

## Background

Specific learning disability remains the most prevalent disability among the student population (NCES, 2024), but there is no consensus on the best practices in identifying SLD (e.g., Kavale et al., 2009).

School psychologists use multiple methods to identify SLD (Cottle & Barrett, 2016), but research indicates low consistency in their decisions (Maki et al., 2017; Maki & Adams, 2019; Maki et al., 2022). School psychologists' confidence when making decisions is associated with multiple factors, including the SLD identification method used, the sequence in which the evaluation data is presented, and amount of available data (Maki et al., 2018; Maki et al., 2020). This study investigates school psychologists' decision-making processes in SLD evaluations by examining the diversity of assessment practices used and whether these varied practices are associated with their level of confidence when making decisions.

**Research Question:** *How does the SLD identification method used and the order in which data are presented affect school psychologists' confidence about whether a student has SLD?*

## Methods

**Sample.** Participants were recruited through state school psychology associations that approved this study to be distributed. 77 school psychologists from sixteen states completed the survey.

**Vignettes.** Five fictional case studies with mixed presentation of SLD indicators were developed. Each case has four blocks: 1) progress monitoring data, 2) cognitive test results (i.e., selected clusters on WISC-V, KABC-II NU, and CTOPP-2), 3) achievement test results (i.e., WJ-IV Ach), and 4) reading diagnostic test results (i.e., FAR).

**Procedures.** First, participants completed a brief questionnaire regarding their professional practices in SLD evaluations. Next, five fictional evaluation cases were presented in randomized order. For each case, participants first reviewed progress monitoring data and reported their initial impression of whether the student met criteria for SLD, as well as their confidence in this judgment on a scale ranging from -100 (very confident no SLD) to +100 (very confident SLD). Participants then reviewed the remaining three blocks of evaluation results, presented one at a time in any order they preferred. After reviewing each additional block, participants updated both their SLD judgment and confidence rating.

In total, four waves of impression and confidence data were collected for each participant for each case. After completing each case, participants also reported the SLD identification method they applied.

**Data Analysis.** The following descriptive statistics were calculated:

- 1) Descriptive statistics summarizing the SLD identification methods participants reported using in their professional practice and in the present study.
- 2) Descriptive statistics describing participants' within-case order of review. In addition, descriptive statistics of participants' confidence levels were calculated grouped by the within-case review order.
- 3) Descriptive statistics of school psychologists' confidence levels at each time point within each case, grouped by the SLD identification method applied and by the order they reviewed the blocks.

## Results

Table 1. Self-Reported Use and Most Frequently Used SLD identification methods in Practice

Eligibility Identification Method	Used		Most Frequently Used	
	N	Percentage	N	Percentage
Ability-Achievement Discrepancy (AAD)	63	81.82%	50	64.94%
Patterns of Strength and Weakness (PSW)	41	53.25%	14	18.18%
Response to Intervention (RtI)	36	46.75%	10	12.99%
Low Achievement (LA)	18	23.38%	3	3.90%
Other (Unspecified)	2	2.60%		

Table 2. Frequency of Used SLD Eligibility Identification Methods Frequency by Cases

Method	Case Number					Average
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Cog-Dia-Ach	6.49%	3.90%	2.60%	3.90%	3.90%	4.16%
Ach-Cog-Dia	28.57%	29.87%	35.06%	37.66%	36.36%	33.51%
Ach-Dia-Cog	7.79%	10.39%	3.90%	10.39%	6.49%	7.79%
Dia-Ach-Cog	7.79%	10.39%	6.49%	6.49%	5.19%	7.27%
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Figure 1. Density Plot of Signed Confidence (With Indication of Decision Direction) and Unsigned Confidence by Case and Time

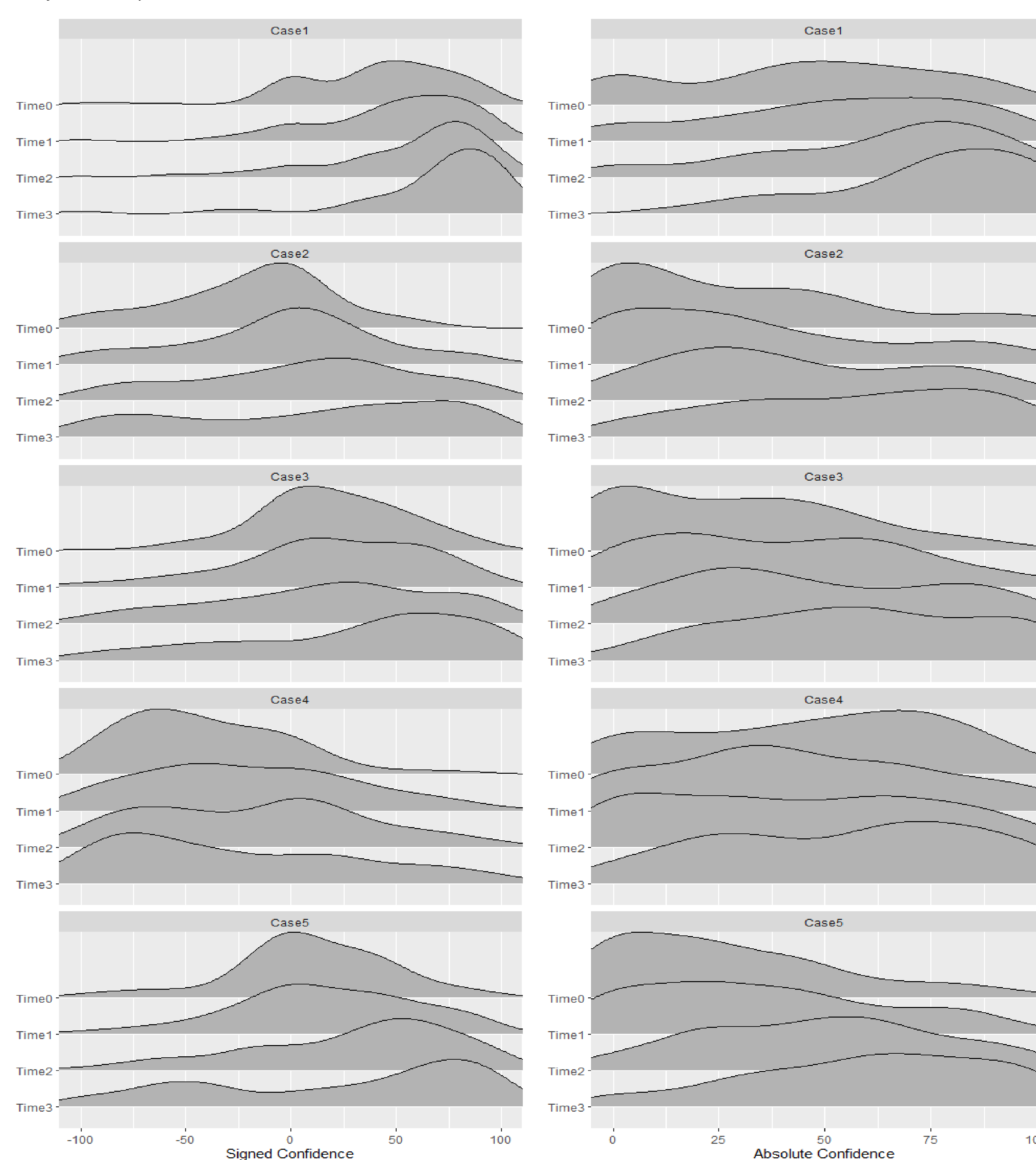


Figure 2. School Psychologists' Confidence Change Over Time by SLD Method Used and Case

