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Abstract

Empowerment-based strategies have become widely used method to address health inequities and promote social change. Few researchers, however, have tested theoretical models of empowerment, including multidimensional, higher-order models. We test empirically a multidimensional, higher-order model of psychological empowerment (PE), guided by Zimmerman's (1995) conceptual framework including three components of PE: intrapersonal, interactional and behavioral. We also investigate if PE is associated with positive and negative outcomes among youth. The sample included 367 middle school youth aged 11-16 ($M = 12.71$; $SD = 0.91$); 60% female, 32% ($n = 117$) white youth, 46% ($n = 170$) African-American youth, and 22% ($n = 80$) identifying as mixed race, Asian-American, Latino, Native American or other ethnic/racial group; schools reported 61-75% free/reduced lunch students. Our results indicated that each of the latent factors for the three PE components demonstrate a good fit with the data. Our results also indicated that these components loaded on to a higher-order PE factor ($X^2=32.68$, $df: 22$, $p=0.07$; $RMSEA: 0.04$, $95\% CI: 0.00, 0.06$; $CFI: 0.99$). We found that the second order PE factor was negatively associated with aggressive behavior and positively associated with prosocial engagement. Our results suggest that empowerment-focused programs would benefit from incorporating components addressing how youth think about themselves in relation to their social contexts (intrapersonal), understanding social and material resources needed to achieve specific goals (interactional) and actions taken to influence outcomes (behavioral). Our results also suggest that integrating the three components and promoting PE may help increase likelihood of positive behaviors (e.g., prosocial involvement); we did not find an association between PE and aggressive behavior. Implications and future directions for empowerment research are discussed.

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Introduction

Empowerment theory has focused our attention on promoting strengths, resources and wellness rather than remediating weakness, deficits and illness for a variety of social issues (Rappaport, 1987; Zimmerman, 2000). Empowerment theory has been applied to community (Aiyer, Zimmerman, Morrel-Samuels, & Reischl, 2015), organizational (Peterson & Zimmerman, 2004), and individual levels of analysis (Zimmerman, 1995). Empowerment-based strategies have become widely used method to address health inequities and promote social change (Morton, Montgomery, & Montgomery, 2011). Although empowerment-based approaches address a range of populations and outcomes, one notable focus is youth (Wallerstein, 2006). Youth empowerment approaches have focused on participatory, youth-driven processes to help build skills, develop prosocial relationships and put skills into practice with appropriate adult guidance (Ozer & Douglas, 2013; Zimmerman, Stewart, Morrel-Samuels, Franzen, & Reischl, 2011). Researchers, funders and practitioners have supported youth empowerment as a promising strategy to help support healthy development and reduce risk of negative outcomes (Morton et al., 2011; Ozer, Newlan, Douglas, & Hubbard, 2013). Theoretical models of empowerment, in particular psychological empowerment, are well developed (Christens, 2012; Peterson, 2014; Zimmerman, 1995). Few researchers, however, have tested theoretical models of empowerment, including multidimensional, higher-order models (Christens, 2012). Moreover, although we expect empowerment-based approaches to have positive effects, few researchers have investigated the relationship between empowerment and behavioral outcomes.

Psychological empowerment (PE) refers to empowerment at the individual level of analysis (Zimmerman, 1995). Although focused at the individual level, PE is inherently ecological in nature and is influenced by, and interdependent with, other levels of analysis including organizational and community levels (Zimmerman, 2000). PE includes empowered processes and outcomes. Empowering processes focus on the experiences that provide individuals with an opportunity to exert control over their lives and those decisions that influence their life circumstances (Zimmerman, 1995). In contrast, empowered outcomes refer to the effects of engaging in empowering processes (Zimmerman, 2000). PE outcomes vary in their presentation because no single measure can fully capture PE in all populations; PE manifests differently for different people in specific contexts (Zimmerman, 2000). One challenge to using an empowerment framework is measurement of PE. Measuring empowered outcomes associated with various components of PE helps us investigate the mechanisms through which empowering processes may have an effect on health or other outcomes. A crucial next step in theory development and application is to test empirically theoretical models of PE as a

multidimensional, higher-order construct and if the higher-order construct is associated with health and behavioral outcomes (Peterson, 2014).

Zimmerman (1995) proposed a conceptual framework of psychological empowerment (PE) that includes three components: intrapersonal, interactional and behavioral which serves a useful guide to identify empowered outcomes and use these outcomes to test empirically a multidimensional higher-order PE model.

