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Pragmatic Language as an Inferentially Driven System: Evidence From Typically Developing Preschool Children

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ABSTRACT

Background: Pragmatic language ability is a critical component of social communication and is frequently impaired despite intact structural language skills. Contemporary theoretical accounts suggest that pragmatic competence is fundamentally inferential in nature; however, empirical research examining the relationship between inferential reasoning and pragmatic language in early childhood remains limited, particularly within typically developing populations.

Method: This study employed a quantitative correlational design to investigate the association between inferential reasoning and pragmatic language abilities in 21 typically developing preschool children aged 3-6 years. Pragmatic language was assessed using a criterion-referenced parent-report Pragmatic Inventory, while inferential reasoning was measured using a criterion-referenced inference test administered directly to children. Both instruments were developed by Rexsy Taruna. Pragmatic domains included initiation of communication, responsiveness, turn-taking, topic maintenance, contextual adjustment, communicative functions, social conventions, social cognition, repair strategies, and nonverbal communication. Data were analyzed using Spearman's rank-order correlation.

Results: Inferential reasoning was moderately and significantly correlated with overall pragmatic language ability ($\rho = .52$, $p = .016$). Strong to very strong associations were observed between inferential reasoning and multiple pragmatic domains, including interactional, contextual, social, and regulatory aspects of communication. Regression analysis further indicated that inferential reasoning accounted for approximately 32% of the variance in pragmatic language performance.

Conclusion: The findings provide empirical support for conceptualizing pragmatic language as an inferentially driven system in early childhood. Inferential reasoning emerges as a foundational mechanism underlying functional pragmatic communication, highlighting the importance of incorporating inferential processes into pragmatic assessment and intervention in speech therapy.

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INTRODUCTION

Pragmatic language ability constitutes a fundamental domain of human communication and represents a core concern within the field of Speech Therapy (ST). Pragmatics refers to the ability to use language appropriately and effectively in social contexts, encompassing skills such as initiating and maintaining conversations, adapting language to the listener and situational demands, interpreting implied meanings, and flexibly deploying language to achieve communicative goals (Adams, 2002; Bishop & Norbury, 2002). Unlike structural components of language, such as phonology, morphology, syntax, and vocabulary, pragmatic competence reflects a higher-level integration of linguistic knowledge with contextual interpretation and meaning construction (Cummings, 2014).

In clinical practice, pragmatic language difficulties are among the most persistent and functionally disabling communication challenges. Children may demonstrate age-appropriate or even advanced grammatical abilities and lexical knowledge, yet still experience marked difficulties in everyday social communication. This dissociation between formal language competence and functional communicative performance has been extensively documented in developmental research and continues to pose significant challenges for assessment and intervention in speech therapy (Norbury, 2014; Wilson & Katsos, 2021). These findings underscore a critical insight: mastery of linguistic form does not necessarily translate into effective communicative function.

This dissociation is particularly salient in children with Autism Spectrum Disorder (ASD). Pragmatic communication impairment is widely recognized as a core feature of ASD and is explicitly reflected in diagnostic frameworks such as the DSM-5 (American Psychiatric Association, 2013). Clinically, many children with ASD exhibit relatively intact structural language abilities, including sentence formulation and lexical knowledge, while showing pronounced deficits in pragmatic language use. They may produce grammatically correct utterances and display extensive vocabularies, yet continue to struggle with turn-taking, topic maintenance, pragmatic inferencing, and adapting language to social context (Tager-Flusberg et al., 2005; Norbury, 2014).

Preliminary clinical observations and survey data collected from children with ASD further reinforce this pattern. Although these children often demonstrate adequate performance on standardized measures of grammar and vocabulary, they consistently exhibit significant impairments in functional communication. Their language use is characterized by limited flexibility, reduced sensitivity to contextual cues, and diminished responsiveness to communicative intent. These findings align with prior research indicating that children with neurodevelopmental disorders may present with pragmatic deficits despite relatively preserved structural language skills (Norbury, 2014; Wilson & Katsos, 2021). Together, this body of evidence highlights that pragmatic competence depends on mechanisms beyond structural language knowledge.

