

Assessing Readiness for Change of Juvenile Probation Policies and Practices: A Factor Analysis of the Probation Officer Attitudes, Beliefs, and Behavior (POABB) Scale

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ABSTRACT

As juvenile probation undergoes nationwide reform to better align with research on adolescent development, it is critical to understand probation officers' knowledge, attitudes, and beliefs about corresponding changes to supervisory practices within juvenile probation departments. The Probation Officer Attitudes, Beliefs, and Behaviors (POABB) Scale was designed for use with juvenile probation officers (JPOs) undergoing training in a specific evidence-based supervision strategy (i.e., Graduated Response) to assess staff's knowledge and beliefs about Graduated Response's practices and intended supervisory behaviors. To provide foundational empirical support for the novel scale, the current study examined the factor structure of this self-report measure using POABB data from 351 juvenile probation staff across three mid-Atlantic states. An exploratory factor analysis revealed that a five-factor structure within the POABB provided the best fit and, overall, the POABB had good internal reliability ($\alpha = 0.84$). Importantly, the five-factor structure suggests a key difference between knowledge of Graduated Response components and attitudes toward using those components in everyday practice. Results suggest that use of the POABB can provide probation departments with information about specific attitudes and overall willingness to implement specific supervision practices as well as offer targeted areas for additional training to support developmentally appropriate probation transformations.

KEYWORDS: Juvenile probation, organizational readiness, measurement, factor analysis, assessment

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INTRODUCTION

Nationwide, juvenile probation policies and practices are undergoing considerable reform to better align with existing research on adolescent

development and behavioral decision making (Annie E. Casey Foundation [AECF], 2018; Cavanagh, 2022; Goldstein et al., 2019; National Council for Juvenile and Family Court Judges [NCJFCJ], 2017a). These reforms often transition away from a

sanction-based, monitoring-oriented probation model toward one that emphasizes goal setting, opportunities and incentives, family-engaged case planning, and decision making and skill development to promote youths' long-term behavior change and wellbeing (AECF, 2018; Soung, 2022). Several county and state jurisdictions have already created and are now implementing these types of developmentally informed juvenile probation case management systems (e.g., AECF, 2018; Farrell et al., 2020; Goldstein et al., 2019; Walker et al., 2019). Continued national and local investments in the widespread adoption of developmentally informed juvenile probation systems demonstrate the "increasingly fertile ground" on which reform efforts are rooted (Schwartz, 2018, p. 52).

As the enthusiasm for revamping juvenile probation grows, jurisdictions (at the county and state levels) will need to be prepared for such change—particularly given the complexities of implementing system-wide reform (Harvell et al., 2019). A reliable and valid tool to assess individuals' readiness for engaging in this change process would be particularly beneficial to jurisdictions contemplating or actively engaged in reforming their juvenile probation systems. Further, such a measure could provide useful data for reform leaders as they seek to promote success and sustainment of developmentally appropriate juvenile probation strategies. This paper will briefly introduce individual and organizational readiness for change as a metric, both broadly and specifically in juvenile justice-related contexts, before describing a novel, self-report measure of individuals' knowledge and attitudes towards policy and procedure changes designed for use with juvenile probation officers undergoing training on a specific form of developmentally appropriate probation strategy: Graduated Response. We will then present the results of a factor analysis of this novel measure, conducted to provide foundational empirical support for the measure and its structure.

Juvenile Probation Reform Efforts

Probation serves as the most common disposition for adolescents who have been adjudicated delinquent in juvenile court. Traditional probation systems focus on requiring youths' complete compliance with court-ordered conditions to avoid sanctions, such as out-of-home placement in juvenile commitment facilities (Hseih, 2016; Klingele, 2013; Soung, 2022). However, research on adolescent development demonstrates that the immature decision making associated with youth—in conjunction with other still-developing cognitive abilities—make it more challenging for young people to conform their behavior perfectly in line with court requirements, especially given the large number of conditions often imposed (e.g., NeMoyer et al., 2014). Therefore, many youth under court supervision fail to comply with their conditions of probation supervision and face confinement (e.g., NeMoyer et al., 2016). In this way, traditional, compliance-based probation systems have led to increased populations of detained and placed youth (Dir et al., 2022; Mendel, 2009) and higher rates of continued and future system involvement (Puzzanchera et al., 2010; Steinberg, 2009).