Psychological Empowerment

Intrapersonal Component

The intrapersonal component of PE refers to how individuals think about themselves in relation to their connections to their social contexts. Intrapersonal empowerment focuses on self-perceptions that provide people with the initiative, confidence and motivation to engage in behaviors aimed at achieving desired outcomes (Strecher, McEvoy DeVellis, Becker, & Rosenstock, 1986). Among youth, the intrapersonal component of PE includes outcomes that are indicative of a person's confidence in their capability to make change, including self-esteem, leadership efficacy, and civic efficacy (Zimmerman, 1990; Zimmerman & Rappaport, 1988). Researchers have frequently identified self-esteem as a core component of youth empowerment programs (Roth & Brooks-Gunn, 2003). Youth with higher levels of self-esteem may be more likely to believe in their ability to exert control and create positive change. Leadership efficacy is an important asset contributing to healthy development that may also influence how youth think about themselves and their ability to influence their environment (Scales & Benson, 2000). Researchers suggest that developing leadership skills is associated with beliefs in one's capacity to institute change (Worker, 2014). Finally, civic efficacy also contributes to youths' beliefs in their capability to influence their context. Young people who feel they can make positive changes within their community will be more likely to engage in behaviors that result in meaningful contributions and positive community change. Thus, when youth demonstrate positive self-esteem, leadership efficacy and civic efficacy they may be more likely to develop confidence in their ability to make positive changes in their community.

Interactional Component

The interactional component of PE refers to understanding the social and capital resources that are needed to achieve one's goals. Developing an understanding of resources available in a given context is a critical aspect of a person's ability to exert control effectively over his/her environment. The interactional component of PE among youth may include supportive relationships with adult mentors, having adults as community resources and resource mobilization. Adults are vital to help youth achieve their goals when it is a mutually

respectful partnership (Wong, Zimmerman, & Parker, 2010). Through supportive relationships, including emotional (fostering feelings of comfort and being respected and loved) and cognitive (information, knowledge and advice) support, adult mentors help youth develop the skills necessary to solve problems, cope with stress, and analyze their context (Jacobson, 1986). Recognizing and utilizing adults as community resources is another aspect of the interactional component of PE. For youth, social relationships with adults are a necessary resource for developing a critical awareness of their environments. When youth feel they have adults available to them to provide guidance in the form of information, knowledge and advice (cognitive support) and/or goods and services needed (instrumental support) in solving problems in the community, neighborhoods or schools, without dominating the interaction, it facilitates developing critical awareness of and making changes in their environment (Jacobson, 1986; Jennings, Parra-Medina, Hilfinger-Messias, & McLoughlin, 2008). Finally, learning how to effectively mobilize and manage resources is essential to achieving one's goals (Zimmerman et al., 2011). Thus, the ability to analyze critically the resources necessary to achieve one's goals is an essential aspect of the interactional component of PE. The interactional component of PE therefore provides a vital cognitive bridge between perceived mastery and control (intrapersonal empowerment) and taking action to exert control (behavioral empowerment).

Behavioral Component

The behavioral component of PE refers to actions taken to influence outcomes. Among youth, this may include engaging in leadership behavior and in community- and school-focused change. Participation in school and community change is a critical part of behavioral empowerment. When youth develop the confidence in themselves to make a difference in their environment, and the critical thinking skills and adult resources needed to understand their social and physical environment and how to influence it, they can integrate these components to make meaningful change (Zimmerman, 2000). Thus, the behavioral component of PE refers to youth engaging in opportunities or making opportunities to influence their environment, particularly school and community contexts that affect their development (Garbarino, 1985).

Guided by Zimmerman's theoretical model of PE, however, the three components are distinct but related components of a single theoretical concept (Law, Wong, & Mobley, 1998). Consequently, we expect PE to manifest collectively through beliefs in one's capability to exert influence (intrapersonal component), understanding of how the system works (interactional component) and engagement in behaviors to exert control (behavioral component) (Zimmerman, 1995). We also expect that a construct of PE, manifest by these three components, will have a positive effect on youth development.

Psychological Empowerment and Youth Outcomes

Although empowerment strategies may benefit all youth, this approach may be especially useful for youth experiencing fundamental causes of health disparities (e.g., growing up in low income families and disadvantaged neighborhoods). Empowering youth with limited access to developmental resources may help them develop the skills to “analyze their situation and take action to transform themselves and their conditions” (Bernard, 2002, p. 12). Engaging in activities that support outcomes associated with PE may provide opportunities that these youth might not otherwise experience and help to offset risks from living in a high-risk environment (Fredricks & Simpkins, 2012).

How individuals think about themselves and their capacity to influence a given context (intrapersonal component) may influence the risk of engaging in harmful behaviors and the possibility for positive development. Adolescents who think poorly of themselves (e.g., low self-esteem, helplessness) are more likely to identify with a negative social identity and engage in risky and detrimental behaviors such as violence (Leather, 2009). Possessing a sense of competence and mastery, including in one’s ability to demonstrate leadership skills and make positive changes in the community, are vital contributions to well-being, promoting positive (prosocial) behaviors and reducing risk of negative behaviors (Eccles & Gootman, 2002). Thus, we expect that experiencing outcomes associated with the intrapersonal component of PE will increase the likelihood of engaging in prosocial behaviors and reduce risk of engaging in detrimental behaviors such as violence.

