Child Trauma Research: Future Directions and Next Steps

Yo Jackson, Ph.D., ABPP, Professor and Senior Scientist, Clinical Child Psychology Program/Life Span Institute, University of Kansas

Research on youth exposure to trauma is most often directed toward the study of the rate, nature, and outcome of experiencing atypical events during development. Although what is considered atypical can vary, for the most part, researchers have focused their investigations on experiences like exposure to child maltreatment, parental psychopathology, parental incarceration, parental substance abuse, chronic physical illness, natural disasters/war, exposure to crime, and poverty. The result of this work in its simplest form, suggests two abiding findings: 1) the majority of youth are exposed to one or more trauma experiences during their development, and 2) exposure poses significant risk for maladjustment, yet not all youth exposed to trauma develop pathology. Recognizing trauma's variable impact on youth functioning and the process by which trauma exposure comes to exert that impact is critical to understanding youth well-being.

Current statistics on the rates of youth exposure to trauma suggest rather staggering numbers. The approach to cataloging the rates of exposure has been twofold. One, assessment of the experiences of youth in the general population, and two, assessment of youth trauma who are known to systems of care (i.e., clinical samples, youth in juvenile detention, youth in foster care, youth enrolled in state-funded relief programs). Although considered nonnormative or atypical events, in that they are not an expected part of childhood, large-scale studies indicate that in community samples, 40-70% of over 11,000 youth sampled report exposure to at least one trauma (Finklehor, Ormrod, & Turner, 2009) before the age of 18. For clinical samples, or youth who have contact with mental health professionals and are receiving treatment, 78% report exposure to poly-victimization (Jackson, et al.,

2016) or exposure to more than one traumatic event. For samples of youth involved with systems of care, recent evidence suggests that 89% of youth who have contact with the juvenile justice system for example, have a history of polyvictimization (Pane-Seifert, et al., 2016). The data regarding the impact of exposure on mental, behavioral, and physical health is also fairly staggering with the most compelling evidence coming from studies like the Adverse Childhood Experiences Survey (ACES, Felitti et al., 1998). ACES, a study of over 9,000 adults indicated that exposure to trauma during childhood has a dose-response relation, meaning that for every one additional trauma experienced, the risk for a range of negative health outcomes increased. Individuals who had, for example, four or more categories of childhood exposure, compared to those who had experienced none, had 4- to 12-fold increased health risks for alcoholism, drug abuse,

depression, and a suicide attempt as adults.

The Felitti study was a landmark for the field and for most part, research continues to document the relation between exposure and outcomes, with most efforts either expanding the kinds of trauma assessed across different kinds, or documenting the range of maladaptive outcomes believed to be related to early exposure. The relation between exposure to trauma in childhood and negative health outcomes is not, however, automatic and the study of resilience seeks to determine under what conditions do youth exposed to trauma progress typically and demonstrate expected developmental milestones across social, academic, physical, emotional, and behavioral health domains. The focus on resilience in youth has taken many forms over the years, progressing from small sample, cross-sectional studies to large-scale efforts that follow youth and their development over time. One such example of the latter is the SPARK project.

SPARK project.

The SPARK project – Studying Pathways to Adjustment and Resilience in Kids, is a 5-year, longitudinal study funded by the National Institutes of Health. The goal of the project was to provide first-time evidence of how characteristics of the trauma, the youth, and the youth's environment interacted to predict well-being across a number of outcomes. The project was based on over five pilot studies that helped determine and confirm the potential role of several possible protective factors for youth exposed to trauma (i.e., resources). Specifically, the project tested how constructs known as resources such as intelligence, internal

locus of control, social support, family environment, and context of the traumatic event (i.e., events between family members, events at school) operated to moderate the relation between exposure and adjustment and how one's appraisal or interpretation and one's coping style operated to mediate outcomes for youth exposed to trauma (see Figure 1). To ensure that the sample was exposed to significant trauma and to perhaps document the process for youth perhaps at the greatest risk for later pathology, the sample was composed entirely of youth in foster care who had a confirmed history of child abuse among many other traumatic events.

It is important to note, resilience is a process and is really not served well by cross-sectional study designs. Moreover, to test for resilience, research has to include multiple outcomes. It is not enough to show that some youth exposed to trauma are doing well in school, or have low levels of pathology, but instead to truly test resilience, one has to show reasonable functioning across a range of domains of functioning. To that end, the SPARK project assessed the mental, social, behavioral, emotional, and physical health, and academic functioning (grades and behavior in class) over time and across three-month time points. In keeping with methodological traditions in child psychology, multiple reporters are also required and the SPARK project included both youth and caregiver-report as well as teacher-report of the youths' functioning. The youth participants were ages 8-21 and all of the youth were in the custody of the state social service agency. Each youth had been in foster care at least 30 days in their current placement and

we included youth in both traditional foster homes and residential care (i.e., 2-parent families and large facilities designed to house large numbers of youth).

Recruitment.

