

MUHAMMED YASIN GÜNGÖR

MEDIA FRAMING OF NUCLEAR POWER PLANTS AND ITS EFFECTS ON PUBLIC OPINION IN TÜRKİYE

Bilkent University 2025

MEDIA FRAMING OF NUCLEAR POWER PLANTS AND ITS EFFECTS ON PUBLIC OPINION IN TÜRKİYE: AN EXPERIMENTAL STUDY

A Master's Thesis

by
MUHAMMED YASİN GÜNGÖR

Department of
Political Science
İhsan Doğramacı Bilkent University
Ankara
September 2025

To Gıdırı



MEDIA FRAMING OF NUCLEAR POWER PLANTS AND ITS EFFECTS ON
PUBLIC OPINION IN TÜRKİYE: AN EXPERIMENTAL STUDY

The Graduate School of Economics and Social Sciences
of
İhsan Doğramacı Bilkent University

by

MUHAMMED YASİN GÜNGÖR

In Partial Fulfillment of the Requirements for the Degree of
MASTER OF POLITICAL SCIENCE

THE DEPARTMENT OF
POLITICAL SCIENCE
İHSAN DOĞRAMACI BİLKENT UNIVERSITY
ANKARA

September 2025

MEDIA FRAMING OF NUCLEAR POWER PLANTS AND ITS EFFECTS ON
PUBLIC OPINION IN TÜRKİYE: AN EXPERIMENTAL STUDY
By Muhammed Yasin Güngör

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Political Science.

Zeki Sarıgil
Advisor

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Political Science.

Esra İşsever Ekinici
Examining Committee Member

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Political Science.

Hakan Yavuzylmaz
Examining Committee Member

Approval of the Graduate School of Economics and Social Sciences

Refet S. Gürkaynak
Director

ABSTRACT

MEDIA FRAMING OF NUCLEAR POWER PLANTS AND ITS EFFECTS ON PUBLIC OPINION IN TÜRKİYE: AN EXPERIMENTAL STUDY

Güngör, Muhammed Yasin

M.A., Department of Political Science

Advisor: Assoc. Prof. Zeki Sarıgil

September 2025

Media framing research has demonstrated significant effects on public opinion formation, yet limited attention examines how frame effectiveness varies across domains and individual characteristics within polarized political environments. Türkiye's polarized media system and ongoing nuclear energy development provide an optimal context for investigating these complex framing dynamics. This study examines how different media framings of nuclear energy policy influence Turkish citizens' attitudes and identifies the individual and contextual factors that moderate these effects.

The research employed a 2×2×2 factorial experimental design manipulating frame valence (positive vs. negative), frame domain (national security vs. environmental security), and media source political orientation (pro-government vs. opposition). Participants (N = 778) were randomly assigned to experimental conditions and exposed to three news articles reflecting their assigned treatment combination before completing attitude measures.

Results demonstrated framing effects. In the full sample, positive frames showed higher government policy support compared to negative frames. Among attention check passers (N = 443), government policy support remained significant and general attitudes reached significance. Domain analysis revealed asymmetry: national security frames produced significant effects across multiple attitude dimensions, while environmental security frames showed minimal impact. Individual differences revealed curvilinear moderation patterns for both media trust and knowledge, with moderate levels creating optimal framing susceptibility.

The findings demonstrate that framing effectiveness depends critically on domain content and audience characteristics rather than simple valence manipulation. Results suggest that security-related frames may be more cognitively accessible in Türkiye's geopolitical context, while environmental arguments require more sustained communication efforts.

Keywords: media framing, nuclear energy, polarization, public opinion, political communication

ÖZET

TÜRKİYE’DE MEDYADA NÜKLEER ENERJİ SANTRALLERİNİN ÇERÇEVELENMESİ VE KAMUOYU ÜZERİNDEKİ ETKİSİ: DENEYSEL BİR ARAŞTIRMA

Güngör, Muhammed Yasin

Yüksek Lisans, Siyaset Bilimi

Tez Danışmanı: Doç. Dr. Zeki Sarıgil

Eylül 2025

Medya çerçeveleme araştırmaları, kamuoyu oluşumu üzerinde önemli etkiler gösterse de çerçevenin etkinliğinin kutuplaşmış siyasi ortamlarda farklı alanlara ve bireysel özelliklere göre nasıl değiştiği sınırlı bir ilgi görmüştür. Türkiye'nin kutuplaşmış medya sistemi ve devam eden nükleer enerji geliştirme süreci, bu karmaşık çerçeveleme dinamiklerinin incelenmesi için en uygun bağlamı sunmaktadır. Bu çalışma, nükleer enerji politikasına ilişkin farklı medya çerçevelerinin Türk vatandaşlarının tutumlarını nasıl etkilediğini incelemekte ve bu etkileri değiştiren bireysel ve bağlamsal faktörleri tanımlamaktadır.

Araştırmada, çerçeve yönünü (olumlu-olumsuz), çerçeve alanını (ulusal güvenlik-çevre güvenliği) ve medya kaynağının siyasi yönelimini (hükümet yanlısı-muhalif) manipüle eden 2×2×2 faktöriyel bir deneysel tasarım kullanılmıştır. Deneye katılan 778 kişi, rastgele olarak deneysel koşullara atanmış ve tutum ölçümlerini tamamlamadan önce kendilerine atanan deney kombinasyonunu yansıtan üç habere maruz bırakılmıştır.

Sonuçlar, çerçeveleme etkilerinin varlığını göstermiştir. Tüm örnekleme, olumlu çerçeveler olumsuz çerçevelere kıyasla hükümet politikasına daha yüksek destek sağlamıştır. Dikkat kontrolü testini geçen 443 katılımcı arasında hükümet politikasına verilen destek anlamlılığını korumuş ve genel tutumlar da anlamlılık düzeyine ulaşmıştır. Alan analizi bir asimetri ortaya koymuştur: ulusal güvenlik çerçeveleri birden fazla tutum boyutunda önemli etkiler yaratırken, çevre güvenliği çerçeveleri çok az bir etki göstermiştir. Bireysel farklılıklar incelendiğinde, hem medyaya güven hem de bilgi düzeyi için eğrisel ılımlılık örüntüleri saptanmış, orta düzeylerin çerçevelemeye karşı en uygun duyarlılığı oluşturduğu görülmüştür.

Bulgular, çerçeveleme etkinliğinin basit bir yön manipülasyonundan ziyade, kritik olarak alan içeriğine ve hedef kitle özelliklerine bağlı olduğunu göstermektedir. Sonuçlar, güvenlikle ilgili çerçevelerin Türkiye'nin jeopolitik bağlamında bilişsel olarak daha erişilebilir olabileceğini, çevresel argümanların ise daha sürdürülebilir iletişim çabaları gerektirdiğini düşündürmektedir.

Anahtar Kelimeler: medya çerçevelemesi, nükleer enerji, kutuplaşma, kamuoyu, siyasi iletişim

ACKNOWLEDGMENTS

I would like to express my sincere gratitude to all those who contributed to the completion of this thesis.

My heartfelt thanks go to my family for their unwavering emotional support, encouragement, and understanding during the challenging moments of this process. Their belief in me served as a constant source of motivation.

I extend my deepest appreciation to my advisor, Zeki Sarigil, for his invaluable guidance, continuous support, and constructive feedback throughout this research journey. His expertise and mentorship were instrumental in shaping this work.

I am grateful to the distinguished jury members Esra İşsever Ekinici and Hakan Yavuzylmaz for generously allocating their time to review this thesis and providing valuable feedback that enhanced the quality of this research.

I would also like to acknowledge my friends from school and work, who provided both mental support and practical assistance, particularly in data collection and research activities. Their camaraderie and willingness to help made this journey more manageable and enjoyable.

This achievement would not have been possible without the collective support of all these wonderful individuals.

TABLE OF CONTENTS

ABSTRACT	III
ÖZET	V
ACKNOWLEDGMENTS	VII
LIST OF TABLES	XII
LIST OF FIGURES	XIII
CHAPTER 1: INTRODUCTION	1
1.1. Research Questions and Theoretical Framework	2
1.2. Methodology and Experimental Design	4
1.3. The Turkish Context: Nuclear Energy in a Polarized Media Environment	4
1.4. Theoretical and Practical Significance	6
1.5. Roadmap and Chapter Organization	6
CHAPTER 2: LITERATURE REVIEW	8
2.1. Public Opinion Formation	9
2.2. Introduction to Media Effects Research	13
2.3. The Evolution of Framing Theory	16
2.3.1. Communication Applications and Conceptual Development	18
2.3.2. Paradigmatic Debates and Typological Developments	19
2.3.3. Contemporary Theoretical Synthesis	20
2.4. Framing vs. Agenda-Setting and Priming	21
2.5. Framing Mechanisms and Individual Differences in Media Susceptibility	23
2.5.1. Political Knowledge and Awareness	24
2.5.2. Partisan Identity and Motivated Reasoning	25
2.5.3. Cultural and Conditional Processing	27
2.6. Media as Information Mediator	28
2.7. News Selection and Gatekeeping Processes	29
2.8. The Turkish Media Landscape	31
2.8.1. Türkiye's Democratic Decline and Media Transformation	32

2.8.2. Media Control and Electoral Implications	33
2.8.3. Press-Party Parallelism and Coverage Patterns	35
2.8.4. Nuclear Energy Framing Case Study	35
2.8.5. Türkiye's Political Polarization in Historical Context	36
2.9. Theoretical Integration and Positioning of Current Research	38
2.10. Theoretical and Methodological Contributions	38
2.11. Theoretical Framework and Hypotheses	39
2.11.1. Main Treatment Effects	39
2.11.2. Heterogenous Treatment Effects	40
2.11.2.1. Domain-Specific Frame Resonance	40
2.11.2.2. Source Credibility and Partisan Information Processing	40
2.11.2.3. Individual Differences and Motivated Reasoning	40
CHAPTER 3: METHODOLOGY	41
3.1. Research Design	41
3.2. Variables and Operationalization	43
3.3. Analytical Strategy and Robustness Checks	48
3.4. Research Paradigm and Data Collection	50
3.5. Data Analysis	54
CHAPTER 4: RESULTS	56
4.1. Statistical Approach and Assumptions	56
4.2. Primary Framing Effects Analysis	56
4.2.1. Overall Valence Effects Across All Participants	56
4.2.2. Attention Check Robustness Analysis	58
4.3. Fundamental Framing Effects and Theoretical Validation	60
4.3.1. Support for Core Framing Theory	60
4.4. Three-Way Factorial Analysis	62
4.4.1. Main Effects Analysis	62
4.4.2. Interaction Effects Analysis	63
4.4.3. Complex Interactions	63
4.4.4. Differential Processing Patterns Across Attitude Dimensions	64
4.5. Frame Domain Effects Analysis	65

4.5.1. National Security Frame Effectiveness.....	66
4.5.2. Environmental Security Frame Effectiveness	67
4.5.3. Frame Domain Asymmetry and Cultural Context	68
4.5.3.1. National Security Frame Effectiveness	68
4.5.3.2. Environmental Frame Limitations and Processing Requirements.....	70
4.5.4. Frame Specificity Effects Analysis.....	71
4.5.4.1. National Security Frame Specificity	71
4.5.4.2. Environmental Security Frame Specificity	72
4.5.4.3. Rejection of Frame-Ideology Alignment.....	72
4.5.4.4. Limited Evidence for Ideological Processing Differences	73
4.5.4.5. Implications for Risk Communication Strategy	74
4.6. Heterogeneous Treatment Effects	74
4.6.1. Source Credibility and Political Alignment Analysis.....	75
4.6.2. Aligned Source Conditions	75
4.6.3. Misaligned Source Conditions	77
4.6.4. Political Source Alignment and Defensive Processing	79
4.6.5. Backfire Effects and Oppositional Interpretation	79
4.6.6. Implications for Press-Party Parallelism	81
4.6.7. News Consumption Moderation Analysis	82
4.6.7.1. Low News Consumers	82
4.6.7.2. Moderate News Consumers	83
4.6.7.3. High News Consumers	83
4.6.8. News Consumption Habits and the Inverted-U Relationship.....	84
4.6.9. Media Trust Moderation Analysis	85
4.6.9.1. Low Media Trust Level.....	86
4.6.9.2. Medium Media Trust Level.....	86
4.6.9.3. High Media Trust Level	87
4.6.10. Media Trust as a Curvilinear Moderator	88
4.6.11. Ideological Moderation Analysis	90
4.6.11.1. National Security Threat Perception Effects	90

4.6.11.2. Environmental Security Threat Perception Effects	90
4.6.12. Knowledge-Based Moderation Analysis	91
4.6.12.1. Evaluative Attitude Effects by Knowledge Level	91
4.6.12.2. Threat Perception Effects by Knowledge Level	92
4.6.13. Knowledge Effects and the Complexity of Expertise	93
4.7. Policy Implications for Türkiye	95
4.8. Practical Recommendations for Policymakers	96
4.9. Communication Strategy Guidance	97
4.10. Democratic Participation Implications	97
4.11. Hierarchical Susceptibility and Psychological Mechanisms	98
4.12. Implications for Nuclear Energy Communication Research	99
CHAPTER 5: CONCLUSION	101
5.1. Methodological Insights and Best Practices	102
5.2. Limitations and Future Research Directions	103
5.3. Conclusion	106
APPENDIX 1 EXPERIMENTAL PROCEDURE	115
APPENDIX 2 SURVEY QUESTIONS	117
APPENDIX 3 NEWS TEXTS	121

LIST OF TABLES

1. FREQUENCIES OF GROUPS	49
2. BASELINE EQUIVALENCE BETWEEN EXPERIMENTAL GROUPS	53
3. DESCRIPTIVE STATISTICS BY EXPERIMENTAL CONDITION	54
4. FRAMING EFFECTS BY DOMAIN (NATIONAL SECURITY VS. ENVIRONMENTAL SECURITY).....	66
5. INDEPENDENT SAMPLES TEST RESULTS FOR ALIGNMENT – FULL SAMPLE....	766
6. INDEPENDENT SAMPLES TEST RESULTS FOR ALIGNMENT – FILTERED SAMPLE	78

LIST OF FIGURES

1. LIBERAL DEMOCRACY LEVELS IN TÜRKİYE	32
2. TÜRKİYE'S POLITICAL POLARIZATION LEVEL BY YEARS	37
3. FREQUENCIES OF GROUPS	49
4. FREQUENCIES OF GROUPS FILTERED BY PEOPLE WHO PASSED THE ATTENTION CHECK.....	50
5. MEAN ATTITUDES TOWARD DEPENDENT VARIABLES BY FRAME VALENCE (POSITIVE VS. NEGATIVE)	57
6. MEAN GENERAL ATTITUDES TOWARD NUCLEAR ENERGY BY FRAME VALENCE IN THE FILTERED SAMPLE	59
7. EFFECT SIZE COMPARISON BY FRAME DOMAIN	68
8. EFFECT SIZES ACROSS ALIGNMENT CONDITIONS	75
9. FRAMING EFFECTS BY TRUST LEVEL	88

CHAPTER 1

INTRODUCTION

Media organizations occupy a fundamental position in democratic societies, serving as intermediaries between citizens and the complex political and social realities that shape their lives. The term "media" itself derives from the Latin "medium," meaning intermediate or middle layer, reflecting its essential function as a conduit that connects audiences with information about events, policies, and developments they cannot directly observe or experience (Cambridge Advanced Learner's Dictionary, 2025). This intermediary role has become increasingly critical in modern systems, where citizens must form opinions about complex policy issues, from climate change and economic policy to technological innovations like nuclear energy, without possessing direct expertise or firsthand experience.