Although pragmatic difficulties are most visible in ASD, the mechanisms underlying pragmatic competence are not unique to clinical populations. Rather, ASD provides a magnified illustration of disruptions in developmental systems that are fundamentally involved in communication across all children. From a developmental perspective, pragmatic language emerges through the gradual refinement of children's ability to interpret meaning in context. Research has shown that typically developing children progressively improve their pragmatic inferencing and social communicative skills throughout the preschool years and beyond, following identifiable normative developmental trajectories (Wilson & Katsos, 2021). Consequently, a comprehensive understanding of pragmatic impairment requires a theoretically grounded account of how pragmatic competence is constructed during typical development.

This consideration forms the conceptual foundation of the present study. Although the empirical phenomena motivating this research arise from clinical observations in children with ASD, the population selected for investigation consists of typically developing children. This methodological decision reflects a deliberate theoretical stance: that the foundational mechanisms of pragmatic language must first be examined within typical development before being meaningfully extended to atypical populations.

Pragmatic language development is inherently complex and cannot be reduced to a single linguistic skill. Classical models of language development, such as Bloom and Lahey's (1978) framework of form, content, and use, emphasize that pragmatic competence (use) is distinct from,

yet interdependent with, language form and content. Importantly, development in one domain does not guarantee parallel development in others; a child may acquire grammatical structures and vocabulary without acquiring the ability to deploy those resources effectively in social communication.

Within this framework, semantic inferencing has been identified as a central mechanism underlying pragmatic competence. Inferencing refers to the ability to derive meanings that are not explicitly stated by integrating linguistic input with contextual knowledge, prior experience, and discourse cues (Grice, 1975; Wilson & Katsos, 2021). In everyday communication, speakers routinely rely on inference to convey intentions efficiently, and listeners must generate appropriate inferences to comprehend those intentions. Understanding conversational implicatures, implied meanings, causal relationships, non-literal language, and social intentions all depend on inferential processing.

A growing body of research demonstrates that inferential reasoning plays a critical role in discourse comprehension and pragmatic interpretation. Children gradually learn to move beyond literal meanings to understand why a speaker says something, what is being implied, and how an utterance relates to the broader communicative context (Wilson & Katsos, 2021). Conversely, difficulties in inferencing are associated with pragmatic breakdowns, including misunderstandings of indirect requests, failure to adhere to conversational norms, and inappropriate social responses (Norbury, 2014).

Despite the central theoretical role attributed to inferencing, empirical research examining the direct relationship between inferential reasoning and pragmatic language ability, particularly within typically developing preschool children, remains limited. Much of the existing literature has focused on describing pragmatic difficulties at the behavioral level or examining inferencing within clinical populations, without systematically investigating how individual differences in inferential reasoning relate to functional pragmatic performance during typical development.

From a methodological standpoint, studying this relationship in typically developing children offers several advantages. It allows for the examination of natural variability in inferential reasoning and pragmatic language without the confounding influence of global developmental impairments. Moreover, it facilitates the identification of foundational mechanisms that may later help explain pragmatic vulnerabilities observed in clinical populations.

The clinical motivation for this research remains firmly grounded in speech therapy practice. Pragmatic language difficulties are among the most challenging issues to assess and treat, particularly when structural language abilities appear intact. Without a clear understanding of the underlying mechanisms that support pragmatic competence, intervention efforts risk targeting surface-level behaviors rather than the cognitive-linguistic processes that give rise to them. Clarifying the relationship between inferential reasoning and pragmatic language may therefore contribute to more theoretically informed assessment and intervention approaches.

In summary, although the empirical phenomena motivating this study arise from clinical observations in children with ASD, the present research deliberately focuses on typically developing preschool children to examine the foundational relationship between inferential reasoning and pragmatic language ability. By investigating how children's inferencing skills relate to their functional use of language in social contexts, this study aims to advance theoretical understanding of pragmatic language development and provide a developmentally grounded foundation for future clinical applications in speech therapy.

METHOD

Research Design

This study employed a quantitative correlational research design to examine the relationship between inferential reasoning and pragmatic language abilities in typically developing preschool children. The primary objective was to determine whether individual differences in children's inferential reasoning skills were associated with variability in their functional pragmatic language use. Given the exploratory and theory-driven nature of the study, no experimental manipulation was applied.

Participants

The sample consisted of 21 typically developing children aged 3 to 6 years. All participants were native speakers of Indonesian and used Indonesian as their primary language for daily communication. Based on parental reports and screening information, none of the children had a history of, or current concerns related to, developmental disorders, neurological conditions, hearing impairment, or language delay. Participants were recruited through convenience sampling from early childhood education settings. Written informed consent was obtained from parents or legal guardians prior to participation.