PE outcomes associated with the interactional component may also be associated with youth outcomes. One interactional component is having an adult mentor. Mentoring relationships with adults contribute to the interactional component of PE through helping youth understand their contexts, including norms, values and strategies to achieve desired goals (Zimmerman, 1995). These supportive mentoring relationships are associated with increased likelihood that youth will engage in prosocial behaviors (Hurd, Sánchez, Zimmerman, & Caldwell, 2012). Mentors may also help protect against negative behaviors (Hurd & Zimmerman, 2010). Researchers have found, for example, that youth who have adult mentors are less likely to engage in violence (Aspy et al., 2004). Thus, we expect that youth experiencing the interactional component of PE will be more likely to demonstrate positive (prosocial) behaviors and less likely to engage in externalizing behaviors.

The behavioral component of PE, including school and community engagement and leadership behavior, may also be associated with youth outcomes. Taking action and/or becoming engaged, even if the desired goals are not achieved, may have a positive influence

on youth development (Phillips, Berg, Rodriguez, & Morgan, 2010). Researchers suggest that youth who report they are engaged in school, for example, are more likely to experience positive outcomes and less likely to engage in negative behaviors such as violence (Eccles, Barber, Stone, & Hunt, 2003). Similarly, community engagement may also reduce the likelihood of violence and promote the development of positive outcomes such as prosocial behaviors (Zeldin, 2004).

Guided by Zimmerman's model of PE, we posit that in order to test the theory and contribute to the evidence base for empowerment and its effects, we need to operationalize PE as a multicomponent construct. Yet, most researchers have examined the association between youth outcomes with each PE component separately. We propose that youth truly experience PE when the three inter-related components operate collectively. As a result, we investigate the relationship with youth outcomes operationalizing PE as a multidimensional, higher-order construct.

Current Study

In the current study we assess the factor structure and construct validity of a measure of PE for middle school aged youth. First, we assess the factor structure for the three distinct components of PE (i.e., can PE be modeled as a multidimensional construct). Next, we test if these components form a higher-order factor consistent with the three component model suggested by Zimmerman (1995). Finally, we test the validity of the measures by examining their association with externalizing behaviors and prosocial behaviors. We expect that the PE outcomes associated with intrapersonal, interactional and behavioral components will load on to their respective factors. We also expect shared variance among the three factors and that these will load onto a higher-order PE factor. Finally, we expect that the higher-order PE factor will be associated with less aggression and more prosocial behavior.

Method

Study Context

The participants in this current study are middle-school students from Genesee County, MI. The transition from a manufacturing-based to service-based economy has been difficult for the residents of Genesee County, including its young people. The city of Flint, for example, lost over 70,000 auto-industry jobs and nearly half its population over the last 40 years. Like other communities facing declining populations and extreme economic and health challenges, Flint and nearby areas experience high rates of crime and violence. The County has experienced higher unemployment levels compared to state and national averages for over a decade

(Bureau of Labor Statistics, 2014) and Flint has been ranked as one of the most violent cities in the U.S. with a population over 100,000 (Weigley, Hess, & Sauter, 2013).

Sample

We recruited middle-school youth who were signed up for after school programming. They were recruited from six middle schools with funded afterschool programs in the City of Flint and Genesee County. The sample included 367 middle school youth aged 11-16 ($M = 12.71$; $SD = 0.91$); 60% were female. The sample included 32% ($n = 117$) white youth, 46% ($n = 170$) African-American youth, with the remaining youth (22%; $n = 80$) identifying as mixed race, Asian-American, Latino, Native American or other ethnic/racial group. Fourteen percent ($n = 60$) of youth were from Flint City schools with the rest from adjacent school districts in the county (none came from more rural districts). The proportion of students participating in free/reduced lunch ranged from 61-75% across the six schools.

Procedures

The respondents in this study were participants in a longitudinal study evaluating the developmental outcomes of the Youth Empowerment Solutions (YES) afterschool program (Kretman, Zimmerman, Morrel-Samuels, & Hudson, 2009). After participants completed a pretest (baseline) survey, they were randomly assigned to the YES program or the usual afterschool program. Parent consent and youth assent as approved by the University IRB were obtained before completion of the pretest questionnaire and assignment to conditions. For this study we used the pretest (baseline) survey data, collected before any exposure to the YES program or the usual afterschool programs. The participating youth completed the baseline questionnaire during their after school time with group administration.

Measures

Psychological empowerment components

Intrapersonal component. The intrapersonal component included measures for leadership efficacy, civic efficacy and self-esteem. Leadership efficacy was a 3-item scale adapted from Zimmerman and Zahniser (1991) that included 5-point Likert items (1 = Strongly Disagree to 5 = Strongly Agree) including being a leader in groups, organizing people to get things done and getting others to follow one's ideas ($\alpha = 0.67$). We measured civic efficacy using 3 items, also using a 5-point Likert rating scales, asking participants if they felt they could be involved in community change, make their community better by helping others and doing things to make the world better ($\alpha = .81$). Participants also used 5-point Likert scales to indicate their level of agreement with 5 statements using items from the Rosenberg self-esteem scale (Rosenberg, 1965), including "I take a positive attitude toward myself," "On the whole, I am

satisfied with myself,” “I feel that I am a person of worth,” “I am able to do things as well as most other people,” and “I feel I do not have much to be proud of (reverse coded)” ($\alpha = .68$).