ABBREVIATIONS

Juvenile Probation Officer (JPO)

National Council of Juvenile and Family Court Judges (NCJFCJ)

Probation Officer Attitudes, Beliefs, and Behaviors (POABB)

Kaiser-Meyer-Olkin (KMO)

Recognizing the misalignment between youths' developmental capacities and expectations of probation, reformers, researchers, and advocates have sought to change probation systems to better promote youths' successful discharge from probation and support positive behavioral change (van Wormer & Campbell, 2016). Jurisdictions around the country have worked to transform their systems into ones that encourage prosocial behaviors and positive youth development using incentives for reaching short- and long-term goals; examples include Opportunity-Based Probation in Pierce County, WA (AECF, 2018), Accountability and Incentives Management system in Maryland (Farrell et al., 2020; Harvell et al., 2018), and Graduated Response across Pennsylvania (Brogan et al., 2021). In 2017, these reforms were championed on a national scale when the National Council for Juvenile and Family Court Judges called for the adoption of developmentally informed practices in probation (Goldstein et al., 2019; NCJFCJ, 2017a; NCJFCJ, 2017b).

"Graduated Response" is a common shorthand for structured juvenile probation case management systems that rely upon the operant conditioning principles of positive reinforcement (i.e., incentives and rewards for desired behaviors) and immediate and measured interventions for undesired behaviors (Brogan et al., 2021; Goldstein et al., 2016). Such interventions can include those that reduce barriers related to access (e.g., parents' inability to engage in probation conditions due to work or other essential commitments) or to youths' ability to comply with conditions (e.g., needing to pick up a sibling from school and being unable to attend required community service). In Pennsylvania, Graduated Response has been adopted by jurisdictions across the state—as part of this adoption, probation departments hosted professional development trainings for their officers that focused on core principles of adolescent development (e.g., cognitive capacities, emotional and psychosocial develop-

ment), the empirical basis of using operant conditioning principles for behavior change (e.g., Kazdin, 2005) and key components of the Graduated Response system, including the ways in which probation can and should be responsive to the risks and needs of youth (Brogan et al., 2015; see Brogan et al., 2021 for more detailed information about the trainings provided). Further, these trainings were designed as a starting point for organizational culture change to promote successful probation reform (Brogan et al., 2021).

Organizational and Individual Readiness for Change

Successful reform within an organization requires shifts in organizational culture and values (Esthappan et al., 2020)—shifts that are dependent upon an organization's readiness, or the degree to which individuals within an organization are psychologically and behaviorally prepared, to change (Jones et al., 2005; Lerch et al., 2011; Schein, 2004). Weiner (2009, p. 2) referred to organizational readiness as the "precursor to successful implementation of complex change." Organizational readiness is influenced by several factors (Taxman et al., 2014), including organizational culture toward change (e.g., openness to innovation and learning), organizational resources and infrastructure to support change (Vakola, 2014; Weiner, 2009), and several personal characteristics of the individuals who comprise an organization. For example, team members' past experiences with change, their knowledge and expectations of the planned changes, and their personal readiness for change, all play important roles in an organization's overall readiness for change (Holt et al., 2007). Organizations ready to change show greater preparedness and support for reform initiatives and exert greater effort and persistence when difficulties arise during change implementation (Weiner et al., 2009). In contrast, organizations less ready to change typically

demonstrate greater resistance to and avoidance of change preparation and initiation (Bandura, 1997; Gist & Mitchell, 1992; Shea et al., 2014). As a result, prior to implementing organizational change, gaps in individual members' knowledge or expectations of those changes should be identified and their own personal attitudes toward and readiness for change should be assessed to mitigate potential challenges (Holt et al., 2007). Such identified areas requiring additional support can then be adapted into more robust training, as training can provide efficient opportunities for changes in individuals' knowledge and attitudes or beliefs (Knaak, 2019). However, research suggests that changes in knowledge and attitudes do not necessarily align with changes in behavior (Beidas & Kendall, 2010; Brogan et al., 2021; Frank et al., 2020). Organizational readiness for change requires both individuals' buy-in as well as ongoing technical assistance, support, and supervision (Beidas et al., 2012; Edmunds et al., 2013).

Individual and organizational readiness for change has been widely studied across several diverse settings (Miake-Lye et al., 2020), including healthcare (Alexander & Hearld, 2012; Vaishnavi et al., 2019), community mental health clinics (Stanhope et al., 2019), child welfare agencies (Mersky et al., 2020), and schools (McKnight & Glennie, 2019). Further, these constructs have also been examined within the juvenile justice system, where such research has focused on youth-serving agencies' adoption of evidence-based practices, such as assessment and referral services, individualized case planning, engagement with youths, families, and communities, and racial and ethnic equity initiatives (Esthappan et al., 2020; Rigsbee, 2015; Taxman et al., 2014). Findings from these studies convey the importance of organizational readiness for change in initiating and sustaining innovative reforms within the juvenile justice system (Taxman et al., 2014).

