate behaviors” (Lippman et al., “Appendices,” p. 81, 2015). The SRH literature understands self-control similarly as the ability to regulate and refrain from risky sexual behaviors. A significant amount of work, however, also points to the importance of individuals’ “risk proneness,” or “the potential to be attracted to potentially

risky activities” in understanding individuals’ sexual behavior (Raffaelli and Crockett, 2003, pp. 1036-1037).

KEY TAKE-AWAY:

The link between self-control and SRH outcomes is generally strong; however, the evidence is mostly empirical and from developed country contexts. Nonetheless, the existing evidence is internally coherent and identifies a relationship between more traditional notions of self-control, such as emotional regulation, as well as the related notions of risk proneness and risk-seeking.

Like positive self-concept, self-control is a clearly well-researched and well-supported skill in the SRH literature, although the results are heavily empirical and not as regionally diverse as for positive self-concept. It is critical to recognize that in many areas of the world, young people, especially adolescent girls and young women, do not have control over sexual decision making. Self-control may not be as relevant for these populations, and certainly, any programmatic approach to self-control would have to take into consideration the context of gender and cultural norms around sexual decision making. This review identified 25 pieces of literature linking self-control to SRH outcomes; 22 of these were empirical studies, and 3 were meta-analyses or literature reviews. As demonstrated in Table 6 on page 47, 4 positive findings were found for self-control and a relatively low (29.2) number of null findings. Self-control also demonstrated breadth in terms of coverage across types of outcomes and regions covered.

In the literature reviewed, self-control was frequently conceptualized as a risk factor. Examples include impulsivity, lack of emotional regulation, risk taking propensity, and impulsive sensation-seeking. However, positive corollaries such as self-control, impulse control, and higher personal control were also present. In some cases, self-control was highly contextual. One measure included questions related to birth control use such as, "If you wanted to use birth control, how sure are you that you could stop yourself and use birth control once you were highly aroused or turned on?" and "How sure are you that you could resist sexual intercourse if your partner did not want to use some form of birth control?" Self-control builds on youth’s positive self-concept since it requires youth to have some level of confidence and efficacy in their ability to exert control in a potentially risky situation.

Risky Sexual Behaviors. Sixteen studies revealed a relationship between self-control and risky sexual behaviors. Two of these were literature reviews, one was a meta-analysis, and the remaining literature consisted of quantitative empirical studies. All of these studies were based in the United States, with three exceptions, one of which compared data on Eastern and Western European adolescents (specifically middle and late adolescents in Hungary, Slovenia, Netherlands, Switzerland) and another that analyzed data on Croatian adolescents. Schmitt (2004) considered the relationship between personality factors, including conscientiousness (a facet of which corresponds to self-control) and sexual risk-taking; using data from 52 nations, he finds conscientiousness to be protective against “sexual promiscuity.”

Four of these empirical studies were longitudinal. Pearson’s (2006) analysis of 7th–12th graders using Add Health data found personal control to be important in predicting sexual activity, especially for girls. Raffaelli and Crockett’s (2003) and Crockett, Raffaelli, and Shen’s (2006) analyses of adolescents use data from the National Longitudinal Survey of Youth and find that youth with higher self-regulation are less likely to participate in risky

sexual behavior. Cooper et al. (2003) analyzed used data on 1,978 adolescents and found that both young people's impulsivity and a lack of emotional regulation were related to the number of risky sexual practices in which they had ever engaged, as well as their overall number of sexual partners.

Hoyle's meta-analysis on personality factors and sexual risk-taking finds impulsive sensation-seeking to be a well-researched and well-supported correlate of number of partners and high-risk sexual encounters, in particular. Likewise, Kirby's review of the U.S.-based literature identifies impulsivity as a key predictor of sexual initiation and contraceptive use identifies impulsivity.

Protective Sexual Behaviors. Eleven studies revealed a relationship between self-control and protective sexual behaviors. All of these studies, except one literature review, were quantitative studies. Two of the quantitative studies were longitudinal studies and used data from the National Longitudinal Study of Adolescent Health.

Two studies were non-U.S. based. Jemmott et al. (2007) analyzed data from 390 10- to 16-year-olds in South Africa and found that "behavioral control," or adolescents' perceived control over condom use was significantly associated with condom use intention. In addition, Baele et al. (2001) analyzed data on Flemish high school students, considering both "emotional control," which refers to how emotions might affect condom use with a new partner, and "sexual control," which refers to perceived control over sexual feelings (p. 425). They found that both of these measures were important for understanding condom use intention among sexually experienced and inexperienced youth, but that the relationship ran in the opposite direction for actual condom use behavior (in other words, higher emotional control was related to lower condom use consistency).

Other U.S. samples included in this literature were unmarried Latino students (with a mean age of 23.2), sexually experienced adolescents at least 15 years old, and male African-Americans ages 14–19 from an urban high school in Houston, Texas. It is interesting that, among these 11 studies, 5 examine intention to use condoms in addition to condom use behaviors, and 1 examines only intention to use condoms.

Kirby's (2002) review of U.S. literature found that youth with greater sensation-seeking and greater general risk-taking attributes are less likely to use contraception.

HIV/STIs. Two studies considered the effect of poor self-control on HIV and STIs. It is notable that any relationship was found between self-control and HIV/STIs, given the low level of research on soft skills and HIV/STIs. One of these studies, cited in the above section on risky sexual behaviors, analyzed longitudinal data from 1,978 adolescents and found that impulsivity and a lack of emotional regulation were positively associated with having ever had an STD (Cooper et al., 2003). The other study found that low self-control among black university students in South Africa was positively related to HIV risk¹⁰ (Gwandure and Mayekiso, 2010).

Evidence from the Field. It is notable that, overall, only two experts of the eight interviewed cited self-control as a skill highly related to SRH outcomes. Most focused instead on positive self-concept and our third skill, communication. One expert interviewed explained that self-control is more often an underlying theme of youth SRH programs rather than an explicit focus (Brian Goesling, personal communication, April 8, 2016). Another expert cited positive

¹⁰ HIV risk is assessed using a scale adapted from the Human Sciences Research Council KABP scale used by Du Plessis, Meyer-Weitz, and Steyn (1993). The main components of HIV risk assessed were knowledge, attitudes, beliefs, and practices (Gwandure and Mayekiso, 2010, p. 123).

self-concept, emotional regulation, and communication as critical skills for SRH outcomes, qualifying that emotional regulation skills may be more developed and thus easier to target among older adolescents and young adults 18–29 (Vignetta Charles, personal communication, March 22, 2016).

Strength of the Evidence. It should be noted that all of the literature that identified a relationship between self-control and positive SRH outcomes was empirical; however, this empirical literature is internally coherent and identifies a relationship between more traditional notions of self-control, such as emotional regulation, as well as the related notions of risk proneness and risk-seeking. A number of longitudinal studies emerged from this literature, strengthening the assertion that self-control predicts, rather than is merely correlated with, sexual risk-taking.

Several counterintuitive findings related to self-control and SRH outcomes also emerged. One study, which analyzed data on 1,572 male and female U.S. high school students found, counterintuitively, that higher sensation seeking among youth was positively related to condom use (Davis, 1999). Another study, which analyzed data on 483 youth ages 14–18, found that the risk proneness measures “enjoys taking risks,” and “life without danger is dull” were associated with lower levels of childbirth, with slightly different results for men and women. For males, feeling that “life without danger is dull” was related to lower levels of childbirth, but it was not significant for females.

This review also identified 11 studies that found no relationship between self-control and SRH outcomes (all U.S. based, except for one study from Belgium), as well as two studies that found a mixed relationship between self-control and SRH outcomes. Further research on how self-control plays out in SRH outcomes in developing country contexts is warranted to add to the field’s understanding of this skill. It would also be helpful to better understand how the measurement of this skill (as low self-control or high self-control) affects the outcome.

3) Communication refers to one’s ability to effectively express and understand knowledge and ideas. Modes of communication include listening, and skills in verbal, non-verbal, and written communication. These include one’s ability to negotiate and persuade, as well as transmit and interpret knowledge (Lippman et al., “Appendices,” 2015). Within the SRH literature, a distinction between two aspects of communication is evident: communication with parents and communication with partners. Communication between adolescents and parents has been shown to reduce some sexual risk behaviors; however, literature on this topic is limited. Between partners, communication related to sexual behavior often takes the form of negotiating sexual initiation and use of contraception. Condom use in particular can be influenced by communication between partners, since it requires cooperation of the male partner. For women and girls, condom use can be an especially difficult topic to discuss, especially where socio-cultural norms do not support it. In this review, mixed findings suggest a highly nuanced relationship between both types of communication and SRH outcomes.