Interactional component. The interactional component included measures for adult mentorship, adult resources, and resource mobilization. We assessed social support from mentoring relationships by asking about frequency of received emotional and cognitive support using 5 items (Vinokur & Van Ryn, 1993). Participants indicated how often (1 = Once a year or less to 5 = Every day) a mentor engaged in behaviors such as encouragement, providing useful information and advice, showing he/she cares about you as a person, listens when you need to talk, and does things for you when you need help ($\alpha=0.87$). Our measure of adults as community resources included 3 items developed for this study assessing how many adults young people knew who could potentially provide cognitive and/or instrumental support in helping them with solve neighborhood, school, and city/town problems using a 5-point scale (1 = None to 5 = Four or more) ($\alpha = 0.66$). We measured resource mobilization with a measure developed for this study that included 4 items rated from 1 (Strongly Disagree) to 5 (Strongly Agree): “Working with others on a community project makes the project better,” “I know what things are needed to do a community project,” “Adults can help me do a community project,” and “I can find things in my community to help make my community better” ($\alpha = 0.78$).

Behavioral component. The behavioral component included measures for leadership behavior, and community and school engagement. Leadership behaviors included 3 items ($\alpha=0.76$) adapted from Zimmerman and Zahniser (1991) that asked participants how often they engaged in behaviors such as being a leader in groups, organizing people to get things done and getting others to follow one’s ideas (from 1 = Never to 5 = Always). Community and school engagement each included 4 items that used a 5-point Likert scale (1 Strongly Disagree to 5 = Strongly Agree), asking participants participating in neighborhood/school activities, doing volunteer activities to help with school/neighborhood, encouraging others to do things to help improve their school/neighborhood, and helping people in need in their neighborhood/school (Community: $\alpha=0.85$, School: $\alpha=0.79$). These measures were adapted from the U.S. Department of Education community engagement scale (U.S. DOE, 2004).

Youth Outcomes

Aggressive behavior. We measured aggressive behavior using 10 items adapted from the California HealthyKids survey (California Department of Education, 2004). Items addressed both physical and psychological aggression. Participants were asked how often in the past month (from 0 = None to 5 = 4 or more times) they engaged in behaviors including yelling at teachers, yelling at other youth, pushing or shoving, breaking others’ things intentionally, getting

into physical fights, intentional peer exclusion, ignoring someone, spreading mean rumors or lies, and teasing. We calculated the aggressive behavior score as the mean of these ten items ($\alpha = 0.89$).

Prosocial behavior. We measured prosocial behavior using 5 items adapted from Goodman (2001), asking participants how much they agreed with statements from 1 = Strongly disagree to 5 = Strongly agree: “I try to be nice to people,” “I usually share with others,” “I am helpful if someone is hurt, upset or feeling ill,” “I am kind to younger children,” and “I often offer to help others”. We calculated the prosocial behaviors score as the mean of these five items ($\alpha = 0.80$).

Sociodemographic variables. Sociodemographic variables included sex, age and race/ethnicity. Sex was coded 0 = female and 1 = male). We calculated age from the reported month and year of birth. Racial/ethnicity was a self-reported measure in which participants could choose one or more racial/ethnic categories including Black, White, American Indian/Alaska Native, Asian, Native Hawaiian or Pacific Islander and Other (not listed). For the purposes of this study, we created 2 categories: White and Non-white; We combined the remaining racial/ethnic groups to collectively represent racial/ethnic groups at higher risk of marginalization/societal discrimination in US society.

Data Analytic Strategy

We used structural equation modeling (SEM) to test measurement and structural models of psychological empowerment guided by Zimmerman (1995, 2000) using MPlus 7.3 (Múthen & Múthen). We first used confirmatory factor analysis (CFA) to examine the measurement model for psychological empowerment. In order to investigate evidence of discriminant validity for the PE components, we first compared a measurement model of PE in which all of the PE-outcome indicators loaded onto a single latent factor and a measurement model in which empowering outcome-related indicators each loaded on to their respective components: intrapersonal, interactional and behavioral. We made adjustments to the measurement model in order to achieve satisfactory fit with the data as guided by fit indices, indicator (standardized) loadings (e.g., $>.20$ per Kline, 2011) and substantive theory. We then explored if a common PE factor underlay the intrapersonal, interactional and behavioral components of PE.