Measuring readiness for change at the beginning of reform efforts provides an organization with insight into the potential for successful implementation, and it can identify areas in which intervention might increase commitment and efficacy (Hannon et al., 2017). Within the juvenile probation system, such shifts may be slow to take shape given numerous contextual factors, such as frontline staff distrust of administrative-led change (Farrell et al., 2011), heavy caseloads that leave little time to implement new practices, and lack of organizational infrastructure to help staff translate new knowledge and training into policies and procedures (Taxman et al., 2014). Knowing how ready a juvenile probation department may be for a specific change equips reform leaders with insight and guidance on how to stimulate, strengthen, and sustain an organization's commitment to and preparedness for current and future reforms.

Advancing scientific knowledge about readiness for change, particularly within juvenile justice settings, requires brief, publicly accessible, reliable, and valid measures (Shea et al., 2014). Such measures should include items relevant to the organization's proposed reform while remaining adaptable for use in other circumstances (Shea et al., 2014; Weiner, 2009). To our knowledge, no such instrument exists to measure staff attitudes toward the adoption of evidence-based probation strategies. As a result, researchers leading the Graduated Response training sessions across Pennsylvania and two other states (see Brogan, 2021) developed the Probation Officer Attitudes, Beliefs, and Behaviors (POABB) scale. Created initially as a quality assurance measure, the POABB was designed to identify baseline levels of relevant knowledge among training participants, as well as changes in attitudes and beliefs about Graduated Response principles and strategies from pre- to post-training. Survey items were developed in conjunction with justice system personnel (e.g., probation officers and supervisors, judges, attorneys) across Pennsylvania

and were meant to address the general thematic concepts discussed in training sessions (e.g., research on adolescent development and effective behavior change principles; basic components of a Graduated Response system, including using both incentives and interventions to change youth short- and long-term behavior). POABB survey items related to behavioral change principles were based on empirical operant conditioning research (e.g., Kazdin, 2005; McSweeney & Murphy, 2014; Smagner & Sullivan, 2005); such survey questions provided the trainers with information on probation staff's basic knowledge related to changing youths' behaviors that could then be translated into new probationary practices. Additionally, given the importance of understanding adolescent brain development to maximize young people's cognitive capacities in the context of probation (Goldstein et al., 2015), survey items were drafted to elicit previous knowledge on key principles of adolescent development.

Although initially designed as a quality assurance measure to ensure the Graduated Response trainings met their goals (e.g., increase knowledge around Graduated Response practices, adolescent neuro-behavioral development, and behavior change strategies), we recognized that the survey also provided information about individual staff's knowledge, attitudes, and beliefs about transitioning to new probation practices—key information that probation departments could use to identify additional ways to support staff during the transition. Given the thematic goals of the training and of the quality assurance measure, we expected that the survey would show a relationship between items assessing similar themes and concepts. However, the measure has not previously been studied to validate this hypothesis. Therefore, to provide foundational empirical support for the POABB scale, the current study identified psychometric properties of the measure and examined its internal factor structure.

Understanding the underlying factors of the POABB scale can provide support for its continued use within probation departments implementing reform to assess staff members' knowledge of developmentally appropriate supervision strategies and willingness to adopt Graduated Response practices, in line with national recommendations (e.g., NCJFCJ, 2017a).

METHODS

Participants

Respondents were 351 juvenile probation, juvenile court, and other juvenile justice staff across three mid-Atlantic states who attended one of 22 trainings focused on transforming juvenile probation practices by using Graduated Response strategies to better align with adolescent development. Respondents who provided demographic information ($n = 188$) most often identified as female (54.8%), ranged in age from 21 to 71 ($M = 40.01$, $SD = 10.12$), and were predominantly White (82.4%); 12.5% of respondents providing demographic information identified as Black, and others identified as Hispanic (3.0%) or American Indian/Alaska Native (1.4%); no respondents identified as more than one race and few (0.7%) chose not to identify their race or ethnicity.

Measures

The Probation Officer Attitudes, Beliefs, and Behaviors (POABB) Scale is a 21-item scale¹ developed by researchers to assess juvenile probation officers' knowledge, beliefs, and intended behaviors related to the supervision of youth on probation, including questions about their personal attitudes towards current probation practices (e.g., "How effective do you think your current juvenile probation system is in fostering long-term positive behavior change?"). Additional survey questions inquired about the probation officers' beliefs about the use of incentives and sanctions/interventions to

promote behavior change (e.g., “To what extent do you agree that incentives promote youths’ positive behaviors in the short-term?” and “To what extent do you agree that it is ok to use the same sanction/intervention multiple times for the same behavior before increasing the severity of the response?”). Additionally, survey questions elicited information regarding respondents’ knowledge of and comfort communicating about a developmentally appropriate supervision strategy (e.g., “How informed do you feel you are about Graduated Response with respect to the underlying principles” and “To what extent do you believe you are adequately prepared to communicate with youth about Graduated Response”). Attendees provided ratings for each survey item using a 5-point scale (1 = “not at all” or “strongly disagree” and 5 = “very” or “strongly agree”).