KEY TAKE-AWAY:

The relationship between communication (especially partner communication) and SRH outcomes is strong and regionally diverse; however, the relationship is highly nuanced.

Communication of either type was cited by a total of 24 studies. Twenty-two empirical studies, one meta-analysis, and one literature review cited communication as positively

related to SRH outcomes. From Table 6, it is evident that this skill was well-supported by stakeholders and demonstrated breadth across types of literature, types of outcomes, and regions.

Risky Sexual Behaviors. Eight studies, all empirical, identified a relationship between communication and risky sexual behaviors. Half of these studies were not U.S. based.

Four studies (one from sub-Saharan Africa and three from the United States) found a relationship between communication with parents and risky sexual behavior. The study conducted in South Africa found that more communication with parents about sex was protective against early age at sexual debut (Awotidebe et al., 2014).

Within the literature, some studies approach partner communication not by actual communication events, but rather self-efficacy in communication. Self-efficacy refers to one's perception about how well they can control a certain behavior (Boone et al., 2015). In literature related to SRH, self-efficacy is often used in the context of one's ability to negotiate condom use with partners, as well as other practices related to safe sex. One such study (Boone et al., 2015) looked at how this variable affects risky sexual behavior among a sample of more than 300 HIV-positive females in the United States. Among females with lower self-efficacy to discuss safe sex with a partner, a higher percentage had engaged in unprotected intercourse in the previous three months. Evidence was also found for the importance of partner communication in protecting against risky sexual behavior among youth in Zambia, Croatia, and Peru (Magnani et al., 2009).

Protective Sexual Behaviors. Seventeen studies (13 of these empirical, 1 qualitative thesis paper and 1 meta-analysis) found communication to be linked to protective behaviors in youth. A fairly sizable number (nine total) of studies linking communication with protective behaviors were international, including Cameroon (Van Rossem et al., 2011), Madagascar (Meekers et al., 2003), Belgium (Hendrickx, 2008), China (Xiao and Zhiwen, 2012), and Mexico (Givaudan et al., 2005). One study from Tanzania (Babalola, 2006) examining the determinants of condom use among young women aged 15-24 found that the ability to discuss condom use with a partner was positively associated with consistent condom use. Similarly, a study by Baele and colleagues (2001) found that assertiveness in communication and sexual negotiation was associated with the intention to use condoms with a new partner among Flemish high school students.

In the United States, one study (Miller et al., 1999) that explored family-based variables and adolescent sexual behavior found no association between communication with parents and condom use among minority adolescents. This was the only study reviewed that specifically looked at communication with mothers and fathers separately. A meta-analysis that examined 34 articles focusing on partner communication (Widman et al., 2014) discovered that the perceived ability to communicate or insist on safer sex with a partner and perceived comfort in communicating with a partner were associated with higher levels of condom use.

Input from Experts. Six of the eight experts interviewed cited communication as a critical skill for youth SRH outcomes. They referred to communication skills as “communication,” “communication/negotiation,” “negotiation skills,” “ability to communicate/negotiate,” “being able to communicate clearly/assertively,” and “the ability to articulate your needs in a non-aggressive way.” For the most part, they described communication as youth's ability to communicate or negotiate sex with a partner. One practitioner interviewed discussed the longstanding and continuing importance of communication and negotiation as the foundation of early HIV prevention and sex education work. She explained further, “It just makes sense.

Sexual and reproductive health decisions are almost always in context of a partnership, even if it's only one night. You have to be able to negotiate that" (personal communication, Callie Simon, June 17, 2016). Another expert echoed this notion: "Communication is critical throughout [interventions] ... [it] is right on and always has been right on" (Vignetta Charles, personal communication, March 22, 2016). This expert also emphasized that communication is so valuable because it is "intervenable" at all ages.

Strength of the Evidence. Of all of the soft skills examined within SRH outcomes, communication had the highest number of mixed results in the literature across the four outcomes. Out of 87 empirical findings, 51 included null findings for communication and SRH outcomes.

A large number of studies—more than for any other soft skill examined—found counterintuitive associations between communication and SRH outcomes. One study found that 13- to 18-year-olds in rural South Africa who communicated with both parents and their partners were less likely to use a condom at most recent intercourse and more likely to be sexually active (Awotidebe et al., 2014). A study conducted in Belgium (Baele et al., 2001) found a negative relationship between assertiveness in sexual negotiation and consistent condom use. Similarly, a study (Štulhofer et al., 2009) of more than 1,000 Croatian youth found that communicating with partners about sex was associated with a range of risky sexual behaviors.

The frequency of counterintuitive findings related to both partner and parent communication suggests that this variable is complex and requires more research to fully understand. The field would benefit from more standardized ways to measure communication in terms of frequency and quality, since in some of the literature it is not clear what aspect of communication is being measured.

4) Goal orientation Goal orientation is defined as "the motivation and ability to make viable plans and take action toward desired goals" (Lippman et al., 2014a, p. 16). Goal orientation was conceptualized in the SRH literature as aspirations for the future (mostly educational), expectations about one's ability to achieve specific accomplishments in the future, and skills necessary to achieve these accomplishments (goal-setting skills). This skill is closely tied with positive self-concept, since it relates to individuals' beliefs about their abilities to accomplish specific goals. One expert interviewed tied these two skills together distinctly, saying that the SRH field has been successful in designing teen pregnancy programs, in particular, focused on self-esteem and future orientation.

KEY TAKE-AWAY:

The relationship between goal orientation and SRH outcomes is generally strong, but it is regionally homogenous.

Ten studies identified a relationship between goal orientation and SRH outcomes. As evidenced in Table 6, goal orientation received some stakeholder support and demonstrated breadth in terms of coverage across different types of literature reviewed and outcome areas investigated.

Risky Sexual Behaviors. Six studies identified a relationship between goal orientation and risky sexual behaviors. Four of these were empirical studies, and the other two were literature reviews. All of this literature is based in the United States. Of the empirical studies, a longitudinal analysis of 1,330 white, African-American, and Hispanic male and female middle and high school students found that lower expectations for educational achievement

was linked with early sexual debut among the white and Hispanic populations, but not among the African-American students (Costa et al., 1995). Another study revealed interesting gender differences in the relationship between goal orientation and risky sexual behavior. This complex analysis of planning orientation analyzed data from 180 adolescents involved in a preventive intervention project for high-risk youth. The findings revealed that males with high perceptions of their goal attainment efforts were less likely to engage in “at-risk sex;” however, the opposite was true for females (Walsh, 1999). Similarly, an analysis of 186 sexually active homeless youth found that, for males with strong goal-setting skills had fewer sexual partners, but that this variable was not significant for females. However, overall expectations for the future were important for both males and females in predicting number of sexual partners.

The literature reviews summarized empirical literature from the United States, finding youth’s plans to attend college to be an important protective factor against risky sexual behavior (Kirby, 2002) and low academic achievement/low academic ability/low educational goals to be critical risk factors (Santelli and Beilenson, 1992).

Protective Sexual Behaviors. Two studies identified a relationship between goal orientation and protective sexual behaviors. One of these was a quantitative analysis of 1,124 “inner-city ... teenagers” ages 13–19 from the United States, while the other was a literature review. The quantitative study examined a number of assets associated with whether or not youth had ever had sex, finding “future aspirations” to be significantly related to abstinence (Vesely et al., 2004; Kirby, 2002).

Pregnancy and Birth. Three studies supported the relationship between goal orientation and pregnancy. One, a literature review of more than 250 studies, asserts that young people who plan to attend college are less likely to experience teen pregnancy, linking this with choices to engage in risky sexual behavior:

When teens feel close to their schools, believe that academic achievement is important, earn good grades, do not drop out of school, or have plans for higher education beyond high school, they initiate sex later, use contraception more effectively, and are less likely to become pregnant... (Kirby, 2002).

Another study of 1,142 white females ages 14–16 found that educational expectations (specifically, expectations about graduating from high school) were related to lower rates of premarital pregnancy. The United Kingdom’s Teenage Pregnancy Strategy, a government initiative led by a group of experts from various fields, including health, education, and local government identified “raised aspirations” as important for protecting against teen pregnancy.

Input from Experts. Two of eight experts endorsed goal orientation as being highly related to SRH outcomes. One practitioner described “having a future you can imagine that is not your current life situation” as an important aspect to integrate into SRH programs, but qualified this by saying that she thought that the relationship was generally under-investigated, compared with self-efficacy (Callie Simon, personal interview, June 17, 2016). This expert also described how programs may focus less on promoting girls’ future visions and dreams where their opportunities are severely limited. Another expert interviewed described future orientation as a “major driver,” with a longstanding and well-proven association for delaying sexual initiation (Vignetta Charles, personal communication, March 22, 2016).