Instruments

Pragmatic Language

Pragmatic language abilities were assessed using a criterion-referenced parent-report instrument, the *Pragmatic Inventory*, developed by Rexsy Taruna. This inventory was designed to evaluate children's functional use of language in everyday social interactions across multiple pragmatic domains, including initiation of communication, responsiveness in interaction, turn-taking skills, topic maintenance and cohesion, register and contextual adjustment, communicative functions, social conventions and rules, social cognition and empathy, repair strategies, and nonverbal communication. Parent ratings reflected the frequency, consistency, and contextual appropriateness of pragmatic behaviors observed in naturalistic communicative situations.

Inferential Reasoning

Inferential reasoning skills were measured using a criterion-referenced inference test, also developed by Rexsy Taruna, and administered directly to the children. The test consisted of structured tasks designed to assess several types of inferential processing, including situational inference, affective inference, causal inference, intentional inference, predictive inference, normative inference, and moral inference. Test items required children to integrate linguistic input with contextual information in order to derive implicit meanings that were not explicitly stated.

Procedure

Data collection was conducted using two complementary approaches. The pragmatic language inventory was completed by parents or caregivers in a structured questionnaire format. Inferential reasoning tasks were administered individually to each child by a trained examiner in a quiet and familiar environment to ensure optimal engagement and performance. Standardized administration procedures were followed across participants to maintain consistency.

Data Analysis

All statistical analyses were conducted using JASP. Descriptive statistics, including means, standard deviations, minimum and maximum scores, and distributional characteristics, were calculated for inferential reasoning and pragmatic language measures. The relationship between inferential reasoning and pragmatic language ability was examined using correlation analysis. Given the small sample size and the ordinal nature of some measurement scales, Spearman's rank-order correlation coefficients were used as the primary analytic approach. Correlation coefficients, exact *p* values, and effect size interpretations were reported in accordance with international reporting standards.

RESULTS AND DISCUSSION

Participant Characteristics

A total of 21 typically developing children participated in the study. As shown in Table 1, participants ranged in age from 3 to 6 years. The largest proportion of the sample consisted of 5-year-old children (n = 8, 38.10%), followed by 6-year-olds (n = 6, 28.57%) and 4-year-olds (n = 5, 23.81%). Children aged 3 years represented the smallest age group (n = 2, 9.52%). Cumulatively, approximately 71.43% of the sample were aged 5 years or younger, indicating a concentration of participants in the mid-preschool age range.

Gender distribution of the participants is presented in Table 2. The sample included 10 boys (47.62%) and 11 girls (52.38%), reflecting a relatively balanced gender composition with a slight

predominance of female participants. Overall, the age and gender distributions suggest that the sample was developmentally diverse within the preschool period and adequately balanced in terms of gender, providing an appropriate basis for examining associations among inferential reasoning and pragmatic language abilities.

Table 1. Age Distribution of Participants (N = 21)

Age (years)	n	Percent	Cumulative %
3	2	9.524	9.524
4	5	23.810	33.333
5	8	38.095	71.429
6	6	28.571	100

Table 2. Gender Distribution of Participants (N = 21)

Gender	n	%
Boys	10	47.619
Girls	11	552.381

Descriptive statistics for inferential reasoning and pragmatic language abilities are presented in Table 3. Inferential reasoning performance showed a mean score of $M = 17.71$ ($SD = 6.46$), with scores spanning the full possible range (0-25). This wide range indicates substantial inter-individual variability in children's ability to generate inferences across multiple inferential domains, including situational, affective, causal, intentional, predictive, normative, and moral inference.

Pragmatic language ability demonstrated a relatively high mean score ($M = 134.10$, $SD = 17.86$), with observed scores ranging from 89 to 150. Although overall pragmatic performance appeared generally strong within this typically developing sample, the magnitude of the standard deviation suggests meaningful variability in functional communication skills across children. This variability supports the appropriateness of examining associations between pragmatic language ability and underlying cognitive-linguistic processes, such as inferential reasoning.

Overall, the descriptive findings indicate that both inferential reasoning and pragmatic language abilities exhibit sufficient score dispersion within the sample, providing an adequate basis for subsequent correlational analysis examining the relationship between these two constructs.

