Factors Influencing the Quality of Behavior Intervention Plans For Children and Adolescents with Autism Spectrum Disorder

Christine C. Cukar-Capizzi, PsyD, BCBA, Anne E. Pidano, PhD, John D. Molteni, PhD, BCBA-D, Laura B. Turner, PhD, BCBA-D

Yale Child Study Center SINCE 1911

Introduction

➢ Autism Spectrum Disorder (ASD) is associated with maladaptive behaviors that may interfere with student learning.
➢ The Individuals with Disabilities Education Act states a Behavior Intervention Plan (BIP) must be developed and implemented based on the outcome of a Functional Behavior Assessment (FBA) for any student with a disability who engages in behaviors that impede their learning or the learning of others.
➢ The research on FBAs and BIPs provide specific recommendations as to what should be included in a BIP, yet there is a paucity of research investigating the quality of BIPs for students with ASD.
➢ This study sought to evaluate the quality of BIPs developed for children and adolescents with ASD at an autism clinic and to determine factors associated with high-quality BIPs.
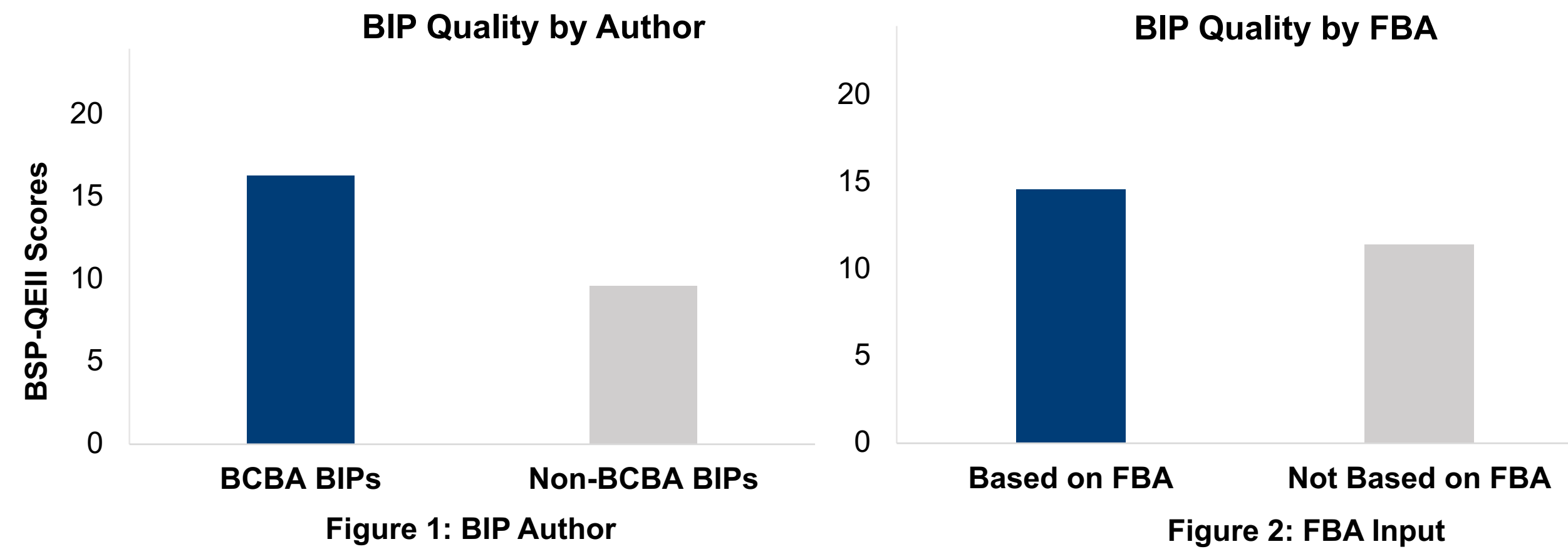
Methods