Procedure

The Institutional Review Board at Drexel University determined that the use of the data provided from these surveys did not constitute human subjects research and therefore did not require further IRB approval. No identifiable information was collected from respondents, and data were collected as a part of ongoing quality assurance for the Graduated Response trainings (for more information on trainings and the overall response to those trainings, see Brogan, 2021). Attendees were asked to complete the POABB just prior to the start of a Graduated Response training; no compensation was provided to the respondents. Although the POABB was administered again following the training (see Brogan, 2021), current study analyses used only data from the pre-training survey, as it captured the pre-intervention knowledge, attitudes, and beliefs of probation staff—a critical component of a department’s readiness for change.

Data Analysis

We conducted an exploratory factor analysis (EFA) to determine the potential factor structure of the POABB assessment tool. Doing so allowed us to determine a number of “factors”, or a minimized number of interpretable items, that clearly and accurately explain the correlations between individual POABB scale items. After using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy to first verify that the data held meaningful latent factors, we determined the optimal number of factors using simulated polychoric correlation matrices, given the ordinal nature of the scale itemsⁱⁱ. After examining the eigenvalues associated with the raw variance across the scale items, polychoric factor analyses were performed using a principal axis algorithmⁱⁱⁱ with a promax rotation^{iv} to determine the percentage of variance explained by two different factor model suggestions. We used both Cronbach’s alpha values of each factor in the resulting structures and the current literature’s understanding of effective behavior change in adolescents to select the most interpretable and reliable structure.

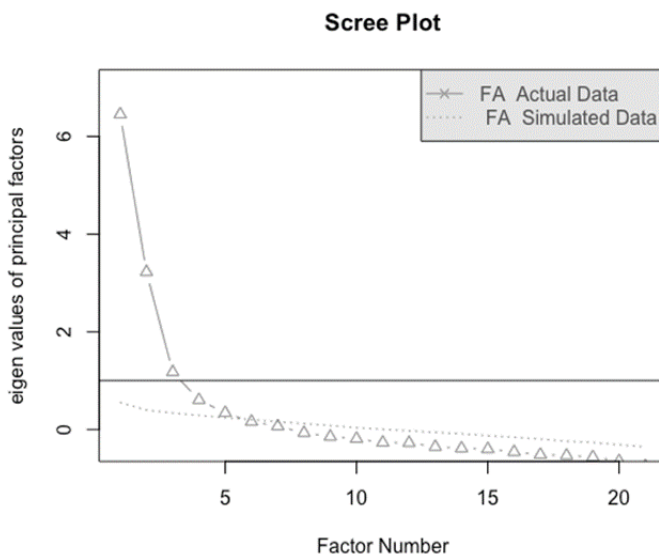
RESULTS

Generally, probation officers indicated that they generally agreed with transitioning to a Graduated Response system (Factor 2; $M=4.3$, $SD=0.59$) and with the use of incentives (Factor 5; $M=3.9$, $SD=0.71$) and sanctions (Factor 4; $M=3.7$, $SD=0.68$) to promote positive behavior. Participants neither agreed nor disagreed with statements related to their knowledge of and ability to speak about Graduated Response ($M = 3.2$, $SD = 1$). And finally, probation staff tended to disagree with using detention and placement as a response for violating probation (Factor 3; $M=2.7$, $SD=1.2$). More in-depth descriptive results of survey data as well as pre- and post-training comparison analyses were previously published (see Brogan et al., 2021).

Exploratory Factor Analysis of the POABB

Our initial KMO test of the measure's 21 items produced a value of 0.82, which exceeded the 0.60 value recommended (e.g., Howard, 2016; Vogt & Johnson, 2015) to declare the data adequate for factor analysis. The overall reliability ($\alpha = 0.84$) of the scale further supported this approach. Given the ordinal nature of the scale items, we utilized a polychoric method for calculating the correlations among items. A parallel analysis^v on the raw correlation values was then performed to determine the number of optimal factors underlying the data. This analysis suggested a five-factor model, although the fifth factor was very close to the line of simulated eigenvalues in the resulting scree plot (Figure 1), indicating that the amount of additional variance explained by this factor could be non-meaningful. As a result, we conducted polychoric factor analyses for both a four-factor and five-factor solution and compared them for best interpretability.

Figure 1: *Parallel Analysis Scree Plot*



The five-factor solution (illustrated in Figure 2) explained 68.8% of common variance among all items (see Table 1), with each factor exhibiting adequate internal consistency ($0.76 \leq \alpha \leq 0.95$, as

summarized in Table 3). In contrast, the four-factor solution only explained 64.5% of common variance among included items, and the interpretation of its factor loadings was less clear. It simply combined two factors from the five-factor solution into a single factor that explained less variability in responses. Though we expected correlation between these two factors (and the five-factor solution indicates as such), we also found meaning in their distinction. As a result, we decided to move forward with interpreting the individual item loadings for the five-factor solution.