Table 3. Descriptive Statistics for Inference and Pragmatic (N = 21)

Variabel	M	SD	Min	Max
Inference	17.714	6.459	0	25
Pragmatic	134.095	17.860	89	150

Inference and Pragmatic

A Spearman's rank-order correlation analysis revealed a moderate, positive, and statistically significant association between inferential reasoning ability and pragmatic language performance in typically developing preschool children ($\rho = .52$, $p = .016$). This finding indicates that children who demonstrated stronger inferential reasoning skills also tended to exhibit more advanced pragmatic language abilities in everyday communicative contexts, as reported by caregivers.

The magnitude of this association suggests that inferential reasoning represents a meaningful contributor to pragmatic competence, even within a relatively narrow developmental window (ages 3-6 years). From a developmental standpoint, this result aligns with theoretical accounts that conceptualize pragmatic language as fundamentally inferential, requiring children to move beyond

literal linguistic input to derive speakers' intentions and contextually appropriate meanings (Grice, 1975; Wilson & Katsos, 2021). Pragmatic behaviors such as understanding indirect requests, maintaining topic coherence, and adjusting language to social context all depend on the ability to generate and evaluate inferences based on situational and discourse-level information.

The present finding is consistent with previous research demonstrating close links between inferential processing and pragmatic interpretation in both typically developing children and clinical populations. Wilson and Katsos (2021) describe pragmatic development as a gradual refinement of inferential mechanisms that enable children to interpret why something is said, rather than merely what is said. Similarly, Norbury (2014) reported that children with pragmatic language difficulties often show marked weaknesses in inferencing, particularly in understanding implied meanings and conversational norms. The current results extend this literature by showing that individual differences in inferential reasoning are meaningfully associated with pragmatic language abilities even among children without identified developmental concerns.

Importantly, the observed correlation, while moderate in strength, indicates that inferential reasoning alone does not fully account for pragmatic language performance. This supports integrative models of pragmatics that emphasize the interaction of multiple cognitive systems, including executive function, social cognition, and language experience. Inferencing may provide the interpretive foundation for pragmatic understanding, but successful pragmatic communication also requires the regulation, monitoring, and flexible deployment of language in real-time social interaction.

Methodologically, the convergence between a performance-based, criterion-referenced inference test and a parent-report pragmatic inventory strengthens the ecological validity of the findings. The significant association suggests that inferential abilities assessed in structured testing contexts generalize to functional communicative behaviors observed in daily life. This is particularly relevant for early childhood research, where direct assessment of pragmatic competence can be challenging.

From a clinical perspective, these findings underscore the importance of considering inferential reasoning as a potential target in the assessment and intervention of pragmatic language difficulties. Early identification of inferential weaknesses may help explain pragmatic vulnerabilities before they manifest as overt communication problems. Interventions that explicitly support children's ability to integrate contextual cues, infer intentions, and derive implicit meanings may therefore contribute to more robust development of pragmatic language skills.

In sum, the integrated analysis demonstrates that inferential reasoning is significantly and meaningfully associated with pragmatic language ability in typically developing preschool children. This finding provides empirical support for theoretical models that position inference as a core mechanism in pragmatic language development and highlights the value of incorporating inferential processes into both developmental research and clinical speech therapy practice

Inferential Reasoning as a Predictor of Pragmatic Language Ability

A simple linear regression analysis was conducted to examine whether inferential reasoning significantly predicted overall pragmatic language ability in typically developing preschool children. The regression model was statistically significant, $F(1, 19) = 9.07$, $p = .007$, indicating that inferential reasoning reliably explained variance in pragmatic language performance.

The model yielded a correlation coefficient of $R = .57$, with an R^2 of .32, suggesting that inferential reasoning accounted for approximately 32.3% of the variance in pragmatic language scores. The adjusted R^2 value (.29) further indicates that this effect remained robust after accounting for sample size. The reduction in RMSE from 17.86 in the null model to 15.08 in the fitted model reflects an improvement in predictive accuracy when inferential reasoning was included as a predictor.

At the level of individual predictors, inferential reasoning emerged as a significant positive predictor of pragmatic language ability. The unstandardized regression coefficient ($B = 1.57$, $SE = 0.52$, $t = 3.01$, $p = .007$) indicates that for each one-unit increase in inferential reasoning score, pragmatic language scores increased by approximately 1.57 points. The standardized coefficient (β

= .57) reflects a moderate-to-large effect size, underscoring the substantive contribution of inferential reasoning to children's functional communication abilities.