Following investigation of the measurement model, we examined the structural regression model investigating relationships between the PE (Figure 1) and youth outcomes, including aggressive prosocial behaviors. Although some researchers suggest including all possibly (statistically and conceptually) relevant variables in the model to control for possible confounding of variable clusters (Greenland, Robins, & Pearl, 1999), this may result in a model

that is overfit, with numerically unstable estimates (Hosmer, Lemeshow, & Sturdivant, 2013). Consequently, we chose sociodemographic variables for inclusion as control variables based on statistical and substantive contributions to the overall model. We evaluated model fit using X^2 , Comparative Fit Index (CFI) values and Standardized Root Mean-Square Error of Approximation (RMSEA) with the associated 90% confidence interval. We compared nested models using the X^2 difference test.

Missing Data

We used FIML to address missing data. FIML does not impute values into new datasets, but rather estimates parameters based on available complete data and implied values for missing data conditioned on observed data (Schlomer, Bauman, & Card, 2010).

Results

Descriptive Statistics

Descriptive statistics including covariances, means and standard deviations for continuous, and proportions for categorical study variables are presented in Table 1. All scales that served as indicators for empowerment components demonstrated acceptable skewness.

Missing Data

Two percent or less of data were missing on each of the study variables except mentor social support; mentor social support was missing data on 89 cases (24%). We did not find differences (at $p > .05$) in the outcome variables, prosocial behavior and aggressive behavior between those missing on mentor social support and not missing. We also did not find differences by race/ethnicity, sex or age between those missing on mentor social support and not missing. Although no test can provide definitive evidence regarding missing data assumptions, our results indicate that the MAR (missing at random) assumption is plausible. Methods such as FIML are appropriate for data with MAR assumption and yield less biased estimates and preferred over deletion approaches or nonstochastic imputation (Enders, 2010; Kline, 2014).

Measurement models

Measurement model results are presented in Table 2. Our first measurement model, a single factor PE model consisting of the nine outcome indicators, was a marginal fit with the data (results not shown). Modification indices suggested correlating errors between two sets of indicators to improve fit. As this was consistent with our theory about the interdependence of empowered outcomes, we added these correlations to the model specification. This improved model fit ($X^2_D=82.48$, $df_D=2$, $p<0.0001$) (see Model 1 fit indices in Table 2) and we maintained these correlations in subsequent models. Our second measurement model was the three

component PE factor model. Our results indicated that this model was a good fit with the data. Furthermore, we found that this model was a significantly better fit than the single factor model where all the items loaded on one factor ($\chi^2_{D=14.81}$, $df_D=3$, $p<0.005$). In addition, the χ^2 for the three component model was not significant. This results provided evidence of discriminant validity for the three components of PE versus 9 items loading onto a single factor. In the three factor model, we found notable correlations between the factors (0.83-0.92), suggesting a significant amount of shared variance among these distinct factors, providing preliminary evidence for a higher-order factor. In the third measurement model, we examined if the first-order intrapersonal, interactional and behavioral component factors loaded onto a higher-order psychological empowerment factor. A model with the 3 correlated first-order factors (Model 2) is statistically equivalent to a model with 3 first-order and a higher-order factor (Model 3) (Geiser, 2013). Thus the fit statistics for Models 2 and 3 are the same. Results from Model 3, however, suggest that the first-order latent factors significantly load on the higher-order factor. Furthermore, the addition of a higher-order factor resulted in an admissible solution and the higher-order factor is consistent with our guiding theoretical framework. Consequently, our measurement model moving forward included the higher-order PE factor.

Structural model

Following an acceptable measurement model, we examined relationships between PE and youth outcomes, specifically aggressive behavior and prosocial behavior. Model results indicated an acceptable fit with the data (results not shown). In our final model, Model 4, we included sociodemographic covariates for our youth outcomes and PE components (model fit provided in Table 2, models results are provided in Table 3). Figure 1 includes measurement and structural models for the final model with standardized parameter estimates. After controlling for sociodemographic factors, PE was associated with more prosocial behavior. We did not find an association between PE and aggressive behavior. Following these model results, we investigated correlation residual to explore additional model diagnostics. We found that the majority of our correlation residuals were $< |.10|$, the general rule of thumb in SEM literature (Kline, 2014). We did find, however, that our model did not explain some sample correlations well, including the following: adults as community resources and mentor social support, aggressive behavior and age; age and community engagement and school engagement.

Discussion

In the current study, we tested outcomes informed by Zimmerman's (1995; 2000) model of psychological empowerment (PE) including those associated with intrapersonal, interactional and behavioral components. We examined a measurement model of empowered outcomes and

if these outcomes represent three distinct components of PE. We also investigated if these components collectively reflect a single, higher-order PE factor. Finally, we explored if PE was associated with reducing risk of negative outcomes (aggression) and promoting positive outcomes (prosocial behavior) among youth.