Figure 2: *Five-Factor Model Diagram*

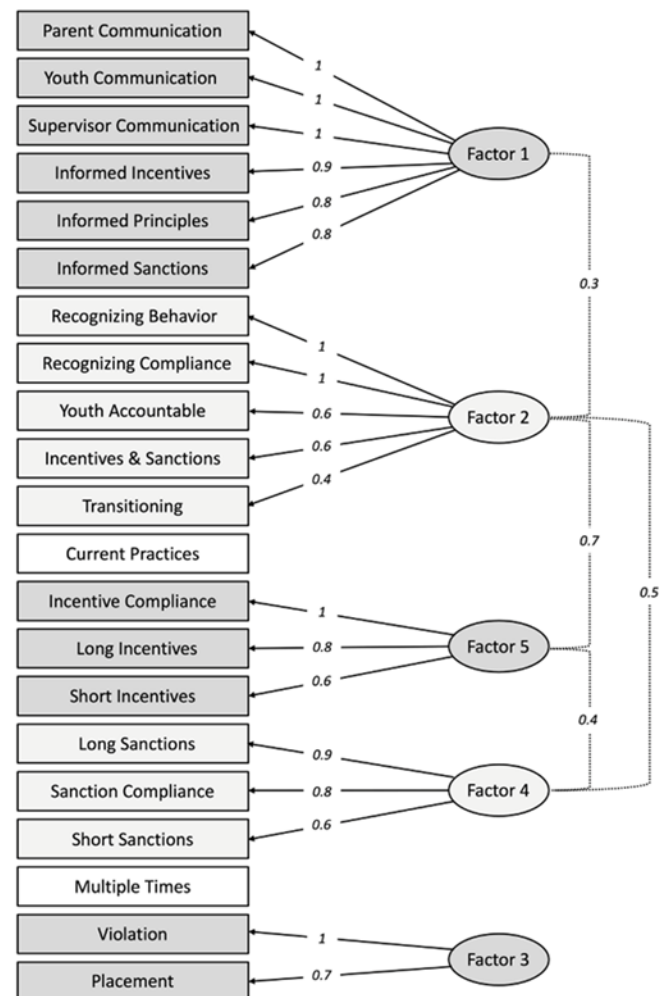


Table 1: *Variance Explained by Each Factor*

Scale Item	<i>SS</i>	<i>Proportion Variance</i>	<i>Cumulative Variance</i>
Factor 1	5.238	0.249	0.249
Factor 2	3.393	0.162	0.411
Factor 5	2.126	0.101	0.512
Factor 4	1.984	0.094	0.607
Factor 3	1.701	0.081	0.688

The five factors in this model were interpreted as (1) Knowledge of and Perceived Ability to Communicate about Graduated Response ($M = 3.2$, $SD = 1.0$, $\alpha = 0.95$, 95% CI [0.94, 0.96]; (2) Attitudes towards Underlying Themes and Transitioning to a Graduated Response System ($M = 4.3$, $SD = 0.59$, $\alpha = 0.80$, 95% CI [0.75, 0.82]; (3) Attitudes towards Responses to Violations of Probation ($M = 2.7$, $SD = 1.2$, $\alpha = 0.82$, 95% CI [0.77, 0.85]; (4) Beliefs about the Use and Utility of Sanctions/Interventions ($M = 3.7$, $SD = 0.7$, $\alpha = 0.76$, 95% CI [0.71, 0.80]); and (5) Beliefs about the Use and Utility of Incentives ($M = 3.9$, $SD = 0.71$, $\alpha = 0.77$, 95% CI [0.72, 0.80]).

Factor 1 (Knowledge of and Perceived Ability to Communicate about Graduated Response) encompassed questions pertaining to how informed probation staff felt about the underlying principles of Graduated Response, how to effectively use incentives, and how to effectively use sanctions and other interventions; it also included questions in which probation staff were asked how prepared they felt to communicate with youth, parents, and supervisors about Graduated Response. Factor 2 (Attitudes towards Underlying Themes and Transitioning to a Graduated Response System) included questions related to the importance of

recognizing progress and effort towards behavior change or probation condition compliance, probation staff's beliefs about youth being accountable for their behaviors, their attitudes towards using incentives and interventions in tandem to promote behavior change, and their agreement with transitioning to a Graduated Response system. Factor 3 (Attitudes towards Responses to Violations of Probation) encompassed questions asking for staff's agreement on using detention and placement for violations of probation. Factor 4 (Beliefs about the Use and Utility of Sanctions/Interventions) included questions that identified staff's beliefs about sanctions/interventions' abilities to change behavior in the short- and long-term as well as in promoting compliance with probation conditions. And finally, factor 5 (Beliefs about the Use and Utility of Incentives) encompassed questions related to staff's beliefs about incentives' abilities to change behavior in the short- and long-term as well as in promoting compliance with probation conditions.