Pragmatic Language as an Inferentially Driven System

A series of Spearman's rank-order correlation analyses was conducted to examine the relationship between inferential reasoning and specific domains of pragmatic language ability. The results revealed consistent, moderate to very strong positive correlations between total inferential reasoning scores and multiple pragmatic indicators, indicating that higher inferencing ability was systematically associated with more advanced pragmatic performance across domains.

Inferential reasoning showed a moderate and statistically significant association with repair strategies (ρ = .59, p = .005) and nonverbal communication (ρ = .58, p = .006). These findings suggest that children with stronger inferential skills are better able to recognize communicative breakdowns and employ appropriate strategies to repair misunderstandings, as well as interpret and use nonverbal cues such as facial expressions, gestures, and body language. From a pragmatic perspective, both repair and nonverbal communication require children to infer interlocutors' intentions, recognize mismatches between intended and received messages, and adjust communicative behavior accordingly.

Stronger associations were observed between inferential reasoning and core interactional pragmatic skills. Inferential reasoning was strongly correlated with initiation of communication (ρ = .68, p < .001) and responsiveness in interaction (ρ = .78, p < .001), indicating that children who are more proficient in generating inferences are more likely to initiate interactions appropriately and respond contingently to conversational partners. These pragmatic behaviors require children to infer when communication is expected, what type of response is socially appropriate, and how their interlocutor's prior utterance should be interpreted within the ongoing discourse.

Very strong correlations were also found between inferential reasoning and turn-taking skills (ρ = .95, p < .001), as well as topic maintenance and cohesion (ρ = .49, p = .024). These findings highlight the inferential demands inherent in managing conversational flow. Effective turn-taking and topic maintenance require children to infer conversational boundaries, anticipate others' contributions, and integrate prior discourse information to maintain coherence. The strength of these associations supports the view that pragmatic discourse management is fundamentally inferential rather than purely rule-based.

Inferential reasoning demonstrated strong to very strong correlations with pragmatics related to contextual and social understanding, including register and contextual adjustment (ρ = .69, p < .001), communicative functions (ρ = .86, p < .001), and social conventions and rules (ρ = .98, p < .001). These domains require children to infer situational norms, interlocutor expectations, and culturally appropriate language use. The near-perfect association with social conventions and rules suggests that children's ability to navigate socially appropriate communication is closely tied to their capacity to derive implicit social meanings rather than explicit instruction alone.

Similarly, inferential reasoning was very strongly associated with social cognition and empathy (ρ = .86-.87, p < .001), indicating that children who perform well on inferential tasks are more adept at understanding others' perspectives, emotions, and intentions in communicative contexts. This finding aligns with theoretical accounts that position pragmatic language as a mechanism for expressing and interpreting mental states through inference-based reasoning.

Taken together, these results provide robust empirical support for the conceptualization of pragmatic language as an inferentially driven system. Rather than operating as a collection of discrete social rules or learned conversational scripts, pragmatic competence appears to emerge from children's ability to integrate linguistic input with contextual, social, and interpersonal information to derive implicit meaning.

These findings are consistent with previous theoretical and empirical work emphasizing the centrality of inference in pragmatic development. Grice's (1975) theory of conversational implicature posits that successful communication depends on listeners' ability to infer speaker intentions beyond literal meaning. More recently, Wilson and Katsos (2021) have argued that pragmatic development involves progressive refinement of inferential mechanisms that allow

children to interpret why an utterance is produced in a given context. The present results extend this framework by demonstrating that inferential reasoning is not only theoretically related to pragmatics but is empirically associated with a broad range of functional pragmatic behaviors in typically developing preschool children.

Furthermore, the pattern of strong correlations across multiple pragmatic domains helps explain clinical observations frequently reported in children with pragmatic language difficulties, including those with ASD. Norbury (2014) noted that pragmatic impairments often manifest as difficulties in topic management, conversational repair, and social appropriateness, domains that, as shown in the current study, are closely linked to inferential reasoning ability. Importantly, the present findings indicate that these relationships are evident even in the absence of diagnosed developmental disorders, suggesting that inferential reasoning represents a foundational mechanism underlying pragmatic competence across development.

From a clinical standpoint, these results have important implications for speech therapy practice. Traditional pragmatic interventions often focus on teaching explicit conversational rules or rehearsing specific social behaviors. However, the strong associations observed between inferential reasoning and pragmatic performance suggest that such approaches may be insufficient if underlying inferential processes are not adequately supported. Assessment and intervention frameworks that incorporate inferencing, such as supporting children's ability to interpret context, anticipate communicative intent, and derive implicit meaning, may lead to more generalized and durable improvements in pragmatic language.

