

Commentary

Future Directions for Positive Youth Development as a Strategy to Promote Adolescent Sexual and Reproductive Health

The U.S. Centers for Disease Control and Prevention's (CDC's) Division of Reproductive Health (DRH) has supported approaches to positive youth development (PYD) since the mid-1990s, but wanted a better conceptual and empirical basis to guide this work. DRH engaged in multiple conversations with those in the field and reviewed the literature to learn more about the approaches others have taken. This exploration resulted in the draft conceptual framework and working definition presented in the articles included in this supplement. DRH also sought to review the evidence for the effect of PYD programs on adolescent sexual and reproductive health. Thus, it conducted a review of PYD programs, and also reviews of the determinants research examining the association between PYD constructs and adolescent sexual and reproductive health. The determinants reviews were organized by Pittman's four categories of *Connectedness* (bonding), *Competence* (social, cognitive, behavioral, emotional, and moral), *Confidence* (self-efficacy, self-determination, belief in the future, and clear and positive identity), and *Character* (prosocial norms, spirituality) [1].

In December 2007, a panel of youth development experts was convened to review the process and preliminary findings of the team conducting the 5 literature reviews. Desired outcomes were to (1) obtain expert input regarding DRH's definition of and conceptual framework for PYD programs that promote adolescent sexual and reproductive health (ASRH); (2) achieve an understanding of the efficacy of positive youth development as a strategy to promote ASRH based on literature reviews of the ability of PYD constructs to predict ASRH outcomes and PYD program efficacy; (3) develop recommendations for how to support youth service providers' use of evidence-based PYD programs; and (4) develop recommendations for future determinants and intervention research on positive youth development.

This article synthesizes recommendations from the expert panel and the results of the literature reviews to provide an agenda for future research and programmatic action on PYD as a strategy to promote ASRH. The future directions are grouped into four areas: definition of PYD programs, PYD dissemination, PYD predictor research, and PYD intervention research.

Definition of PYD Programs

Rigorous research on interventions that take a PYD approach has been completed during a 25-year period. However, the definition of PYD has been emerging over a shorter time through many conversations and reports [2–8]. As a result, the field has been characterized by a number of constructs and both Catalano et al and the present report have taken an inclusive approach to the definition of positive youth development programs, searching for programs that address the 15 constructs, opportunities, and program environments. The PYD movement has been in a definitional phase with many but no standard definitions offered. We developed a broad working definition of PYD programs that promote ASRH because doing so helped to include disparate views and provided a corpus of programs to review. Given the breadth of programs using the PYD approach and the few programs that have been rigorously evaluated, our expert panel confirmed that this was a good approach. However, now that two reviews of PYD programs have been completed over the last 12 years and a review of the predictive validity of these youth development constructs was completed for this review, it is recommended that future work might explore developing a theory or framework for PYD.

While the conceptual approach used here provides a broad definition of youth development, there is a growing need for future research that establishes a framework or theory of youth development that integrates the many constructs. There are several theoretical perspectives that have applicability for understanding PYD, including, for example, the *Theory of Triadic Influence* [9], the *Social Development Model* [2], and *Personal Vitality Contagion* [10]. A review of applicable theoretical frameworks may reduce the overlap between youth development constructs, help specify the relationships among these youth development constructs, and propose how those constructs operate over the life course, that is, from infancy through young adulthood. A benefit to the field from this theoretical conversation may be a consolidation or interpretation of the elements of the PYD model.

Recommendations for Program Applications

The good news is that we identified 15 PYD programs that demonstrated efficacious outcomes on adolescent sexual and reproductive health. These programs intervened across development, including infancy, preschool, elementary, middle, and high school periods. All of these five periods provide youth with different developmental challenges, and it seems that PYD programming is never too early or too late to have an impact on children and adolescents.

The 15 PYD programs that were found to be effective should be disseminated more widely. This will require the development of manuals for curriculum, training and technical assistance for implementers, and training and technical assistance for program administrators so they can support and monitor program implementation. Procedures and program activities will need to be user-friendly and able to be implemented with fidelity by service providers, teachers, and volunteers. For many of these programs, this is likely to require additional development resources to make these tested, effective PYD programs ready for dissemination.

Replication and effectiveness trials of these programs should be conducted to enhance our confidence in the results of these well-conducted efficacy trials. Further, as suggested further in the text, it will be important for these trials to carefully describe the strategies used, how and by whom they were implemented, their effect on youth development constructs addressed as well as other mediating mechanisms described in the program's logic model, and measure a range of both positive and problem outcomes including sexual and reproductive health. Agencies that fund program dissemination should partner with agencies that provide research funding so that we learn the most from dissemination through replication and effectiveness trials. These programs have shown strong effects when implemented by program developers with strong interest in fidelity and outcome research. We need to understand how well they can be implemented in real-world settings and what effects they are likely to have. The development of research tools to monitor implementation fidelity, implementation progress and problems, and need for technical assistance will be required, as well as efficient research tools to track immediate, intermediate, and longer-term outcomes. We recommend that, where possible, analysis of effects on relevant subgroups be examined (e.g., culture, low income, high risk, gender, age, etc.). Finally, it will be important to measure characteristics of program implementers that are associated with strong implementation and outcomes.