Strength of the Evidence It is important to acknowledge that, overall, this literature is very homogenous—all of it except one report from the United Kingdom is based in the United

States. The U.K. report, the country's "Teenage Pregnancy Strategy for 2010," authored by the Teenage Pregnancy Independent Advisory Group, discusses the importance of "raised aspirations and skills in resilience" for preventing teenage pregnancy but does not go into much depth about this relationship. It is also notable that five studies find no relationship between goal orientation and SRH outcomes. One counterintuitive finding also emerged—males who believed that they were making progress toward attaining their goals were less likely to engage in at-risk sex, but the reverse was true for females (Walsh, 1999).

5) Higher order thinking skills refer to "three inter-related constructs: problem-solving, critical thinking, and decision-making" (Lippman et al., 2015, "Appendices," p. 77). These skills were combined into one construct because they were frequently measured together in the youth workforce literature. The SRH literature reviewed addressed decision-making and problem-solving skills and their linkage to SRH-related outcomes. Critical thinking, however, did not emerge as a soft-skill in this literature. Since these three skills are so related, the umbrella term was retained, however. (See Brewer, 2013, for a more extensive definition of higher order thinking skills). Overall, nine empirical studies and one literature review identified a relationship between higher order thinking skills and SRH outcomes. From Table 6, it is clear that this skill received some stakeholder support and demonstrated breadth across regions and types of outcomes covered.

KEY TAKE-AWAY:

Higher order thinking skills, in particular critical thinking and decision-making skills, appear to be important for influencing youth SRH outcomes, but this skill is not as well-supported as the previous four skills discussed.

The notion of "social problem solving," or the type of problem solving that occurs in relationships and daily life emerged as particularly important in the SRH literature. This is one example of how higher order thinking skills, communication/negotiation, and social skills are, in some cases, defined similarly in the SRH literature. Another example is the notion of "social negotiation skills," or "the ability to enact a preferred course of action while maintaining relationships with others," which was coded as "higher order thinking skills," based on the measure's focus on decision-making, but certainly requires strong social skills. Similarly, the type of communication that occurs with a partner might frequently be a type of problem solving if it's about sexual decisions, such as whether or not to use contraception; however, in this review, these variables were classified as "communication."

Risky Sexual Behaviors Three empirical studies found a relationship between higher order thinking skills and risky sexual behaviors. These studies were all based in the United States and considered social problem solving, social negotiation skills, and a variable referred to as "responsible choices," which reflects a measure with a heavy focus on decision-making skills. An additional meta-analysis found a very small but negative relationship between the personality factor "openness," which partly maps onto problem solving, and sexual risk-taking.

Protective Sexual Behaviors. Six studies identified a relationship between higher order thinking skills and protective sexual behaviors. Five of these were quantitative analyses, and the other was a literature review. All samples were U.S.-based and included 14- to 17-year-old women from Hawaii, sexually active homeless males ages 14–21, and high school

students from 24 schools in Southern California. All of these studies, with the exception of the literature review, which discussed “greater problem solving abilities,” analyzed the relationship between decision making and protective sexual behaviors. Interestingly, one of these studies found a negative relationship between *ineffective* decision making and contraception use but no relationship between *effective* decision making and contraception use (Commendador, 2007).

Pregnancy and Birth. One quantitative study found that social problem solving among college athletes in the United States was a protective factor against becoming pregnant or getting someone pregnant.

Gender-based Violence. A study of 521 college men in the United States found relationships between several Big Five personality traits and sexual assault and rape perpetration (Voller and Long, 2009). Specifically, “ideas,” which is a facet of the personality factor “openness,” and is also referred to as “intellect” or “intellectual curiosity,” was found to be negatively associated with rape (although the finding was not significant for sexual assault).

Input from Experts. Two experts cited higher order thinking skills—specifically, “the ability to think and make choices” as well as higher order thinking more generally—as being highly related to SRH outcomes. One expert explained that there is a correlation between higher order thinking and SRH outcomes but qualified this, saying: “however, very normal adolescent brain development has a huge range, with sex differences as well. We might be asking too much of youth, in terms of how the brain has developed. Emotions are often leading the way” (Vignetta Charles, personal communication, March 22, 2016). Another expert spoke about the importance of enhancing young people’s abilities to make decisions within relationships (Barbara Michel, personal communication, April 18, 2016).

Strength of the Evidence. It is important to point out that higher order thinking is less well-covered compared with the other skills discussed and that the literature is regionally homogenous. In addition, our review revealed eight null findings between higher order thinking skills and SRH outcomes. Overall, it is unclear when and for whom higher order thinking skills are most important. A study of homeless youth in the United States, for example, found that decision-making skills were important protective factors against engaging in unprotected sex for males but not for females.

The lower level of coverage of this skill may be due to its close similarity to other skills that are critical for youth SRH, specifically communication and social skills; standardizing measures of problem solving, decision making, and critical thinking across this literature would be helpful in understanding the skill’s overall effect on SRH outcomes. However, from the literature reviewed, it is clear that higher order thinking skills are important for leading to positive SRH outcomes and protecting against risky behaviors.

Gender-based Violence

It is important to point out that the top skills identified for preventing gender-based violence did not align with the top five for SRH outcomes overall, explaining the limited discussion of gender-based violence in the above sections. It should be emphasized here that nearly all of the gender-based violence outcomes identified in the reviewed literature refer to the perpetration of sexual violence (rape or sexual assault). One qualitative study proposed a link between increased confidence among women (which clashed with gender norms around women’s roles) and increased levels of gender-based violence (Khan, Mishran, and Morankar, 2005). However, such a relationship does not mean that programs should not still seek to build positive self-concept among women, but that they must take community-level

norms into consideration and gain community buy-in and support in addition to intervening at the individual level.

The skills that were important for explaining the perpetration of gender-based violence outcomes were empathy, positive attitude, and social skills. A systematic review of published empirical studies found that empathic deficits were associated with sexual violence perpetration. Two quantitative studies found that low levels of perspective-taking and empathic concern were associated with sexual assault among offending and non-offending adolescent males. Finally, men with lower levels of the personality facet tender-mindedness were more likely to perpetrate rape. The support for the skill positive attitude came from literature examining facets of extraversion and neuroticism, specifically the facets “positive emotions” and “depression” (reverse coded). Both of these personality facets were important in explaining the perpetration of gender-based violence. The support for social skills came from a study examining a facet (“warmth”) of the personality factor “extraversion.”

Overall, more research on soft skills that protect against the perpetration of gender-based violence and reduce vulnerability to gender-based violence, is critical, especially in developing country contexts. Most of the current literature explores the role of personality facets and would be well-complemented with literature on other soft skills.

Other skills of importance

Other skills of importance for youth that did not make it into the top five skills but still received support from stakeholders and the empirical literature include: integrity/ethics, positive attitude, social skills, and responsibility.

Seven studies identified a relationship between integrity/ethics and SRH outcomes. Most of these data came from personality factors agreeableness and conscientiousness, facets of which map onto the soft skill integrity/ethics. Aside from personality factors, terms used in the literature for integrity/ethics include personal values and “tolerance of deviance,” measured by youth’s assessment of the wrongness of various normative acts, such as theft and lying.

Positive attitude was another skill that received some support in the SRH literature. Six studies identified a relationship between positive attitude and SRH outcomes. Like integrity/ethics, most of this came from literature on personality factors, specifically emotional stability and extraversion. It is important to point out that extraversion was found to contribute to risky sexual behaviors in more cases than it was found to protect against them. In only one case, extraversion (the “positive emotions” facet in particular) was found to be associated with lower levels of risky sexual behavior. Thus, the personality factor “emotional stability” seems to be more important in understanding how “positive attitude” contributes to SRH outcomes. Aside from these personality factors positive attitude was examined in the SRH literature as positive attitude toward school and negative affectivity.

Social skills garnered some support from the literature. Nine studies found a relationship between social skills and SRH outcomes. Most of this evidence came from the literature on agreeableness and extraversion. Again, it is important to point out that extraversion was found to contribute to risky sexual behaviors as well as protect against them. More research on the facets of extraversion would help tease out which aspects of this personality factor are protective and which are risk-enhancing.

Finally, five studies found a relationship between responsibility and SRH outcomes. It is important to emphasize that responsibility comes up in the SRH literature is “locus of

control,” or an individual’s beliefs about the extent to which they can control events in their life (Lippman et al., 2015, “Appendices,” p. 103). Having a strong internal locus of control is important for having the directive to be goal-oriented, which was a well-supported skill in the SRH literature.