However, the process of information mediation is inherently selective and interpretive. Media organizations cannot simply transmit raw, unfiltered information about all events and developments; such an approach would overwhelm audiences with excessive detail while failing to provide the contextual framework necessary for meaningful understanding. Instead, media outlets engage in systematic filtering processes, selecting which events merit coverage, determining the prominence and frequency of that coverage, and crucially, deciding how to frame those events for public consumption (Entman, 1993; Lewin, 1947; McCombs & Shaw, 1972; Shoemaker, 2020). This gatekeeping function, while necessary for effective communication, creates opportunities for strategic influence over public opinion formation.

The power of media to shape public discourse extends far beyond simple information transmission to encompass what McCombs and Shaw (1972) termed "agenda-setting," the ability to influence not only what people think about, but which issues they consider important. Building on this foundation, framing theory suggests that media influence operates at an even deeper level, affecting not just which issues receive attention but how audiences understand and evaluate those issues. As Entman argues, frames work by selecting "some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation" (1993, p. 52).

This capacity for strategic influence becomes particularly consequential in contexts where citizens lack direct knowledge or experience with complex policy domains. Nuclear energy policy exemplifies such a domain, involving highly technical considerations about reactor design, safety systems, waste management, and risk assessment that extend far beyond typical citizens' expertise. In such contexts, media framing may play a disproportionate role in shaping public opinion, as citizens rely heavily on journalistic interpretation and presentation rather than independent evaluation of technical evidence.

1.1. Research Questions and Theoretical Framework

This study addresses fundamental questions about how media framing influences public opinion formation, in the context of nuclear energy in a developing country in the global south (i.e. Türkiye). The central research question guiding this investigation is: How do different media framings of nuclear energy policy influence Turkish citizens' attitudes toward nuclear power, and what individual and contextual factors moderate these effects? And finally, what broad theoretical and practical implications can we draw from such an analysis?

This broad question encompasses several specific dimensions that the research design addresses systematically. First, it examines basic valence effects by testing whether positive versus negative framings of nuclear energy systematically influence attitudes and policy support. Second, it investigates domain-specific framing by comparing the effectiveness of national security versus environmental security frames, testing whether frame impact depends on the substantive focus rather than simply evaluative direction. Third, it analyzes source credibility effects by examining how the political orientation of media outlets moderates frame effectiveness through audience-source alignment. Beyond these basic framing mechanisms, the study investigates individual difference moderators that may determine framing susceptibility. It examines whether media trust, news consumption habits, domain-specific knowledge, and political ideology create systematic variations in frame responsiveness. These individual differences are particularly important in polarized contexts where audiences may process identical information differently based on their relationship with media institutions and prior political commitments and orientations.

The theoretical framework draws primarily on accessibility-applicability models of framing effects (Price et al., 1997) which suggest that frames work by making particular considerations more accessible for judgment formation. This perspective predicts that effective frames should activate relevant cognitive schemas and influence the weight that different considerations receive in attitude formation. However, the framework also incorporates insights from motivated reasoning research (Slothuus & de Vreese, 2010) and Zaller's (1992) Receive-Accept-Sample model, which suggest that frame effectiveness depends critically on audience characteristics and the political context in which frames operate.

1.2. Methodology and Experimental Design

To answer the research question rigorously, this study employs a 2×2×2 factorial experimental design that manipulates frame valence (positive versus negative), frame domain (national security versus environmental security), and media source political orientation (pro-government versus opposition media). This design creates eight distinct experimental conditions that allow systematic examination of main effects and interaction effects across the three key dimensions of framing manipulation.

Participants randomly assigned to experimental conditions read three news articles that reflect their assigned combination of valence, domain, and source characteristics and then responded question about their attitudes towards various aspects of nuclear energy.

1.3. The Turkish Context: Nuclear Energy in a Polarized Media Environment

Türkiye provides a particularly compelling context for examining media framing effects on nuclear energy attitudes due to the intersection of technological complexity, political salience, and media polarization. The country currently stands at a critical juncture in its energy policy, with its first nuclear power plant under construction at Akkuyu in Mersin province, a second facility planned for Sinop on the Black Sea coast, and discussions ongoing about additional installations. This nuclear program represents a significant shift in Türkiye's energy strategy, positioned by government officials as essential for achieving energy independence, reducing the current account deficit, and meeting climate goals through clean electricity generation.

The Turkish government has framed nuclear energy development as a strategic imperative, emphasizing multiple benefits including reduced dependence on energy imports, economic development opportunities, and environmental advantages. Officials have highlighted nuclear power's role in achieving carbon

neutrality goals and reducing air pollution, particularly in urban areas heavily dependent on fossil fuel combustion. The economic arguments have proven especially prominent, given Türkiye's substantial current account deficit and vulnerability to energy price fluctuations in global markets.

However, these official framings compete with alternative interpretations emphasizing potential risks and drawbacks. Critics have raised concerns about seismic activity in planned locations, environmental impacts on coastal ecosystems, waste management challenges, and the strategic vulnerability of nuclear facilities to external threats. Historical nuclear accidents, from Three Mile Island and Chernobyl to the more recent Fukushima disaster, provide readily available negative frames that opponents can deploy to challenge pro-nuclear arguments. The technical complexity of nuclear technology creates uncertainties that both supporters and critics can exploit to support their preferred interpretations.

This debate unfolds within Türkiye's highly polarized media environment, characterized by what Çarkoğlu et al. (2014) term "press-party parallelism," strong alignment between media outlets and political parties that creates systematically different information environments for different audience segments. Pro-government media outlets tend to emphasize the economic and strategic benefits of nuclear energy while downplaying environmental and safety concerns, whereas opposition media outlets more frequently highlight potential risks and question the economic viability of nuclear investments. This polarization means that citizens' exposure to nuclear energy information may be systematically biased based on their media consumption choices, potentially amplifying rather than moderating political divisions on energy policy. The polarized structure of Turkish media creates particularly favorable conditions for observing framing effects, as different audience segments receive substantially different information about the same policy developments. Research by Ersoy and İşeri (2021) demonstrates how Turkish media outlets

frame nuclear energy through distinctly different political lenses, with systematic variations in emphasis, source selection, and causal attribution. This fragmented information environment may enhance the impact of individual framing attempts while limiting citizens' exposure to alternative perspectives that might moderate frame influence.

1.4. Theoretical and Practical Significance

This research contributes to framing in theory and practice in several ways. Theoretically, the study advances understanding of how framing effects operate in polarized political environments by examining the interaction between frame characteristics, source credibility, and audience predispositions. The factorial design enables testing of complex theoretical predictions about when frames prove effective and why they sometimes fail to achieve intended effects. The attention to individual difference moderators provides insight into the psychological mechanisms underlying framing effects and helps identify boundary conditions for frame influence.

From a practical standpoint, the findings may have direct implications for political communication strategy in Türkiye and similar contexts. Understanding how frame effectiveness varies across audience segments and message characteristics can inform more effective communication strategies for both government and opposition actors. The research also provides insights relevant for science communication efforts, suggesting how technical information about complex policies like nuclear energy can be presented most effectively to diverse audiences.

1.5. Roadmap and Chapter Organization

This thesis proceeds through several stages of analysis and interpretation. Chapter 2 provides a comprehensive review of the relevant literature on framing theory, media effects, and communication research, situating this study within broader theoretical and empirical traditions while identifying the specific contributions it makes to existing knowledge.

Chapter 3 outlines the methodology in detail, explaining the experimental design, participant recruitment procedures, material development process, and measurement strategies. This chapter also addresses validity considerations and potential limitations of the experimental approach while justifying the methodological choices made throughout the research process.

Chapter 4 presents the empirical findings, beginning with basic descriptive analyses and proceeding through tests of the primary hypotheses and examination of complex interaction effects. The results section provides comprehensive statistical analysis while maintaining focus on the theoretical questions that motivated the research. It also interprets these findings within the broader theoretical framework, discussing their implications for framing theory, political communication practice, and democratic deliberation in polarized contexts. The chapter discusses the policy implications of the results for the Turkish case. It addresses study limitations and suggests directions for future research that could build on these foundations.

The concluding chapter synthesizes the key contributions of the research while reflecting on their broader implications for understanding media effects in contemporary political systems. Throughout this progression, the thesis maintains focus on both theoretical advancement and practical application, aiming to demonstrate how experimental research can contribute to better understanding of political communication in complex environments.

CHAPTER 2

LITERATURE REVIEW

This literature review aims to establish the theoretical foundation for understanding how media framing influences public opinion formation, with particular attention to the mechanisms and moderating factors that determine framing effectiveness. The review examines interconnected bodies of literature that inform this study's theoretical framework and empirical design.

The review begins with public opinion formation to establish the fundamental processes through which citizens develop political attitudes and preferences in modern democratic systems. This foundation demonstrates why mediated communication becomes essential for opinion formation on complex policy issues. The review then examines the introduction to media effects research to trace the evolution from early strong effects models through limited effects paradigms to contemporary conditional effects frameworks. This historical perspective shows how understanding of media influence has become more sophisticated and nuanced over time.

The review explores the evolution of framing theory from its sociological and psychological origins to contemporary applications in political communication research. This section establishes the fundamental mechanisms through which frames influence opinion formation and distinguishes framing from related media effects phenomena. Subsequently, the review examines framing versus agenda-setting and priming to clarify how these three major media effects mechanisms operate through different cognitive processes and produce distinct types of influence on public opinion.

The review then analyzes framing mechanisms and individual differences in media susceptibility to understand how audience characteristics create systematic variations in framing responsiveness. This section reveals why identical frames produce different effects across population segments. It then examines how media serves as information mediator to understand the essential intermediary role that media organizations play in democratic communication, particularly for complex technical issues where citizens lack direct experience. The review also investigates news selection and gatekeeping processes to understand how media organizations determine which stories receive coverage and how they are presented to audiences. This examination presents the multiple filters and decision points that shape the information environment within which framing effects operate. Finally, the review provides analysis of the Turkish media landscape as a critical case of polarized political communication. This section establishes the contextual conditions of press-party parallelism within which this study's experimental findings should be interpreted. These literatures are examined because they collectively address the core theoretical questions motivating this research: when do framing effects occur, through what psychological mechanisms do they operate, and how do audience characteristics and political contexts moderate their effectiveness? Understanding these interconnected processes is essential for developing theoretical predictions about conditional framing effects and designing experimental tests that can capture the complexity of real-world political communication while maintaining the rigor necessary for causal inference.

2.1. Public Opinion Formation

Public opinion formation represents a complex interplay between individual cognitive processes, elite influence, and media mediation with profound implications for democratic governance and policy outcomes. Understanding how citizens develop their political attitudes and preferences requires examining the fundamental mechanisms through which information flows from political

actors to the mass public, and how individuals process and integrate this information into coherent political judgments.

The foundational challenge in public opinion formation lies in what Lippmann identified as the gap between "the world outside and the pictures in our heads" (1992, p. 3). Citizens must form opinions about political issues and events that extend far beyond their direct experience, creating what Carmines and Kuklinski (1990) describe as a fundamental information problem in modern democracies. The complexity of contemporary policy issues, the indeterminacy of political causation, and citizens' position as outsiders to the policymaking process create structural constraints that make fully informed political judgment nearly impossible for most individuals.

These structural constraints create what Downs recognized as rational ignorance, where the costs of becoming informed generally outweigh the relative benefits from voting on an informed basis. Under these conditions, it becomes "irrational for most citizens to acquire political information for purposes of voting" (1957, p. 147), creating systematic dependencies on external information sources that can provide interpretive shortcuts and cognitive aids.

Zaller's Receive-Accept-Sample (RAS) model provides a systematic framework for understanding how political attitudes form and change. The model posits that individuals do not carry "true attitudes" on every issue about which a pollster may happen to inquire, and instead propose a model of how individuals construct opinion reports in response to the particular stimuli that confront them" 18.09.2025 10:47:00. This perspective fundamentally challenges traditional conceptions of public opinion as stable, pre-existing preferences, instead viewing opinion as the product of dynamic processes involving the reception, acceptance, and sampling of political communications.