These programs have the potential to make broad and significant impact on children and youth, thus rendering them more capable of meeting the challenges that lay before them in adulthood. We agree with Moore et al's [11] assessment that the best methodology should be used to test these programs because with "public funds being a treasured and increasingly rare commodity, there can be little argument that the public deserves the most definitive findings."

Finally, we agree with our expert panel that dissemination will require creative partnerships. Currently, there are many organizations serving youth, but few are implementing tested, effective PYD programs. Further, in addition to federal sources for PYD program funding such as CDC, SAMSHA (Substance Abuse and Mental Health Services Administration), 21st Century Schools, and even Temporary Assistance for Needy Families, education, family and community foundations support PYD program implementation (e.g., Grantmakers for Children, Youth, and Families). Dissemination of this program report to these agencies and foundations as well as convening meetings to discuss how these entities might support the implementation of tested, effective PYD programs through routine services and funding mechanisms is needed. These program funding agencies might also collaborate with CDC, NIH (National Institutes of Health), and foundations that support research to fund effectiveness trials. This type of blended funding has been recommended by the Society for Prevention Research to leverage investments in programs and research to produce policy-relevant scientific knowledge.

Recommendations for Research on Predictors

We were struck by the variety of studies that examined many of the youth development constructs. In some cases over 100 studies examined the relationship between a youth development construct and adolescent sexual and reproductive health. Further, there was sufficient evidence to suggest that many PYD constructs were longitudinally related to ASRH. PYD constructs with sufficient evidence of promotive or protective effects include family connectedness and parent adolescent communication, parental monitoring, school connectedness, cognitive and social competence, prosocial norms, spirituality, belief in the future, self-determination, and self-efficacy. Although there was sufficient evidence, more longitudinal research is needed to extend the findings reported to more ASRH behaviors and to examine differences by subgroup, including those defined by gender, race/ethnicity, and age.

We found no studies or only cross-sectional studies for a number of PYD constructs, including strength of character, positive emotions, and life satisfaction. Further, we found insufficient evidence for a number of youth development constructs, including peer and community connectedness, emotional competence, and clear and positive identity. We recommend that longitudinal research be undertaken to assess the ability of these constructs to predict ASRH and other important outcomes for youth. In general, more longitudinal evidence is needed for both categories of studies.

Despite evidence of the protective or promotive nature of many of the youth development constructs, with few relationships of risk indicated, there were many studies that did not find an effect within each subconstruct studied. Unfortunately, our review was hampered by unstandardized measurement of the youth development constructs and

ASRH outcomes. Without more standardization of measures it is difficult to reconcile differences in outcomes across studies. Additional work needs to be undertaken, including work on psychometrics and examination of the appropriateness of the measure for different populations. Consideration should be given to creating an electronic compendium on youth development constructs that would be complementary to *The Mental Measurement Yearbook* [12]. Once standardized measures are constructed, normative descriptive research could be conducted that would provide a picture of how these constructs change with development, providing a landscape of normal development.

Although measurement was less of a problem with the outcomes, not all studies measured the various ASRH outcomes. We believe that this is a missed opportunity. If existing studies measured a comprehensive range of ASRH and other adolescent health outcomes, it would also help in determining whether the youth development construct had the same or a different relationship with different outcomes across the same subjects, rather than having the differences in outcomes be confounded with between-study sample variation. Although current efforts are under way to “harmonize” measures across studies, this post hoc effort is still likely to be less than definitive. Development of standard measures of PYD constructs and examining their relationship across multiple youth outcomes within individual studies would immensely assist progress in longitudinal research on the ability of PYD constructs to predict these outcomes.

There is no doubt that more longitudinal research is needed. Little value is derived from the many cross-sectional studies that exist because it is not possible to establish causal order between potential predictors and outcomes. Although data from experimental research that manipulates predictors provide the strongest design to investigate causality, longitudinal research at least overcomes the threat to causality produced by lack of time order between predictor and outcome. Further, if longitudinal prediction is established, it makes experimental manipulation a more reasonable investment. Much can be gained by mining existing longitudinal datasets, which could provide even more evidence while awaiting efforts to standardize measures. Secondary analysis of existing datasets could quickly leverage our understanding of whether youth development constructs are determinants of ASRH, rather than waiting for future longitudinal studies.

This review of the ability of PYD constructs to predict ASRH should be extended to other outcomes. It is clear from the program review that PYD programs are producing effects across a range of outcomes for youth and young adults. The review of multiple outcomes could strengthen our understanding of the power of constructs to affect young people and enhance our understanding of unique and common PYD predictors for different outcomes. Further examining the impact of PYD constructs on multiple youth outcomes will help us in understanding the potential of PYD programs to affect a variety of outcomes and perhaps

strengthen the appeal of PYD programming. This approach has been taken for risk factors [13], leading researchers to measure multiple outcomes for prevention programs that address risk factors [14–17] which has, in part, led to the investment in prevention science [2].