5.4 Malleability of Most-Supported Soft Skills

Malleability refers to “whether a skill can be changed, and more specifically, improved,” during the ages of 12–29 (Lippman et al., 2015, p. 39). Developmental research indicates that soft skills can be targeted and improved throughout childhood, adolescence, and early adulthood (Brunello and Schlotter, 2011). In fact, soft skills have been found to be more malleable than cognitive skills in adolescence (Cunha and Heckman, 2008; Kautz et al., 2014; Cunha, Heckman, and Schennach, 2010). As pointed out in the report on *Key “Soft Skills” that Foster Youth Workforce Success*, malleability is especially important in low-resource contexts, because it tells whether a skill can be developed where previous opportunities to develop them, such as high-quality schooling, may have been lacking (Lippman et al., 2015, p. 39).

There is evidence, as shown in Tables 4 and 6 on pages 36 and 47, that the recommended soft skills discussed in the two previous sections are malleable. Some of these soft skills have evidence of malleability through program evaluations, which show changes in a skill as the result of a particular intervention within the life of a program. Where this intervention-based evidence is not available, theoretical evidence regarding a skill’s development over time lends support to its malleability (Lippman et al., 2015). However, it is important to note that a current lack of evidence of a skill’s malleability for a particular age range does not necessarily mean that this skill is not malleable during this period.

Theoretical and program-based evidence of malleability is supported by research that recommends optimal stages of development for these soft skills. The University of Chicago’s Consortium on Chicago School Research (CCSR) proposes that adolescence is an optimal period of development for skills related to the formation of identity and personal values, as well as skills related to self-esteem. Guerra and Cunningham similarly recommend confidence and ethics as skills for optimal development during adolescence, as well as problem solving, control, and initiative. The Learning Metrics Task Force suggests a focus on “positive view of self and others,” and “moral and ethical values,” as well as social awareness, civic engagement, leadership, and resilience/“grit.” Taken all together, it is clear that there is theoretical and empirical evidence for the malleability of soft skills during adolescence, early adulthood, and other stages of life.

In examining the malleability of each skill, with a focus on adolescence and early adulthood, and building upon the research done for the report *Key “Soft Skills” that Foster Youth Workforce Success*, this review was able to demonstrate which skills are most likely to be improved in youth development programs. Social skills and positive self-concept have both been found to be malleable within programs among 15- to 18- and 19- to 29-year-olds. Program-based evidence indicates that higher order thinking skills are malleable among 15- to 18-year-olds, and theoretical evidence suggests that they are malleable among 19- to 29-year-olds as well. Self-control has been found to be malleable within programs for among 15- to 18-year-olds and for adults. Finally, theoretical evidence suggests that communication is malleable among both age groups of interest.

This review updates the previous review’s synthesis with evidence on the malleability of empathy and goal orientation. Empathy demonstrates evidence of malleability at all age ranges, including adolescence and young adulthood. However, theoretical evidence

supports the primary development of the skill of empathy in early childhood (via parents) and middle childhood (via peers and social groups). In addition, there is programmatic and theoretical evidence that goal orientation skills develop during adolescence, while theoretical evidence supports the malleability of goal orientation into early adulthood.

6. CONCLUSIONS AND RECOMMENDATIONS

Contributions and Findings of this Study

This study confirms that developing a core set of soft skills holds promise as an effective strategy to promote positive outcomes for youth, including workforce success, SRH, and violence prevention. Despite different orientations and different literatures across these three fields, a common set of skills enjoy robust and high-quality evidence linking them to each set of outcomes, as theory and prior evidence would suggest.

Furthermore, this study answers the question of *which* skills are most important to develop. **Self-control, higher order thinking skills, and positive self-concept** receive the most support of those skills that are crosscutting; they are among the top five soft skills for each outcome domain. Thus, they are recommended for inclusion in integrated PYD programs or other youth programs. In addition, **social skills and communication** are supported by evidence across all three domains as well and are among the top five across two domains. Social skills are among the top five for workforce and violence prevention, and communication is among the top five for workforce and SRH.

Each of these skills are expressed through a variety of behaviors and function to promote positive outcomes in different ways.

- Exercising **self-control** is key to avoiding risky sexual behaviors and ensuring condom use, as well as limiting impulsivity that is linked with aggression and gang membership. Self-control enables productivity and thus higher performance and earnings on the job, as well as the discipline necessary to be successful as an entrepreneur.
- **Higher order thinking skills** come into play when a young person considers long-term goals rather than short-term benefits of behaviors that might put them at risk of unintended pregnancy or violence. Critical thinking and problem solving skills can defer or eliminate the need for aggressive or reactive behavior. In the workplace, higher order thinking skills increasingly facilitate performance in the workplace and entrepreneurial success across many industries and occupations, in a world of work that is rapidly changing due to technological advances and automation of routine tasks, increased trade and other trends. In the workplace, higher order thinking skills are deemed critical among employers, and facilitate individual performance and entrepreneurial success.
- **Positive self-concept** includes self-efficacy and confidence, which enable a young person to negotiate condom use, walk away from a fight, or successfully navigate challenging tasks and situations at work. These skills may be manifested in different ways a bit differently across domains of life, but youth who deploy them successfully are most likely to be function well whatever the challenge, and build upon their successes.

Two other skills emerged with high levels of support in two domains.

- **Empathy** was among the top skills linked to violence prevention, as was **goal orientation** for positive SRH. They are recommended for inclusion in programs seeking to achieve violence prevention and SRH outcomes, respectively.
- **Finally, responsibility and positive attitude** received support across all three outcome areas, although to a lesser degree than those discussed above.

It is important to note that these skills interact with each other and are mutually reinforcing in the achievement of positive outcomes. For example, some evidence and expert opinion suggests that having high self-esteem without self-control or empathy can propel a youth to have inflated sense of self and be more aggressive in relationships. Further, skills beget other skills. Youth who possess high levels of self-control are more likely to be confident in their ability to do something, fostering positive self-concept; they are also more likely to stop and think before acting, thereby practicing higher order thinking.

These findings emerged from a systematic review of the literature that included studies that tested relationships between a soft skill and the outcomes of interest among adolescents and youth ages 12 to 29. Seventy such studies met these criteria in the violence prevention literature, and 95 met these criteria in the SRH literature, while 58 studies focused on youth and entry-level workers' skills and workforce outcomes in the prior workforce success paper. In addition to the empirical evidence on positive relationships between a skill and an outcome of interest, the team considered the breadth and quality of research and stakeholder support, regional diversity of the studies, and malleability of the soft skills, using the same methodology as was used in the workforce success report.

Some differences in the literature on soft skills were noted by age and developmental stage. The evidence base was skewed toward adolescents ages 14–17, rather than young adults ages 18–29, or young adolescents ages 12–13, indicating evidence gaps. There was a qualitative difference in how skills are conceptualized, defined, and measured by developmental stage. For example, self-control was often conceptualized as emotional regulation in older adolescents, but as impulsivity in younger adolescents. Likewise, higher order thinking skills were more likely to be addressed in studies involving older adolescents and young adults, which is developmentally appropriate since that is when abstract thinking develops. Planning and perspective-taking look very different by age, as reflected in the research.

By and large, the studies reviewed found similar relationships between soft skills and outcomes for both genders, but there were exceptions. One study found that cognitive empathy was more important in explaining male bullying frequency, while affective empathy was the more salient factor in explaining female bullying perpetration. In addition, findings from the SRH literature suggest that positive self-concept can lead to different sexual and reproductive outcomes by gender. Females with higher self-concept are more effective at using contraception and avoiding risky sex; but some studies showed that the reverse was true for males.

Another substantive contribution of this study, as with the prior workforce study, was to harmonize the terminology relating to each construct, thereby addressing the challenge of different terms across fields. Using the common terminology developed for the workforce report, terms were coded from the violence prevention and SRH literatures. The terms tended to be used in more specific ways in those literatures, so an expansion of the definitions of the terms to include more specificity was needed. It was noticeable that a

minority of studies in the latter two fields used positive skill terms; most violence prevention studies used a term that indicated the absence of a skill, while the SRH literature used both positive skill terms and deficit language. Overcoming the challenges of the different terminologies in each field was necessary to conduct the analyses of literatures across fields. Going forward, adopting common terminology across disciplines will enable better communication across fields of research and youth development programming, and help to build the field of evidence for each skill and its relevant outcome.