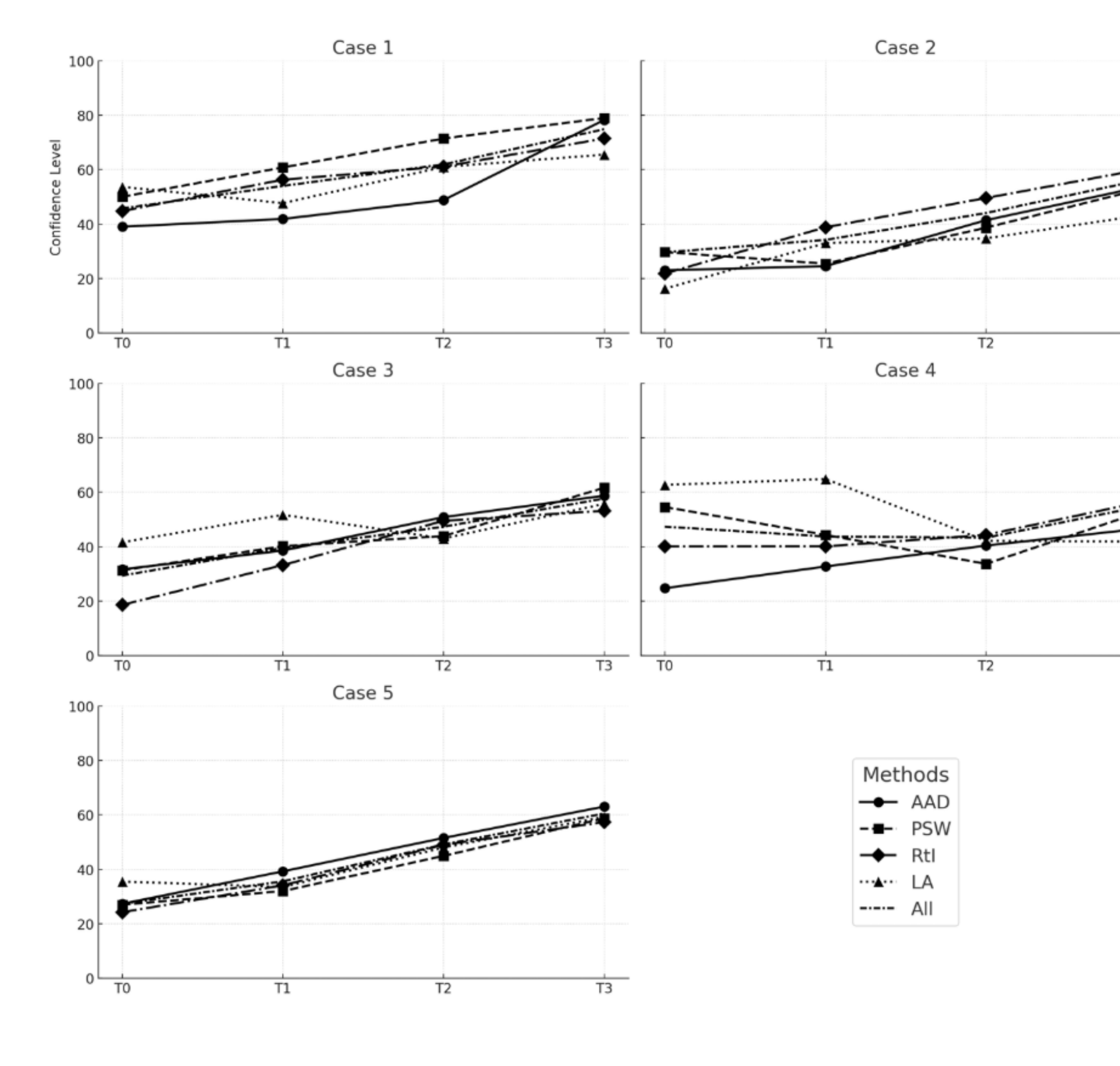
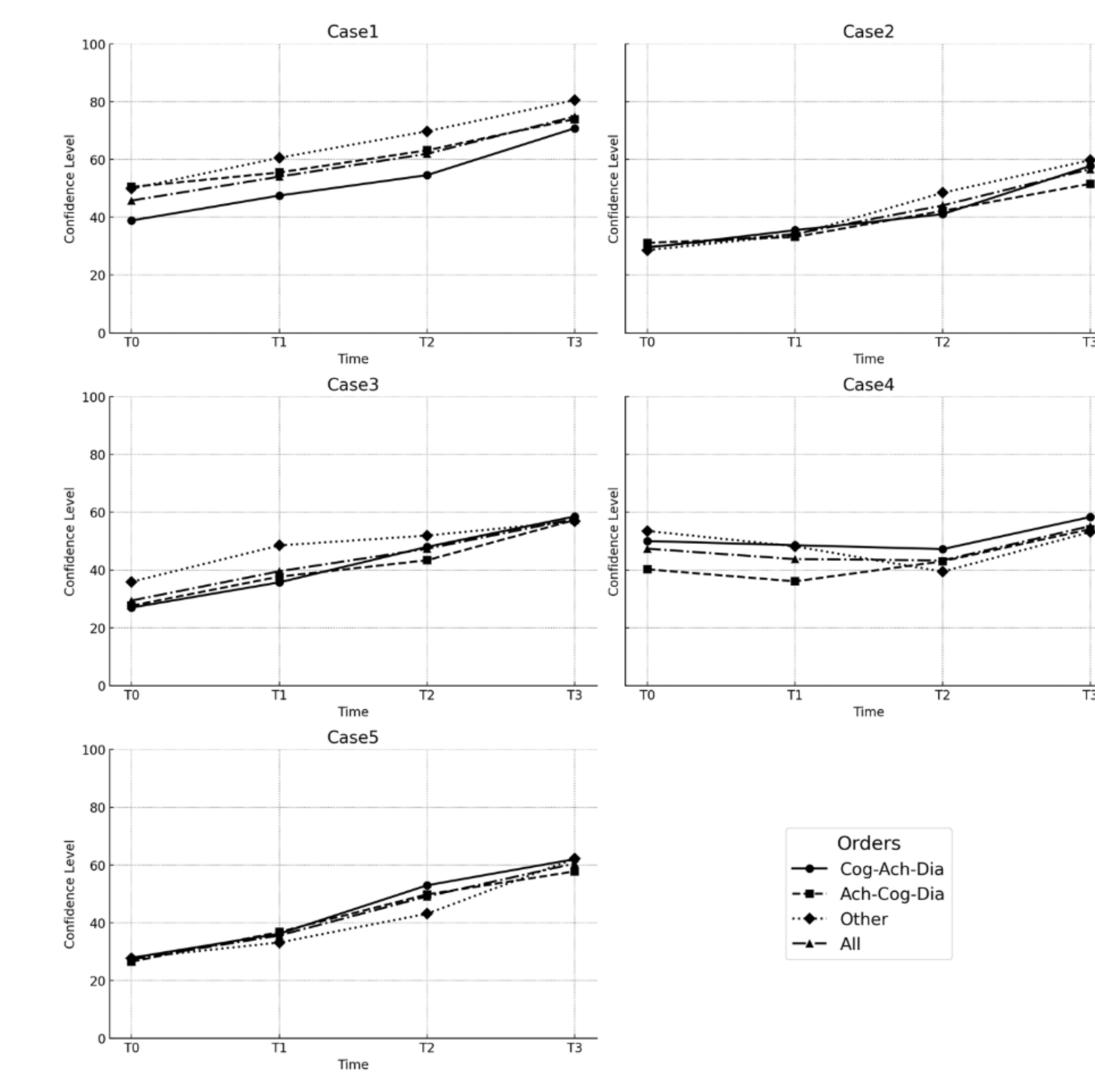


Figure 3. School Psychologists' Confidence Change Over Time by Order and Case



- The Ability–Achievement Discrepancy (AAD) method was the most frequently used approach, with more than half of school psychologists identifying it as their primary tool for eligibility determination in their practice.
- Approximately 30% of school psychologists reported relying exclusively on a single identification method in their professional practice.
- On average, similar proportions of school psychologists reported using each of the three commonly applied SLD identification methods, while only a small percentage endorsed a Low Achievement method.
- Cochran's  $Q$  tests ( $p < .05$ ) indicated that school psychologists' selection of SLD identification methods varied significantly depending on the specific characteristics of each case.
- Most school psychologists followed one of two data review patterns—Achievement–Cognitive–Diagnostic or Cognitive–Achievement–Diagnostic—demonstrating, demonstrating substantial procedural consistency in practice.
- School psychologists reached different eligibility decisions and expressed varying levels of confidence, suggesting limited consistency in final determinations.
- Confidence levels generally increased as more data were reviewed within each case, although final confidence ratings still differed across participants.
- When grouped, by the end of each case, school psychologists' average confidence levels tended to converge, even when their initial confidence levels differed.

## Conclusion

- 1) School psychologists varied in their use of SLD identification methods, the order in which data were viewed, and the confidence in their decision about whether the student had SLD.
- 2) School psychologists' confidence increased as evaluation data accumulated, with identification method and data review order influencing initial confidence but showing limited impact on final certainty once all information was available.

# Decision Making in Specific Learning Disability Evaluation

Zhizhou He, Ed.M. & Christopher R. Niileksela, Ph.D.

## Background

Specific learning disability remains the most prevalent disability among the student population (NCES, 2024), but there is no consensus on the best practices in identifying SLD (e.g., Kavale et al., 2009).

School psychologists use multiple methods to identify SLD (Cottle & Barrett, 2016), but research indicates low consistency in their decisions (Maki et al., 2017; Maki & Adams, 2019; Maki et al., 2022). School psychologists' confidence when making decisions is associated with multiple factors, including the SLD identification method used, the sequence in which the evaluation data is presented, and amount of available data (Maki et al., 2018; Maki et al., 2020). This study investigates school psychologists' decision-making processes in SLD evaluations by examining the diversity of assessment practices used and whether these varied practices are associated with their level of confidence when making decisions.

**Research Question:** *How does the SLD identification method used and the order in which data are presented affect school psychologists' confidence about whether a student has SLD?*

## Methods

**Sample.** Participants were recruited through state school psychology associations that approved this study to be distributed. 77 school psychologists from sixteen states completed the survey.

**Vignettes.** Five fictional case studies with mixed presentation of SLD indicators were developed. Each case has four blocks: 1) progress monitoring data, 2) cognitive test results (i.e., selected clusters on WISC-V, KABC-II NU, and CTOPP-2), 3) achievement test results (i.e., WJ-IV Ach), and 4) reading diagnostic test results (i.e., FAR).

**Procedures.** First, participants completed a brief questionnaire regarding their professional practices in SLD evaluations. Next, five fictional evaluation cases were presented in randomized order. For each case, participants first reviewed progress monitoring data and reported their initial impression of whether the student met criteria for SLD, as well as their confidence in this judgment on a scale ranging from -100 (very confident no SLD) to +100 (very confident SLD). Participants then reviewed the remaining three blocks of evaluation results, presented one at a time in any order they preferred. After reviewing each additional block, participants updated both their SLD judgment and confidence rating.

In total, four waves of impression and confidence data were collected for each participant for each case. After completing each case, participants also reported the SLD identification method they applied.

**Data Analysis.** The following descriptive statistics were calculated:

- 1) Descriptive statistics summarizing the SLD identification methods participants reported using in their professional practice and in the present study.
- 2) Descriptive statistics describing participants' within-case order of review. In addition, descriptive statistics of participants' confidence levels were calculated grouped by the within-case review order.
- 3) Descriptive statistics of school psychologists' confidence levels at each time point within each case, grouped by the SLD identification method applied and by the order they reviewed the blocks.

## Results

Table 1 summarizes the SLD methods participants reported using in practice, as well as their most frequently used method. The Ability-Achievement Discrepancy (AAD) method was the most used method, and more than half of the participants used AAD as their primary tool in eligibility determination. Approximately 30% of participants indicated that they rely exclusively on a single identification method in their professional practice.

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Low Achievement (LA)	18	23.38%	3	3.90%
Other (Unspecified)	2	2.60%		

Table 2 presents a summary of the methods participants used to make decisions across the five case studies. On average, a roughly equal number of participants reported using each of the three commonly used SLD identification methods. A small percentage of participants reported using a Low Achievement method. Cochran's Q tests revealed statistically significant variation in method selection across cases ( $p < .05$ ), suggesting that participants' selection of SLD identification methods was influenced by the specific characteristics or context of individual cases.

Table 2. Frequency of Used SLD Eligibility Identification Methods Frequency by Cases

Method	Case Number					Average
	1	2	3	4	5	
AAD	20.78%	28.57%	33.77%	32.00%	35.06%	30.03%
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Table 3 summarizes the sequence in which participants reviewed evaluation data. Most participants followed one of two patterns: Achievement-Cognitive-Diagnostic and Cognitive-Achievement-Diagnostic, reflecting a high consistency across school psychology practice.

Table 3. Frequency of the Order Information Reviewed Evaluation Data by Case

Method	Case Number					Average
	1	2	3	4	5	
Cog-Ach-Dia	38.96%	33.77%	40.26%	32.47%	36.36%	36.36%
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Figures 1 depict the distribution of participants' confidence levels at various points during the assessment process. Figure 1.a shows multiple peaks in confidence levels, indicating that participants made different decisions with varied confidence, suggesting low consistency in their final decisions. On Figure 1.b, it was observed that, overall, participants gradually gain confidence levels throughout each case, while their final confidence levels continued to vary, highlighting ongoing variability in perceived certainty, even at the conclusion of the assessment.