Table 2: Factor Reliability

Factor	Scale Item	<i>a</i>	<i>M</i>	<i>SD</i>	<i>CI (lower)</i>	<i>CI (upper)</i>
1	Communicate Parent	0.95	3.2	1	0.94	0.96
	Communicate Youth					
	Communicate Supervisor					
	Informed Incentivize					
	Informed Principles					
	Informed Sanction					
2	Recognizing Behavior	0.80	4.3	0.59	0.75	0.82
	Recognizing Compliance					
	Youth Accountable					
	Incentive Sanction Combo					
	Transitioning					
3	Violation	0.82	2.7	1.2	0.77	0.85
	Placement					
4	Long Sanctions	0.76	3.7	0.68	0.71	0.80
	Sanction Compliance					
	Short Sanctions					

DISCUSSION

As jurisdictions across the country begin to transition to more developmentally informed juvenile probation systems, agencies must be able to assess their readiness to make these large-scale, conceptual changes in their approach to addressing youths' behaviors. With this information, agencies can develop and implement policies to transition to

new supervision practices and, if needed, provide additional scaffolding to staff to ensure a smooth transition. The current study examined the subscales of the POABB, an assessment tool designed to assess individual's knowledge and readiness to transition to developmentally informed juvenile probation systems by measuring knowledge, attitudes, and beliefs of juvenile probation staff.

Results indicated that, in a large sample of officers from three mid-Atlantic counties, the POABB has good reliability and a five-factor structure that best fit the data statistically and conceptually. The five factors were (1) Knowledge of and Perceived Ability to Communicate about Graduated Response; (2) Attitudes towards Underlying Themes and Transitioning to a Graduated Response System; (3) Attitudes towards Responses to Violations of Probation; (4) Beliefs about the Use and Utility of Sanctions and Other Interventions; and (5) Beliefs about the Use and Utility of Incentives. Each of the five factors centered around the intended purpose of the provided training (e.g., Factors 1 and 2); crucial modules of the training, such as time dedicated to specific content about the use of salient incentives and, later in the training, the use of appropriate and individualized interventions (i.e., Factors 4 and 5); or closely related items on the survey that were not directly discussed in the training (i.e., Factor 3). All of the factors describe juvenile probation officers' knowledge, attitudes, and beliefs towards components of developmentally appropriate juvenile supervision strategies (e.g., incentives and interventions).

The separation of latent factors in this measure also demonstrates important distinctions between related concepts. First, the factor structure indicates that there exists a key difference between knowledge of the components of the developmentally informed supervision approach (i.e., Factor 1) and probation staff members' attitudes toward using such components in everyday practice (i.e., Factors 2 and 5). In other words, the amount of information juvenile probation officers know about incentives and interventions differed from the extent to which they agreed with using such practices. As another example, although probation officers may understand and be willing to use incentives in response to youths' successes (Factor 5), they may not recognize that effort or progress toward a goal represents a form of success (Factor 2); instead, they

may only see youth as successful once the behavior has been completely and permanently modified; the disconnection between knowledge and attitudes towards using incentives when youth have shown effort towards a task may hinder the goal of changing youths' behaviors.

This key distinction is particularly important to consider when gaining buy-in from staff; in addition to simply providing information about the new supervision approach, probation agencies may want to spend time understanding juvenile probation officers' beliefs and viewpoints in order to tailor implementation strategies and target necessary trainings to promote meaningful engagement with the new system. Although knowledge is often highly correlated with behavior change (e.g., Hornik, 1989; Kim & Hunter, 1993a, 1993b), research has demonstrated that behavioral intentions, as indicated by attitudes toward the proposed behaviors, may be a key intermediary step in changing behavior (Kim & Hunter, 1993b). Thus, the fact that the POABB allows for measurement of and distinction between both these constructs indicates its value for juvenile probation leadership who seek to go beyond assessing knowledge of specific training concepts and understand probation officers' intentions to change their behaviors in accordance with new supervision practices.

