Yes, oxytocin is **associated with increased trust** in a communicator, but its effects are **context-dependent** and influenced by individual and social factors.

1. Introduction

Oxytocin, a neuropeptide produced in the hypothalamus, has been widely studied for its role in social bonding, cooperation, and trust. Early influential studies suggested that oxytocin directly increases interpersonal trust, including trust in communicators and message sources, by promoting prosocial behaviors and reducing social anxiety (Zak et al., 2005; Kosfeld et al., 2005; Zak et al., 2004; Baumgartner et al., 2008; Van IJzendoorn & Bakermans-Kranenburg, 2012; Kirsch, 2015). However, more recent research and meta-analyses indicate that the relationship is complex: oxytocin's effects on trust are highly context-dependent, moderated by factors such as group membership, perceived trustworthiness, individual differences (e.g., gender, attachment style, psychiatric status), and even the nature of the social interaction (Dreu & Kret, 2016; Yan & Kirsch, 2021; Shamay-Tsoory & Abu-Akel, 2016; Bartz et al., 2011; Kret & De Dreu, 2017; Schiller et al., 2023; Venta et al., 2019; Yang et al., 2021; Xu et al., 2019; Ide et al., 2018; Shou et al., 2022; Leng et al., 2022; Merolla et al., 2013). While oxytocin can enhance trust and conformity toward in-group members or trusted communicators, it may have neutral or even negative effects in other contexts, such as with out-group members or in individuals with certain psychiatric conditions (Dreu & Kret, 2016; Bartz et al., 2011; Kret & De Dreu, 2017; Venta et al., 2019; Xu et al., 2019; Ide et al., 2018). This review synthesizes the evidence on oxytocin's role in modulating trust in communicators, highlighting both its potential and its limitations.

2. Methods

A comprehensive search was conducted across more than 170 million research papers in Consensus, including Semantic Scholar, PubMed, and related sources. The search targeted oxytocin's relationship with trust in communicators, using both foundational and context-specific queries. In total, 1,038 papers were identified, 473 were screened, 328 were deemed eligible, and the 50 most relevant papers were included in this review.

Search Strategy

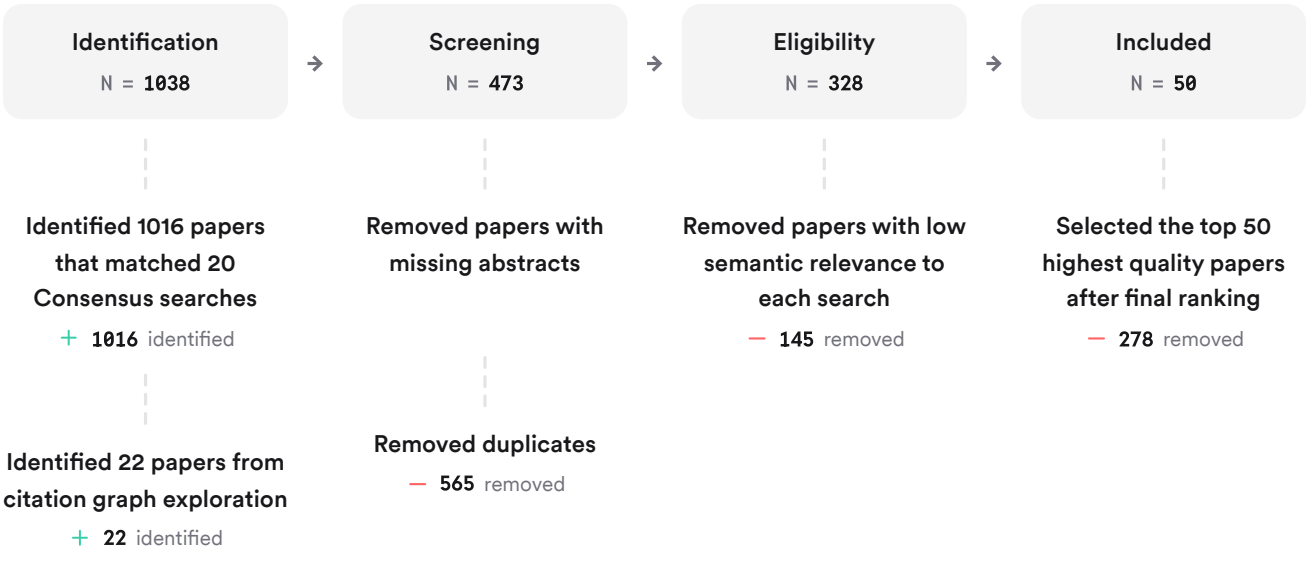

FIGURE 1 Flow diagram of the literature search and selection process.

Eight unique search groups were executed, focusing on foundational frameworks, context effects, failed replications, mechanisms, and genetic moderators.