Considerations for Programs

Programs that are designed to focus on or include this core set of skills can be assured that they are focusing on the skills that are well supported by evidence to improve outcomes across these three domains of youth development. This study can be used to inform design, implementation, and evaluation of programs for cross-sectoral youth program development, and funders can use this paper to guide investments, with a focus on the following approaches:

- Align youth development programs focused on workforce development, violence prevention, and SRH with the key soft skills recommended in this review.
- Introduce soft skill development strategies as early as appropriate and reinforce as youth age.
- Provide youth with opportunities to practice soft skills across the different types of contexts they will need them for.
- Consider both the specific context in which skill will be applied (e.g., in the workplace, at school, at home, in the community) and how the expression of the skill will differ by the social and cultural context and tailor curricular content appropriately.
- Provide content knowledge that is needed in order to support the practice of soft skills in specific contexts.
- Develop soft skills through a positive youth development approach that also recognizes and engages other personal characteristics, norms and attitudes, important relationships and settings in a youth's life, as well as the broader social context.

All of these skills have been found to be malleable, and therefore are good bets for youth development programming. **A forthcoming paper from YouthPower Action will address specific strategies that work to develop these skills in programs serving youth.** Skill development approaches will need to be adapted by age and context, but generally the research supports early introduction to these skills, and reinforcement over time as youth age. It will be important to provide domain- and context-specific content in these programs.

As we have seen in the violence prevention and SRH literatures, skills are expressed differently in each domain, so providing examples of concrete behaviors and offering actual experiences using these skills in each domain and context will be important. For example, the skill of self-control can be used in the workplace to stay on task despite distractions, to say no to unprotected sex, and to control a violent reaction in a hostile environment. Practice using this skill in each of these specific domains would no doubt be optimal.

Based upon our review, it would be beneficial for programs to also focus on knowledge content that individuals need to apply the skills. For example, knowledge of contraception is needed in order to support self-efficacy in using it. Likewise, awareness of cultural norms and attitudes toward violence are closely related to the motivation to make decisions to behave in non-violently. Recalling the broader socio-ecological framework presented in

section 2.3, soft skills are only one type of individual factor that influences outcomes. Also influential are academic and technical skills, knowledge, attitudes and values, and personal qualities. Beyond the individual are factors related to family, peer, and social networks, the environments where youth spend their time, as well as broader societal and cultural contextual factors. So, although evidence supports a focus on soft skills to improve cross-sectoral outcomes, that focus should not be exclusive of other influences on outcomes.

Implications for Measurement

This study has both specific and broad implications for measurement of soft skills. Measures are needed for multiple purposes, including self-awareness and growth, program implementation, and program evaluation. **A forthcoming YouthPower Action paper will address the current landscape of measures of these skills, and identify gaps in the field from the standpoint of the needs of international youth development programs.** The following are important to strengthen the field's capacity to effectively conduct research and measure soft skills.

- Measures of the key soft skills identified in this paper are needed for the purposes of assessing individual growth and for evaluating the quality of program implementation; measures should be valid and reliable, easy to administer, and appropriate for international youth development programs.
- The key soft skills identified in this paper need to be measured together in the same instrument in order to analyze how they relate to each other and to outcomes.
- Common definitions of skills and common measures of key soft skills need to be used across studies and programs to build the evidence in the field around what works to foster these skills for different populations, and to further understand how they are related to youth outcomes.
- Measures that are positively formulated as the presence, rather than the absence of a key soft skill, need to be included more often in studies on violence prevention and SRH.
- Research that cuts across youth development domains and contexts is needed to understand how a skill operates to produce positive outcomes in each, since most research is currently siloed by sector (workforce, violence prevention, SRH).
- Key soft skill measures need to be included in more studies addressing multiple levels of the socio-ecological framework, using appropriate analytical techniques to differentiate separate effects, in order to understand the interrelationships between skills and other factors and their relationships to outcomes.

The measures used in the studies reviewed for this paper were specific to the domains of SRH and violence prevention, and were typically expressed as the absence of a skill, such as impulsivity, rather than a soft skill itself, such as self-control. Thus, evidence is needed on the positive formulation of the skill as preventive and promotive for each of these outcomes. As more and more studies include measures that are positively formulated, and use the same or similar measures across studies in each domain, the evidence for each skill in its relation to outcomes across fields can continue to build.

The stability and consistency of skills across contexts is an open question not addressed by the specific studies in the research base. For example, a young person may have a strong sense of self-efficacy in a controlled environment of work, but not in a chaotic, violent environment surrounding their home. In addition, some skills are theoretically important across fields, but the evidence is not yet there because they have not been included in studies. The research team expected to find more evidence linking communication to

violence prevention, but little was found. There tend to be fads in the research—many researchers focus on one skill, such as self-efficacy, and the evidence builds rapidly as researchers use the same measure across studies in the same field; that pattern is reflected in the database of studies created for this project.

In addition, there remains a question that is rarely addressed in the research of *how much* of a skill is enough to promote a positive outcome. Since all youth are likely to have some degree of these soft skills, programs need guidance to set goals for their participants on key thresholds that will really make a difference. Among the studies reviewed, a few analyzed relationships to outcomes for high and low performers of a skill, but none identified a threshold that showed substantial gains in positive outcomes. Experts and the literature suggest further that there are some instances where having too much of a skill, such as positive self-concept, can be counterproductive, specifically in relation to violence prevention outcomes; this needs further study and has implications for programming.

The theory and evidence reviewed suggest, however, that if a skill is among the most important in one domain, it is likely to also be important in other domains. In general, research on violence prevention and SRH is still siloed and not broad enough to encompass soft skills that are found to matter for youth development more generally. If studies can include measures of soft skills across contexts as well as domains, there is much that could be learned about how to strengthen them across multiple relationships and settings that would be mutually reinforcing. Furthermore, experts agree that these skills are related and that they are best developed together to reinforce each other, so they need to be studied and measured together as well.

Recommendations for Further Research

In addition to the implications for skills measurement discussed above, this study has identified several broader areas where the evidence base on soft skills across multiple sectors could be strengthened. Although efforts may be undergoing on these areas, our research noted the following gaps:

- Rigorous program evaluations that investigate the separate and combined effects of individual soft skills on outcomes are needed.
- Qualitative research on how youth understand, interpret, value, develop, and use soft skills is needed for both program design and measurement purposes.
- Research on how soft skills, positively formulated, lead to positive outcomes, is needed in the fields of violence prevention and SRH.
- More research in non-U.S. contexts, particularly in low- and middle-income countries, is needed.
- Disaggregating data on the relationship between a soft skill and an outcome by age and gender is rare, and needs to be done consistently in studies.
- Young adolescents and young adults are underrepresented in the research; in addition to special populations such as married women and OVC need to be included in the research on soft skills and SRH.
- More research on the relationship of soft skills to violent crime, violent extremism, and IPV, as well as gender-based violence and sexual and reproductive biological outcomes is needed.

The report on *Key “Soft Skills” that Foster Youth Workforce Success* noted that program evaluations typically do not separate out individual soft skills that are included in workforce development programs and test them in relation to outcomes. The same holds true in the

fields of violence prevention and SRH outcomes. Therefore, rigorous program evaluations that have longitudinal designs and use mediation analyses are needed to understand how and why particular skills have an impact on the targeted outcome. It is also critical to understand how skills relate to and reinforce each other, since youth need multiple skills in order to succeed in the workforce and other domains of their lives. To achieve this, planning for evaluations needs to be accommodated early in the program planning phase and resources designated for rigorous, longitudinal research studies.

In addition, the importance of rigorous qualitative literature should not be understated. This qualitative literature helps in understanding which soft skills have the biggest impact on prevention outcomes, and often contains valuable information about how youth interpret soft skills and utilize them in their lives. It is particularly important to include the voices of youth themselves, program implementers, and teachers, parents, and other important people in their lives as part of qualitative research. As previously acknowledged, most of the research on soft skills for violence prevention and SRH considers how the *absence* of soft skills leads to negative outcomes, rather than how their presence leads to positive outcomes. More research on skills as protective factors in relation to positive outcomes is thus warranted. In the field of SRH, this might be done through measuring how soft skills strengthen protective and preventive behaviors, such as condom or contraception use; in the field of violence prevention, research might focus on how soft skills relate to outcomes such as prosocial behaviors or peaceful conflict resolution.

Another gap in this research is that specific populations of youth have been largely overlooked. There is a need for more international research generally, and specifically research involving youth in high poverty and in high conflict settings. This review uncovered only five studies on soft skills and violence prevention outcomes in the Asia/Pacific region and only two studies on soft skills and SRH outcomes in this region. From Latin America and the Caribbean, only two studies were found on soft skills and violence prevention outcomes, and only five studies were found on soft skills and SRH outcomes. Research on soft skills and SRH outcomes in sub-Saharan Africa was more well-investigated, but lacking in the violence prevention literature, with only five studies from this region.