In addition to capturing juvenile probation staff members' knowledge and attitudes towards a new, developmentally appropriate juvenile probation approach at the time of administration, the distinctions between knowledge and attitudes also highlight potential areas of intervention for department leadership and trainers to examine in order to promote the success and sustainability of the transition. Despite the increase in knowledge that may occur after training on new probation strategies informed by adolescent development, attitudes towards using the central components of those strategies may not change. For example, recent research by Ingel and colleagues (2022) recently

suggested that though research and national leadership in juvenile justice practices (e.g., NCJFCJ) have supported the use of incentives and noted the ineffectiveness of sanctions in changing behavior, there remain JPOs who believe that sanctions are integral to changing behavior, especially around substance use, and therefore use sanctions with youth on their caseloads (Ingel et al., 2022). Therefore, it is important for probation supervisors to be able to assess knowledge, attitudes, and intended behaviors of their probation staff to identify additional trainings, discussion, and further follow up supervision or technical assistance to motivate changes in probation officers' supervision practices (for more on changing behaviors using the POABB, see Brogan et al., 2021).

Although the POABB was designed for jurisdictions planning to implement Graduated Response systems and, therefore, uses terms specific to such programs, the latent factors identified in the measure's factor analysis are not limited only to systems with the Graduated Response title. Consistent with recommended guidelines for creating instruments measuring organizational readiness for change (Weiner, 2009), the factor analysis indicated that verbiage describing the name of the system was not central to the factors and, therefore, can be changed to describe other developmentally appropriate systems that utilize the same core constructs (e.g., specific responses to behavior to promote short- and long-term behavior change) to suit jurisdictions' needs. Thus, the POABB could be minimally adapted to apply to other developmentally appropriate probation systems (e.g., Opportunity-Based Probation; Walker, et al., 2019) grounded in similar concepts and other empirically based practices related to adolescent development and effective behavior change.

Limitations and Future Directions

Despite the contribution and insights this paper offers, we recognize several study limitations. Because the data were initially gathered for quality assurance purposes rather than as part of a research protocol, there was no validated measure administered simultaneously that would have allowed for examination of the POABB's criterion validity compared to a similar assessment of individual or organizational readiness for change. However, the POABB shows promise as an easy-to-deliver tool to assess the readiness of juvenile probation officers as departments transition to new, nationally recognized practices (NCJFCJ, 2017a). Therefore, future research should utilize this measure in tandem with a validated measure of organizational readiness—even a measure that may not be specific to juvenile probation—to ascertain the POABB's concurrent validity. Similarly, future research should confirm the factor structure in samples of juvenile probation officers undergoing similar policy and practice changes in other geographical areas of the country and with varying demographic characteristics.

CONCLUSION

Enthusiasm for juvenile probation reform has begun to proliferate across the country with the acknowledgement that supervision practices for youth should be responsive to their developmental capabilities (NCJFCJ, 2017b). As more probation departments look to reform their current policies and practices to better align with adolescent development and effective behavior change principles, it would likely be beneficial to first assess probation staff's readiness for change. Such assessment will provide valuable information about juvenile probation officers' attitudes and beliefs about juvenile probation reform, as well as identify areas that would benefit from additional training, supervision, or

motivation for change. To our knowledge, the POABB is the first measure designed to assess juvenile probation officers' knowledge, attitudes, and beliefs about an empirically supported supervision strategy for youth. The results of the current study indicate that this assessment tool demonstrates promise in providing key areas of information that probation agencies can use to inform, enhance, and promote their reform efforts.

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DECLARATION OF INTEREST

The authors report no conflict of interest.

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ENDNOTES

ⁱ Although the original POABB Scale included 25 total items, initial analyses indicated that four of these items were highly skewed because of the low frequency of some response choices (see Appendix I). Specifically, because participants were more likely to choose certain responses (e.g., "a little effective" or "somewhat effective") over others (e.g., "fairly effective" or "not at all effective") for these particular survey questions, the number of observations for some responses were too low to use for correlation estimation (see Appendix II for scale items with low-count cells that were removed). Additionally, the results of the Kaiser-Meyer-Olkin (KMO) test statistic (0.48) for sampling adequacy of the 25 items was far below the threshold indicating data factorability (i.e., 0.60).

ⁱⁱ The normality of scale items - which is required for the use of the standard maximum likelihood estimation (MLE) in EFA - is violated in this case. For further discussion of the assumptions of EFA and the relative advantages of polychoric correlation matrices for EFA using ordinal-scale variables, see Flora et al., 2012; Holdago-Tello et al., 2010.

ⁱⁱⁱ This algorithm allowed us to avoid using MLE, for reasons explained in the previous footnote.

^{iv} As an oblique rotation method, employing a promax rotation allowed for the possible correlation among suggested factors, which was highly likely in this case.

^v Advised for social science research with a smaller number of observations (e.g., see Wood et al., 2015), parallel analysis compares the magnitude of eigenvalues from the sample correlation matrix ($n = 308$)

APPENDICES

Appendix I.