The RAS model identifies four key axioms that govern opinion formation. The Reception Axiom suggests that "the greater a person's level of cognitive

engagement with an issue, the more likely he or she is to be exposed to and comprehend political messages concerning that issue" (1992, p. 42). The Resistance Axiom indicates that "people tend to resist arguments that are inconsistent with their political predispositions, but they do so only to the extent that they possess the contextual information necessary to perceive a relationship between the message and their predispositions" (1992, p. 44). The Accessibility Axiom proposes that "the more recently a consideration has been called to mind or thought about, the less time it takes to retrieve that consideration or related considerations from memory" (1992, p. 48). Finally, the Response Axiom states that "individuals answer survey questions by averaging across the considerations that are immediately salient or accessible to them" (1992, p. 49).

This cognitive architecture creates differential patterns of influence across the population. Citizens with moderate levels of political awareness emerge as most susceptible to persuasion because they receive sufficient political information to be influenced but lack the knowledge necessary to systematically resist messages that conflict with their predispositions. As Zaller explains, citizens with moderate political awareness receive certain political communications yet lack sufficient background knowledge to effectively counteract persuasive attempts that might alter their attitudes.

The role of political elites in shaping public discourse proves central to opinion formation processes. Page and Shapiro's analysis demonstrates that "short-term movements in public opinion, in fact, can largely be accounted for (and predicted) by quantitative analysis of what news, from what sources, appears in the mass media" (1992, p. 386). When political elites present unified messages on policy issues, public opinion tends to move in the direction advocated by elite consensus. However, when elites divide along ideological or partisan lines, "members of the public tend to follow the elites sharing their general ideological or partisan predisposition, with the most politically attentive members of the

public mirroring most sharply the ideological divisions among the elite" (Zaller, 1992, p. 9).

Political parties serve as particularly important reference groups for citizens by providing evaluative shortcuts that simplify complex political judgments.

Campbell et al. established that "party has a profound influence across the full range of political objects to which the individual voter responds" (1960, p. 128).

Goren et al. elaborate on this mechanism, explaining that "when someone hears a recognizable partisan source advocating some position, her partisan leanings are activated, which in turn lead her to evaluate the message through a partisan lens" (2009, p. 806). When source and recipient share partisan affiliations, "the latter will trust the former and accept the message without reflecting much on message content" (Goren et al., 2009, p. 806).

The information environment shapes these processes through what Gamson and Modigliani (1989) conceptualize as parallel systems of meaning construction. Media discourse and public opinion operate as "two interacting systems" where media provides "tool kit" of interpretive frameworks that the public uses to make sense of complex issues (Gamson, 1988). Ball-Rokeach and DeFleur's Dependency Model (1976) articulates how the audience's dependency on media for information is the key variable determining the media's influence, particularly during times of social instability when media possesses greater potential to create cognitive, affective, and behavioral changes in the audience.

Understanding these foundational concepts of public opinion formation leads us to examine the specific mechanisms through which modern media systems influence these processes, particularly through systematic research on media effects that has evolved significantly over the past century.

2.2. Introduction to Media Effects Research

The formation of public opinion involves multiple interconnected processes that have evolved significantly with changes in media landscapes and communication technologies. While direct interactions between citizens and political elites or opinion leaders have traditionally played important roles in shaping public attitudes, the proliferation of social media platforms has fundamentally altered these dynamics by creating new pathways for influence and information exchange.

Despite the emergence of alternative digital media platforms, traditional media institutions continue to serve as primary information sources for most citizens. This enduring influence makes media organizations critical gatekeepers in democratic societies, as their editorial decisions about content selection, presentation, and interpretation significantly impact both individual attitude formation and broader social discourse. The choices media outlets make regarding which issues to cover, which perspectives to emphasize, and which voices to amplify or marginalize have profound implications for how citizens understand political events and policy debates.

These media-public relationships have been extensively examined within the media effects literature, which has documented the complex mechanisms through which mediated communication influences opinion formation and attitude change.

The study of media effects has undergone significant theoretical evolution, moving from simplistic models of direct influence to sophisticated frameworks that recognize the complex interactions between media messages, audience characteristics, and social contexts. This evolution reflects both methodological advances and empirical findings that have challenged earlier assumptions about media power and audience passivity.

The earliest conceptualization of media influence emerged from what became known as the "strong effects paradigm" or the "all powerful media" model. This perspective, exemplified by the hypodermic needle theory developed by Lasswell in the 1920s, conceptualized media content as having immediate and direct impact on passive audiences (1938). Media messages were metaphorically "injected" into audiences like a hypodermic syringe, producing uniform and predictable responses. This theoretical framework operated on the premise that media communication flows in a single direction from sender to receiver, treating audiences as inactive recipients who would respond uniformly and directly to media messages, without considering personal characteristics, social circumstances, or other contextual factors that might influence their reactions.

Walter Lippmann's foundational work "Public Opinion" supported this perspective, arguing that individuals' views on issues beyond immediate experience are largely influenced by external information flows, with media serving as the central channel for forming perceptions of political reality (1992). However, mid-20th century empirical research challenged these assumptions. The limited effects paradigm emerged from landmark studies, particularly Lazarsfeld, Berelson, and Gaudet's (1944) presidential election analysis in Erie County. Their findings demonstrated constrained media influence, showing that half the electorate had decided their vote choice by May, indicating campaign media primarily reinforced existing preferences rather than altering them. This research identified three primary effects contradicting the hypodermic needle model: reinforcement (strengthening existing preferences), activation (crystallizing latent predispositions among undecided voters), and conversion (actual preference changes, which proved extremely rare).

Klapper's (1960) influential compilation of research in "The Effect of Mass Communication" further solidified the limited effects perspective. Klapper argued that "mass communication does not have the effect of directing opinions and

behaviors; media contents may have only indirect effects on people." The two-step flow model reimagined information dissemination as an indirect process in which content travels through dual phases, initially from media outlets to opinion leaders before reaching the public (Katz & Lazarsfeld, 1955; Lazarsfeld et al., 1944).

The 1960s-1970s witnessed the "rediscovery of strong media effects" through subtler mechanisms. McCombs and Shaw's (1972) agenda-setting research marked a pivotal moment in this rediscovery, demonstrating earlier approach that the media "may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what to think about" (Cohen, 1963, p. 13).

The agenda-setting findings revealed a "strong relationship between the issues emphasized by the media and those issues deemed important by the voters" (Clawson & Oxley, 2020, p. 141). Experimental validation by Iyengar and Kinder (1987) showed that subjects who viewed newscasts emphasizing specific problems changed their opinions and rated those issues as much more important in post-experiment questionnaires. Cultivation theory, developed by George Gerbner in the 1960s, provided another mechanism for understanding long-term media effects through cumulative exposure rather than immediate influence.

The contemporary era of media effects research embraces the "social constructivism" which combines elements of both strong and limited effects of mass media. This perspective recognizes that media influence operates through complex mechanisms depending on message characteristics, source attributes, audience predispositions, and social contexts. Modern approaches incorporate sophisticated models such as the differential susceptibility to media effects model, recognizing that individual characteristics interact to shape responsiveness while exposure doesn't guarantee influence.

This evolution from simple direct effects models to sophisticated frameworks recognizing audience agency and contextual factors has paved the way for specialized research approaches, particularly the development of framing theory as a distinct mechanism of media influence.

2.3. The Evolution of Framing Theory

Media effects are not examined from a single perspective but encompass multiple mechanisms through which mediated communication influences public opinion and political cognition. As will be explored in detail later, these effects include agenda-setting, which examines how media coverage decisions influence the perceived importance of issues among citizens, and priming, which investigates how frequent media exposure to particular topics affects the criteria people use when evaluating political figures and policies.

However, beyond these mechanisms lies a distinct branch of media effects research that goes one step further than simply examining whether a topic receives media coverage. This approach investigates how topics are covered—which aspects are emphasized and brought to the foreground, what language and terminology are employed to describe situations, and conversely, which elements are relegated to the background or ignored entirely. This field of study is known as framing theory, and it focuses specifically on how news stories construct and present their subject matter.

The systematic emphasis or de-emphasis of particular aspects of an issue is expected to lead to parallel patterns in public opinion formation among audiences exposed to such coverage.

Framing theory has emerged as one of the most influential and extensively applied frameworks in communication research. It offers explanations for how media shape public understanding of political and social issues. The theoretical

development has been marked by interdisciplinary contributions from sociology, psychology, and economics, creating a rich foundation for understanding interpretive processes in political communication.

The intellectual foundations of framing theory trace back to diverse disciplinary traditions. Erving Goffman's seminal work "Frame Analysis: An Essay on the Organization of Experience" provided the foundational sociological perspective by conceptualizing frames as cognitive structures that organize social experience (1974). Goffman aimed to "isolate some of the basic frameworks of understanding available in our society for making sense out of events and to analyze the special vulnerabilities to which these frames of reference are subject" (1974, p. 10). His approach emphasized that frames represent "definitions of a situation built up in accordance with principles of organization that govern events ... and our subjective involvement in them" (Goffman, 1974, p. 10).

Goffman's approach conceptualized framing as essentially a cognitive process that operates below conscious awareness, characterizing it as the automatic internalization of mental frameworks that shape how individuals perceive and interpret their social environment. These "schemata of interpretation" enable individuals "to locate, perceive, identify, and label" occurrences or information, providing essential organizational principles for making sense of complex social phenomena.

The psychological tradition contributed equally important insights through the work of Kahneman and Tversky, whose prospect theory challenged rational choice assumptions about decision-making. Their research demonstrated that "decision problems can be described or framed in multiple ways that give rise to different preferences, contrary to the invariance criterion of rational choice" (Kahneman & Tversky, 1984). The Asian disease experiments revealed that people exhibit systematic preference reversals when identical options are

presented in terms of gains versus losses, establishing that presentation format could systematically influence judgment independent of informational content. This psychological perspective proved crucial for understanding framing effects because it demonstrated that “the psychological principles that govern the perception of decision problems and the evaluation of probabilities and outcomes produce predictable shifts of preference when the same problem is framed in different ways” (Tversky & Kahneman, 1981). The loss aversion principle would later inform understanding of how negative and positive media frames differentially influence public opinion.

2.3.1. Communication Applications and Conceptual Development

The migration of framing concepts into communication research marked a significant theoretical expansion that transformed how scholars understood media influence. Robert Entman's influential 1993 essay "Framing: Toward Clarification of a Fractured Paradigm" provided the most widely cited definition in communication research, where he defined the term as selecting certain aspects of a subject to make it more salient.

Entman's formulation emphasized that "framing essentially involves selection and salience" (1993, p. 52) establishing these as the core mechanisms through which frames operate. His approach identified four key functions that frames perform in political communication: problem definition (determining what issues require attention), causal interpretation (explaining why problems occur), moral evaluation (expressing judgments about actions and actors), and treatment recommendation (suggesting solutions or responses).

Entman also articulated the distributed nature of framing across "at least four locations in the communication process: the communicator, the text, the receiver, and the culture" (1993, p. 52). This multi-level approach recognized that frames exist not only in media texts but also in the cognitive schemas of

message producers and audiences, as well as in broader cultural repertoires of meaning.

The concept of interpretive packages, developed by Gamson and Modigliani (1989), provided another influential framework for understanding how frames operate as coherent meaning systems. They defined media discourse as "a set of interpretive packages that give meaning to an issue," where "a package has an internal structure" with "a central organizing idea, or frame, for making sense of relevant events" (Gamson & Modigliani, 1989, p. 3) This approach emphasized that frames are comprehensive interpretive frameworks that combine reasoning devices, framing devices, and cultural themes.

2.3.2. Paradigmatic Debates and Typological Developments

The rapid growth of framing research generated significant theoretical debates about conceptualization, mechanisms, and measurement. D'Angelo (2002) identified three distinct paradigms within framing research: the cognitive paradigm (focusing on frame-schema interactions), the constructionist paradigm (examining frames as cultural toolkits), and the critical paradigm (analyzing frames as hegemonic processes). These paradigmatic differences reflect tensions about whether framing effects operate primarily through individual cognitive processes or through broader social and cultural mechanisms. Framing research developed sophisticated typologies distinguishing between different forms and functions of frames. The distinction between generic and issue-specific frames has proven particularly important for understanding frame operation. Generic frames, such as conflict, human interest, and economic consequence frames, apply across multiple topics and policy domains. Issue-specific frames are tailored to particular controversies or policy areas, such as nuclear energy or immigration debates.

The distinction between episodic and thematic framing, developed by Iyengar (1991), has been especially influential. Episodic frames "present an issue by offering a specific event oriented report," focusing on individual cases and

concrete examples. Thematic frames "place issues into a broader context," providing background information and structural analysis (Gross, 2008, p. 171). The concept of valenced frames has emerged as particularly relevant for understanding political communication effects, with these frames portraying issues in explicitly positive or negative terms.

Framing research also distinguishes between two types of frames that operate through different mechanisms. Equivalency frames present logically identical information in different but equivalent ways, such as describing outcomes in terms of gains versus losses, which can produce systematic preference reversals despite identical factual content (Druckman, 2001b, 2004). Emphasis frames, by contrast, focus attention on different aspects or dimensions of the same issue, highlighting certain considerations while de-emphasizing others (Chong & Druckman, 2007a; Druckman, 2001b). While equivalency frames test how presentation format affects judgment, emphasis frames examine how selective attention to different issue dimensions shape opinion formation.

2.3.3. Contemporary Theoretical Synthesis

Contemporary framing theory has evolved toward greater sophistication in understanding both mechanisms and contingent conditions. Van Gorp's (2007) frame package model provides detailed analysis of how manifest framing devices (words, images, metaphors) work together with reasoning devices (causal explanations, moral judgments) to activate cultural schemas. This approach emphasizes that "the very heart of the framing mechanism is that, at a cognitive level, the framing devices that are incorporated in the news message activate a schema that hypothetically corresponds with the frame preferred by the journalist" (2007, p. 65).

The integration of framing theory with other media effects models has produced more nuanced understanding of when and how frames influence opinion.