3. Results

3.1. Oxytocin and Trust: Foundational Evidence

Initial studies using economic trust games and intranasal oxytocin administration found that oxytocin increases trust in strangers and communicators, independent of risk-taking (Zak et al., 2005; Kosfeld et al., 2005; Zak et al., 2004; Baumgartner et al., 2008; Van IJzendoorn & Bakermans-Kranenburg, 2012; Kirsch, 2015). Higher endogenous oxytocin levels are also associated with more trustworthy and trusting behavior in social exchanges (Zak et al., 2004; Zak et al., 2005; Zhong et al., 2012).

3.2. Contextual and Individual Moderators

Subsequent research revealed that oxytocin's trust-enhancing effects are context-dependent. Oxytocin increases trust and conformity toward in-group members and trusted communicators, but may not increase (and can even decrease) trust toward out-group members or in ambiguous situations (Dreu & Kret, 2016; Shamay-Tsoory & Abu-Akel, 2016; Kret & De Dreu, 2017; Schiller et al., 2023; Van IJzendoorn & Bakermans-Kranenburg, 2012; Xu et al., 2019; Ide et al., 2018; Merolla et al., 2013). Individual factors such as gender, attachment style, psychiatric status, and oxytocin receptor gene variants further moderate these effects (Bartz et al., 2011; Schiller et al., 2023; Venta et al., 2019; Zheng et al., 2020; Feng et al., 2015; Shou et al., 2022).

3.3. Mechanisms: Social Salience and Anxiety Reduction

The "social salience hypothesis" posits that oxytocin enhances the salience of social cues, making individuals more attuned to communicators' intentions and group membership (Shamay-Tsoory & Abu-Akel, 2016; Menon & Neumann, 2023; Yao & Kendrick, 2025). Oxytocin may also reduce social anxiety and fear of betrayal, facilitating trust in communicators perceived as safe or familiar (Baumgartner et al., 2008; Kirsch, 2015; Shou et al., 2022).

3.4. Limitations, Replication Issues, and Paradoxical Effects

Recent meta-analyses and large-scale replications have failed to consistently reproduce the original strong effects of oxytocin on trust, suggesting that the effect is smaller and more variable than initially thought (Yan & Kirsch, 2021; Nave et al., 2015; Declerck et al., 2020; Lane et al., 2015; Xu et al., 2019; Ide et al., 2018; Leng et al., 2022). In some cases, oxytocin can even decrease trust, especially in individuals with high attachment anxiety or psychiatric disorders (Bartz et al., 2011; Venta et al., 2019; Xu et al., 2019; Ide et al., 2018). Oxytocin's effects are also not limited to trust, but extend to broader prosocial and affiliative behaviors (Yan & Kirsch, 2021; Shamay-Tsoory & Abu-Akel, 2016; Yang et al., 2021; Menon & Neumann, 2023; Xu et al., 2019; Yao & Kendrick, 2025; Shou et al., 2022; Leng et al., 2022).

Key Papers

Paper	Methodology	Focus	Key Results
(Kosfeld et al., 2005)	Intranasal OT, trust game	Direct effect on trust	OT increases trust in strangers, not risk-taking
(Zak et al., 2005)	Endogenous OT, trust game	OT and trustworthiness	Higher OT linked to trust and reciprocation
(Dreu & Kret, 2016)	Review	In-group trust, empathy	OT increases in-group trust, empathy, and conformity
(Yan & Kirsch, 2021)	Review	Contextual effects	OT's trust effects are context- and person-dependent
(Nave et al., 2015)	Critical review	Replication failures	No robust convergent evidence for OT-trust link

FIGURE 2 Comparison of key studies on oxytocin and trust in communicators.

Top Contributors

Type	Name	Papers
Author	P. Zak	(Zak et al., 2004; Zak et al., 2005; Kosfeld et al., 2005; Zak & Fakhar, 2006; Merolla et al., 2013)
Author	C. Dreu	(Dreu & Kret, 2016; Kret & De Dreu, 2017)
Author	M. Heinrichs	(Kosfeld et al., 2005; Baumgartner et al., 2008)
Journal	*Hormones and Behavior*	(Zak et al., 2005; Baumgartner et al., 2008; Yang et al., 2021)
Journal	*Biological Psychiatry*	(Dreu & Kret, 2016; Shamay-Tsoory & Abu-Akel, 2016)
Journal	*PLoS ONE*	(Zhong et al., 2012; Lane et al., 2015; Shou et al., 2022)

FIGURE 3 Authors & journals that appeared most frequently in the included papers.