Figure 1. Density Plot of Signed Confidence (With Indication of Decision Direction) and Unsigned Confidence by Case and Time

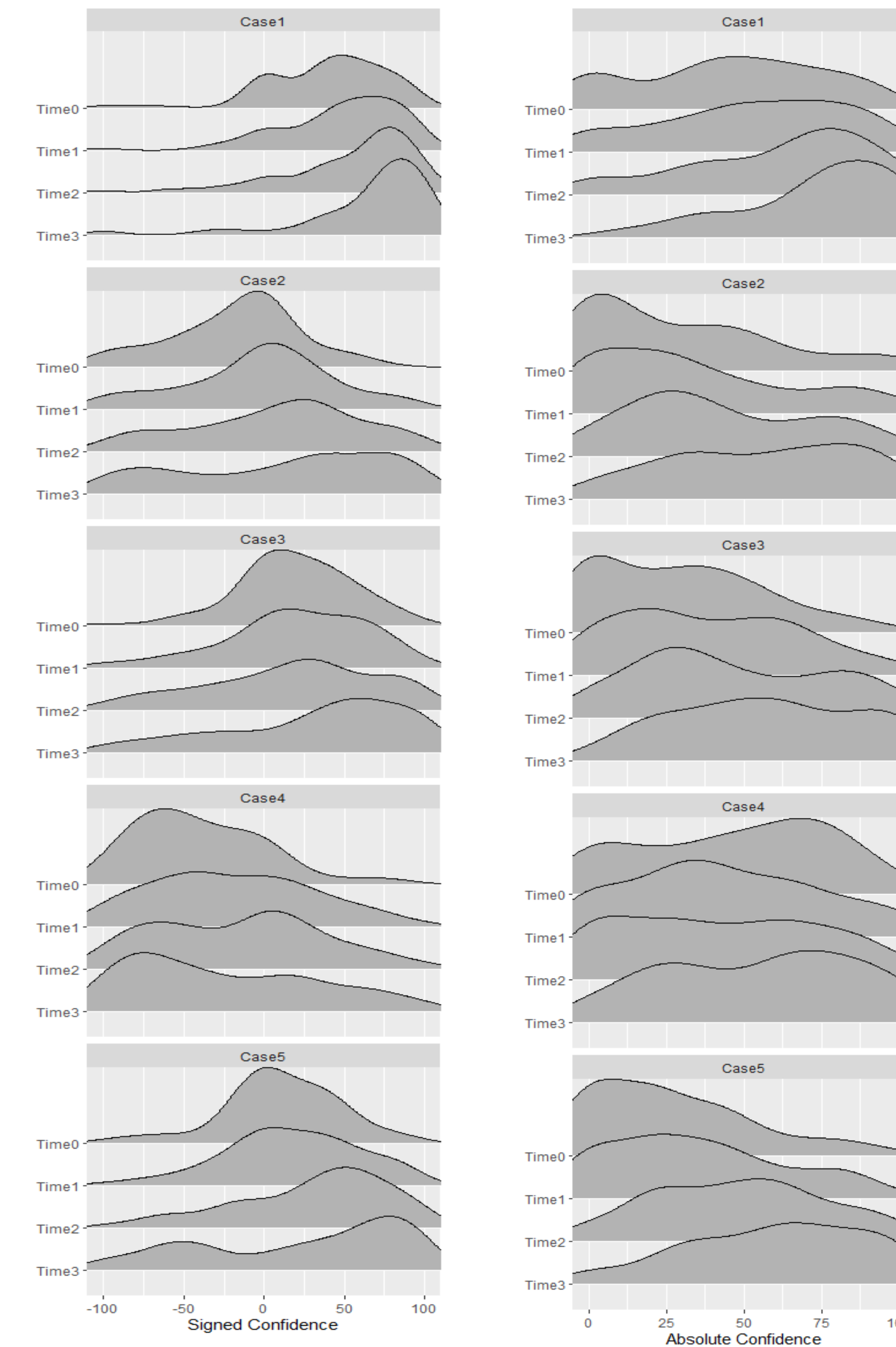


Figure 2 and 3 highlight participants' confidence change over time, grouped by the identification method used and the order in which evaluation data was reviewed. Figure 2 suggests that participants become more confident as they gather more data. Depending on the case context, certain methods may provide greater initial clarity or lead to faster confidence gains. Similar trends were also found when participants were grouped by the order; they viewed evaluated data as indicated in Figure 3. The participants' confidence level tended to converge by the end of each case, suggesting that while data review order may influence initial confidence, it has less impact on final certainty once all information is available.

Figure 2. School Psychologists' Confidence Change Over Time by SLD Method Used and Case

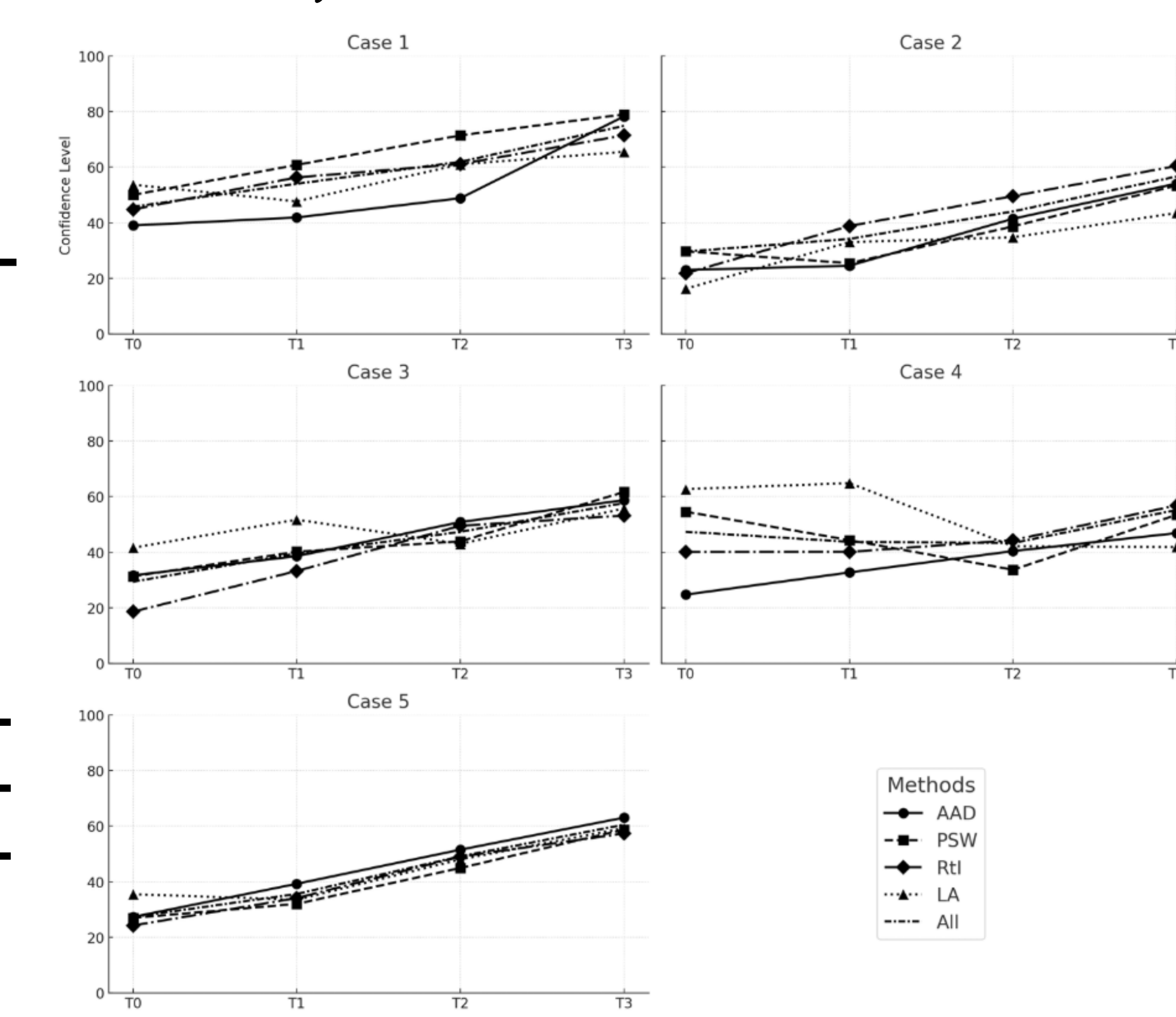
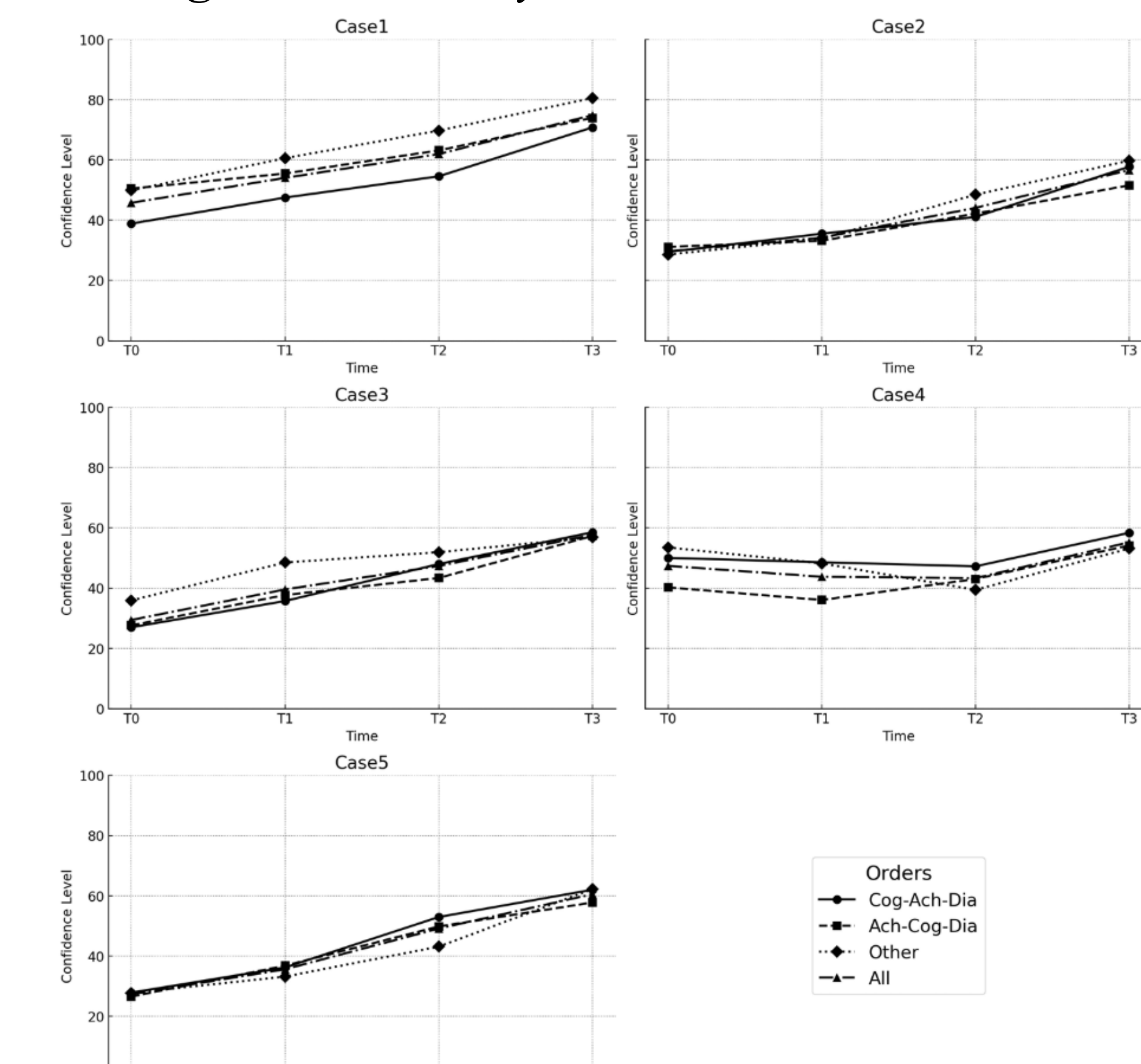


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## Conclusion

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## Results

- The Ability-Achievement Discrepancy (AAD) method was the most used method in this sample.
- More than half of the participants used AAD as their primary tool in eligibility determination.
- Approximately 30% of participants rely exclusively on a single identification method in their professional practice.