Lecheler and de Vreese (2018) identify three basic processes that mediate framing effects: accessibility change, belief importance change, and belief

content change. This multi-process model recognizes that frames can operate through different psychological mechanisms depending on issue characteristics and audience attributes.

Modern framing research increasingly emphasizes competitive framing environments where multiple frames contest for public attention and acceptance. Chong and Druckman's (2007a) work on frame competition demonstrates that effects depend not only on frame characteristics but also on the broader information environment, including frame repetition, frame strength, and the presence of competing interpretations.

While framing theory has established itself as a crucial framework for understanding media influence, its relationship with other major media effects theories, particularly agenda-setting and priming, requires careful theoretical clarification to understand how these mechanisms operate both independently and in conjunction.

2.4. Framing vs. Agenda-Setting and Priming

Multiple distinct areas of media effects research have emerged, each examining different mechanisms through which mediated communication influence public opinion and political behavior. Beyond framing theory, the two most fundamental approaches in this field are agenda-setting and priming. While these research domains are interconnected and often operate simultaneously in real-world communication environments, they are distinguished by several key theoretical and methodological characteristics. Each mechanism involves different cognitive processes, operates according to different temporal patterns, and produces distinct types of effects on public opinion formation.

The relationship between framing, agenda-setting, and priming represents one of the most theoretically significant areas in media effects research. While these three mechanisms are often discussed together as complementary processes,

scholarly debate continues regarding their theoretical boundaries and operational distinctions.

Scheufele and Tewksbury (2007) provide the most systematic analysis of these distinctions, arguing that while agenda-setting and priming operate through accessibility-based models, framing represents a fundamentally different process based on applicability rather than mere cognitive availability. Scheufele and Tewksbury said agenda-setting theory, established by McCombs and Shaw demonstrates that media influence operates primarily through salience transfer, where “there is a strong correlation between the emphasis that mass media place on certain...and the importance attributed to these issues by mass audiences” (2007, p. 11).

Priming theory emerged from agenda-setting research but focuses on evaluation rather than attention. Clawson and Oxley explain that media coverage affects “the standards by which politicians are judged” (2020, p. 142) by making certain considerations more accessible for political evaluation. The priming mechanism operates through the accessibility model, where recent and frequent activation of concepts increases their likelihood of being used in subsequent judgments (Price & Tewksbury, 1997).

The most significant theoretical debate centers on whether these mechanisms operate through the same underlying psychological processes. Traditional accessibility models suggest all three effects work by making concepts more readily available in memory. However, Scheufele and Tewksbury (2007) argue that framing operates through applicability, suggesting which interpretive frameworks are most relevant for understanding issues rather than simply increasing cognitive availability.

Nelson, Clawson, and Oxley (1997) offer experimental evidence supporting the applicability framework, contending that concepts with equal cognitive

accessibility do not necessarily exert equivalent influence on how individuals evaluate political matters. The three mechanisms also differ temporally: agenda-setting requires sustained attention, priming can occur rapidly when schemas exist, and framing can operate immediately through interpretive suggestion. Having established the theoretical distinctions between these media effects mechanisms, it becomes essential to examine how framing effects actually operate at the individual level, particularly considering that not all audience members respond equally to the same framing strategies.

2.5. Framing Mechanisms and Individual Differences in Media

Susceptibility

Media effects in general, and framing effects in particular, play significant roles in shaping individual opinions, but this relationship is far from uniform. The characteristics of the receiver are as important as the source characteristics of the media in determining these effects. Features within the source, within individuals, and within the broader cultural context determine the formation, strength, and limitations of framing effects.

This recognition of differential susceptibility has transformed media effects research from models assuming universal influence to sophisticated frameworks that account for systematic variation in how different individuals and groups respond to mediated messages.

Understanding how framing effects operate requires examining the specific psychological mechanisms through which interpretive frameworks influence opinion formation, as well as recognizing that individual characteristics create systematic patterns of differential susceptibility. Contemporary research reveals multiple pathways through which frames shape understanding, with different mechanisms operating under different conditions and for different audiences. Three primary models explain cognitive mechanisms: accessibility, importance, and dual-process approaches. The accessibility model suggests frames work by

making concepts more cognitively available, following Zaller's (1992) "top of the head" phenomenon. However, Nelson, Clawson, and Oxley challenge this, arguing frames influence opinion "by altering the perceived importance" of specific values evoked by issues rather than simply increasing accessibility (1997, p. 567).

Contemporary research recognizes framing effects may operate through multiple psychological processes simultaneously. Slothuus (2008) demonstrates different population segments are influenced through different mechanisms, with political awareness serving as a key moderating variable.

The content change process operates when frames introduce genuinely new information or considerations individuals had not previously possessed. The importance change process occurs when frames alter the weight individuals assign to existing beliefs without necessarily changing belief content. Empirical research demonstrates that "importance of considerations mediates framing effects among moderately and highly aware participants, but not among the least aware" (Slothuus, 2008, p. 18).

2.5.1. Political Knowledge and Awareness

Not all individuals possess equal levels of knowledge or awareness about social and political events. Differences in educational background, social environments, areas of interest, and other factors can create significant variation in political sophistication among citizens. This variation, in turn, affects both their level of dependence on external sources including media during opinion formation processes and their internal mechanisms for processing incoming information. Consequently, these differences can result in varying levels of media effectiveness across different individuals.

Political knowledge emerges as the most consistently important moderator across theoretical frameworks. Zaller's RAS model predicts citizens with moderate political knowledge prove most susceptible to persuasion because

they “pay enough attention to be exposed to the blandishments of the incumbent but lack the resources to resist” (1992, p. 19).

This curvilinear relationship occurs because awareness affects both reception and resistance simultaneously. Citizens with very low awareness often fail to receive communications effectively, while highly aware citizens successfully receive messages but possess contextual knowledge necessary to resist conflicting communications. Chong and Druckman demonstrate “less knowledgeable individuals require greater exposure” before opinion shifts, while “repetition has no effect on the more knowledgeable group” (2007b, p. 647). The knowledge-based moderation extends to processing mechanisms, with different segments influenced through fundamentally different psychological mechanisms. This finding suggests that effective communication strategies must account for systematic variations in how different population segments process and respond to mediated information.

2.5.2. Partisan Identity and Motivated Reasoning

Beyond individual characteristics, the attributes of information sources can also create differences in how external information is utilized during opinion formation processes. When individuals with certain levels of consciousness encounter conflicting information from outside sources, particularly when they prefer not to expend significant effort, they seek shortcuts. These shortcuts save people from the burden of extensive research and fact-checking for every issue occurring around them, in their countries, and globally, enabling them to easily form opinions on a wide range of topics.

One of these shortcuts involves examining the political orientation of the information sources they encounter. When individuals are presented with information from a political source that they believe generally reflects their own views, they are expected to be inclined to trust that source even on topics where they lack prior opinions. This dynamic creates the expectation that media effects

and framing effects will be stronger when information comes from sources that individuals perceive as politically aligned with their own positions.

This phenomenon of partisan motivated reasoning has profound implications for understanding how framing operates in polarized political environments, where source credibility becomes filtered through partisan identity rather than objective indicators of reliability or expertise.

Partisan identification creates powerful filters that shape information processing, often overriding other individual difference factors. Goren, Federico, and Kittilson reveal that when citizens hear partisan sources, "partisan leanings are activated, which in turn lead her to evaluate the message through a partisan lens" (2009, p. 806). When source and recipient share affiliations, trust develops and messages are accepted without reflection.

Partisan cues function as powerful heuristics, allowing individuals to extend their evaluations of political parties to related policies and issues (Mondak, 1993). In a media environment saturated with political information, such cues help citizens navigate complex content by signaling the partisan implications of messages (Carmines & Kuklinski, 1990; Zaller, 1992). Zaller emphasizes that even well-informed individuals rely on source cues to form opinions, while the less informed may passively accept whatever frames they encounter. Moreover, the impact of partisan cues is not symmetrical, individuals tend to react more strongly against values endorsed by opposing parties than they do in favor of endorsements from their own party (Goren et al., 2009).

Slothuus and de Vreese demonstrate "citizens tend to respond more favorably to an issue frame if sponsored by a party they vote for" (2010, p. 642), with contrast effects where opposing party frames actually move opinion in opposite directions. These partisan effects prove strongest among politically sophisticated citizens, contradicting assumptions that knowledge promotes objectivity. Bolsen

and Shapiro explain that as individuals with different partisan identities "become more knowledgeable and numerate, they become increasingly likely to accept information that bolsters existing group loyalties" (2017, p. 1).

2.5.3. Cultural and Conditional Processing

Framing effects operate through cultural mechanisms connecting individual psychology to collective meaning systems. Gamson's constructionist approach emphasizes frames gain power through cultural resonance, where "certain packages on specific issues have a natural advantage because their ideas and language resonate with larger cultural themes" (1988, p. 167).

Frame effectiveness depends heavily on contextual factors. Druckman's (2001a) research demonstrates frames only influence opinion when coming from credible sources, with identical frames producing different effects based on source attribution. The competitive context proves crucial because citizens' motivation and knowledge determine which factor prevails when multiple frames contest for attention (Chong & Druckman, 2007a).

Values and ideological predispositions create additional systematic patterns of differential susceptibility. Slothuus shows that individuals with weak values are affected through both importance change and content change processes, "whereas there are no framing effects among those with strong values" (2008, p. 18). This suggests that individuals with well-developed ideological frameworks possess greater resistance to frame manipulation.

These individual variations in susceptibility to framing effects highlight media's broader role not merely as a transmitter of information, but as an active mediator that shapes how citizens understand and interpret political and social reality.

2.6. Media as Information Mediator

When discussing the relationship between media and public opinion formation along with its determining factors, another point that must be addressed is the literal mediator role of media, including its mechanisms, power, and limitations. This mediating function represents a fundamental aspect of how democratic communication operates in complex modern societies, where direct citizen engagement with political processes and policy information becomes increasingly difficult.

Contemporary democratic systems create structural information problems necessitating mediated communication between political elites and mass publics.

Media organizations serve as essential intermediaries translating complex political information into accessible formats, creating both opportunities for informed citizenship and challenges for democratic deliberation.

Carmines and Kuklinski (1990) identify three fundamental constraints making direct citizen engagement nearly impossible: policy complexity, indeterminacy of political causation, and citizens' outsider position to policymaking. These create what Downs (1957) recognized as rational ignorance, where information costs outweigh voting benefits, creating systematic dependencies on external information sources.

Ball-Rokeach and DeFleur's Dependency Model articulates how "audience dependency on media information resources as a key interactive condition for alteration of audience beliefs, behavior, or feelings as a result of mass communicated information" (1976, p. 3). This dependency intensifies when media serves many central information functions and during times of social instability, giving media greater potential to create cognitive, affective, and behavioral changes.

Gamson and Modigliani (1989) emphasize media serve as active meaning-makers providing interpretive frameworks that the public uses to make sense of complex issues, extending beyond information provision to interpretive guidance. The mediator role connects to heuristic processing research, with Mondak explaining "heuristic processing" provides mechanisms enabling "informed yet efficient issue appraisals" (1993, p. 167).

This mediating function of media organizations operates through concrete institutional processes, most fundamentally through the decisions about which stories receive coverage and how they are presented, which are processes systematically studied under gatekeeping theory.

2.7. News Selection and Gatekeeping Processes

Beyond the personal, cultural, and source-related characteristics discussed in previous sections, one of the most fundamental aspects of media's role in personal and broader public opinion formation is determining which news stories find space in newspapers, websites, and television programs—and equally importantly, which stories do not. Ultimately, what influences people's opinions is the media content to which they are exposed, making media organizations' decisions about which stories are deemed worthy of coverage and presentation to audiences critically important.

Media organizations make coverage decisions based on both professional criteria such as newsworthiness, including timeliness, proximity, prominence, and impact and practical constraints like available resources, staff capacity, and physical space limitations. Beyond these factors, more subjective considerations related to editorial positioning can influence news selection. These decisions depend on what the news source wants to show its audience, determining which stories will pass through that organization's gate.

At this juncture, variables such as the news source's political position, its stance on specific policy issues, the profile of its target social or elite audience, or commercial considerations, including appealing to advertisers or serving the interests of parent conglomerates, can all influence which stories gain coverage. Gatekeeping processes fundamentally shape information environments within which citizens form political opinions. Originally developed by Lewin (1947), gatekeeping theory explains how information units pass through decision points or "gates" within channels, where gatekeepers, individuals or groups "in power" make critical decisions about what passes through and what is blocked. As Lewin conceptualized, gate sections function as areas where "the passing or not passing of the unit through the whole channel depends to a high degree upon what happens in the gate region" (Lewin, 1947, p. 145). Shoemaker notes that while gatekeeping has become more complex, it remains "one of the oldest social science theories applied to communication study" (2020, p. 1), emphasizing the process of information movement and gatekeeper motivations in determining content selection.

Multiple gate types exist: organizational gates (internal media decisions), source gates (evaluating information producer credibility), and audience gates (public reactions reinforcing or challenging narratives). Political considerations significantly influence gatekeeping through direct pressure, partisan preferences, and consequence anticipation. Media organizations' political stances affect selection through agenda-setting emphasis and framing selection. Commercial considerations create additional influence layers through advertising revenue relationships, competition pressures, and external funding. Research demonstrates advertising budgets can predict editorial uptake, revealing how financial interests shape coverage toward advertiser-aligned stories (Gurun & Butler, 2012). The gatekeeping process proves heavily influenced by source relationships, with Nelson et al. (1997, p. 568) observing that journalist reliance on elite sources means "media often serve as conduits for individuals eager to promote certain perspective" (1997, p. 568).

These universal gatekeeping dynamics take on particular significance when examined within specific political and media contexts, as demonstrated by the case of Türkiye's media landscape, which illustrates how political polarization can fundamentally transform democratic information environments.