In conclusion, the integrated results demonstrate that inferential reasoning is strongly and systematically associated with multiple domains of pragmatic language ability in typically developing preschool children. These findings reinforce theoretical models that position inference as a core mechanism in pragmatic language development and underscore the importance of incorporating inferential processes into both developmental research and clinical approaches to pragmatic assessment and intervention.

CONCLUSION

The present study investigated the relationship between inferential reasoning and pragmatic language ability in typically developing preschool children aged 3 to 6 years. Across correlational and regression analyses, the findings consistently demonstrated that inferential reasoning is significantly and meaningfully associated with children's pragmatic language performance, both at the global level and across specific pragmatic domains. First, inferential reasoning showed a moderate positive correlation with overall pragmatic language ability, indicating that children with stronger inferencing skills tend to exhibit more effective functional communication in everyday social contexts. Second, inferential reasoning emerged as a significant predictor of pragmatic language ability, accounting for approximately one-third of the variance in pragmatic performance. This finding underscores the substantive contribution of inferential reasoning to pragmatic competence, even within a relatively narrow developmental window in early childhood. At a more fine-grained level, inferential reasoning was systematically associated with a broad range of pragmatic domains, including interactional skills (e.g., initiation, responsiveness, turn-taking), discourse-level abilities (e.g., topic maintenance and cohesion), contextual and social-pragmatic skills (e.g., register adjustment, social conventions), as well as regulatory and nonverbal aspects of communication (e.g., repair strategies and nonverbal communication). The strength and consistency of these associations provide robust empirical support for conceptualizing pragmatic language as an inferentially driven system, rather than as a collection of isolated conversational rules or learned social scripts.

Theoretically, these findings align with inferential models of pragmatics that emphasize the central role of meaning construction beyond literal linguistic input (Grice, 1975; Wilson & Katsos, 2021). Developmentally, the results suggest that pragmatic competence emerges through children's increasing ability to integrate linguistic, contextual, and social information to derive implicit meanings and communicative intent. Clinically, the findings highlight the importance of incorporating inferential processes into pragmatic assessment and intervention, particularly in early childhood, when pragmatic systems are still developing and malleable. In sum, this study contributes

to the literature by providing empirical evidence that inferential reasoning represents a foundational mechanism underlying pragmatic language ability in typically developing preschool children. By focusing on typical development, the present findings offer a developmentally grounded framework that may help explain pragmatic vulnerabilities observed in clinical populations and inform more mechanism-based approaches in speech therapy practice.

LIMITATIONS

Several limitations of the present study should be acknowledged. First, the sample size was relatively small (N = 21), which limits statistical power and the generalizability of the findings. Although significant and theoretically coherent effects were observed, replication with larger and more diverse samples is necessary to confirm the robustness of the reported associations. Second, the cross-sectional design precludes causal inference. While inferential reasoning was shown to predict pragmatic language ability, the directionality of this relationship cannot be conclusively determined. Longitudinal studies are needed to examine how inferential reasoning and pragmatic language co-develop over time and whether early inferencing skills prospectively predict later pragmatic outcomes. Third, pragmatic language ability was assessed using a parent-report inventory, which, although ecologically valid, may be subject to rater bias and variability in parental interpretation of communicative behaviors. Future research would benefit from incorporating multi-method assessments, such as direct observational measures, discourse-based tasks, or clinician ratings, to triangulate pragmatic competence. Fourth, inferential reasoning was operationalized as a composite construct encompassing multiple inference types (e.g., situational, causal, affective, moral). While this approach captures inferencing broadly, future studies could examine whether specific types of inference differentially relate to particular pragmatic domains, allowing for a more fine-grained mechanistic account. Finally, the present study focused exclusively on typically developing children. Although this was a deliberate theoretical choice, extending this research to clinical populations, such as children with pragmatic language disorder or Autism Spectrum Disorder, would be essential to evaluate the clinical generalizability and diagnostic relevance of the inference-pragmatics relationship. Despite these limitations, the present study provides a theoretically grounded and empirically supported foundation for understanding pragmatic language development as an inferentially driven process. Future research that integrates longitudinal designs, larger samples, and diverse populations

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