Our results support Zimmerman's (1995; 2000) model of PE. We found evidence for discriminant validity for the three components of psychological empowerment: intrapersonal, interactional and behavioral. Our results indicate that, although related, the intrapersonal, interactional and behavioral factors represent three distinct components of psychological empowerment. This suggests that empowered outcomes are indicative of a young person's capability to influence a given context (intrapersonal), understanding of the larger system and relationships within that system (interactional) and efforts to influence change in that context (behavioral component) (Zimmerman, 1995).

Our results also indicate that the three hypothesized components support the notion that outcomes indicative of the intrapersonal, interactional and behavioral components of PE are distinct, but inter-related *and*, collectively represent an underlying higher-order construct that can be interpreted as psychological empowerment among early adolescents. Thus, our results provide support for PE as a higher-order, multidimensional construct. Through incorporating developmental- and context-specific empowerment outcomes associated with PE components among youth living in a low resource community, our results support Zimmerman's model of PE and provide support for the development of empowerment-focused indicators as a way to measure PE among specific populations. The associations of PE in hypothesized directions for other adolescent outcomes both support the construct validity of our measure and suggest that efforts to enhance the PE through collectively promoting intrapersonal, interactional and behavioral components, may be an effective strategy for enhancing positive development.

We did not find a relationship between PE and aggressive behavior. Although this was contrary to our a priori hypothesis, this is consistent with what other researchers have found regarding the complex, nuanced relationship between positive developmental factors and negative behaviors. Researchers suggest that, during adolescence, some engagement in risk behavior may be expected, even when exposed to promotive factors (Phelps et al., 2007). In addition, risk behaviors may have constructive functions in peer social groups, such as peer acceptance and involvement (Schulenberg & Maggs, 2002).

Our results are useful for informing interventions in multiple ways. First, empowerment-focused interventions may need to consider ways to incorporate processes that focus on all three components of PE as suggested by Zimmerman (1995). Thus, empowerment-focused

programs would benefit from incorporating components that address how youth think about themselves in relation to their connections with social contexts (intrapersonal), their understanding of the social and material resources that are needed to achieve specific goals (interactional) and actions taken to influence outcomes (behavioral). In addition, our results suggest that programs may benefit from creating strategies that help youth integrate feelings of control and competence, efforts to help youth think critically about their social and physical contexts, and opportunities to take action in order to promote PE and, ultimately, healthy development. Our results also suggest that empowerment-focused approaches may benefit from incorporating content addressing developmental and social-contextual factors that influence both prosocial and antisocial behaviors.

Future Directions in Empowerment Theory Research

Christens (2012) posits a model of PE that includes a relational component which focuses on collaborative competence, bridging social divisions, network mobilization, and facilitating empowerment of others. Although we did not include measures specific to these four constructs, our interactional component does include measures associated with relationships with adults and mobilization of resources that includes several items about working with others to achieve goals. Nevertheless, future research that teases apart what we assessed as the interactional component to distinguish between cognitive aspects of this component and relational aspects of this component as suggested by Christens (2012) would be useful. Langhout, Collins and Ellison (2014), for example, studied relational empowerment among elementary school students involved in a youth action research project. They found that the youths' involvement in the project contributed to the relational aspects of PE as hypothesized by Christens (2012).

In addition, we intentionally focused on the individual level of analysis for assessing PE because we focused on behavioral outcomes. Nevertheless, researchers have applied a similar model of empowerment to organizational (Peterson & Zimmerman, 2004) and community empowerment (Aiyer et al., 2015; Maton, 2008). Peterson & Zimmerman (2004) applied the same three-component model used in the present study to an organizational context. They focused on organizational characteristics associated with both empowering processes and variables that may be used to operationalize empowered outcomes for organizations. They translated the three components in conceptual framework used in this study to be intraorganizational, interorganizational, and extraorganizational components of empowerment theory. Aiyer et al. (2015) also applied the same three components of empowerment theory to suggest that an empowered community includes intracommunity, interactional, and behavioral

components. The intracommunity component includes social relationships among neighborhood residents akin to the relational component of PE. The interactional component applied to community level of analysis includes both social capital and social control and concomitant social resources to maintain positive social connections within a neighborhood or community. Aiyer et al. (2015) suggest that the behavioral component applied at the community level of analysis involves collective action and association involvement. The key to the behavioral component is the collaborative nature of social actions to improve neighborhoods, influence policy, or simply to create inclusive and supportive neighborhoods. Maton (2008) identified similar characteristics of settings that create empowering processes for the collective well-being, but he did not focus as much on measurement issues.