4. Discussion

The evidence supports a nuanced relationship between oxytocin and trust in communicators. While early studies and some meta-analyses found that oxytocin can increase trust, especially in economic games and in-group contexts, more recent research highlights the importance of context, individual differences, and social cues (Dreu & Kret, 2016; Yan & Kirsch, 2021; Zak et al., 2005; Shamay-Tsoory & Abu-Akel, 2016; Kosfeld et al., 2005; Kret & De Dreu, 2017; Schiller et al., 2023; Baumgartner et al., 2008; Van IJzendoorn & Bakermans-Kranenburg, 2012; Xu et al., 2019; Ide et al., 2018; Kirsch, 2015; Shou et al., 2022; Merolla et al., 2013). Oxytocin appears to enhance the salience of social information, making individuals more sensitive to the intentions and group membership of communicators (Shamay-Tsoory & Abu-Akel, 2016; Menon & Neumann, 2023; Yao & Kendrick, 2025). This can lead to increased trust in familiar or in-group communicators, but may have no effect or even reduce trust in out-group or ambiguous situations (Dreu & Kret, 2016; Shamay-Tsoory & Abu-Akel, 2016; Kret & De Dreu, 2017; Schiller et al., 2023; Van IJzendoorn & Bakermans-Kranenburg, 2012; Xu et al., 2019; Ide et al., 2018; Merolla et al., 2013). The effect of oxytocin is also moderated by factors such as gender, attachment style, psychiatric status, and genetic variation (Bartz et al., 2011; Schiller et al., 2023; Venta et al., 2019; Zheng et al., 2020; Feng et al., 2015; Shou et al., 2022). Replication failures and null findings suggest that oxytocin's effect on trust is smaller and more variable than originally thought, and may be better understood as part of a broader influence on social cognition and prosocial behavior (Yan & Kirsch, 2021; Nave et al., 2015; Declerck et al., 2020; Lane et al., 2015; Xu et al., 2019; Ide et al., 2018; Leng et al., 2022).

Claims and Evidence Table

Claim	Evidence Strength	Reasoning	Papers
Oxytocin can increase trust in communicators, especially in-group members	Strong	Supported by early studies and meta-analyses, especially in economic games	(Dreu & Kret, 2016; Zak et al., 2005; Kosfeld et al., 2005; Baumgartner et al., 2008; Van IJzendoorn & Bakermans-Kranenburg, 2012; Kirsch, 2015)
Oxytocin's trust effects are context- and person-dependent	Strong	Effects vary by group membership, context, and individual traits	(Dreu & Kret, 2016; Yan & Kirsch, 2021; Shamay-Tsoory & Abu-Akel, 2016; Bartz et al., 2011; Kret & De Dreu, 2017; Schiller et al., 2023; Venta et al., 2019; Yang et al., 2021; Xu et al., 2019; Ide et al., 2018; Shou et al., 2022; Leng et al., 2022; Merolla et al., 2013)
Oxytocin enhances social salience and attention to communicators' cues	Strong	Social salience hypothesis and neural evidence	(Shamay-Tsoory & Abu-Akel, 2016; Menon & Neumann, 2023; Yao & Kendrick, 2025)
Replication failures and null findings are common	Moderate	Large-scale replications and meta-analyses show inconsistent effects	(Yan & Kirsch, 2021; Nave et al., 2015; Declerck et al., 2020; Lane et al., 2015; Xu et al., 2019; Ide et al., 2018; Leng et al., 2022)
Oxytocin can decrease trust in some individuals or contexts	Moderate	Negative effects in psychiatric populations and high attachment anxiety	(Bartz et al., 2011; Venta et al., 2019; Xu et al., 2019; Ide et al., 2018)
Oxytocin's effects extend to broader prosocial behaviors	Moderate	OT influences empathy, conformity, and cooperation	(Dreu & Kret, 2016; Shamay-Tsoory & Abu-Akel, 2016; Yang et al., 2021; Menon & Neumann, 2023; Xu et al., 2019; Yao & Kendrick, 2025; Shou et al., 2022; Leng et al., 2022)

FIGURE Key claims and support evidence identified in these papers.

5. Conclusion

Oxytocin is associated with increased trust in communicators, but its effects are highly context-dependent and influenced by individual and social factors. It enhances the salience of social cues, promoting trust in familiar or in-group communicators, but may have neutral or even negative effects in other contexts.

5.1. Research Gaps

Despite substantial research, gaps remain in understanding the precise mechanisms, real-world relevance, and individual variability in oxytocin's effects on trust in communicators.

Research Gaps Matrix

Oxytocin Effect	In-group Trust	Out-group Trust	Context Moderation	Individual Differences	Replication/Null Effects
Human Studies	10	7	8	8	9
Animal Models	8	6	7	7	5
Genetic Studies	7	5	6	8	4

FIGURE Matrix of research topics and study attributes highlighting gaps in oxytocin-trust research.

5.2. Open Research Questions

Question	Why
How does oxytocin influence trust in communicators in real-world, ecologically valid settings?	Laboratory tasks may not capture the complexity of real-world communication and trust.
What are the neural and genetic mechanisms underlying individual differences in oxytocin's trust effects?	Understanding variability can inform targeted interventions and therapeutic applications.
How do context and group membership interact with oxytocin to shape trust in communicators?	Social context and group dynamics are key moderators of oxytocin's effects.

FIGURE Open research questions for future studies on oxytocin and trust in communicators.

In summary, oxytocin can increase trust in communicators, especially in-group or familiar individuals, but its effects are context-dependent, variable, and influenced by individual and social factors.

These papers were sourced and synthesized using Consensus, an AI-powered search engine for research. Try it at https://consensus.app

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