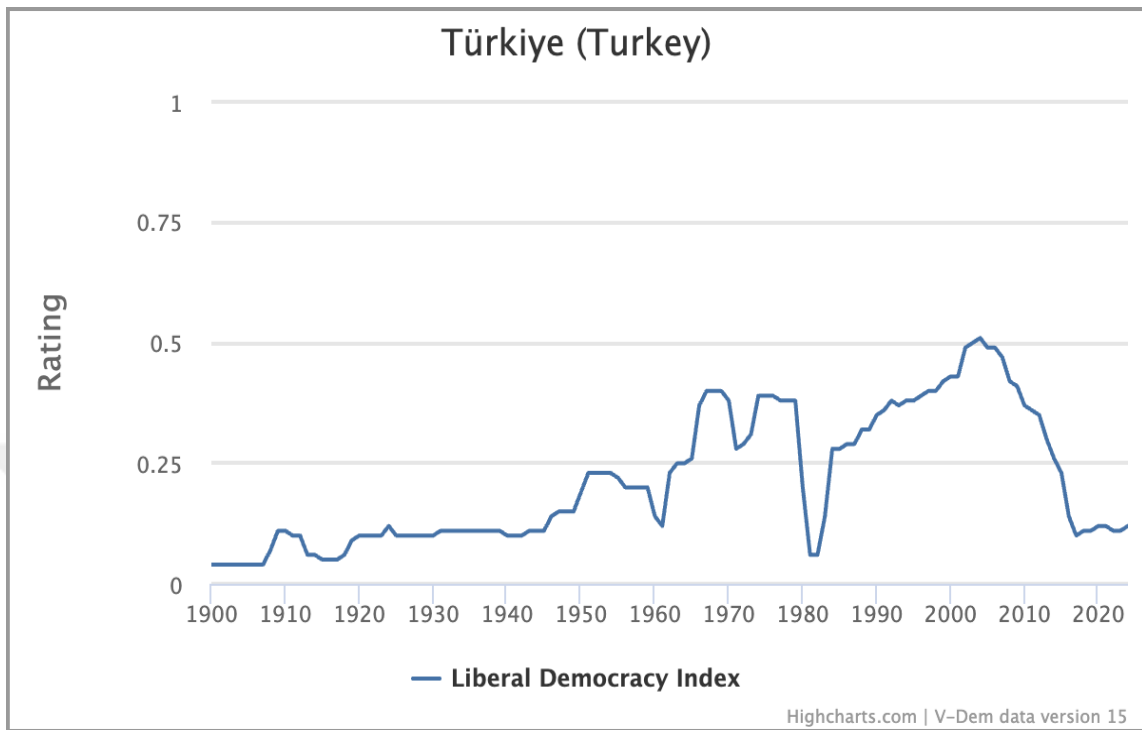
2.8. The Turkish Media Landscape

The influence of media exhibits significant variation depending on the democratic context and institutional framework within which it operates. In established democracies, media typically functions as a relatively independent force that can shape electoral outcomes through various mechanisms. For example, Van Spanje and de Vreese (2014) discovered that media evaluations of the European Union significantly affected voting patterns for Eurosceptic parties in the 2009 European Parliament election, with positive EU coverage decreasing the likelihood of Eurosceptic voting.

The media landscape becomes fundamentally different in non-democratic or hybrid regimes, where state control and concentrated ownership create distinct dynamics. In such contexts, media's role may shift from that of an independent watchdog to a tool for political influence and control. Farrag and Shamma (2014) revealed that media played a significant role in shaping voter behavioral intentions during Egypt's 2011 parliamentary elections, particularly when combined with religious messaging. Shah (2021) highlighted the perceived bias and dishonesty in media coverage within Pakistan context, noting the growing prominence of digital media as traditional outlets faced restrictions.

These variations underscore suggest that the degree of democratic governance directly influences both media independence and the mechanisms through which media affects political behavior. In hybrid regimes, characterized by electoral competition but systematic advantages for incumbents, media becomes a crucial battleground for political control.

Figure 1 Liberal democracy levels in Türkiye



2.8.1. Türkiye's Democratic Decline and Media Transformation

Türkiye exemplifies this relationship between democratic erosion and media capture. The country has experienced systematic democratic backsliding over a decade, transforming from an electoral democracy into competitive authoritarianism (Edoardo, 2025; Esen & Gumuscu, 2016; Yavuzylmaz & Esen, 2025) or electoral autocracy (Aytaç et al., 2021; Yilmaz & Bashirov, 2018). This transformation is reflected in multiple democracy indices. The Varieties of Democracy (V-DEM) project ranks Türkiye with a Liberal Democracy Index of 0.12 in a 0-1 scale (2025), while Freedom House rates it "Not Free" with a score of 33/100 (2025). The Economist Intelligence Unit's Democracy Index rates Türkiye at 4.26/10 in 2024, classifying it as a "Hybrid Regime" (2024).

Academic analyses converge on this assessment of democratic decline. Esen and Gümüşçü argue that incumbent Justice and Development Party (AKP) made

the playing field is highly skewed in favour of themselves and the country turn into a competitive authoritarian regime (2021).

2.8.2. Media Control and Electoral Implications

Türkiye's media landscape has undergone profound transformation alongside democratic backsliding. Yeşil (2018) identifies expropriation of commercial media companies, tax fines imposed on media outlets, and politically motivated investigations as primary means of repression. Baybars-Hawks and Akser document five distinct methods, including “conglomerate pressure, judicial suppression, online banishment, surveillance defamation, and accreditation discrimination” (2012, p. 302).

The consequences for electoral competition are significant. Research by Esen and Gümüüşçü (2016) demonstrates how a pro-government media bloc has emerged, creating unequal media coverage that constitutes a systematic advantage for incumbents. Yıldırım et al. (2021) provide empirical evidence showing that incumbent party visibility increases while opposition party visibility declines, with the ruling party being the only beneficiary of positive coverage across election campaign periods.

This media capture has intensified political polarization and press-party parallelism. Çarkoğlu and Yavuz (2010) highlight decreased internal pluralism in media outlets, noting that newspaper coverage has become more partisan and readership more homogeneous, while Çarkoğlu et al. (2014) found press-party parallelism and polarization increased and internal pluralism declined.

Metin and Ramaciotti Morales (2024) link increased media partisanship directly to the government's tactics of media capture, suggesting this situation has deepened the democracy-authoritarianism cleavage in Turkish society.

The OSCE's 2023 election assessment found that while Turkish elections still offered "genuine political alternatives," they were characterized by "unjustified

advantages" for incumbents, with systematic media bias creating an uneven "playing field" (Organization for Security and Co-operation in Europe, 2023).. The Turkish media system represents a critical case study of how political polarization can fundamentally transform democratic information environments. Scholarly analysis reveals disagreements about whether recent changes represent dramatic transformation or historical continuity, with important implications for understanding current media-politics relations.

One perspective emphasizes significant transformation toward increased restrictions. Baybars-Hawks and Akser (2012) suggest restrictions have increased over time, while Tunç (2018) emphasizes government shifts toward competitive authoritarianism. This trajectory reflects what Yılmaz (2016) characterizes as a shift from "Europeanisation" to "de-Europeanisation," where initial EU-driven media reforms were subsequently reversed as political priorities changed.

Contemporary analysis identifies "a high degree of political parallelism, a polarised media with eroding journalistic professionalism, and government-captured/controlled ownership concentration" as defining characteristics of the Turkish media landscape (Akser & Baybars, 2024, p. 7).

Alternative perspectives challenge this thesis by emphasizing continuity. Yeşil (2018) argues current relationships continue past policies, while Kaya and Çakmur (2010) contend media-politics relationships have always been complex and characterized by a "high degree of political parallelism." The authors argue that 1990s neoliberal commercialization intensified rather than reduced political parallelism, "instrumentalizing" media as tools for owners' corporate and political interests.

2.8.3. Press-Party Parallelism and Coverage Patterns

Turkish media exhibits high press-party parallelism where outlets align with political camps, creating segmented information environments serving partisan functions.

This polarization reflects structural changes where media concentration among conglomerates with diverse business interests creates vulnerability to political pressure, resulting in "a new media order where the financial interests of the media holdings and political interests of the government are interwoven" (Karlıdag & Bulut, 2016, p. 30). Akser suggests media owners lost their ability to resist government pressure as their broader economic interests became vulnerable (2018).

This polarized structure reinforces social divisions, with media fueling rather than mediating polarization through "biased" coverage that reflects "economic and political loyalties" (Sayın & Toros, 2014).

2.8.4. Nuclear Energy Framing Case Study

Ersoy and İşeri's (2021) analysis reveals systematic framing differences aligning with political orientations. They found pro-government outlets emphasize social progress/economic competitiveness frames supporting government policies, while opposition outlets focus on environmental risk and public accountability frames challenging those policies.

The Turkish case also reveals how ownership structures affect editorial content. After Hürriyet's ownership shifted "from Doğan to Demirören group (a pro-government conglomerate), the newspaper's coverage became more pro-nuclear while neglecting alternative perspectives," demonstrating how ownership changes systematically influence editorial decisions (Ersoy & İşeri, 2021, p. 422). This exemplifies the broader pattern where conglomerates with government business relationships align coverage with ruling party agendas.

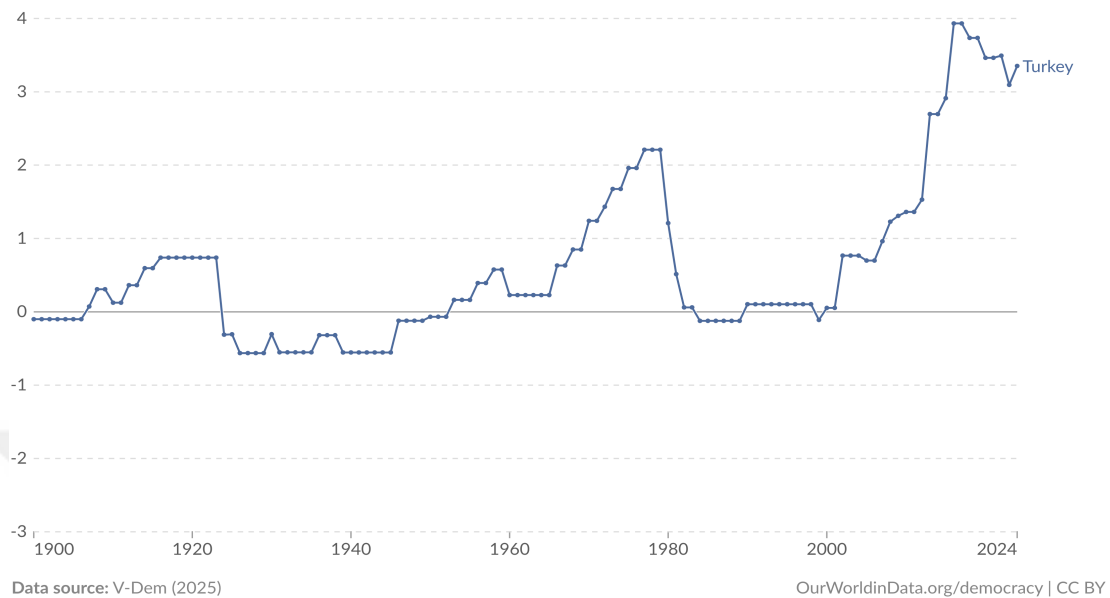
Consequently, Turkish media “emerged as one of the principal battlefields” for different camps rather than a space for public deliberation (Kaya & Çakmur, 2010, p. 534)

2.8.5. Türkiye's Political Polarization in Historical Context

The extent of political polarization in Türkiye can be understood through systematic measurement provided by the V-Dem project (V-Dem (2025) – processed by Our World in Data, 2025). V-Dem assesses political polarization by examining whether society is divided into antagonistic political camps, specifically measuring how political differences affect social relationships beyond formal political discussions, based on evaluations by approximately 3,500 country experts.

Türkiye's polarization trajectory, as captured in V-Dem data spanning over a century, reveals dramatic fluctuations that reflect the country's turbulent political history. The data shows Türkiye's current polarization score of 3.35 in 2024, indicating that "supporters of opposing political camps are more likely to interact in a hostile than friendly manner," a level that represents one of the highest periods of social division in the country's modern history.

Figure 2: Türkiye's political polarization level by years



This contemporary polarization represents a striking departure from earlier periods. In 2000, Türkiye's polarization score was merely 0.054, reflecting a society where political differences had minimal impact on social relationships. The transformation has been particularly dramatic since the early 2000s, with polarization scores climbing steadily from 0.767 in 2002 to peak at 3.933 in both 2016 and 2017. While the score has moderated slightly since then, it remains at historically elevated levels.

The V-Dem data reveals that Türkiye's current polarization, while intense, is not unprecedented in its history. The country experienced comparable levels during the turbulent 1970s, when polarization reached 2.211 in the late 1970s before declining sharply following the 1980 military coup.

Türkiye also exhibits severe societal polarization according to V-DEM data, currently scoring 0.57 on a five level scale where 0 represents "serious polarization." The country has experienced dramatic polarization increases since 2011, dropping from moderate levels to near-zero scores by 2016-2022 (0.04).

This trajectory indicates that Turkish society now faces "serious differences in opinions on almost all key political issues, resulting in major clashes of views." These measurements provide crucial context for understanding the information environment in which media framing effects operate, as highly polarized societies may process political information fundamentally differently than societies with lower levels of political antagonism, creating conditions where source credibility and partisan alignment become primary determinants of message reception and interpretation.

2.9. Theoretical Integration and Positioning of Current Research

This research addresses critical gaps in framing literature while making significant theoretical and empirical contributions through its systematic 2x2x2 experimental design capturing complex interactions between frame content, source credibility, and audience predispositions.

The research addresses three fundamental limitations. First, while extensive research examines framing effects in relatively depolarized environments, limited investigation explores how effects operate within highly polarized systems where press-party parallelism creates fragmented information environments. Second, existing research largely examines frame content and source credibility separately, failing to systematically investigate interactive effects across audience segments. Third, individual differences literature focuses on simply moderating variables without examining how multiple factors interact with both frame content and source characteristics.