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Low Achievement (LA)	18	23.38%	3	3.90%
Other (Unspecified)	2	2.60%		

- Cochran's Qs for all SLD identification methods were significant at .05. Participants' selection of SLD identification methods may be influenced by the specific characteristics or context of individual cases.

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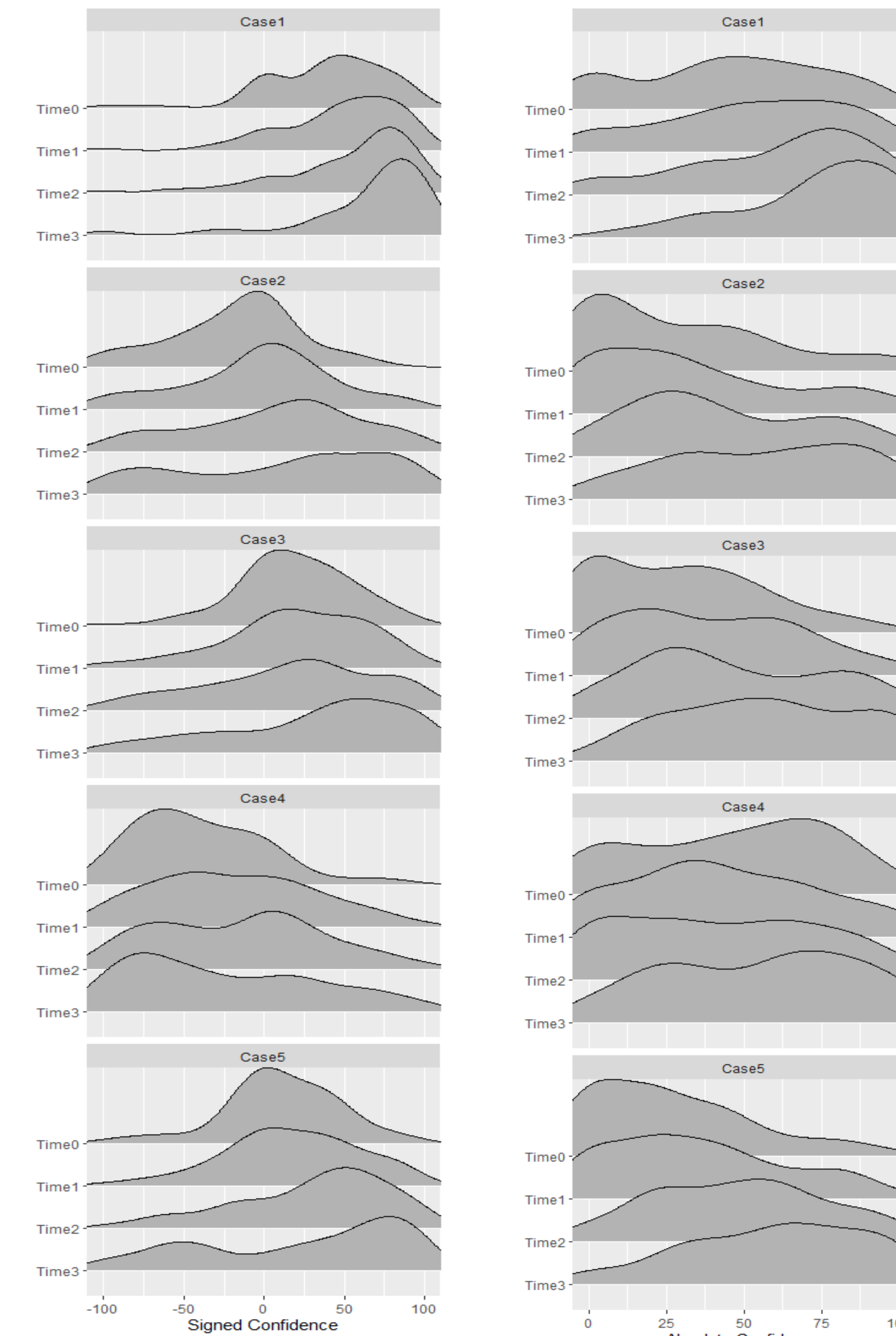
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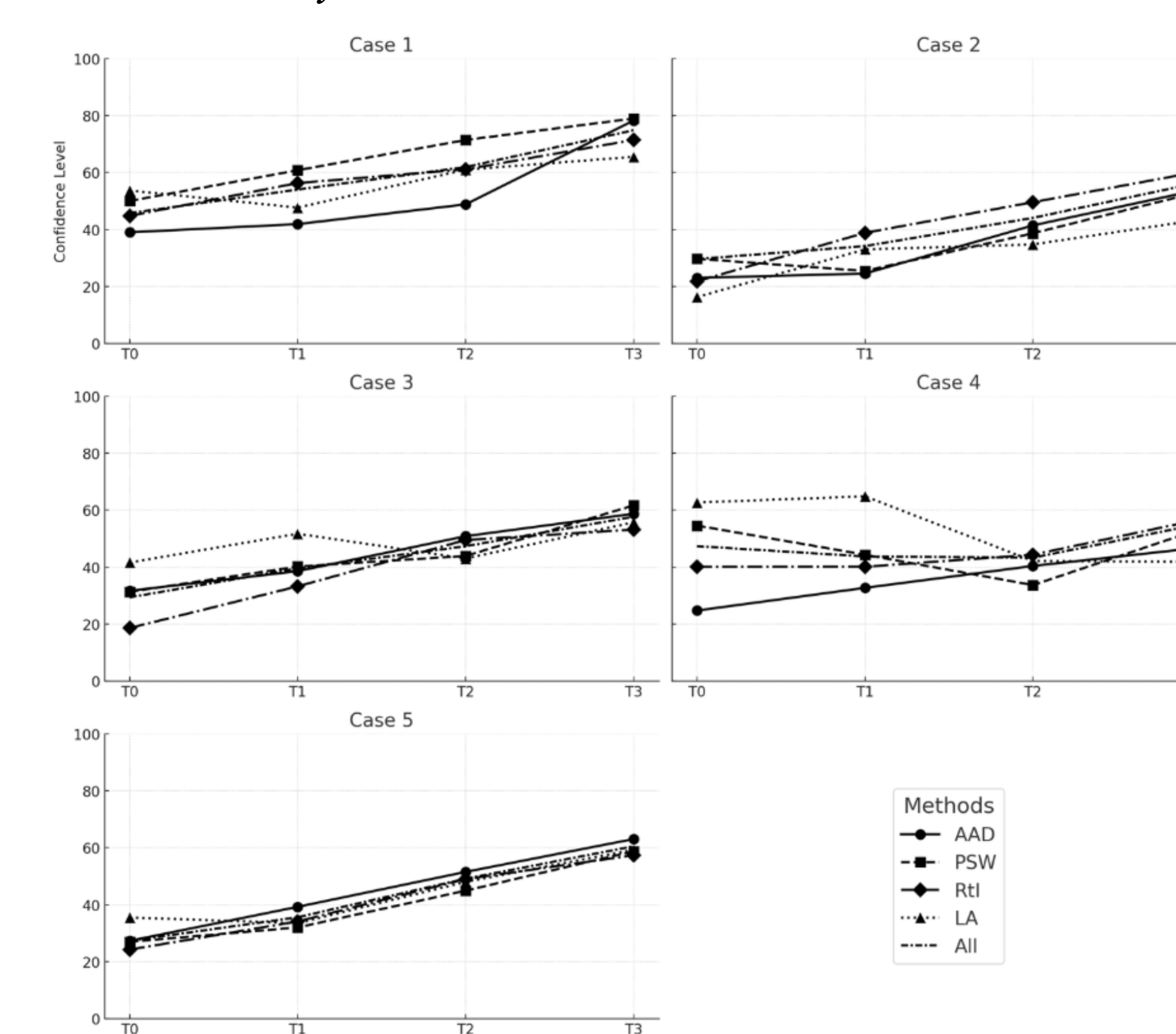
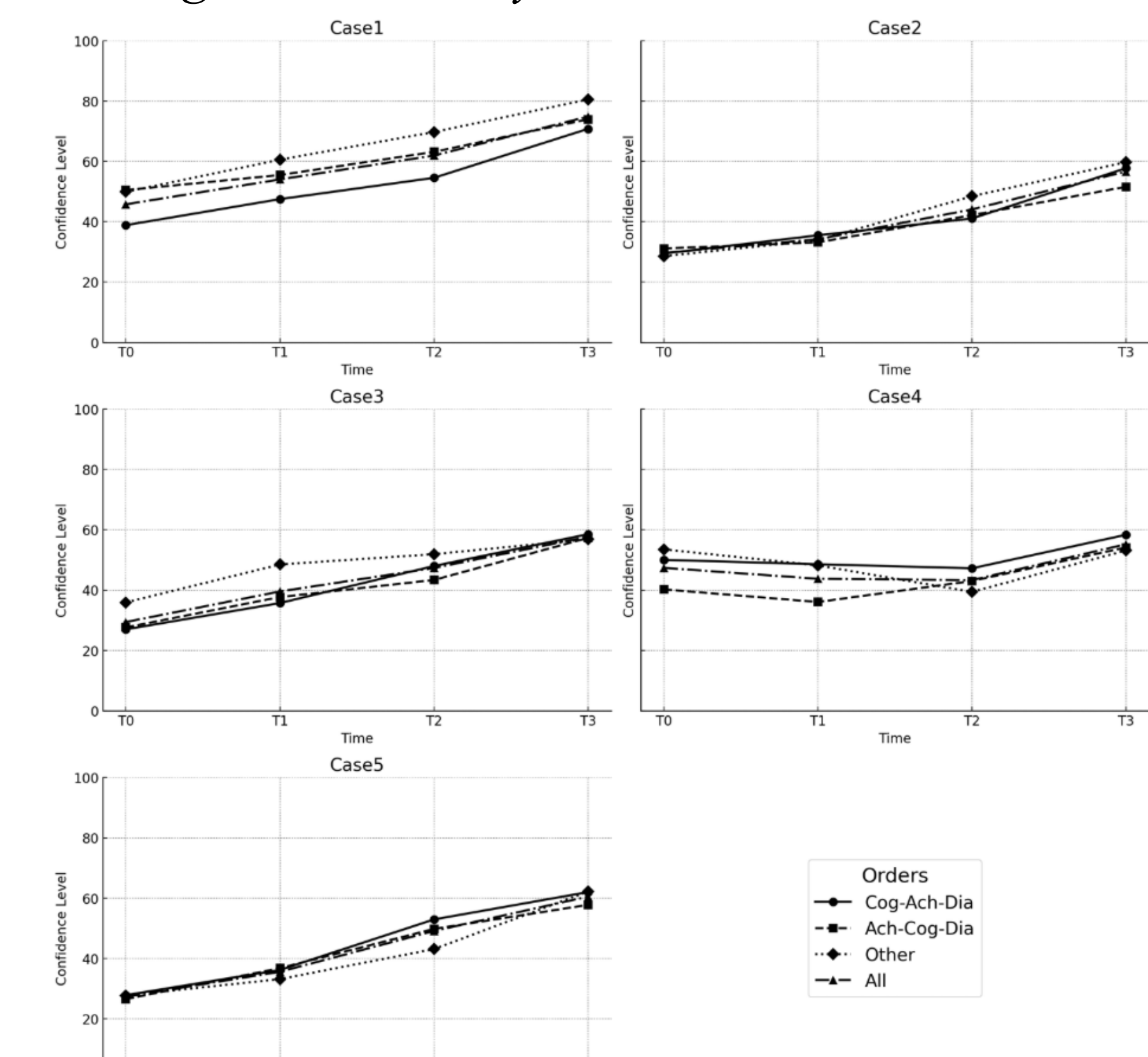