To access youth in foster care for research, the SPARK staff had to create working relationships with a myriad of stakeholders. Social service agencies are tasked with the protection of youth in foster care, even from well-intentioned researchers and thus it was important to ensure that the SPARK staff learned the culture of social services and modeled their expectations for cooperation accordingly. Specifically, it was important for the SPARK project to be useful for the State's mission in regard to youth in care, to add value to the process of protecting youth in care and to show how collecting data on the youths' well-being, including their history of abuse would be helpful to social services workers who interacted with youth and families daily. Moreover, the SPARK project required not only that the State provide access to youth in foster care (i.e., disclosing their names and foster parent contact information), but also give a copy to the SPARK staff of each child's case file or the legal documentation of each child's maltreatment history. Up until the SPARK project began, the state of Missouri had never granted access to the legal case file to an outside organization. To do so would require a great deal of trust on the part of the state of Missouri and a great deal of planning and care regarding the retrieval and storage of the documents. Case files include names of victims and perpetrators and specific details regarding the child's abuse history and for some youth, the in-

formation in their case file amounts to evidence used in court proceedings, medical findings, and police reports; information whose access is managed by legal statute. The SPARK staff met with the director of the Division of Social Services for the State of Missouri as well as the director of the Children's Division in Jackson County, Missouri to develop a plan for accessing youth in care as well as their case files. The State had to individually consent for each of the over 500 youth in foster care that ultimately became participants in the SPARK project, photocopy over 5,000 documents from the case files of these youth, and provide up-to-date contact information for the current placement of each child (placements that changed somewhat frequently over the course of the project). The SPARK project staff also met with and developed relationships with case workers, circuit court judges, court-appointed special advocates, and foster parent associations to ensure the success of the project. Needless to say, the process was time and labor intensive.

The SPARK project also collected data from each youth's teacher via an online survey. Great care was required to ensure that with youth often shifting home placements, that the information on the youth's current school and teacher was correct. Moreover, youth in project attended schools in over 27 different school districts, requiring permission from each district and each relevant school in a given district. Grades for each youth are not kept in a central location, nor are teachers available year round, thus it was no small undertaking for the SPARK staff to coordinate finding grade

cards and teachers throughout the project.

Data collection.

Once youth and foster parents were located, informed about the study, and agreed to participate, the process of data collection began. The SPARK project collected data from the youth and foster parents on over 2,000 variables, requiring a three-hour data collection session. Data was collected with the use of the Audio Computer Assisted Self-Interview (ACASI) where items from questionnaires are provided on the screen of a laptop computer, read aloud to the respondent over headphones and responses are stored on the computer hard drive. It was important to ensure the well-being of the participants during the project so the staff worked to provide breaks, games, snacks and support for the participants during the data collection sessions. Child care was provided for any other youth in the family and locations for data collection were chosen based on close proximity to the foster parent's home to ensure greater ease of participation in the project. A three-part debriefing after data collection was completed and all youth were contacted 48 hours after data collection to safeguard against any negative effects of participating in the project.

Preliminary results.

Data collection for the SPARK project ended in 2015 and thus far, the staff have disseminated results in over 10 published studies and over 15 conference presentations. Although the test of the "big model" is still in progress, there are a few preliminary results that may be of interest. One, youth who demonstrate adaptive functioning (expected progress physically, mentally, emotionally) do not have

less exposure to trauma than those who fare poorly, nor are they better copers or more intelligent or have more social support. What is characteristic of youth who are faring well is that they tend to have average intelligence, have more teacher support than any other kinds of support, tend to interpret events in a balanced way (see trauma events as both good and bad), and they tend to cope with trauma by directly addressing the problem. Two, those who do fare poorly across a range of developmental outcomes tend to have more family support than any other kind, see their families of origin as supportive and cohesive, tend to interpret trauma in a rigid manner (i.e., events are either all good or all bad), and they tend to cope with trauma by either avoiding it or by enlisting the help of others. It is possible that seeking others in times of stress is a good thing, however, for youth in foster care, often the "others" that are available are not adequate problem solvers to be effective in the lives of their children.

What universities can do to help?

Before federal funding was granted, the mentoring I received was invaluable. Having other investigators available and willing to discuss the application process was critical to my success. After I received the first RO1 grant, having release time to build infrastructure for the project and providing me with assistance in areas where I had little prior experience (i.e., budgets, hiring staff) was especially helpful in ensuring the success of the project. Projects like SPARK are not possible without significant support from the university infrastructure for research administration system and centers like the Life Span Institute at the University of Kansas. The university and the research staff serve as a repository for what works in making large-scale research a reality and a training center for people to have vision for making impactful change in the lives of youth. The university has the capacity to assist investigators in building the systems (i.e., HIPPA compliant servers) that meet the needs of any project, like SPARK, where the most confidential, legal information can be easily stored, accessed and protected. This is not just a comfort to investigators, but a necessary element of any research institution that hopes to garner the trust of community and state agencies who provide direct access to special populations of youth.