2.10. Theoretical and Methodological Contributions

The systematic examination of frame-source interactions provides empirical evidence for theoretical predictions about motivated reasoning and partisan information processing. By manipulating frame content (national security vs. environmental security) and source credibility (pro-government vs. opposition

media), the study isolates mechanisms through which partisan motivated reasoning shapes frame acceptance and rejection.

The focus on issue-specific rather than generic frames is also important. This study develops frames specifically tailored to nuclear energy debates connecting to broader ideological orientations. Nuclear energy represents an ideal case for studying media framing effects due to several theoretical and practical considerations. First, nuclear policy involves high technical complexity that creates significant information dependencies, making citizens particularly reliant on media interpretations rather than direct experience (Ball-Rokeach & DeFleur, 1976). Second, nuclear energy debates inherently involve competing value frameworks such as environmental protection and national security that align with different ideological orientations, creating optimal conditions for testing value-based frame resonance. Third, as demonstrated in the Turkish context, nuclear energy coverage reveals how press-party parallelism creates systematically different interpretive frameworks that fragment public understanding (Ersoy & İşeri, 2021). Finally, understanding framing effects on nuclear policy has direct democratic implications, as public opinion significantly influences policy legitimacy and implementation in this consequential domain.

2.11. Theoretical Framework and Hypotheses

2.11.1. Main Treatment Effects

This study's theoretical foundation draws from accessibility-applicability models of framing effects (Price & Tewksbury, 1997) and prospect theory (Kahneman & Tversky, 1984), which demonstrate how an information presented in different evaluative contexts can systematically alter judgment outcomes. Building on the literature review's examination of framing mechanisms, this research tests how valence-based frames and individual differences interact to shape nuclear energy attitudes in Türkiye's polarized media environment.

Hypothesis 1: People reading positive nuclear energy news will express more positive attitudes toward nuclear energy than those reading negative news.

Hypothesis 2: People exposed to positive nuclear energy news will express more support for the ruling party's nuclear energy policy.

2.11.2. Heterogenous Treatment Effects

2.11.2.1. Domain-Specific Frame Resonance

Nuclear energy debates involve competing value frameworks such as national security and environmental security that align with different ideological orientations. As discussed in the literature review regarding individual differences in media susceptibility, frame effectiveness depends on alignment with audience value priorities.

Hypothesis 3: National security frames will be more effective among right-leaning individuals while environmental security frames will be more effective among left-leaning individuals.

2.11.2.2. Source Credibility and Partisan Information Processing

The literature review highlighted how Türkiye's press-party parallelism creates conditions where source credibility becomes filtered through partisan identity. In such polarized environments, audience-source alignment often overrides content quality in determining message reception.

Hypothesis 4: Individuals are more susceptible to sources aligning with their political stance.

2.11.2.3. Individual Differences and Motivated Reasoning

Drawing from Zaller's (1992) RAS model discussed in the literature review, citizens with moderate political knowledge prove most susceptible to persuasion due to sufficient attention but limited resistance resources. This creates a curvilinear relationship where both very low awareness (insufficient reception) and very high awareness (successful resistance) reduce framing susceptibility.

Hypothesis 5: High-knowledge individuals will be less influenced by frames.

These hypotheses collectively test how the theoretical mechanisms identified in the literature review operate within Türkiye's specific media-political context.

CHAPTER 3

METHODOLOGY

3.1. Research Design

This study employs a between-subjects experimental design to empirically test the hypotheses regarding the effect of media framing on public opinion on nuclear power plants in Türkiye. The central research question is: What influence do diverse media framings of nuclear power plants in Türkiye have on public opinion? To answer this, participants were divided into distinct groups, each exposed to different framing conditions. In total, eight groups were formed, corresponding to all combinations of three experimental factors, each with two levels:

- Framing Valence: Positive vs. negative portrayal.
- Framing Domain: National security vs. environmental security.
- Media Source Type: Pro-government vs. opposition media.

Each participant was randomly assigned to one of the eight experimental conditions (vignettes) defined by these factors. The framing materials were presented as short news articles (the full text of each frame is provided in the Appendix 3). To keep the experimental design manageable, only two framing topics were chosen (national security and environmental security), even though other relevant topics (e.g., economic frames) are conceivable. National security was selected due to its enduring public salience, while environmental security was chosen because of the global prominence of environmental issues and challenges associated with nuclear energy. These two topics also map onto an anticipated left–right political divide in sensitivity, as noted in the literature. Thus,

the design remains balanced with two levels for each factor, yielding a $2 \times 2 \times 2$ factorial structure (framing topic $\times$ valence $\times$ media type).

In implementing the media source manipulation, well-known Turkish news outlets were used to represent each media type so that participants could easily recognize the political orientation of the source. The source manipulation involved randomly assigning participants to one of two conditions: pro-government media using one article each from Sabah, Yeni Safak, and Yeni Akit for a total of three articles, or opposition media using one article each from Sozcu, Cumhuriyet, and Korkusuz for a total of three articles. Each news excerpt clearly indicated the source and its orientation in parentheses – for example: “Sabah, 19.06.2022 (Pro-Government Media)” or “Cumhuriyet, 05.04.2023 (Opposition Media)” – to ensure participants recognized the media frame as intended. The full text for the news pieces can be available at Appendix 3.

This study adopts a thematic and emphasis framing approaches. Thematic frames present issues within a broader structural or societal context, encouraging systemic attribution of responsibility while episodic frames focus on individual events or concrete examples, often portraying issues as isolated incidents (Iyengar, 1991).

Emphasis framing, as defined by Druckman (2001b) involves highlighting particular dimensions of an issue to influence public perception without altering factual content, while equivalency framing involves presenting logically equivalent statements with different wording (e.g., 90% survival vs. 10% mortality).

The context of the study is deliberately focused on Türkiye and the issue of nuclear power plants in Türkiye. Türkiye was chosen as the case for practical and scholarly reasons: the researcher's location made implementation

convenient, and there is a noted lack of experimental analysis of the causal impact of media framing regarding nuclear energy in the Turkish context. This provides an opportunity to contribute to the media effects literature within an understudied setting.

Additionally, Türkiye's media landscape is highly polarized, with outlets often emphasizing certain aspects of issues in line with their political leanings while ignoring others. This polarization makes Türkiye an interesting context to examine how media framing might polarize public opinion.

Although the specific topic involves nuclear power plants, the primary aim is not to delve into energy policy itself but to explore framing effects on public opinion. The nuclear power plant issue was chosen for several reasons: it is timely and contentious as Türkiye's first nuclear plant is under construction in Mersin, with plans for others in Sinop and possibly a third site, sparking ongoing debates. It has multiple facets (environmental impacts, national security implications, questions of energy independence and economic considerations), and the general public's familiarity with nuclear energy is expected to be relatively low as it requires technical knowledge. This low prior knowledge means many people are likely susceptible to influence by how the media frames the issue, making it an ideal subject for testing framing effects.

In summary, by situating the experiment in Türkiye's polarized media environment and using the nuclear power plant issue, the study seeks to observe measurable impacts of manipulated news frames on public opinion under realistic yet controlled conditions.

3.2. Variables and Operationalization

The complete survey instrument is available in the Appendix 2 for detailed examination of all measures and question wordings. Data collection employed a

structured online questionnaire to gather demographic information, political attitudes, media consumption patterns, and domain-specific knowledge.

Independent Variables – Media Framing: The independent variables in this experiment are the type of news frame presented about nuclear power plants. Following De Vreese's (2003) conceptualization, the independent variables represent the specific frames through which information is conveyed. In practice, this study manipulates three independent variables: frame domain (national security vs. environmental security), valence (positive vs. negative), and source slant (pro-government vs. opposition media).

Participants read three short news articles that combined these experimental manipulations according to their randomly assigned condition. Drawing on methods used by Price et al. (1997), entirely new texts were written for the experiment, inspired by actual news but modified to emphasize the target frames clearly. This approach allowed precise manipulation of framing elements while keeping other content constant.

Dependent Variables – Public Opinion Measures: To capture the effect of framing, five dependent variables were measured via survey questions. Each dependent variable corresponds to an aspect of participants' attitudes or perceptions regarding nuclear energy, and each is operationalized with a specific question or set of questions using a 5-point Likert-type scale. The dependent variables (DVs) are:

Overall Attitude toward Nuclear Energy (D_GA_1): This DV represents the participant's overall evaluative judgment of nuclear energy, encompassing both favorable and unfavorable beliefs, feelings, and opinions. It was measured with a survey item asking for the respondent's general attitude toward nuclear energy on a 5-point scale (1 = very negative, 5 = very positive).

Perception of Nuclear Energy as a Viable Energy Option (D_ES_1): This DV reflects how practical and suitable the participant considers nuclear energy for meeting Türkiye's energy needs. It was measured by asking respondents to rate the viability of nuclear energy for Türkiye on a 5-point scale (1 = not viable at all, 5 = very viable).

Support for the Government's Nuclear Energy Policy (D_GP_1): This DV measures participants' approval or disapproval of the Turkish government's current policy stance on building and operating nuclear power plants. It was operationalized by asking respondents how much they support the government's nuclear energy policy on a 5-point scale (1 = strongly oppose, 5 = strongly support).

Perceived Threat of Nuclear Energy to National Security (D_UGT_1): This DV gauges the extent to which participants see nuclear energy and nuclear power plants as a threat to national security. Participants indicated the perceived level of threat on a 5-point scale (1 = very low threat, 5 = very high threat).

Perceived Threat of Nuclear Energy to the Environment (D_CGT_1): This DV assesses participants' beliefs about the environmental risks of nuclear power plants. Participants rated the perceived environmental threat on a 5-point scale (1 = very low threat, 5 = very high threat).

Demographic variables were collected using standard approaches adapted to the Turkish context. Gender was measured using three response options (male, female, prefer not to say) to accommodate diverse participant preferences. Age was collected as a continuous variable with a minimum threshold of 18 years to ensure adult participants. Education level employed a seven-point scale ranging from illiterate (1) to masters-doctoral degree (7), capturing the full spectrum of educational attainment in the Turkish population.

Political orientation was assessed through a five-point left-right self-placement scale, ranging from far-left to far-right positions. For analyses requiring grouping classification, participants selecting positions 1-2 were categorized as left-leaning, those selecting 4-5 as right-leaning, while position 3 represented the political center. This approach follows established conventions in political science research while preserving the substantive meaning of ideological self-identification.

Party preference was measured by asking participants which party they would support if parliamentary elections were held the following day, providing 17 party options plus "other" and "prefer not to answer" categories. Party preference classification employed a government-opposition dichotomy based on current coalition arrangements. Participants indicating support for AKP (Justice and Development Party), MHP (Nationalist Movement Party), or BBP (Great Unity Party), parties within or closely aligned with the governing coalition, were classified as government supporters. All other party preferences were categorized as opposition support. Participants declining to indicate party preference were excluded from analyses involving this variable to ensure meaningful comparison between committed partisans.

Source alignment was constructed by matching participants' party preferences with the political orientation of news sources in their assigned experimental condition. Participants whose party preference aligned with their assigned media source (government supporters reading pro-government media or opposition supporters reading opposition media) were coded as "aligned," while those receiving information from politically opposing sources were coded as "misaligned." This operationalization enabled direct testing of hypotheses about source credibility and motivated reasoning in polarized information environments.

Domain-specific knowledge about nuclear energy was evaluated through four multiple-choice questions addressing basic facts about nuclear power plants in Türkiye. These questions were designed to assess factual understanding rather than opinions, focusing on objective information that citizens might reasonably be expected to know about ongoing nuclear energy developments.

It was operationalized by scoring participants on their total number of correct responses to four factual questions about nuclear energy in Türkiye, with correct answers verified through CIMER (Presidential Communication Center), the official government information portal. This approach ensured that knowledge assessment reflected accurate, officially verified information rather than potentially biased or incomplete sources. Participants were subsequently grouped into five knowledge levels (0-4 correct answers) for analysis.

Media consumption habits were assessed through two complementary measures. Daily news consumption was measured by asking participants how many hours per day they spend consuming news and information content. Political news consumption frequency was assessed separately to distinguish between general information seeking and specific political engagement patterns.

Media trust was operationalized through participants' evaluations of three distinct information domains: traditional media organizations, internet-based news accounts, and individual news providers. Participants rated their trust in each domain on five-point scales. An overall media trust variable was created by averaging responses across the three domains, providing a comprehensive measure of institutional media trust. For analyses requiring categorical classification, participants were divided into three groups based on their overall media trust scores, enabling examination of curvilinear relationships between trust and framing susceptibility while maintaining theoretical meaningfulness and adequate sample sizes for statistical analysis. Each of these measures provides a quantitative outcome to test the framing effects.

3.3. Analytical Strategy and Robustness Checks

The choice of statistical methods was driven by the distributional properties of the data and the specific research questions addressed. Mann-Whitney U tests were selected as the primary analytical approach due to systematic violations of normality assumptions across all dependent variables, as confirmed by Shapiro-Wilk tests (all $p < .001$). The Mann-Whitney U test provides robust results regardless of distributional assumptions and maintains adequate statistical power for detecting meaningful differences between experimental groups. One-tailed tests were employed based on directional hypotheses derived from framing theory. The theoretical foundation predicted that positive frames would systematically increase favorable attitudes and reduce perceived threats compared to negative frames. This directional prediction justified the use of one-tailed significance testing, which provides greater statistical power for detecting theoretically predicted effects while maintaining appropriate Type I error control. Rank biserial correlation was selected as the effect size measure rather than alternatives such as Cohen's d . This choice reflects the non-parametric nature of the primary analyses, as rank biserial correlation provides a standardized effect size measure specifically designed for Mann-Whitney U tests. Unlike Cohen's d , which assumes normal distributions, rank biserial correlation remains interpretable regardless of distributional properties and provides meaningful comparison across different outcome measures.