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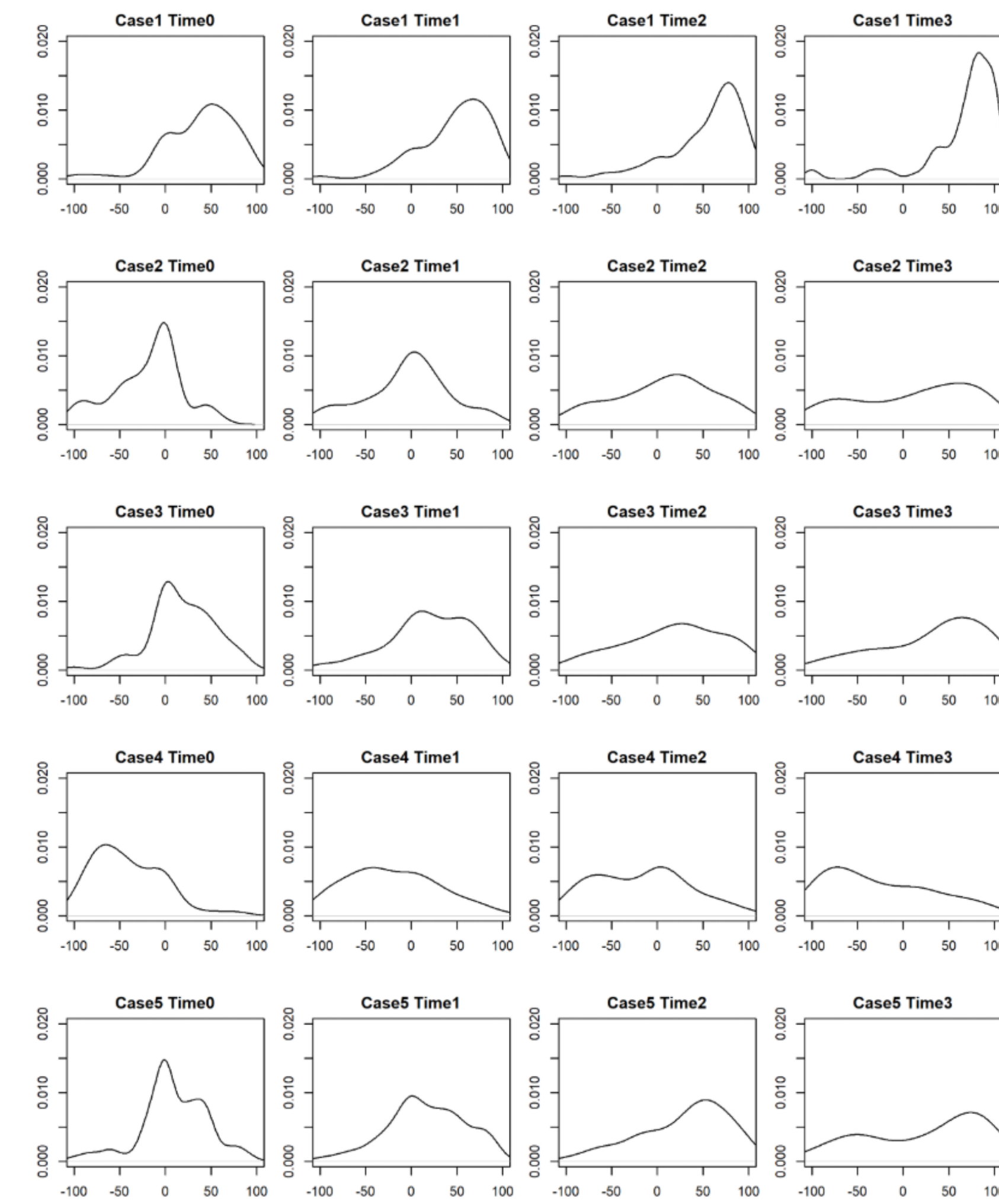


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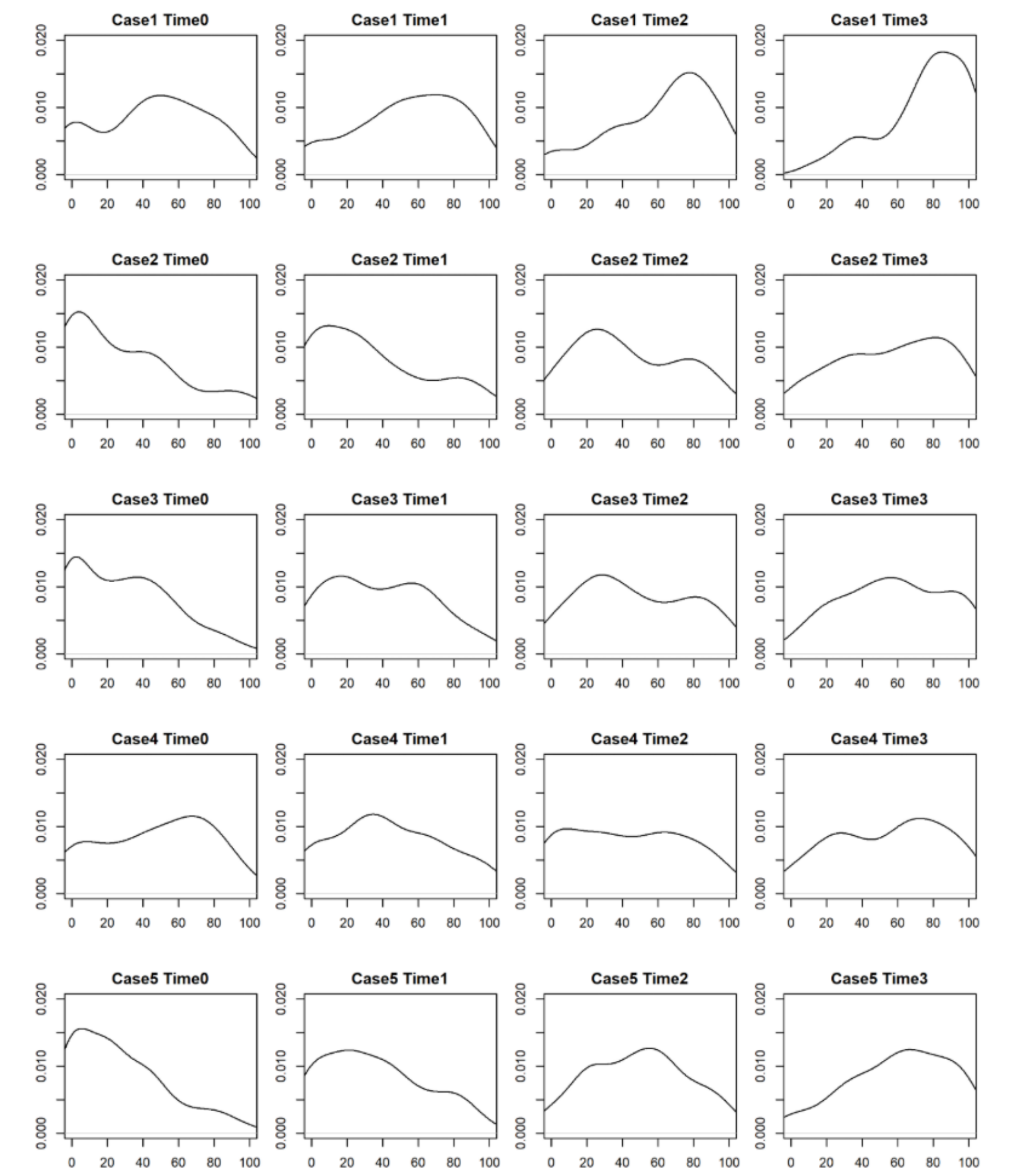


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Figure 3. School Psychologists' Confidence Change Over Time by Method Used and Case