Further, within the broad age group of 12–29, few studies consider young adults ages 19–29, and few address those ages 12–14. There is also lack of research that addresses the needs of married adolescents. Married youth, especially young women, are at high risk for negative SRH outcomes, in part because of a lack of services designed to meet their unique needs. More research is needed for this population, especially in countries where the average age at marriage occurs during the adolescent years. OVC are another subgroup of young people who are in great need of improved programming to address their SRH needs. Given the large number of OVC-oriented programs around the world, an effort to build the body of research in the area of soft skills and SRH could have an important impact. Overall, disaggregating data by gender and age is critical in helping to add to the field's understanding of how skills affect subgroups of youth differently.

Lastly, certain types of outcomes have been under-investigated. In the field of violence prevention, little research exists to unpack linkages between soft skills and violent crime as well as between soft skills and IVP. Research on soft skills and participation in violent extremism is also lacking and mostly anecdotal in nature at this point. In the field of SRH, research on soft skills and the perpetration of gender-based violence, as well as studies that utilize the measurement of biological outcomes, would be extremely useful.

Program development, measurement, and research efforts on cross-sectoral youth development would be well advised to focus on these key soft skills that enjoy support

across the fields of workforce development, violence prevention, and SRH. Although gaps in measurement and research exist, there is enough consistent support for these skills across fields to provide the confidence that fostering their development among youth will increase their chances of positive outcomes across these, and likely other, domains of their lives.

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8.APPENDICES

8.1 Appendix A: Grouping of Terms from the Literature

Below are the skill common terms devised by the research team (in the left column) from terms appearing in the literature (right column). Terms in parentheses were reverse-coded.

Communication	<p><i>From Violence Prevention Literature</i></p> <ul style="list-style-type: none"> • Speak calmly even when angry • Communicate thoughts clearly • Verbal reasoning • Constructive anger expression • Language competence • High verbal IQ • Talks to parents • (Destructive anger expression) <p><i>From SRH Literature</i></p> <ul style="list-style-type: none"> • Communication with a partner/assertive communication <ul style="list-style-type: none"> ○ Communication with partner about condom or contraception use ○ Discussed family planning with a partner ○ Discussed STI or HIV/AIDS prevention with a partner ○ Communication about safer sex practices with a partner ○ Assertiveness (in communication/sexual negotiation) ○ Partner communication self-efficacy <ul style="list-style-type: none"> ▪ Confident can ask partner for sexual history ▪ Confident can discuss safe sex with a partner ▪ (Lower self-efficacy to discuss safe sex with a partner) ○ Both partners take initiative with regard to condom use ○ Communication comfort (perceived comfort communicating with a partner) ○ (Poor refusal skills) ○ (Perceived fear, concern, or stress over communication with a partner) • Communication with parents <ul style="list-style-type: none"> ○ Mother-/father-/parent-adolescent communication ○ Family communication (about sex) • Communication with peers
Empathy	<p><i>From Violence Prevention Literature</i></p> <ul style="list-style-type: none"> • Empathy • Affective empathy • Cognitive empathy • Social emotional empathy • Perspective-taking • Guilt towards fighting

	<ul style="list-style-type: none"> • Lacks remorse • (Low/lacks empathy) • (Low perspective) • (Callous unemotional traits) <p><i>From SRH Literature</i></p> <ul style="list-style-type: none"> • Perspective-taking • Empathic concern • Youth’s empathetic relationships • (Empathic deficits)
Goal orientation	<p><i>From Violence Prevention Literature</i></p> <ul style="list-style-type: none"> • Future aspirations • High aspirations • (Lacks goals) <p><i>From SRH Literature</i></p> <ul style="list-style-type: none"> • Education-related <ul style="list-style-type: none"> ○ Educational aspirations ○ Educational expectations ○ Plans to attend college ○ Academic goals ○ (Low) educational aspirations/goals • More future orientation • General/higher aspirations for the future • Goal setting skills • Positive expectations for the future • Self-directed goals • Perceived effort toward achieving goals • (Lower) expectation for achievement
Higher order thinking skills	<p><i>From Violence Prevention Literature</i></p> <ul style="list-style-type: none"> • Ability to use non-aggressive/problem-solving strategy • Sound planning behavior • Non-aggressive cognitive schemas • Critical thinking skills • Ability to solve problems • Ability to make decisions • Selective attention • (Lack of critical thinking) • (Aggressive problem-solving strategies) • (Aggressive response access) <p><i>From SRH Literature</i></p> <ul style="list-style-type: none"> • Social negotiation skills • Responsible choices • Decision making

	<ul style="list-style-type: none"> • (Passive decision making/avoids decision making)) • (Low social problem solving) • (Passive problem solving) • (Needs guidance in solving problems)
Positive attitude	<p><i>From Violence Prevention Literature</i></p> <ul style="list-style-type: none"> • School commitment • (Low school commitment/engagement) • (Negative attitude towards school) <p><i>From SRH Literature</i></p> <ul style="list-style-type: none"> • Positive attitude toward school • (Depressive symptomology) • (Negative affectivity)
Positive self-concept	<p><i>From Violence Prevention Literature</i></p> <ul style="list-style-type: none"> • (High) self-esteem • Positive self-concept • Positive sense of identity • Self-efficacy • Self-confidence • School expectancy (whether or not youth believe they will graduate from high school) • (Low self-esteem) • (Perceptual bias) • (Adaptive narcissism) • (Lack of academic efficacy) • (Delinquent self-concept) • (Perceives barriers to success) • (Lack of self-concern) <p><i>From SRH Literature</i></p> <ul style="list-style-type: none"> • Positive self-image • Self-esteem • Positive self-concept • Self-worth • Empowerment • Differentiation of self • Self-pride • Decisional self-esteem • General self-confidence • Emotional well-being • Self-efficacy <ul style="list-style-type: none"> ○ Sexual self-efficacy ○ Condom use/contraceptive self-efficacy

	<ul style="list-style-type: none"> ○ Self-efficacy for prevention of HIV/AIDS ○ Self-efficacy for abstinence ○ Self-efficacy to refuse sex if partner refuses to wear condom ○ High confidence in ability to use a condom ○ Not shy to obtain condom ○ (Low confidence in ability to use a condom) ○ (Low efficacy belief [HIV-related]) ● (Low self-esteem) ● (Low perceived life chances) ● (“Feel that I am a failure”) ● (Self-destructive behavior)
Responsibility	<p><i>From Violence Prevention Literature</i></p> <ul style="list-style-type: none"> ● Responsible ● (Doesn’t accept responsibility) ● (Irresponsible) <p><i>From SRH Literature</i></p> <ul style="list-style-type: none"> ● Locus of control <ul style="list-style-type: none"> ○ Perceived control ○ Locus of control related to goals ● Low achievement-oriented behavior ● Responsibility and positive engagement as fathers
Self-control	<ul style="list-style-type: none"> ● Self-regulation ● Self-control ● Effortful control ● Stress management skills ● Emotional means (ability to refrain from acting on aggressive tendencies) ● Temperance (ability to suppress aggression) ● Tolerance to frustration ● Ego resilience (ability to flexibly adapt to environment) ● (Poor behavioral control) ● (Low self-control) ● (Low inhibition) ● (Impulsivity) <ul style="list-style-type: none"> ○ Lack of impulsivity/response inhibition ○ (Impulsive) ○ (High ADHD Symptoms (Impulsivity, hyperactivity, risk taking)) ● (Risk-taking/seeking and risk proneness) <ul style="list-style-type: none"> ○ Low risk-taking ○ (Thrill-seeking) ● (Avoidance coping) ● (Lack of emotional regulation) ● (Poor refusal skills)

	<ul style="list-style-type: none"> • (Frustration proneness) • (Affect dysregulation) • (Trait anger) • (Externalizing problems) <p><i>From SRH Literature</i></p> <ul style="list-style-type: none"> • Self-control • Self-regulation • Impulse control • Behavioral control • Personal control • Emotion control • Sexual control (perceived control over sexual feelings) • Emotional stability • Harm avoidance • Prevention of unprotected coitus • (Risk-taking/seeking and risk proneness) <ul style="list-style-type: none"> ○ Fewer risk attitudes (impulsivity and sensation-seeking) ○ (Thrill-seeking) ○ ([Impulsive] sensation seeking) ○ (Risk proneness/risk-taking propensity) ○ (Enjoys taking risks) • (Avoidance coping/lack of emotional regulation) • (Behavioral dysregulation) • (Impulsivity)
Social skills	<p><i>From Violence Prevention Literature</i></p> <ul style="list-style-type: none"> • Interpersonal skills • High affiliative orientation (stable tendency to want to form and sustain close relationship with others) • High prosocial response bias • Prosocial peer commitment • Positive/non-aggressive conflict resolution/negotiation skills • Attitudes toward formal authority (positive) • (Antisocial behavior) • (Approval for aggressive strategies) • (Maladaptive narcissism) • (Aggressive-egocentric goal setting) • (High social-threat/aggressive response/attribution/interpretation bias) • (Hostile attribution bias) • (Negatively biased information processing) • (Inter-parental conflict) <p><i>From SRH Literature</i></p> <ul style="list-style-type: none"> • Social self-efficacy

	<ul style="list-style-type: none"> • Cultural respect • Social skills/interactions • (Cue misinterpretation) • (Intimacy deficits/isolation/attachment problems)
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Below is the terminology of outcome terms devised by the research team from the violence prevention literature.