Attention check filtering was implemented to assess the robustness of findings across different levels of participant engagement. The attention test filter resulted in substantial participant attrition, with 443 participants (57.0%) successfully passing the attention check out of the initial 778 participants. This means 335 participants (43.0%) were excluded from the analysis due to failing the attention test.

The dropout rates varied across experimental groups. Group 111 showed the highest retention rate with 67.4% of participants passing (64 out of 95), while

Group 211 had the lowest retention rate at 48.0% (49 out of 102). The remaining groups showed intermediate retention rates: Group 121 retained 55.7% (54 out of 97), Group 122 retained 57.6% (57 out of 99), Group 112 retained 53.2% (50 out of 94), Group 212 retained 64.9% (61 out of 94), Group 221 retained 54.1% (53 out of 98), and Group 222 retained 55.6% (55 out of 99).

Table 1: Frequencies of Groups

<i>Group</i>	<i>Total Counts</i>	<i>Filtered Counts</i>	<i>Percentage Passed (%)</i>
111	95	64	67.37%
112	94	50	53.19%
121	97	54	55.67%
122	99	57	57.58%
211	102	49	48.04%
212	94	61	64.89%
221	98	53	54.08%
222	99	55	55.56%
<i>Total</i>	778	443	56.94%

Figure 3: Frequencies of Groups

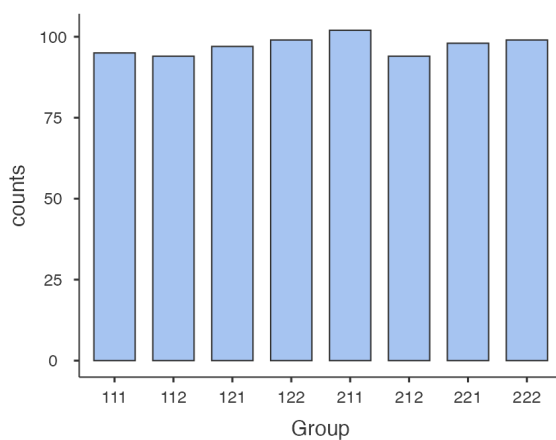
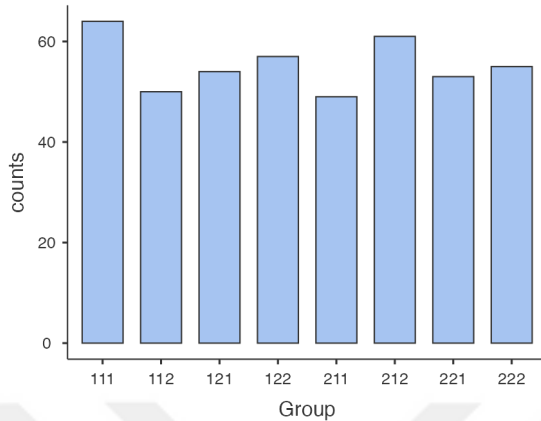


Figure 4: Frequencies of Groups filtered by people who passed the attention check



Analyses were conducted for both the complete sample and the subset of participants who successfully passed attention checks, enabling evaluation of whether effects reflected genuine cognitive processing or random responding. The comparison between filtered and unfiltered samples provided insight into the role of participant attention in experimental framing research. Attention filtering generally strengthened core effects, suggesting that inattentive responding adds noise rather than revealing additional processing patterns. The substantial differences between complete and filtered samples underlines the importance of participant attention in experimental research on media effects.

3.4. Research Paradigm and Data Collection

This research follows a quantitative, positivist paradigm (Della Porta & Keating, 2008). Positivism assumes an objective reality that can be measured and analyzed statistically. Consistent with this approach, the study gathers empirical data via a structured survey experiment and uses statistical methods to test the proposed relationships between the framing (independent variable) and the attitude/perception measures (dependent variables). The research design is cross-sectional, meaning all data were collected at a single point in time after the experimental exposure. This allows comparisons across different

experimental groups under the framing conditions, rather than tracking changes over time.

Data collection was carried out through online survey platform Qualtrics as part of the experimental procedure. The survey, which embedded the experiment's stimulus materials and questions was open for approximately one month.

Participation was not restricted to a narrow demographic profile; in fact, it did not apply specific inclusion or exclusion criteria for participants aside from them being adults (aged 18 or above) capable of giving informed consent and being a Turkish citizen. The rationale was to recruit a reasonably diverse convenience sample and maximize internal validity through random assignment, rather than to obtain a statistically representative sample of the Turkish population.

Recruitment was accomplished through multiple channels: a portion of respondents were Bilkent University affiliated individuals reached mainly via the official university email announcement system, which distributed an anonymous survey link. Additionally, to reach beyond the university community, the survey link and QR codes pointing to it were shared on social media and other communication platforms including X, Facebook and WhatsApp groups, inviting the general public to participate. Using an open link ensured that a variety of people could take part, though it resulted in a sample that leans toward those who are internet-connected and interested in the topic.

Participants first read an informed consent form at the beginning of the survey. Subsequently, in addition to the randomly assigned news articles, participants completed 20 questions comprising 3 demographic questions, 5 dependent variable items, 2 political orientation questions, 5 questions assessing knowledge level about the topic (including one attention check question), and 5 questions regarding media usage habits. Following survey completion, participants were presented with a detailed post-study debriefing text containing additional information about the survey experiment.

The survey was expected to take approximately 3-4 minutes to complete. The median completion time was 409 seconds for all participants and 401 seconds for those who passed the attention check. The mean completion time for all participants was 1,862 seconds, which did not provide meaningful data due to extreme values. However, 75% of participants completed the study in under 605 seconds (approximately 10 minutes).

Ultimately, 778 participants completed the survey experiment. All participants were randomly assigned to one of the eight experimental groups by the Qualtrics randomization feature, and all responded anonymously. The anonymity and random assignment help reinforce the integrity of the data and the causal inferences, respectively.

Each participant is treated as an individual unit of analysis, since all data (survey responses) were collected at the individual level. The goal, however, is to draw inferences at a broader level, following a nomothetic approach that emphasizes general patterns over individual cases (Lange, 2013). Because the sample was one of convenience and does not statistically represent the Turkish population, the study prioritizes internal validity (the integrity of comparisons within the experiment) over external validity (generalizability to the entire population). Random assignment and the factorial design help ensure that the eight groups were equivalent in demographics and other characteristics, which supports internally valid comparisons between conditions.

Randomization checks showed no significant demographic differences across the eight experimental conditions. Pearson's χ^2 tests found no variation between groups for political orientation, gender, education level, or party preference (all $p > .45$). A Welch's one-way ANOVA indicated no significant difference in participants' age, $F(7, 330) = 0.88$, $p = .522$, with Games–Howell post hoc comparisons confirming no pairwise differences. These results suggest that

random assignment successfully balanced demographic characteristics across conditions.

The same pattern was observed when analyses were repeated on the filtered sample including only participants who passed the attention check. Chi-square tests again showed no significant association between group assignment and gender, education level, party preference, or political orientation (all $p \geq .097$), and Welch's ANOVA confirmed no significant difference in age, $F(7, 185) = 0.85$, $p = .546$. This supports that randomization remained effective even after excluding inattentive respondents.

To ensure the validity of the experimental design, baseline equivalence tests were conducted between participants assigned to positive and negative frame conditions across key demographic and political characteristics. Mann-Whitney U tests revealed no significant differences between experimental groups in either the full sample or the filtered sample of attention check passers. All demographic variables including gender, age, education level, left-right ideology, and political party preference showed non-significant differences with p-values ranging from .172 to .990. These results confirm successful randomization and demonstrate that any observed differences in dependent variables can be attributed to the experimental manipulation rather than pre-existing group differences, establishing the internal validity necessary for causal inference.

Table 2: Baseline Equivalence Between Experimental Groups

<i>Variable</i>	<i>Full Sample (N=778)</i>	<i>Filtered Sample (N=443)</i>
	p-value	p-value
<i>Gender</i>	.528	.172
<i>Age</i>	.467	.288
<i>Education</i>	.740	.867
<i>Left-Right Ideology</i>	.860	.990

However, given that participants do not reflect the full population's demographics, any conclusions drawn cannot be generalized to all Turks; the results primarily speak to differences caused by the framing manipulations under these controlled conditions. This study's main objective is to examine whether media framing has any causal impact on individuals' perceptions about nuclear energy rather than drawing conclusions for broader population.

Table 3: Descriptive Statistics by Experimental Condition

<i>Variable (mean)</i>	<i>111</i>	<i>112</i>	<i>121</i>	<i>122</i>	<i>211</i>	<i>212</i>	<i>221</i>	<i>222</i>
<i>Age</i>	43.01	45.16	42.32	43.67	43.82	42.26	40.92	43.95
<i>Education</i>	6.39	6.36	6.38	6.28	6.44	6.32	6.29	6.46
<i>Gender</i>	1.35	1.37	1.36	1.36	1.34	1.39	1.36	1.29
<i>Political Orientation</i>	3.41	3.51	3.41	3.34	3.41	3.38	3.47	3.56

3.5. Data Analysis

After data collection, the responses were exported and analyzed using quantitative statistical methods. First, descriptive statistics were computed to summarize the sample's key characteristics and to verify that randomization produced comparable groups (e.g. checking that demographics were roughly balanced across the eight conditions).

Next, inferential statistical tests were conducted to directly test the hypotheses concerning framing effects. Given the experimental design, the analysis focused on comparing group means on each dependent variable:

- Independent-samples t-tests were used for pairwise comparisons when only two groups or two levels of a factor were relevant for a particular hypothesis.

- Analysis of Variance (ANOVA) was employed to compare outcomes across multiple groups simultaneously, especially to evaluate the main effects of each factor and any interaction effects between factors. When ANOVA results showed a significant difference among more than two groups, post-hoc tests were conducted to pinpoint which specific groups differed from each other.

All analyses were conducted using the Jamovi statistical software package (The jamovi project, 2025), a platform that implements R statistical methods (Fox et al., 2024; Kerby, 2014; Lenth et al., 2025; R Core Team, 2024; Ripley et al., 2025). Jamovi was used for its robust ANOVA and post-hoc testing capabilities. Throughout the analysis, a standard significance level ($p < 0.05$) was used to determine statistically significant effects.

CHAPTER 4

RESULTS

4.1. Statistical Approach and Assumptions

In this research, the Mann-Whitney U test was used for primary comparative analyses due to violations of normality assumptions across all dependent variables (Shapiro-Wilk tests: all $p < .001$), while homogeneity of variance assumptions were satisfied (Levene's tests: all $p > .05$). One-tailed tests were employed based on directional hypotheses that positive framing would increase favorable attitudes toward nuclear energy and reduce perceived threats compared to negative framing. For threat perception measures, the directional hypothesis predicted that positive frames would reduce perceived threats relative to negative frames.

4.2. Primary Framing Effects Analysis

4.2.1. Overall Valence Effects Across All Participants

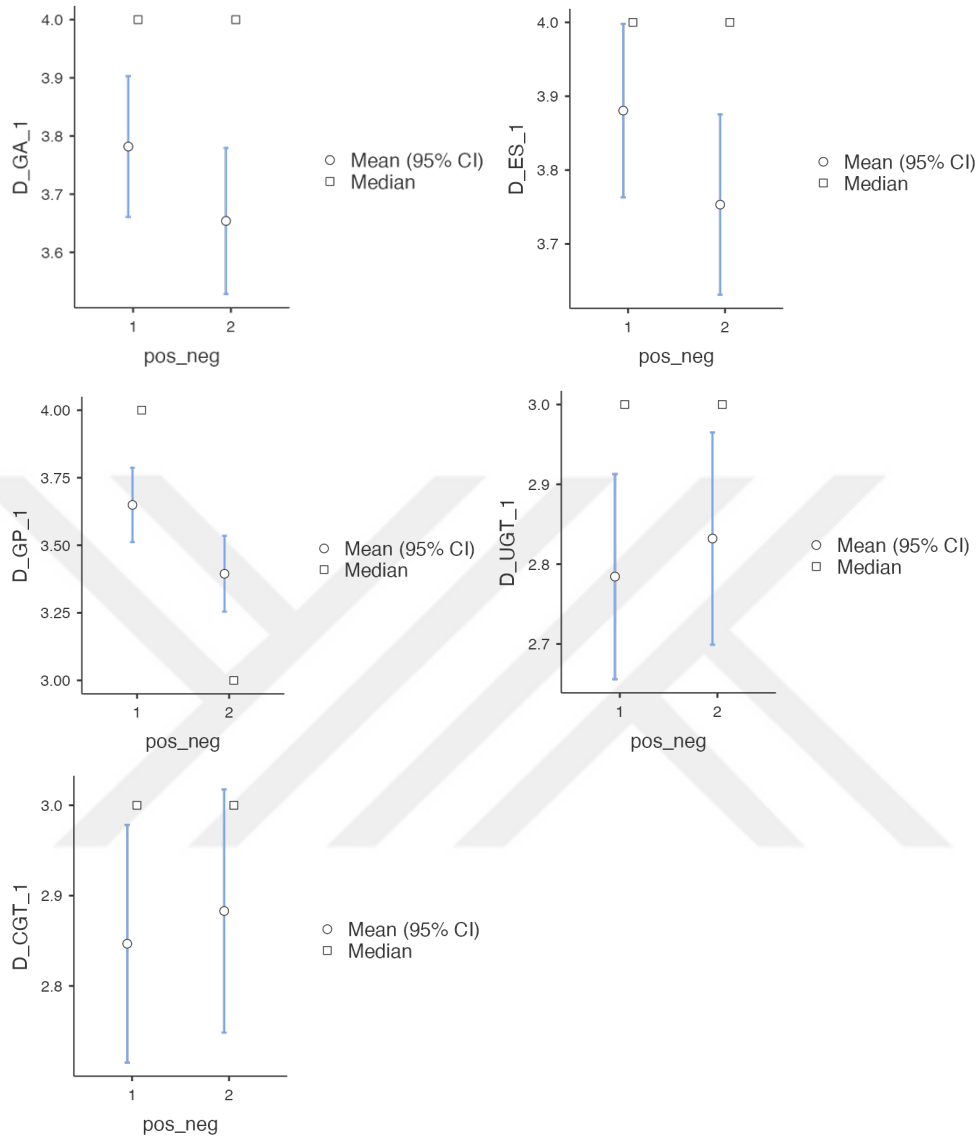
Analysis of the complete sample ($N = 778$) revealed one significant framing effect across evaluative attitude dimensions alongside several non-significant effects. Government policy support demonstrated the strongest effect (Mann-Whitney $U = 67,842$, $p = .005$, $r = -0.103$), with participants exposed to positive frames expressing higher support ($M = 3.65$, $SD = 1.38$) than those exposed to negative frames ($M = 3.39$, $SD = 1.42$).