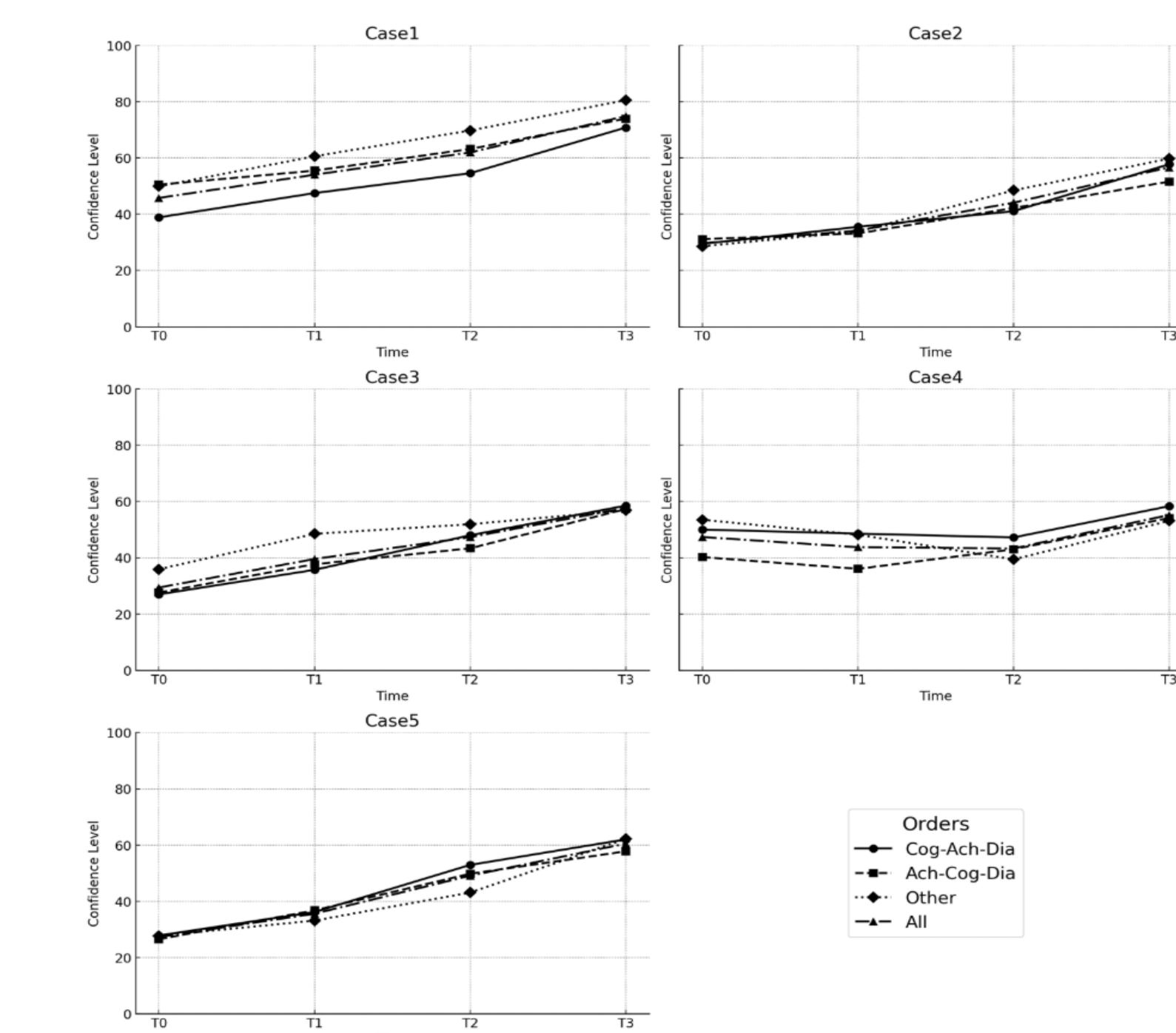
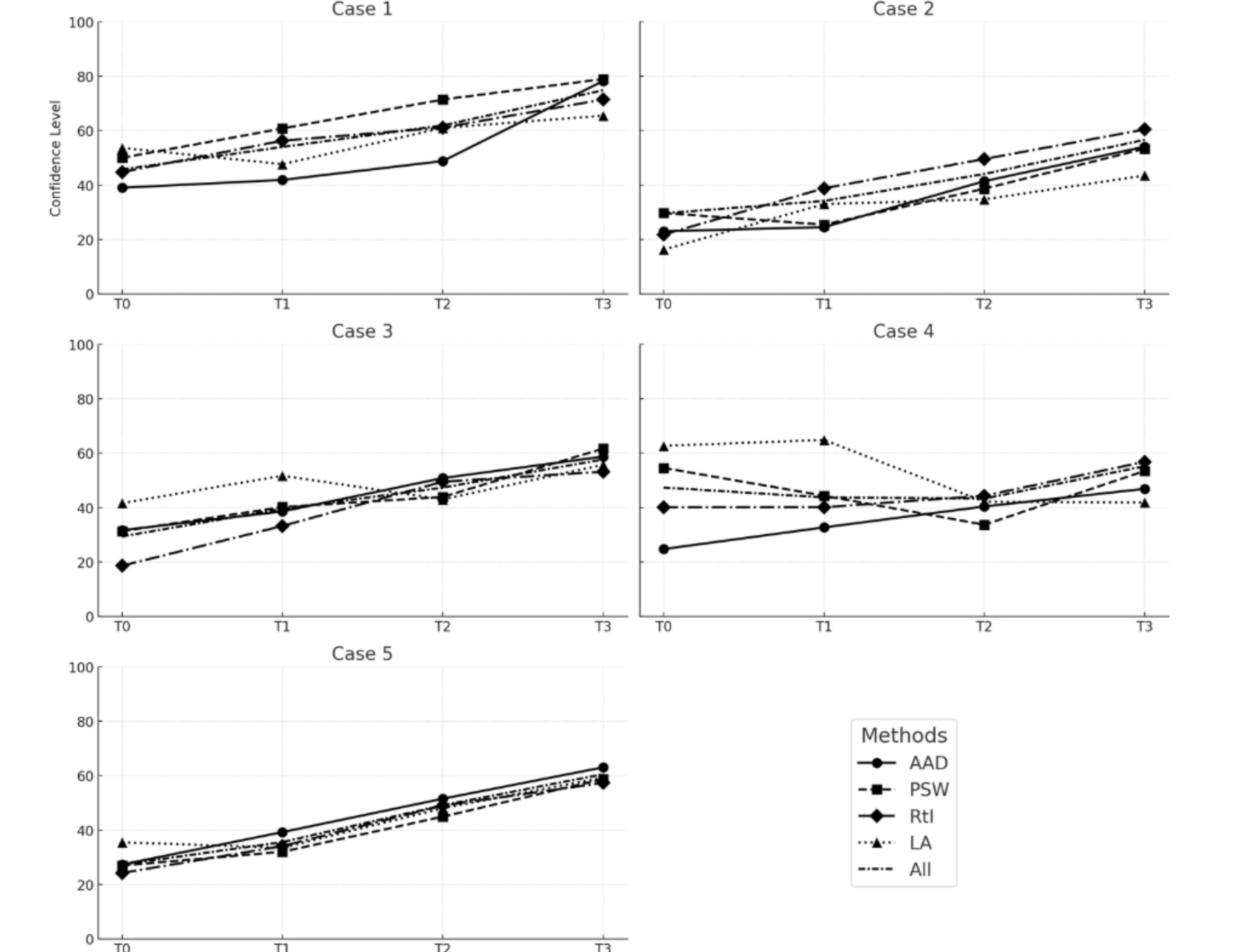


Figure 4. School Psychologists' Confidence Change Over Time by Order and Case



## Conclusion

- 1) School psychologists varied in their use of SLD identification methods, the order in which data were viewed, and the confidence in their decision about whether the student had SLD.
- 2) School psychologists' confidence increased as evaluation data accumulated, with identification method and data review order influencing initial confidence but showing limited impact on final certainty once all information was available.

# Results

SLD Eligibility Identification Method	Case Number					Average
	1	2	3	4	5	
Ability-Achievement Discrepancy (AAD)	16 (20.78%)	22 (28.57%)	26 (33.77%)	24 (32.00%)	27 (35.06%)	23.0 (30.03%)
Patterns of Strength and Weakness (PSW)	24 (31.17%)	30 (39.47%)	23 (29.87%)	9 (12.00%)	24 (31.17%)	22.0 (28.72%)
Response to Intervention (RtI)	31 (40.26%)	21 (27.27%)	18 (23.38%)	36 (48.00%)	22 (28.57%)	25.6 (33.42%)
Low Achievement	6 (7.79%)	4 (5.19%)	10 (12.99%)	6 (8.00%)	4 (5.19%)	6.0 (7.83%)

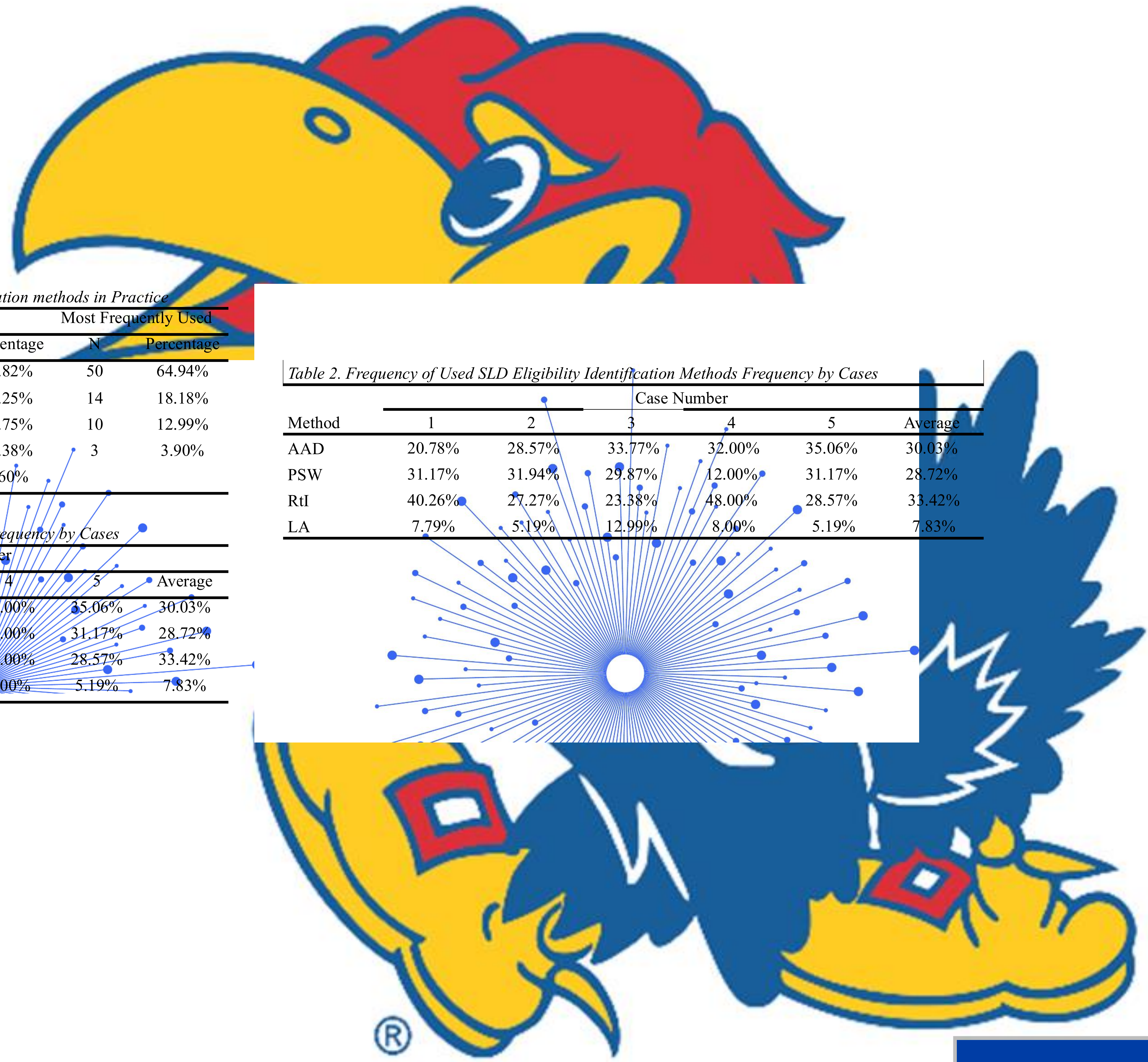


Table 1. Self-Reported Use and Most Frequently Used SLD identification methods in Practice

Eligibility Identification Method	Used		Most Frequently Used	
	N	Percentage	N	Percentage
Ability-Achievement Discrepancy (AAD)	63	81.82%	50	64.94%
Patterns of Strength and Weakness (PSW)	41	53.25%	14	18.18%
Response to Intervention (RtI)	36	46.75%	10	12.99%
Low Achievement (LA)	18	23.38%	3	3.90%
Other (Unspecified)	2	2.60%		

Table 2. Frequency of Used SLD Eligibility Identification Methods Frequency by Cases

Method	Case Number					Average
	1	2	3	4	5	
AAD	20.78%	28.57%	33.77%	32.00%	35.06%	30.03%
PSW	31.17%	31.17%	29.87%	12.00%	31.17%	28.72%
RtI	40.26%	27.27%	23.38%	48.00%	28.57%	33.42%
LA	7.79%	7.79%	12.99%	8.00%	5.19%	7.83%

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- School psychologists' confidence increased as evaluation data accumulated, with identification method and data review order influencing initial confidence but showing limited impact on final certainty once all information was available.