The expert panel suggested that although we examined ASRH outcomes, most of these were outcomes were negative. The development of positive ASRH measures has received little attention. Positive sexual health measures will have to answer questions such as: What does it mean to have healthy sexual relationships? At what age are such relationships appropriate? While it may take many conversations at different levels to describe positive sexual health, we agree with our expert panel that it is time to begin the conversation.

For constructs that have been examined with multiple longitudinal studies, the next steps are to understand more about the strength of relationships. As measures of PYD concepts become more standardized and more youth outcomes are consistently measured across studies, meta-analysis would be a useful next step in this regard. Further, as discussed above, putting these constructs together theoretically so that we can understand distal and proximal predictors across development will greatly increase our understanding of the most important PYD constructs to address at different points in development. One drawback in the current review is that the study findings were often examined with other constructs in the predictive equation. This is likely to mask important distal predictors that may be mediated by the more proximal predictors. Research that examines indirect effects is very much needed.

Recommendations for Research on Interventions

This review also provides some suggestions for future intervention research. In terms of PYD constructs most frequently addressed among effective programs, the current review found overlap with the earlier review by Catalano et al [2,18]. Bonding, Competencies, Belief in the Future, and Self-determination were all addressed by more than half of the effective programs in both reviews. These constructs seem central to youth development programs. However, in both reviews these constructs were not differentially included in the effective versus the ineffective programs. Although we recognize that this is in part a problem of statistical power; nevertheless, our conclusion from this replicated evidence is that simply addressing these constructs is not a recipe for success. The programs that were effective may have combined them in unique ways, or the activities and method of intervention used to enhance these constructs in effective programs may have been better at changing individual attitudes and behaviors, thus being responsible for the effectiveness of these programs. If we are to discern why these programs are effective, it is clear that it will be important in the future for programs to define and assess implementation methods and change strategies, and that they also evaluate the impact on youth development constructs as

well as outcomes. One element of PYD programs that differentiated effective from ineffective programs was addressing the construct of recognition or supportive program atmosphere. The evidence suggests that this is an essential element of effective PYD interventions.

An important opportunity exists to encourage randomized trials of PYD programs already implemented by large youth-serving organizations such as National 4-H, Big Brothers/Big Sisters, Girl Scouts and Boy Scouts, YMCA and YWCA on ASRH outcomes. This would entail developing an assessment of the ability to evaluate whether these programs are characterized by relatively consistent delivery of similar components across geography and time. Without this standardization there is a risk that the program will vary considerably from site to site, making it impossible to sort out whether it is the program or the variations that are contributing to the outcomes achieved. In addition, trials might be mounted for other unevaluated PYD programs that address the PYD constructs with the most evidence for being determinants of ASRH. Again, investments should be made only for those programs with strong logic models, that address the most supported PYD constructs, and demonstrate that the program is evaluable. Finally, programs should incorporate other elements of our working definition, particularly have a supportive program atmosphere, provide recognition, and provide real-world opportunities and experiences.

In conclusion, we believe that it would be good to conduct research that tests the hypothesis we provided at the beginning of this commentary, that the combination of PYD programs and education on sexuality education may be a particularly powerful intervention. PYD programs may provide more positive developmental experiences, which in turn build support for other protective factors operating at the family, school, and community levels and an investment in listening to those delivering the skills and norms related to sexuality education. Research that compared each of these approaches alone and in combination with a no-treatment intervention would provide a test of our assumptions.

Summary

PYD has tremendous potential to promote not only ASRH but adolescent health more broadly. This review has identified 15 tested, effective models that have demonstrated impact on ASRH; most also affected other youth outcomes, and several produced long-lasting, sustainable effects. These model programs should be prepared for broader dissemination, replication, and effectiveness trials. Broader dissemination will entail investments in developing training, technical assistance, and monitoring models that will aid in ensuring and sustaining implementation with fidelity and tracking program adaptations in broad settings. Evaluations of existing national youth-serving organizations and existing PYD programs that are unevaluated should be encouraged if they are evaluable, address the most strongly supported PYD constructs, have a clearly developed logic model that

connects program elements to youth development constructs and outcomes, and program manuals are developed. Support is also provided here for the impact of youth development constructs on later ASRH outcomes, suggesting that new PYD programs, especially those targeting PYD constructs with longitudinal evidence of promotive or protective effects, should be developed and evaluated to identify long-term results.

There is much work to be done on examining the ability of PYD constructs to impact ASRH. While there is sufficient evidence for a number of PYD constructs, more longitudinal research is needed. We have argued here that investigation of existing longitudinal datasets may efficiently increase our understanding of the evidence for the promotive and protective effects of understudied constructs or those with mixed evidence. Further, there is a need for the development of standardized measures of PYD constructs and the development and use of measures of positive sexual and reproductive health outcomes. We also recommend that future studies compare the relative strength of the PYD constructs and devote more resources to understanding how these constructs work together to promote ASRH.

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