Participants (*N*=60) children and adolescents with ASD
➢ Age: 4-18 (Mean=9.9 years); Males (*n*=52), Females (*n*=8)
Procedures
➢ BIPs (*N*=60) written for children with ASD evaluated at a community autism clinic were randomly selected from three District Region Groups (DRGs) to reflect high (DRG 1), medium (DRG 2), and low (DRG 3) SES groups in Connecticut (*n*=20 per group).
➢ The Behavior Support Plan Quality Evaluation Guide-II (BSP-QEII) was used to assess BIP quality, as its items correspond to the most highly recommended elements for inclusion in BIPs.
➢ Two raters rated the BIPs, resulting in a BSP-QEII total score that fell into the following categories: weak, underdeveloped, good, or superior, as specified by the BSP-QEII.
➢ Raters also noted whether the BIP author was a board-certified behavior analyst (BCBA) and whether an FBA was conducted to inform the development of each BIP.

Results

BIP Characteristics	
BIP Authors	
Missing	7 (12%)
BCBAs	33 (55%)
Non-BCBAs	20 (33%)
BCBAs per District Region Group (DRG)	
DRG 1:	10 (30.3%)
DRG 2:	14 (42.4%)
DRG 3:	9 (27.3%)
BIPs not based on FBA:	18 (30%)
BIPs based on FBA:	42 (70%)
Function/Summary/Hypothesis Statement from FBA	
Included in BIP:	25 (60%)
Not Included in BIP	17 (40%)
Timeframe between FBA and BIP development	
0-3 months	25 (66%)
3-6 months	2 (5%)
6-9 months	2 (5%)
9-12 months	3 (8%)
>12 months	6 (16%)

Results

Figure 1: BIP Author — BIP Quality by Author (BCBA BIPs, Non-BCBA BIPs)

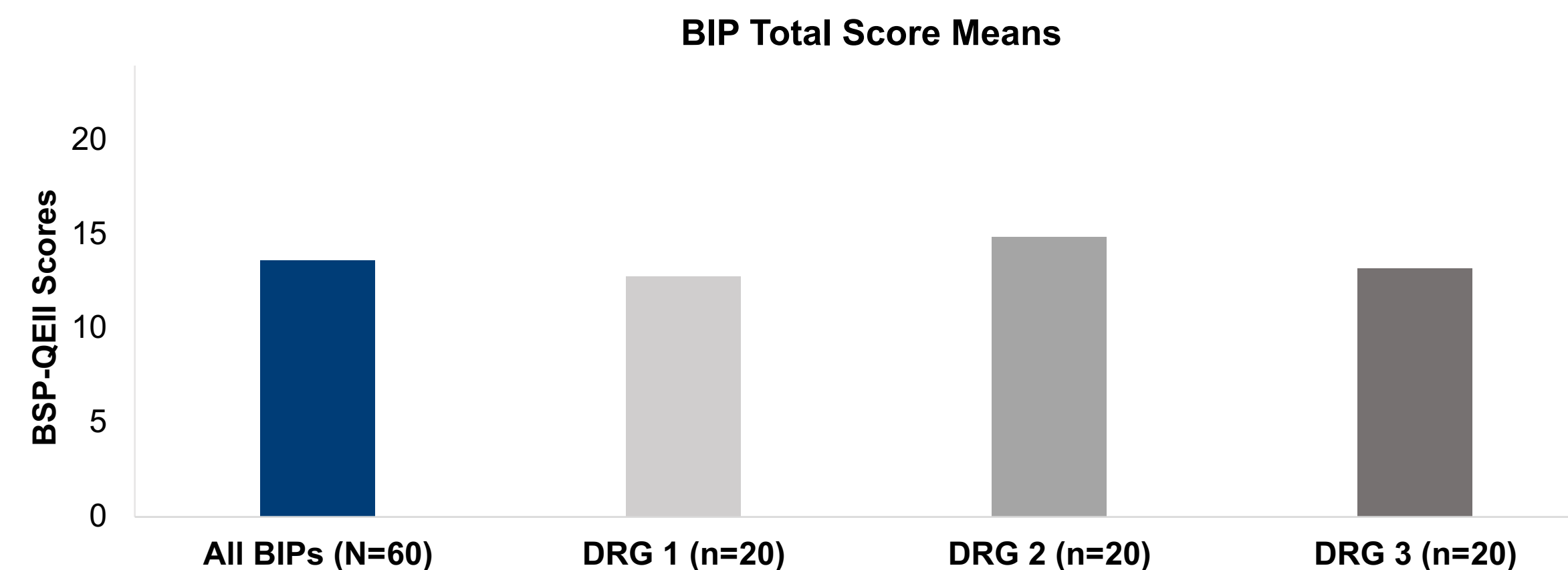**Figure 2: FBA Input** — BIP Quality by FBA (Based on FBA, Not Based on FBA)

➢ Each of the BIPs were rated on a Likert scale from 0-24 with higher scores indicating higher quality BIPs.