# Decision Making in Specific Learning Disability

## Evaluation

Zhizhou He, Ed.M. & Christopher R. Niileksela, Ph.D.



## Background

Specific learning disability remains the most prevalent disability among the student population (NCES, 2024), but there is no consensus on the best practices in identifying SLD (e.g., Kavale et al., 2009).

School psychologists use multiple methods to identify SLD (Cottle & Barrett, 2016), but research indicates low consistency in their decisions (Maki et al., 2017; Maki & Adams, 2019; Maki et al., 2022). School psychologists' confidence when making decisions is associated with multiple factors, including the SLD identification method used, the sequence in which the evaluation data is presented, and amount of available data (Maki et al., 2018; Maki et al., 2020). This study investigates school psychologists' decision-making processes in SLD evaluations by examining the diversity of assessment practices used and whether these varied practices are associated with their level of confidence when making decisions.

## Methods

**Sample.** Participants were recruited through state school psychology associations that approved this study to be distributed. 77 school psychologists from sixteen states completed the survey.

**Vignettes.** Five fictional case studies with mixed presentation of SLD indicators were developed. Each case has four blocks: 1) progress monitoring data, 2) cognitive test results (i.e., selected clusters on WISC-V, KABC-II NU, and CTOPP-2), 3) achievement test results (i.e., WJ-IV Ach), and 4) reading diagnostic test results (i.e., FAR).

**Procedures.** First, participants completed a brief questionnaire regarding their professional practices in SLD evaluations. Next, five fictional evaluation cases were presented in randomized order. For each case, participants first reviewed progress monitoring data and reported their initial impression of whether the student met criteria for SLD, as well as their confidence in this judgment on a scale ranging from -100 (very confident no SLD) to +100 (very confident SLD). Participants then reviewed the remaining three blocks of evaluation results, presented one at a time in any order they preferred. After reviewing each additional block, participants updated both their SLD judgment and confidence rating.

In total, four waves of impression and confidence data were collected for each participant for each case. After completing each case, participants also reported the SLD identification method they applied.

**Data Analysis.** The following descriptive statistics were calculated:

- 1) Descriptive statistics summarizing the SLD identification methods participants reported using in their professional practice and in the present study.
- 2) Descriptive statistics describing participants' within-case order of review. In addition, descriptive statistics of participants' confidence levels were calculated grouped by the within-case review order.
- 3) Descriptive statistics of school psychologists' confidence levels at each time point within each case, grouped by the SLD identification method applied and by the order they reviewed the blocks.

## Results

Table 1 summarizes the SLD methods participants reported using in practice, as well as their most frequently used method. The Ability-Achievement Discrepancy (AAD) method was the most used method, and more than half of the participants used AAD as their primary tool in eligibility determination. Approximately 30% of participants indicated that they rely exclusively on a single identification method in their professional practice.

Table 2 presents a summary of the methods participants used to make decisions across the five case studies. On average, a roughly equal number of participants reported using each of the three commonly used SLD identification methods. A small percentage of participants reported using a Low Achievement method. Cochran's Q tests revealed statistically significant variation in method selection across cases ( $p < .05$ ), suggesting that participants' selection of SLD identification methods was influenced by the specific characteristics or context of individual cases.

Table 3 summarizes the sequence in which participants reviewed evaluation data. Most participants followed one of two patterns: Achievement-Cognitive-Diagnostic and Cognitive-Achievement-Diagnostic, reflecting a high consistency across school psychology practice.

Figures 1 and 2 depict the distribution of participants' confidence levels at various points during the assessment process. Figure 1 shows multiple peaks in confidence levels, indicating that participants made different decisions with varied confidence, suggesting low consistency in their final decisions. On Figure 2, it was observed that, overall, participants gradually gain confidence levels throughout each case, while their final confidence levels continued to vary, highlighting ongoing variability in perceived certainty, even at the conclusion of the assessment.

Figure 3 and 4 highlight participants' confidence change over time, grouped by the identification method used and the order in which evaluation data was reviewed. Figure 3 suggests that participants become more confident as they gather more data. Depending on the case context, certain methods may provide greater initial clarity or lead to faster confidence gains. Similar trends were also found when participants were grouped by the order; they viewed evaluated data as indicated in Figure 4. The participants' confidence level tended to converge by the end of each case, suggesting that while data review order may influence initial confidence, it has less impact on final certainty once all information is available.

Table 2. Frequency of Used SLD Eligibility Identification Methods Frequency by Cases

Method	Case Number					Average
	1	2	3	4	5	
AAD	20.78%	28.57%	33.77%	32.00%	35.06%	30.03%
PSW	31.17%	31.94%	29.87%	12.00%	31.17%	28.72%
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LA	7.79%	5.19%	12.99%	8.00%	5.19%	7.83%

Table 3. Frequency of the Order Information Reviewed Evaluation Data by Case

Method	Case Number					Average
	1	2	3	4	5	
Cog-Ach-Dia	38.96%	33.77%	40.26%	32.47%	36.36%	36.36%
Cog-Dia-Ach	6.40%	2.90%	2.00%	2.90%	2.90%	4.10%

Figure 1. Density Plot of Signed Confidence (With Indication of Decision Direction) by Case and Time

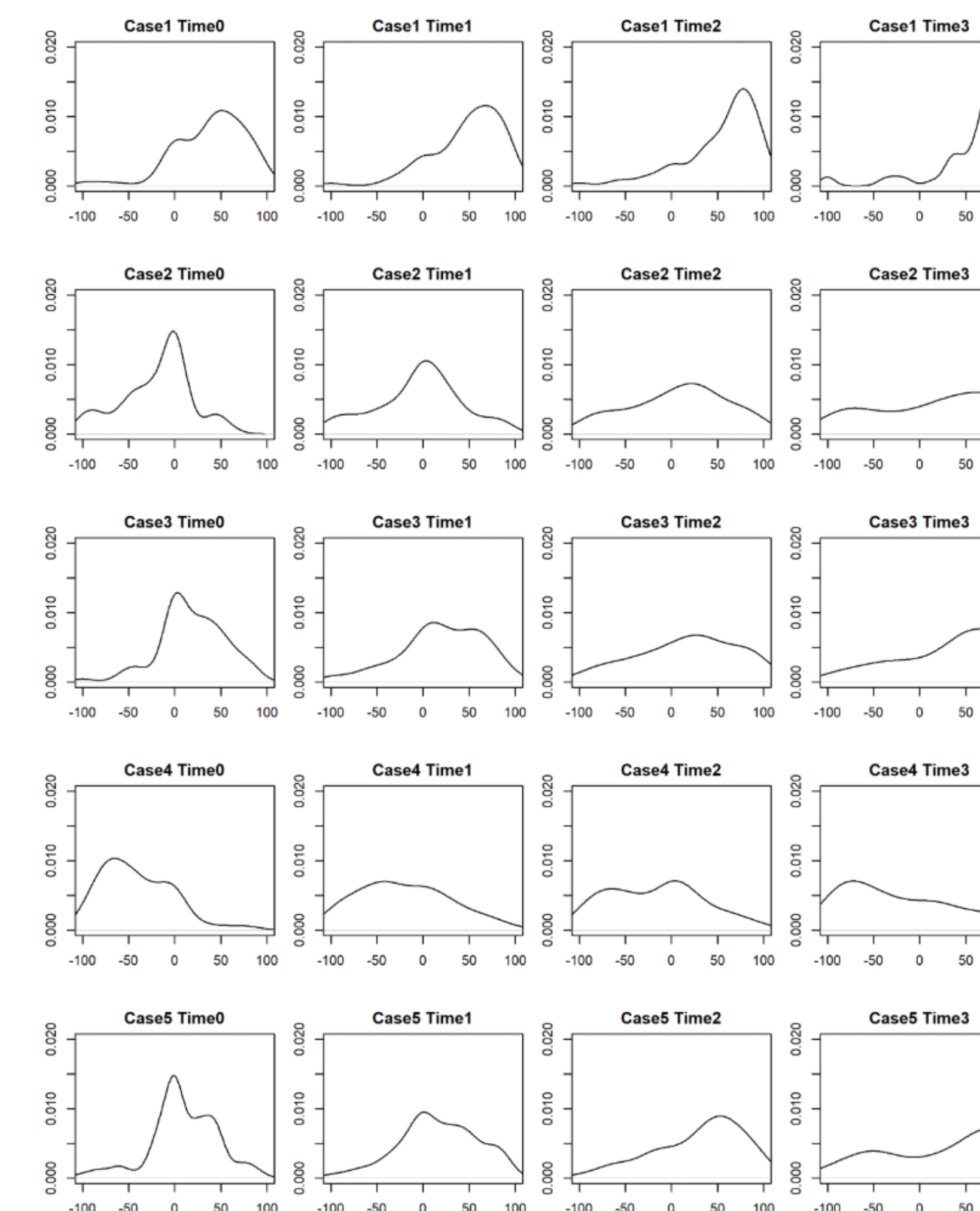


Figure 2. Density Plot of Signed Confidence (Without Indication of Decision Direction) by Case and Time