The role of community-based research at universities has garnered greater and greater attention in higher education and in the wider public press. Research universities are under pressure to show their positive influence in the local community and the "stories" of university success in impacting change for the state and its residents become more and more what draws students to attend a given school. Early experiences in college can be important in laying the foundation for the development of the passion and energy that is required to effect change in the lives of youth over the longterm. University administrators may do well to expand their definitions of faculty productivity and student success to include activities that provide opportunities for students to get involved in projects that serve the broader community improvement. Education would come to mean then that students get something and give something back as the natural order of things in higher education. The important question for the future may be how universities can work to build the kind of community relationships that are necessary to create large-scale projects that facilitate learning and community good.

Unfortunately and fairly often, the university is viewed by community and state agencies as not relevant to the mission of helping others, but it does not have to be this way. One exception is the recent work my lab has done at The Children's Place (TCP), a community mental health center in Kansas City, MO. TCP serves the mental health needs of over 200 preschool-age youth and their families who have a history of child maltreatment. Working in partnership with KU, we created a practicum where graduate and undergraduate students work to assess treatment outcomes at the agency. With our data, TCP has been able to show local foundations how investment in their programming is effective for promoting youth adjustment, resulting in now four years of funding for several graduate students, and a data collection system that is now an integral part of their intake and discharge process. As a long-term result, TCP has changed some of their approaches to treatment, which for their clients, has led to less time in foster care, better parent-child relationships, improved youth mental health, and earlier readiness for preschool. The students learned real-world application of data collection techniques that actually serve a local agency that up until recently collected almost no information on their clients and their treatment outcomes. On a personal note, the success of the project has meant that I have been asked to speak to the Board of two of the primary mental health funders in Kansas City, MO about data collection processes and have been

asked to consult on another treatment evaluation program at another treatment facility for youth in the local area. It seems once community agencies understand that the university can provide support and a shared vision of improving services for youth, other agencies are sure to follow.

Future directions.

For supporting individual investigators, several suggestions seem relatively clear. One, it is important for universities to develop a culture of understanding of the heterogeneity of faculty within a given department. Some faculty members will never need grant funding to do good work, but some will, and even for those that do not need grants, it is possible that they could do even greater things if grant support was available. For those who seek grants, it is also important to identify a grant mentor, someone not necessarily in the same discipline, but who has the experience and time to provide regular support and guidance in navigating the ever-changing world of external funding systems. The peer review system at KU (where grant applications are sent to paid external reviewers) is a good start, but not likely sufficient for new investigators to learn what they need to know to be successful funded investigator.

Moreover, there is a sense that some new investigators have (in some ways due to bad advice from universities administrators) that getting grants has a lot to do with luck, funding climate or simply having the fortune of employing several self-driven passionate, researchers at a given university. It is possible that chance is at play, but it makes much more sense for universities to be proactive and

work to grow these "lucky" people. Although it is not clear if it is possible, but it would be a good idea to try to be systematic about the process, provide release time for writing grants, education about the application process, identifying funding mechanisms, and assisting faculty in building interdisciplinary teams who may have a better chance of addressing complicated research questions that can have significant application to the broader community.

It is also possible that for research administrators, it is time to rethink their role in the large-scale grant process. At most of the research meetings I hold with community organizations, especially when medical centers are involved, I find most medical administrators will make time to be present. That is, administration on the community-side of research is often very interested in participating in the research development process, but I cannot say I have found too many university administrators who see a role for themselves at these meetings. Perhaps investigators need to be more proactive as well and invite research administrators to community meetings so they can see first-hand how important their interest is to the motivation of others (investigators and community members alike) to be a part of a project.

Besides educating students, universities have to want to be known for addressing some type of problem. Much like the study of resilience in youth, most intractable social problems are complicated and multi-determined. Child maltreatment, for example is non-linear, as it does not have a one-to-one cause and effect that is easily identified. As a result, children exposed to child maltreatment

may end up with some or many or no mental health problems later in life. It is unlikely that any one lab will determine under what circumstances youth will end up in the some or many or no mental health problem pathway, thus the need to collaborate across labs and institutions is vital to untangling the effects of trauma. Exposure to trauma is one of many "wicked problems" universities across the country are committed to addressing and it is important for everyone's future success that universities see their important role in promoting success and manifesting change for the community.

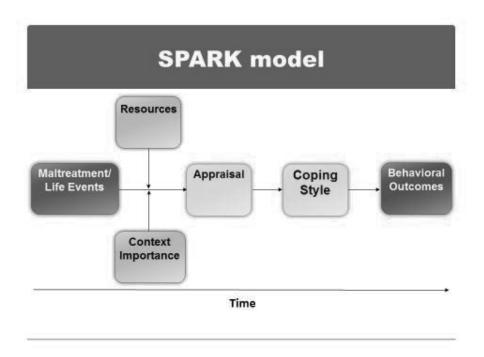


Figure 1: SPARK Model of resilience in youth exposed to trauma

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