Differences in Total Scores
➢ **Figure 1.** BIP total scores written by BCBAs (*M*=16.30, *SD*=5.07) were significantly higher than those written by non-BCBAs, (*M*=9.60, *SD*=5.14), $t(51)$=4.639, $p<.001$.
➢ **Figure 2.** BIP total scores in which an FBA was conducted prior to BIP development (*M*=14.60, *SD*=4.02) were significantly higher than when an FBA was not conducted prior to BIP development (*M*=11.42, *SD*=5.04), $t(58)$=2.60, $p=.01$.

Association between DRG and BIP Quality
➢ Results of a one-way ANOVA comparison found no significant differences in BIP ratings between the 3 DRG groups: Rater 1: $F(2, 57)$=1.979, $p=.148$, Rater 2: $F(2, 57)$=.223, $p=.801$.

Figure 3: BIP Groups — BIP Total Score Means (All BIPs (N=60), DRG 1 (n=20), DRG 2 (n=20), DRG 3 (n=20))

Note: Means are for all BIPs (*N*=60) and for each DRG; DRG 1 (*n*=20), DRG 2 (*n*=20), DRG 3 (*n*=20). Each of the 12 BSP-QEII items is rated on a Likert scale ranging from 0-2, with a total potential maximum score of 24.

Results

Figure 4: % of BIPs per Category

41% | 28% | 26% | 5%
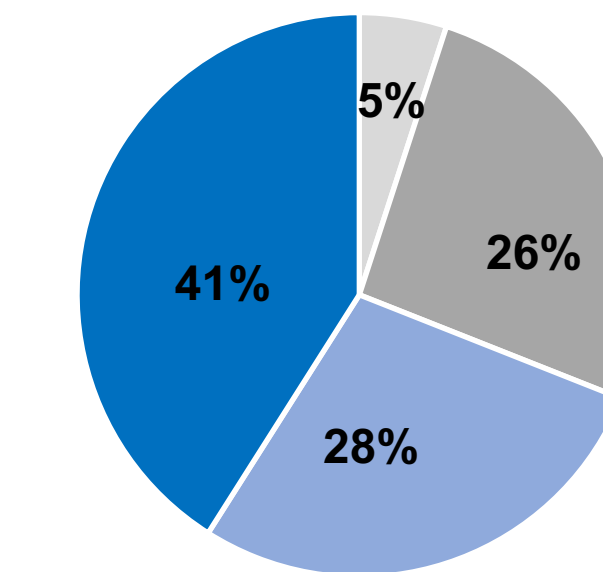
BSP-QEII Categories

■ Superior (22-24) BIP will likely affect change in behaviors and embodies best practice

■ Good (17-21) BIP will likely affect change in behaviors and contains elements of best practice

■ Underdeveloped (13-16) BIP requires a number of alterations to embody best practice

■ Weak (<12) BIP should be rewritten

Summary and Conclusions

➢ A substantial number of BIPs were not based on an FBA.

➢ For those BIPs based on an FBA, a substantial number did not include the function of the behavior, summary, and hypothesis statement in the BIP and were written more than three months after an FBA was conducted.

➢ The majority of BIPs rated obtained a category rating of "weak", followed by "underdeveloped".

➢ BCBAs were more likely to write higher quality BIPs than other professionals.

➢ BIPs based on an FBA were more likely to have higher quality ratings.

➢ There was no association between school district SES and BIP quality, as there were no significant differences found in total score ratings across the three DRG groups.

➢ Results suggest that further training in BIP development is a requirement regardless of the potential resources available to the school district.

Acknowledgements

McPartland Lab mcp.lab@yale.edu www.mcp-lab.org