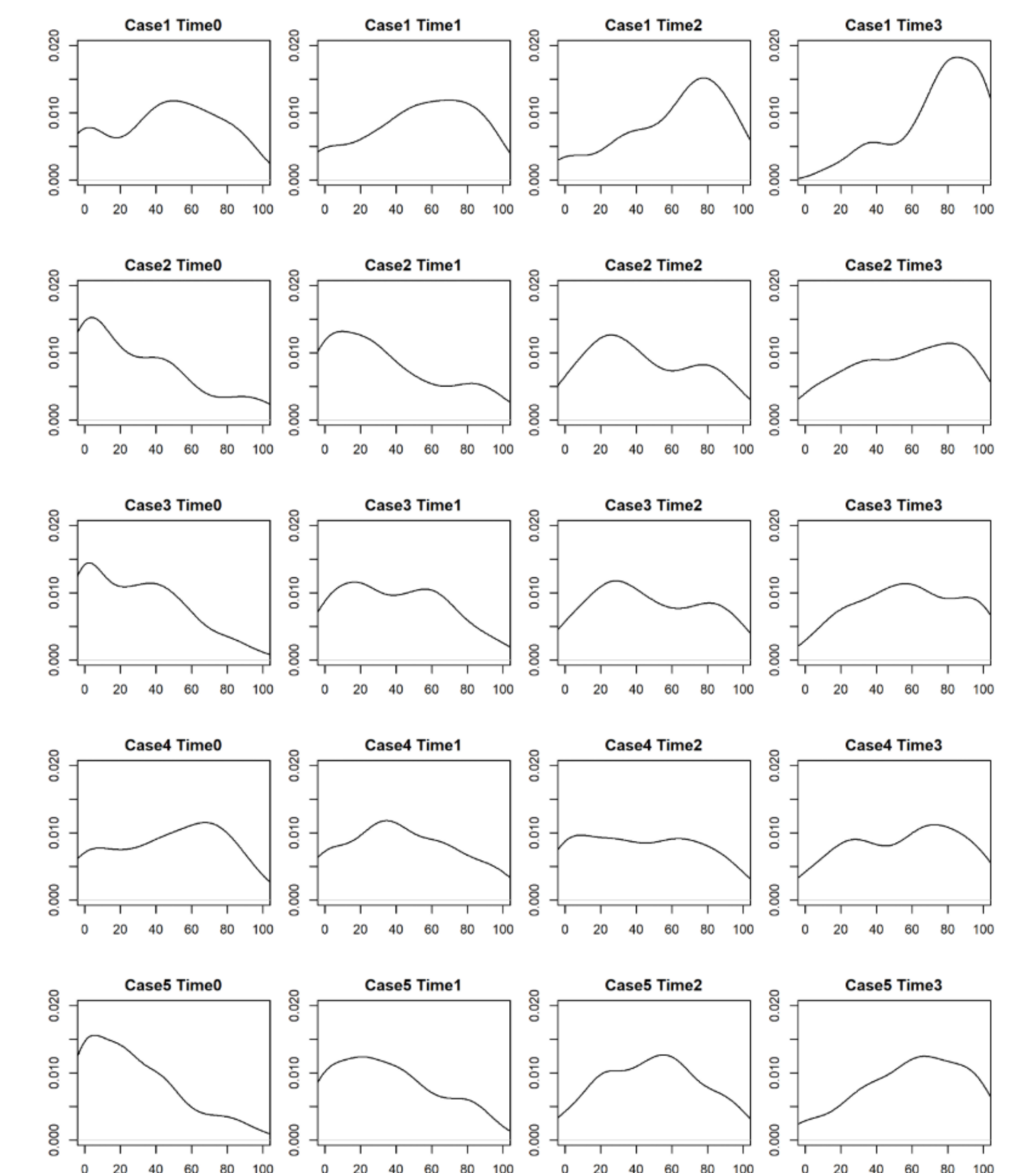


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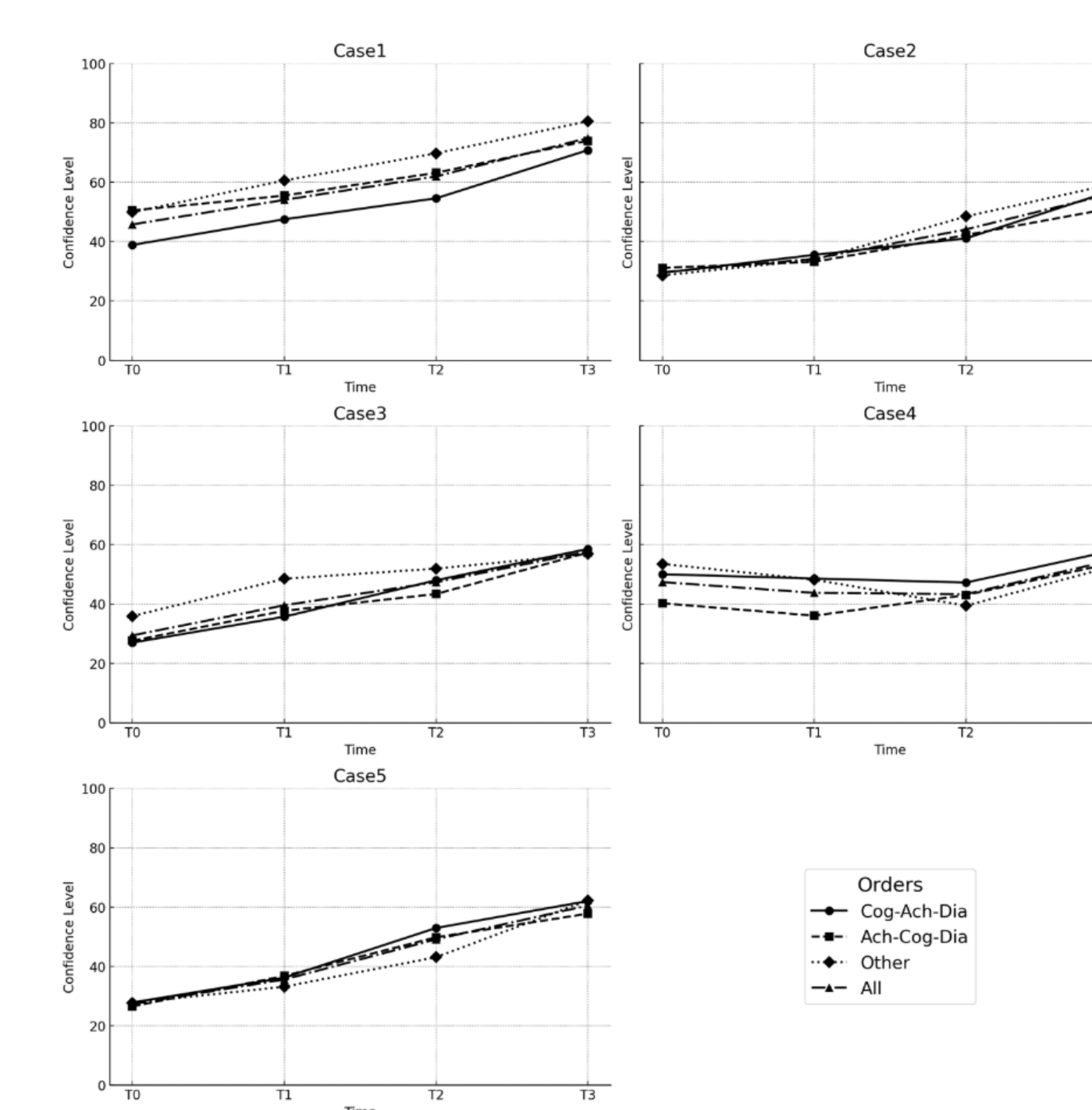
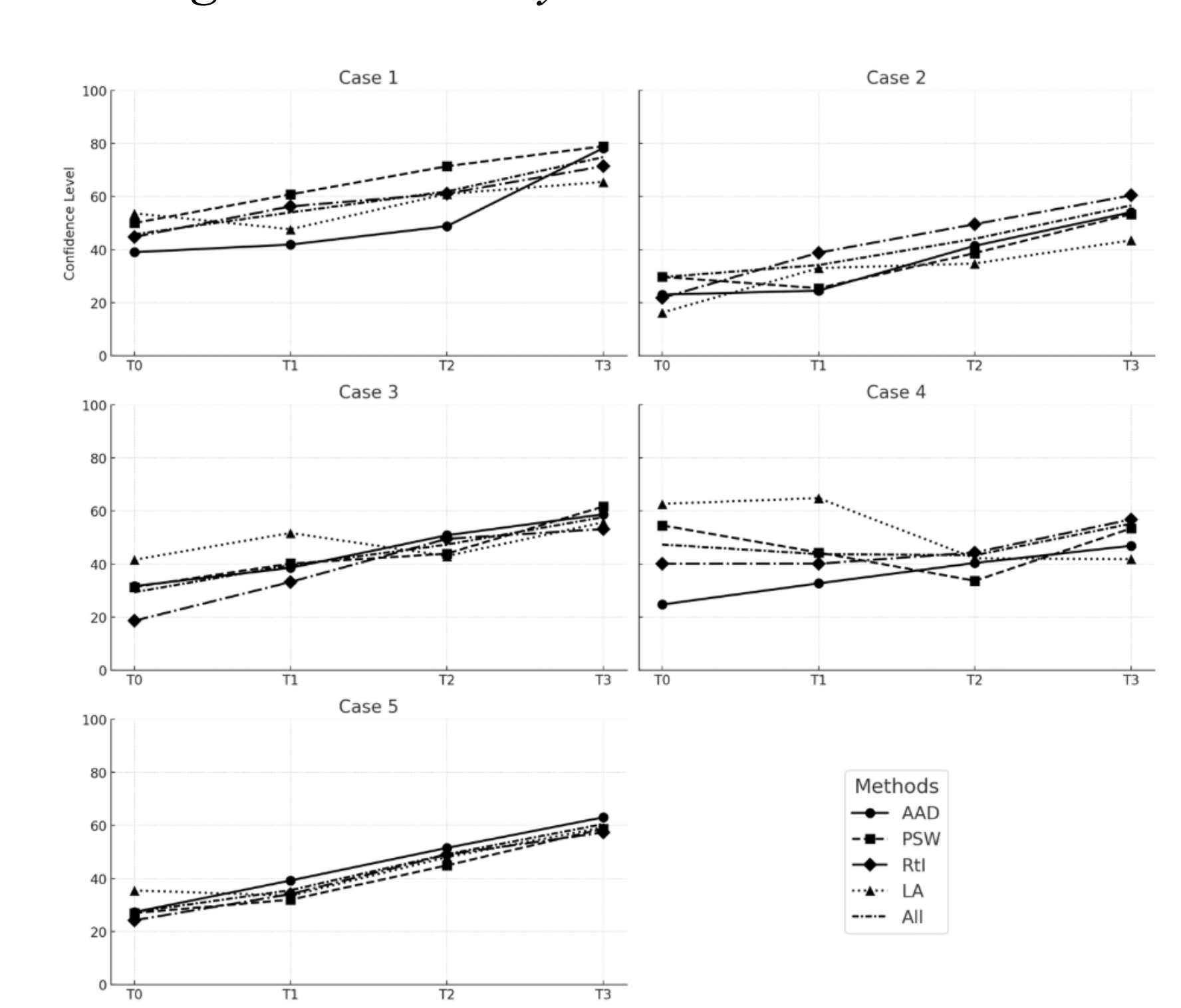


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## Conclusion

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