POABB Scale Items

Item Name	Measure
Violation	To what extent do you agree with using detention for technical violations of probation (VOPs)? [1[Strongly disagree] to 5[Strongly agree]]
Placement	To what extent do you agree with using placement for technical violations of probation (VOPs)? (1[Strongly disagree] to 5[Strongly agree])
Current practices	To what extent do you agree with current probation practices? (1[Strongly disagree] to 5[Strongly agree])
Transitioning	To what extent do you agree with transitioning to a Graduated Response system? (1[Strongly disagree] to 5[Strongly agree])
Current system behavior	How effective do you think your <i>current</i> juvenile probation system is in fostering youths' long-term positive behavior change? (1[Not at all effective] to 5[Very effective])
Current system probation	How effective do you think your <i>current</i> juvenile probation system is in helping youth successfully complete probation? (1[Not at all effective] to 5[Very effective])
GR behavior	How effective do you think Graduated Response will be in fostering youths' long-term positive behavior change? (1[Not at all effective] to 5[Very effective])
GR probation	How effective do you think Graduated Response will be in helping youth successfully complete probation? (1[Not at all effective] to 5[Very effective])
Informed principles	How informed do you feel you are about Graduated Response with respect to the underlying principles? (1[Not at all informed] to 5[Very informed])

Informed incentives	How informed do you feel you are about Graduated Response with respect to the types of behaviors for which you should provide an incentive? (1[Not at all informed] to 5[Very informed])
Informed sanctions	How informed do you feel you are about Graduated Response with respect to the types of behaviors for which you should provide a sanction/intervention? (1[Not at all informed] to 5[Very informed])
Youth communication	To what extent do you believe you are adequately prepared to communicate with youth about Graduated Response? (1[Not at all informed] to 5[Very informed])
Parent communication	To what extent do you believe you are adequately prepared to communicate with parents/caregivers about Graduated Response? (1[Not at all prepared] to 5[Very prepared])
Supervisor communication	To what extent do you believe you are adequately prepared to communicate with your supervisors/supervisees about Graduated Response? (1[Not at all prepared] to 5[Very prepared])
Short incentives	To what extent do you agree that incentives promote youths' positive behaviors in the short term? (1[Strongly disagree] to 5[Strongly agree])
Long incentives	To what extent do you agree that incentives promote youths' long-term positive behavior change? (1[Strongly disagree] to 5[Strongly agree])
Incentive compliance	To what extent do you agree that incentives promote youths' compliance with probation conditions? (1[Strongly disagree] to 5[Strongly agree])
Short sanctions	To what extent do you agree that sanctions/interventions promote youths' positive behaviors in the short term? (1[Strongly disagree] to 5[Strongly agree])
Long sanctions	To what extent do you agree that sanctions/interventions promote youths' long-term positive behavior change? (1[Strongly disagree] to 5[Strongly agree])

Sanction compliance	To what extent do you agree that sanctions/interventions promote youths' compliance with probation conditions? (1[Strongly disagree] to 5[Strongly agree])
Incentives & sanctions	To what extent do you agree that incentives and sanctions/interventions in combination are more effective than sanctions/interventions alone in changing youths' behavior? (1[Strongly disagree] to 5[Strongly agree])
Recognizing behavior	To what extent do you agree that it is important to recognize progress or effort toward positive behavior change? (1[Strongly disagree] to 5[Strongly agree])
Recognizing compliance	To what extent do you agree that it is important to recognize progress or effort toward compliance with probation conditions? (1[Strongly disagree] to 5[Strongly agree])
Multiple times	To what extent do you agree that it is OK to use the same sanction/intervention multiple times for the same behavior before increasing the severity of the response? (1[Strongly disagree] to 5[Strongly agree])
Youth accountable	To what extent do you agree that youth are accountable for their behaviors when using Graduated Response? (1[Strongly disagree] to 5[Strongly agree])

Appendix II.

Scale Items Removed for Factor Analysis

Scale Item	Response	Frequency	Percentage
Current system behavior ($n=180$)	Very effective	16	8.89
	Fairly effective	0	0.00
	Somewhat effective	111	61.7
	A little effective	44	24.44
	Not at all effective	9	5.00
Current system probation ($n = 145$)	Very effective	46	31.72
	Fairly effective	0	0.00
	Somewhat effective	68	46.90
	A little effective	31	21.38
	Not at all effective	0	0.00
GR behavior ($n = 168$)	Very effective	46	27.38
	Fairly effective	0	0.00
	Somewhat effective	103	61.31
	A little effective	17	10.12
	Not at all effective	2	1.20

GR probation (<i>n</i> = 301)	Very effective	62	20.60
	Fairly effective	142	47.18
	Somewhat effective	83	27.57
	A little effective	13	4.32
	Not at all effective	1	0.33

Appendix III.

Between-Factor Correlations

	1	2	5	4	3
1	1.00	0.34	0.26	0.25	-0.23
2		1.00	0.67	0.45	-0.10
5			1.00	0.45	-0.16
4				1.00	0.12
3					1.00