Limitations

Several limitations of this study should be noted. First, our study was located in one urban/suburban area so results may not be generalizable to other community settings. Yet, our study included a diverse group of youth with varied racial/ethnic and socioeconomic backgrounds. Second, our study did not examine invariance of PE over time. While the purpose of the current study was to investigate a measurement model of PE using developmental- and context-specific empowered outcomes, a useful next step in this research will be to investigate longitudinal measurement invariance. Third, all youth in the current study were participating in an afterschool program. Thus, we may not be able to generalize to all middle school youth. Yet, we may have captured an important group because many of the youth participating in federally-funded and other after school, youth-development programs may also be those who would derive the greatest benefit from participating in empowerment-focused interventions. Data for the analyses were collected through youth self-reports, and the assessments could not be cross-validated (e.g., comparing aggression with school discipline records). Yet, researchers have found that self-report measures addressing behaviors such as violence are generally valid and reliable for youth, are able to directly reflect youths' experiences and widely used to assess adolescent outcomes (Sieving et al., 2001; Thompson et al., 2007). Fourth, the model fit statistics suggested our structural model did not fit the data as well as the measurement model. Yet, researchers caution against adhering to strict rules regarding model fit for SEM, in particular with approximate fit indices such as CFI and RMSEA (Kline, 2014; Raykov & Marcoulides, 2006); they instead recommend taking a comprehensive approach to evaluating fit statistics and a strong theoretical grounding for model specification. Furthermore, although the relative fit diminished when including outcome variables, we feel this was an important step in investigating the construct validity for our measure of empowerment. Fifth, this study did not

focus on factors that may moderate the relationship between PE and outcomes, such as gender. Future research that focuses on factors that influence the relationship between PE and youth outcomes may help elucidate possible differences in how PE operates. Fifth, although the current study provides an important step in investigating measures of PE and its association with outcomes, we did not explore population heterogeneity. An important next step may include CFA models with covariates (e.g., MIMIC: multiple indicator multiple causes model) to understand possible population heterogeneity and measurement invariance. Finally, researchers have debated how to best model the multidimensional nature of PE, including modeling different components as causes of PE versus components of PE as different manifestations of the same theoretical construct (Peterson, 2014). Yet, our study makes an important contribution to examining empirically theoretical models of PE and provides support for Zimmerman's (1995) model.

Conclusions

Limitations notwithstanding, results provide convincing evidence for a three component model of PE for youth, and that PE is relevant for predicting outcomes associated with youth development. Yet, it is also necessary to note that this measure may not be applicable to all middle-school youth. Zimmerman (1995) warned against establishing universal measures of PE and suggested that such measures need to pay particular attention to the population and context being studied. Thus, our measure may be particularly useful for studying middle school aged youth from working class families. It may also provide some initial ideas for the types of relevant indicators for the three components of PE that need to be assessed in order to represent PE adequately. The measures analyzed in this study may also be useful as a starting point for developing more population- and context-specific measures in the future.

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Table 1. Covariances, means and standard deviations for continuous, proportions for categorical study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Leadership efficacy	.50														
Civic efficacy	.24	.59													
Self esteem	.10	.14	.49												
Social support-mentors	.15	.21	.11	.96											
Adults- community resources	.23	.35	.20	.41	1.54										
Resource mobilization	.20	.36	.15	.22	.34	.54									
Leadership behavior	.35	.19	.17	.23	.29	.19	.85								
Community engagement	.20	.31	.18	.27	.43	.34	.32	1.00							
School engagement	.23	.28	.17	.23	.33	.25	.29	.40	.63						
Aggressive behavior	-.02	-.17	-.12	.00	.07	-.09	.05	-.09	-.11	.90					
Prosocial behavior	.12	.21	.15	.09	.16	.23	.14	.31	.27	-.23	.44				
Age	.02	-.11	-.08	-.09	-.16	-.07	-.05	.13	-.17	.17	-.11	.82			
Other race/ethnicity	.00	.01	.01	.01	.01	.02	-.01	.02	.01	-.01	.01	-.01	.03		
Black	.02	-.05	.01	-.02	-.06	-.03	.051	-.05	-.07	.10	.05	.07	-.01	0.249	
Male	-.03	-.04	.00	.00	-.10	-.05	-.02	-.03	-.04	-.03	-.02	.03	-.01	-0.012	0.24
Mean/proportion	3.85	4.15	3.98	4.12	3.24	3.97	3.34	3.26	3.87	4.23	1.91	12.71	22%	46%	40%
Standard deviation	.71	.77	.70	.97	1.24	.74	.92	1.00	.79	.66	.95	.91			
Skewness	-.84	-1.48	-.45	-1.18	-.17	-1.06	-.30	-.49	-.82	-.94	-1.14				

Table 2. Fit indices for measurement and structural models of psychological empowerment

	χ^2	CFI	RMSEA (90% CI)	N
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Model 1 (one PE factor, 9 indicators)	47.49**	0.97	0.050(0.027, 0.071)	367
Model 2 (three PE components)	32.68	0.99	0.036(0.000, 0.061)	367
Model 3 (including higher-order PE factor) [⌘]	32.68	0.99	0.036(0.000, 0.061)	367
Model 4 (including outcomes and covariates)	142.09**	0.90	0.062(0.052, 0.079)	361

[⌘]model 2 and 3 are statistically equivalent **p<0.001

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Table 3. Structural model results for second order psychological empowerment and youth outcomes