Aggressive behavior	<ul style="list-style-type: none"> • General aggression • Verbal aggression • Physical aggression • Overt aggression • Self-reported aggression • Teacher-reported aggression • Adolescent aggression • Reactive aggression • Relational aggression • Avoids fights • Instrumental aggression • Violence • Violent acts • School violence • Physical violence
Bullying/cyberbullying	<ul style="list-style-type: none"> • Bullying • Overt/direct bullying • Psychological bullying • Physical bullying • Indirect bullying • Indirect relational aggression
Violent crime	<ul style="list-style-type: none"> • (Number of) violent crime(s) • Violent offending • Youth violence • Violence/aggression
Intimate partner violence	<ul style="list-style-type: none"> • Intimate partner violence • Physical abuse perpetration • Verbal-emotional abuse perpetration • Perpetration of dating violence • Dating aggression/violence
Gang/group violence	<ul style="list-style-type: none"> • Gang membership (in adolescence) • Gang participation • Gang violence • Have used force for political violence • Vulnerability/resilience to violent extremism

Below is the terminology of outcome terms devised by the research team from the SRH literature.

<p>Risky sexual behavior</p>	<ul style="list-style-type: none"> • Variables related to age <ul style="list-style-type: none"> ○ Early sexual initiation/debut ○ Age at first intercourse • Variables related to partners <ul style="list-style-type: none"> ○ Multiple partners/number of sexual partners ○ Number of partners by [x] age ○ High-risk partners • Variables related to contraception or condom use <ul style="list-style-type: none"> ○ Number of days of unprotected intercourse ○ Number of sex acts without using a condom ○ Nonuse of condoms ○ Unreliable contraception use ○ Non-compliance with oral contraception • Frequency of sex • Likelihood of being sexually active • Sexual experience/activity • Sexual intention in the next year • Casual sexual behavior • Use of drugs or alcohol before or during sex • Giving/receiving a reward for sexual favors • Online sexual behavior
<p>Protective sexual behaviors</p>	<ul style="list-style-type: none"> • Variables related to age <ul style="list-style-type: none"> ○ Later sexual debut ○ Intention to remain sexually inactive until [x] age • Variables related to contraception or condom use <ul style="list-style-type: none"> ○ Intention to use condoms ○ Condom use consistency ○ Recent condom use ○ Lifetime condom use ○ Intention to use condoms with new partner at first encounter ○ Higher frequency of condom use ○ Lower percentage of unprotected sex ○ Use of condom at first intercourse ○ Refusal of unprotected sex ○ Effective contraceptive use ○ Birth control use ○ Dual method use • Safe sex practices (a scale of 10 items, including condom use and number of partners) • Lower # of partners in past 60 days • Approached by older men but declined to have sex with them • Never had intercourse
<p>Pregnancy and birth</p>	<ul style="list-style-type: none"> • Pregnancy (history) • Teen pregnancy (defined differently across texts) • Pregnancy before [x] age

	<ul style="list-style-type: none"> • Being pregnant or getting someone pregnant • Likelihood of adolescent pregnancy • Adolescent fatherhood • Pregnancy among HIV-infected adolescents • Unintended pregnancy • Premarital pregnancy
HIV and STIs	<ul style="list-style-type: none"> • STD history • Having ever had a sexually transmitted disease • Contracting STI • HIV risk
Gender-based violence	<ul style="list-style-type: none"> • First or second degree sexual assault • (Sexual and gender-based) violence • Sexual violence perpetration • Rape

8.2 Appendix B: Definitions and Observable Behaviors

Definitions of the soft skills discussed in the literature review are below, as well as examples of each skill in the context of violence prevention and SRH outcomes.

Self-control

Definition: “Self-control refers to one’s ability to delay gratification, control impulses, direct and focus attention, manage emotions, and regulate behaviors” (Lippman et al., 2015, “Appendices,” p. 81). Someone with a high proficiency in self-control is able to focus on tasks and manage behavior despite distractions or incentives to do otherwise. In the violence prevention and psychology literature, a distinction between two important aspects of self-control is emphasized: self-control of behavior, and self-control of emotion (the latter is often referred to as ‘emotion regulation’). Being averse to risk-taking or having a lower propensity to be attracted to potentially risky activities are also important facets of self-control for violence prevention and SRH outcomes.

Observable Violence Prevention Behavior: The youth is able to regulate his or her emotions in high-conflict situations, especially emotions such as anger and frustration. In practice, this means that the youth is able to feel emotions and yet not act impulsively on these emotions. The youth is also able to manage stress well. The youth is able to exert effortful control and to inhibit impulsive actions such as reacting aggressively against peers. The youth manages risks and does not seek thrills or engage in unnecessary risky behaviors or enter situations that seem risky. The youth is able to exercise appropriate refusal skills, such as refusing to join a gang or commit a violent act.

Observable SRH Behavior: The youth is able to engage in desired, protective behaviors in high-emotion situations and/or when faced with negative pressure from influential people (i.e., sexual partners, peers, elders). The youth does not act impulsively and does not engage in risk behaviors (e.g. engaging in sexual intercourse without protection) that might result in adverse SRH outcomes for the youth and/or his/her partner.

Positive Self-Concept

Definition: Positive self-concept refers to “a realistic awareness of oneself and one’s abilities that reflects an understanding of his/her strengths and potential (and hence, is,

positive)” (Lippman et al., 2015, “Appendices,” p. 84). In the SRH literature, the notion of “self-efficacy” related to specific sexual behaviors, such as condom use or the prevention of HIV, is an especially important facet of positive self-concept.

Observable Violence Prevention Behavior: The youth does not exhibit low self-esteem, and instead has a stable and high self-concept. The youth specifically does not have a delinquent self-concept, where the youth would view him or herself as a “bad kid” or “trouble.” The youth does not need to act out in a way consistent with a delinquent self-concept to maintain self-esteem. In fact, the youth is confident in his or her ability to walk away from a fight, and is able to do so. The youth has a positive sense of identity that is associated with prosocial activities and a prosocial identity, therefore being more likely to engage in prosocial behaviors with others. The youth exhibits self-efficacy and believes that he or she can do well in various situations and contexts.

Observable SRH Behavior: The youth does not exhibit low self-esteem. The youth has a positive sense of self and wants to take steps to preserve his/her own health. Furthermore, the youth believes she or he can engage in protective sexual behaviors even in high-emotion situations and/or when faced with negative pressure from influential people, including sexual partners, peers, and elders (e.g., the youth believes she or he can negotiate condom use and/or correctly use a condom).

Higher Order Thinking Skills

Definition: Higher order thinking skills are skills encompassing problem solving, critical thinking, and decision making (Lippman et al., 2015, “Appendices,” p. 77). These skills may reflect the same underlying skill set, which is the ability to take in information from multiple sources, identify the issue(s), evaluate potential options, and reach an appropriate conclusion (Stein, 2000). The violence prevention literature often defines higher order thinking skills as problem solving, critical thinking skills, sound planning behavior, and the ability to make good decisions. In the SRH literature, decision making and problem solving emerge as critical skills, but critical thinking does not. The notion of “social problem solving,” or the type of problem solving that occurs in relationships is also important.

Observable Violence Prevention Behavior: The youth is able to use appropriate and prosocial problem-solving strategies and to think critically about potentially violent situations. This would mean that in high-emotion situations where aggression is an obvious option, the youth is able to utilize good judgment and problem-solving skills to avoid resorting to violence. The youth is also able to make good decisions and to utilize sound planning behaviors, including being able to avoid situations where aggression may arise. The youth can also accurately interpret the behavior of others (especially as relates to aggressive behaviors). By using appropriate higher order thinking skills to analyze ambiguous social cues from others, youth are able to accurately interpret non-aggressive cues as such, and therefore are less likely to react aggressively.

Observable SRH Behavior: The youth makes thoughtful decisions regarding the sexual behaviors that she or he wants to engage in, with whom, when, and under which situations. The youth plans for and/or anticipates sexual behavior in advance and take steps to avoid engaging in sexual activity or reduce the risk of pregnancy and/or infection resulting from sexual activity (e.g., use contraceptives, reduce the number of partners, engage in less risky sexual acts). This includes planning and making decisions ahead of time, as well as making

protective decisions in high-emotion situations. The youth seeks to mitigate the potential consequences of his/her actions on SRH outcomes.

Social Skills

Definition: “Social Skills are a cluster of skills necessary to get along well with others, including:

- Respecting and expressing appreciation for others (requiring cultural sensitivity)
- Demonstrating context-appropriate behavior and ability to behave according to social norms (requiring self-control and positive self-concept) and
- Using a range of skills or processes aimed at resolving conflict (requiring empathy, critical thinking, problem solving, decision-making, and integrity)

This definition reflects a complex interaction of many other skills, but can be conceptualized and measured as a discrete skill.... Social skills can be generalized as the way one interacts with others” (Lippman et al., 2015, “Appendices,” p. 73).

Observable Violence Prevention Behavior: The youth demonstrates competent interpersonal skills, including the ability to build healthy and prosocial connections with others. The youth also seeks out positive interpersonal connection and contact with others. The youth is able to competently navigate social situations and exhibit the ability to negotiate conflict situations with peers without using aggression. The youth also refrains from attributing a hostile bias to others in social situations or behaving in a way that indicates the youth feels attacked or threatened by the other, hereby being more likely to avoid aggression in the relationship.

Observable SRH Behavior: The youth demonstrates competent interpersonal skills, including the ability to build healthy relationships with sexual partners. The youth is able to competently navigate risky sexual situations to avoid engaging in sexual activity and/or reduce the risk of pregnancy and/or infection resulting from sexual activity.

Communication

Definition: Communication refers to one’s ability to effectively express and understand knowledge and ideas. Modes of communication include listening, and skills in verbal, non-verbal, and written communication. These include one’s ability to negotiate and persuade, as well as transmit and interpret knowledge (Lippman et al., 2015, “Appendices,” p. 88). The SRH literature emphasizes in particular persuasive or assertive communication in the context of a relationship and negotiating sexual decisions. Adolescents’ communication with their parents or other trusted adults is also a critical aspect of communication in the SRH literature and thus includes willingness and ability to seek out information.

Observable Violence Prevention Behavior: The youth demonstrates verbal intelligence in conversation and competence in language skills, including self-expression verbally and the ability to express thoughts clearly. The youth can speak calmly and use constructive anger expression when angry. The youth is also willing and able to communicate well with caregivers or other supports about relevant personal issues.

Observable SRH Behavior: The youth has the ability to express thoughts about and decisions regarding SRH clearly. The youth is able to discuss SRH topics with a parent

and/or another trusted adult. The youth is able to discuss SRH topics with sexual partners and negotiate sexual decisions.

Empathy

Definition: Empathy refers to “the affective and cognitive ability to feel and understand what someone else is feeling” (Lippman et al., 2014a).

Observable Violence Prevention Behavior: The youth displays the ability to understand others’ emotional states as well as to take others’ perspectives in social situations. The youth demonstrates through gestures and words that the youth understands others’ motivations and feelings, and the youth demonstrates affective empathy with others, such as displaying sadness when others are hurt.

Goal Orientation

Definition: Goal orientation is defined as “the motivation and ability to make viable plans and take action toward desired goals” (Lippman et al., 2014a, p. 16). In the literature, goal orientation is often referred to having educational goals.

Observable Violence Prevention Behavior: The youth can state goals for the future, and when asked can give “aspirations” for what his or her future life will be.

Observable SRH Behavior: The youth can state at least one personal goal he or she has for the future, and the youth can accurately describe the step(s) needed to achieve this goal. The youth recognizes that risky sexual behavior may reduce his or her chance of reaching this goal and therefore wants to take steps to preserve his or her own health, and/or avoid situations (e.g., having a mistimed pregnancy) that will reduce the chance of achieving this goal.

Responsibility

Definition: Responsibility is defined as “1) one’s ability to understand their role (in a particular context, i.e., home, school, workplace, relationship) and reliably accomplish tasks associated with this role ... and 2) one’s belief that their choices and actions can influence the events in their life and lead to positive outcomes” (Lippman et al., 2015, “Appendices,” p. 104). The violence prevention and SRH literatures emphasize the latter aspect.

Observable Violence Prevention Behavior: The youth is able to make responsible choices in his or her life, especially as regards situations where the youth may be at risk of acting aggressively. The youth demonstrates that he or she is responsible. The youth also is able to accept responsibility for his or her decisions and choices and the consequences that come from these decisions.

Observable SRH Behavior: The youth is able to accept responsibility for his or her SRH decisions and the consequences that come from these decisions. The youth understands that what happens is a result of his or her sexual behavior and leads to consequences that can affect his or her life and that of others.

Positive Attitude

Definition: “A definition of positive attitude includes an emotional aspect in which a youth is happy and enthusiastic; a social aspect of encouraging others; and a cognitive aspect of valuing work or school with a positive outlook” (Lippman et al., 2015, “Appendices,” p. 104).

Observable Violence Prevention Behavior: The youth demonstrates a positive attitude toward school as well as an appropriate level of commitment to attending and remaining in school. The youth is engaged in his or her classes and peer network at school, and has positive aspirations related to school, home life, and the community.

Observable SRH Behavior: The youth demonstrates a positive attitude about his/her sexuality. The youth holds a positive view of risk reducing measures (e.g., contraceptive use) that promote SRH.

8.3 Appendix C: Search Terms

The following is a summary of the key search terms that were used in this literature review. This list is not exhaustive.

Soft Skills Terms	Youth Terms	Violence Prevention Terms	SRH Terms
Soft skills	Youth	Reactive/proactive aggression	Sexual and reproductive health
Life Skills	Adolescent	Relational/physical/verbal aggression	Risky sexual behavior
Social/socio-emotional skills	Young Adult	Fighting	Contraceptive use
Non-cognitive skills	Young Person/People	Bullying/Cyberbullying	Condom use
Protective factors	Teen/Teenager	Problem/externalizing/risk behaviors	Family planning
Relationship skills		Interpersonal Violence	Pregnancy
Psychosocial traits/characteristics		Intimate Partner Violence	HIV
Psychosocial correlates/predictors		Dating violence	STI
Personality		Violent crime	STD
(Personal) characteristics/factors/assets/qualities		Delinquency	Sexually transmitted*
		Gang involvement/recruitment	Sexual violence
		Political violence	Rape
		Terrorism	Gender-based violence
			Early marriage

8.4 Appendix D: Experts Interviewed

Karen Austrian, Population Council
Anoma Bhat, FHI 360
Robert Blum, Johns Hopkins
Catherine Bradshaw, Johns Hopkins
Vignetta Charles, ETR (Education, Training and Research)
Linda Dahlberg, CDC
Eric Dubow, Bowling Green State University
Kathleen Ethier, CDC
Karin Frey, University of Washington
Brian Goesling, Mathematica
Nancy Guerra, University of Delaware
Nicole Haberland, Population Council
Jen Heeg, FHI 360
Berit Kieselbach, World Health Organization
Barbara Michel, Centre for the Support of Peer Education
Nadia Moreno, Partners of the Americas
Tracy Pillay, National Association of Child Care Workers (South Africa)
Ashika Pramlal, National Association of Child Care Workers (South Africa)
Saji Prellis, Search for Common Ground
Marc Sommers, Boston University
Rachel Surkin, IREX
Karen Towers, USAID
Patrick Tolan, University of Virginia
Rebecca Wolfe, Mercy Corps

8.5 Appendix E: Interview Guide

1. Describe how youth soft skills (also referred to as personal qualities, competencies, character strengths, etc.) are addressed in your project/program/research.
2. How did you determine which soft skills (or personal qualities) to focus on in your research?
3. Do you have particular findings from your research, or practitioner wisdom, or even an opinion, about which soft skills or personal qualities are most highly related to violence prevention/SRH outcomes?
4. Do you think these soft skills (mentioned in question #3) are malleable among youth ages 12–29? Do you have any evidence that points to the skill's/skills' malleability?
5. What do you think are the most effective strategies for building/developing these key soft skills (referred to in question #3) among youth?
6. Beyond your own research/program, which soft skills or personal qualities do you think enjoy the most evidence that they are related to violence prevention/SRH outcomes?
7. Who else is working in this area that you would recommend we talk to?
8. Are there resources that you can share with us from your work? Is there any literature you would recommend (such as papers, reports, reference lists, measures, etc.)

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