	Unstandardized		Standardized	
	Estimate	SE	Estimate	SE
Measurement model				
Intrapersonal->leadership efficacy	1		0.59**	0.06
Intrapersonal->civic efficacy	1.29	0.15	0.70**	0.05
Intrapersonal->self esteem	.71	0.18	0.43**	0.07
Interactional->mentor support	1		0.41**	0.07
Interactional->adults-community resources	1.67	0.29	0.52**	0.05
Interactional->resource mobilization	1.33	0.26	0.70**	0.05
Behavioral->leadership behavior	1		0.52**	0.05
Behavioral->community engagement	.96	0.18	0.69**	0.04
Behavioral->school engagement	1.22	0.16	0.74**	0.04
PE->intrapersonal	1		0.91**	0.08
PE->interactional	.96	0.18	0.94**	0.05
PE->behavioral	1.22	0.17	0.96**	0.04
Structural model				
PE->aggressive behavior	-.25	0.17	-0.10	0.07
PE->prosocial behavior	1.02	0.18	0.61**	0.05

**p>.001

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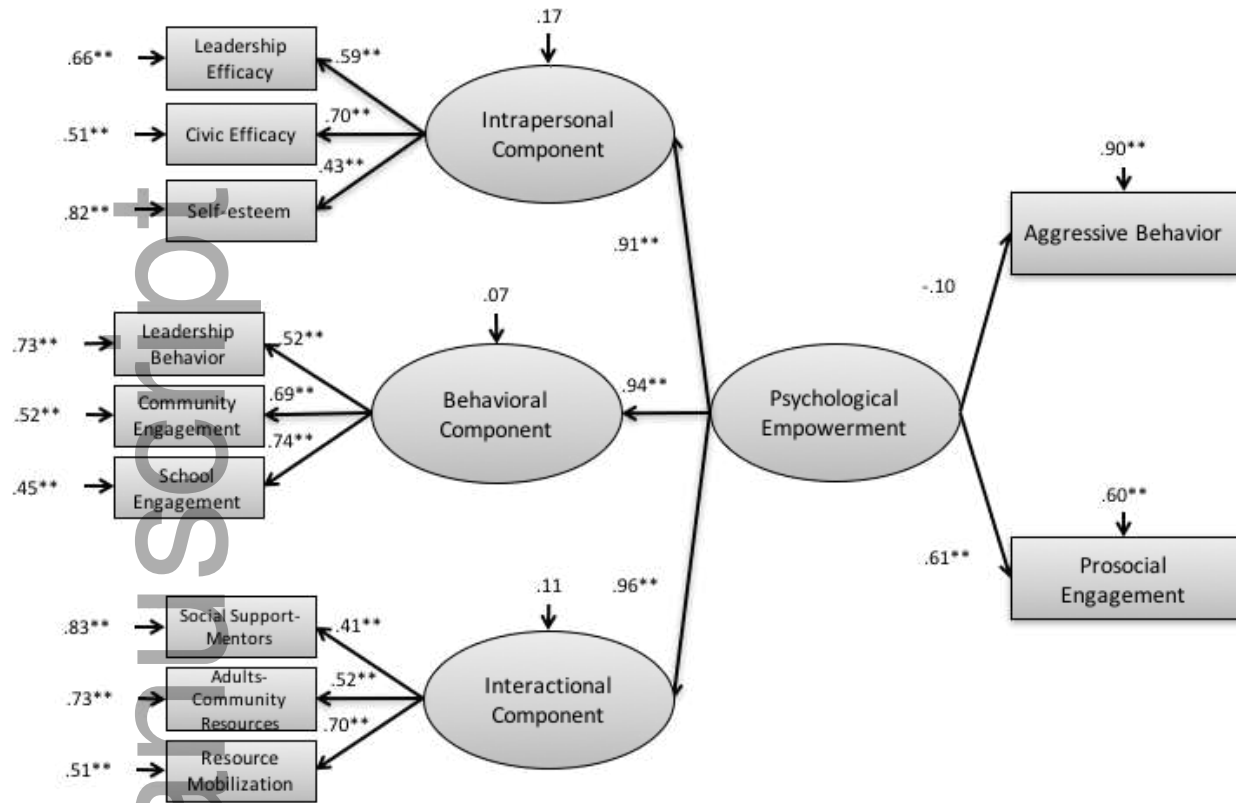


Figure 1. Measurement model for PE and structural model for the relationship between PE and youth outcomes with standardized estimates. ** $p > .001$

Note: Error correlations and covariate paths not shown. Error correlations for leadership efficacy and leadership behavior: 0.40, $p < 0.001$; resource mobilization with civic efficacy: 0.38, $p < 0.001$. Aggressive behavior and age: .14, $p < .05$; race/ethnicity (White reference group): -.49, $p < .001$. Prosocial behavior and age: -.04, $p = .26$; race/ethnicity: .20, $p < .05$.