General attitudes toward nuclear energy showed no significant effect (Mann-Whitney $U = 71,591$, $p = .089$, $r = -0.054$), with positive frame exposure yielding more favorable attitudes ($M = 3.78$, $SD = 1.21$) compared to negative frame

exposure ($M = 3.65$, $SD = 1.27$). Energy source viability perceptions similarly showed no significance (Mann-Whitney $U = 71,481$, $p = .082$, $r = -0.055$), with positive frames generating higher viability ratings ($M = 3.88$, $SD = 1.18$) than negative frames ($M = 3.75$, $SD = 1.23$).

Threat perception measures showed no significant framing effects. National security threat perceptions (Mann-Whitney $U = 74,458$, $p = .348$, $r = 0.016$) and environmental security threat perceptions (Mann-Whitney $U = 74,713$, $p = .380$, $r = 0.012$) remained unaffected by frame valence, with means showing minimal differences between positive and negative conditions.

Figure 5: Mean Attitudes Toward Dependent Variables by Frame Valence (Positive vs. Negative)



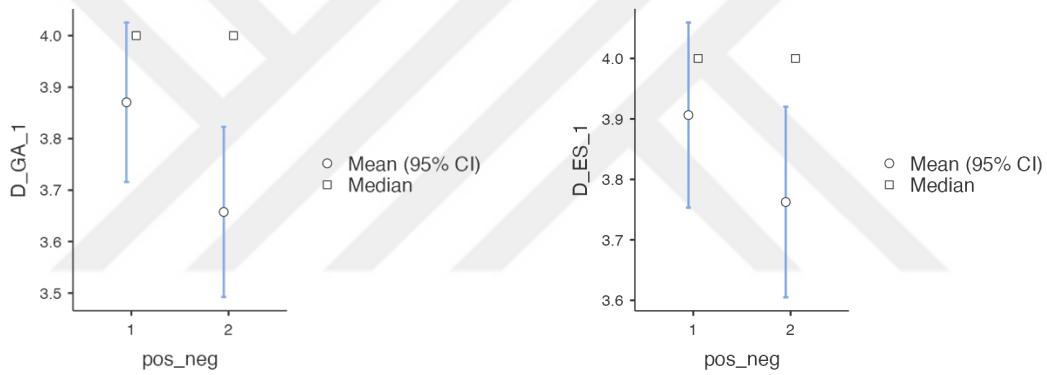
4.2.2. Attention Check Robustness Analysis

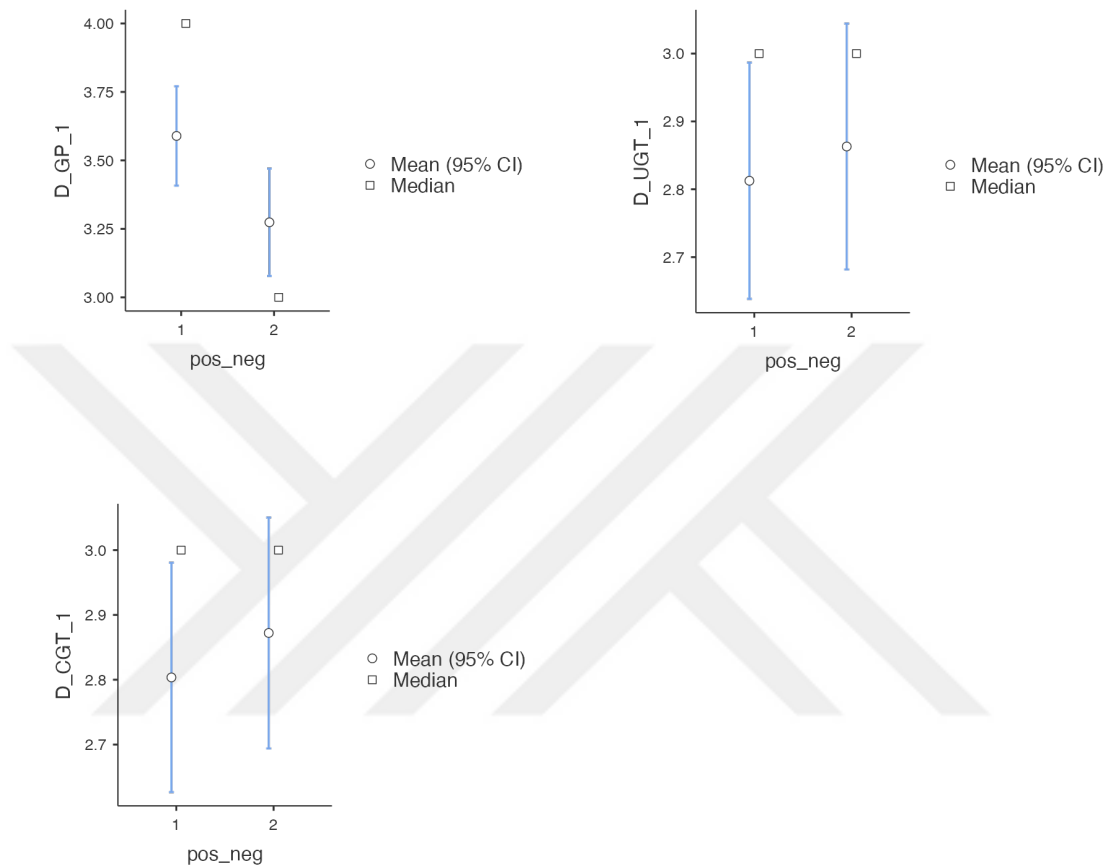
When analyses were restricted to participants who successfully passed the attention check (N = 443), the pattern of effects strengthened substantially. Government policy support remained significant with an increased effect size (Mann-Whitney U = 21,614, $p = .013$, $r = -0.119$). General attitudes toward nuclear energy reached conventional significance levels (Mann-Whitney U = 22,135, $p = .032$, $r = -0.098$), with positive frames producing more favorable

attitudes ($M = 3.87$, $SD = 1.18$) than negative frames ($M = 3.66$, $SD = 1.25$). Energy source viability perceptions were non-significant (Mann-Whitney $U = 22,707$, $p = .079$, $r = -0.074$).

Threat perception measures continued to show no significant effects among attentive participants. National security threat perceptions ($p = .360$, $r = 0.019$) and environmental security threat perceptions ($p = .282$, $r = 0.031$) remained insensitive to frame valence manipulation.

Figure 6: Mean General Attitudes Toward Nuclear Energy by Frame Valence in the Filtered Sample





4.3. Fundamental Framing Effects and Theoretical Validation

4.3.1. Support for Core Framing Theory

The findings provide empirical support for foundational framing theory, confirming that media frame valence systematically can influence public opinion formation on nuclear energy policy. **Hypothesis 1**, predicting that positive frames would generate more favorable attitudes than negative frames, received support across multiple attitude dimensions. The significant effects on government policy support ($p = .005$) in the full sample and among attentive participants ($p = .013$) and general attitudes ($p = .032$) among attentive participants demonstrate that exposure to positive versus negative frames meaningfully shapes how audiences evaluate nuclear energy policy. These

findings align with foundational framing predictions emphasizing the power of valence cues in opinion formation (Chong & Druckman, 2007a; Kahneman & Tversky, 1984).

The strengthening of effects among participants who passed attention checks validates the theoretical proposition that framing effects require cognitive engagement with stimulus materials. Effect sizes increased substantially when inattentive participants were excluded (from $r = -0.054$ to $r = -0.098$ for general attitudes and more than 15% increase in the effects size of government policy support), supporting experimental validity and suggesting that real-world framing effects may be stronger than single-exposure laboratory studies typically reveal. This pattern aligns with accessibility-applicability models of framing effects (Price & Tewksbury, 1997), which emphasize the importance of cognitive processing for frame effectiveness. As naturalistic exposure often involves repeated encounters with frame content, the strengthening effects among attentive participants suggest that the communication effects observed in laboratory settings may underestimate real-world impact.

Hypothesis 2, examining support for the ruling party's nuclear energy policy, also received support. The consistent effects on government policy support across various analytical approaches suggest that framing effects can extend beyond general technological attitudes to influence specific policy preferences. This finding has particular significance in the Turkish context, where energy policies in general and nuclear energy policy in particular represents a contentious political issue. The finding that government policy support demonstrated the strongest and most consistent effects across all analyses suggests that political attitudes may be more susceptible to framing than technical evaluations, consistent with research showing that political judgments rely more heavily on heuristic processing than technical assessments (Carmines & Kuklinski, 1990).

The differential pattern of effects across attitude dimensions offers important insights into how framing mechanisms operate. Rather than creating generalized positive or negative affect that influences all related judgments equally, frames appear to work through more targeted pathways that differentially impact various attitude components.

4.4. Three-Way Factorial Analysis

A 2×2×2 factorial ANOVA examined the complex interactions between source slant, frame domain, and valence in shaping nuclear energy attitudes. The factorial design included three independent variables: valence (positive vs. negative), domain (national security vs. environmental security), and media source (pro-government vs. opposition). The analysis examined main effects for each factor, all two-way interactions, and the three-way interaction across five dependent variables. Both the complete sample (N = 778) and attention-filtered sample (N = 443) were analyzed.

4.4.1. Main Effects Analysis

Valence Effects: Across the complete sample, valence demonstrated a significant main effect only for government policy support ($F = 6.47$, $p = .011$, $\eta^2 = .008$), confirming that positive frames increased policy support compared to negative frames. General attitudes ($F = 2.12$, $p = .146$) and energy source perceptions ($F = 2.27$, $p = .132$) showed non-significant trends in the same direction. When restricted to attention check passers, the valence effect on government policy support remained significant ($F = 5.57$, $p = .019$, $\eta^2 = .013$), while general attitudes ($F = 3.79$, $p = .052$, $\eta^2 = .009$) and energy source perception remained non-significant ($F = 2.01$, $p = 0.157$, $\eta^2 = .005$).

Frame Domain Effects: Frame domain showed minimal main effects across all dependent variables in both samples. The strongest effect was observed for energy source perceptions in the complete sample ($F = 3.71$, $p = .054$, $\eta^2 = .005$), which failed to reach significance. Among attention check passers, frame domain effects remained non-significant across all measures.

Media Source Effects: Media slant demonstrated significant main effects specifically for threat perception measures. In the complete sample, national security threat perceptions showed a significant source effect ($F = 6.52$, $p = .011$, $\eta^2 = .008$), as did environmental security threat perceptions ($F = 4.02$, $p = .045$, $\eta^2 = .005$). Among attention check passers, the source effect on national security threats remained significant ($F = 4.72$, $p = .030$, $\eta^2 = .011$), while the environmental threat effect became non-significant ($F = 2.32$, $p = .129$).

4.4.2. Interaction Effects Analysis

Two-Way Interactions: The analysis revealed minimal two-way interactions across most dependent variables. The most notable exception was environmental security threat perceptions in the complete sample, which showed a significant frame domain $\times$ media source interaction ($F = 6.72$, $p = .010$, $\eta^2 = .009$). However, this interaction disappeared among attention check passers ($F = 1.41$, $p = .235$). National security threat perceptions showed a non-significant domain $\times$ media source interaction in the complete sample ($F = 3.54$, $p = .060$), and it remained non-significant among attentive participants ($F = 0.82$, $p = .366$).

Three-Way Interactions: The three-way interaction (valence $\times$ domain $\times$ media source) was non-significant across all dependent variables in both samples. Effect sizes were consistently small, with the largest three-way interaction observed for environmental security threats in the complete sample ($F = 2.13$, $p = .145$, $\eta^2 = .003$), which remained non-significant. Among attention check passers, three-way interactions were even smaller, with all p -values exceeding .15.

4.4.3. Complex Interactions

The three-way factorial analysis reveals limited evidence for complex interaction patterns among valence, source slant, and frame domain. Across all dependent

variables, only one statistically significant interaction emerged: a frame domain × media source interaction for environmental security threat perceptions in the complete sample. All other two-way and three-way interactions remained non-significant, suggesting that participants generally process these experimental factors as independent considerations rather than integrating them into complex interaction patterns.

This pattern of predominantly independent main effects has important theoretical implications for understanding information processing in political communication contexts. Rather than engaging in sophisticated integration of multiple information cues, participants appeared to evaluate valence, source credibility, and frame content through separate cognitive pathways. While this challenges models of political cognition that emphasize complex cue integration, it may reflect the technical nature of nuclear energy policy, which could limit opportunities for elaborate motivated reasoning among general audiences.

4.4.4. Differential Processing Patterns Across Attitude Dimensions

The factorial analysis reveals distinct processing patterns for different types of attitudes, though these differences are more limited than initially expected. Valence manipulation demonstrated a significant main effect only for government policy support, with this effect maintaining significance among attention check passers. General attitudes and energy source perceptions showed no significant valence effects in either sample.

Media source effects showed a different pattern, primarily influencing threat perception measures. National security threat perceptions demonstrated significant source effects in both the complete sample and among attention check passers. Environmental security threat perceptions showed significant source effects in the complete sample, though this effect became non-significant when restricted to attention check passers.

The significant effect of valence on government policy support aligns with theories suggesting that explicitly political attitudes may be particularly responsive to evaluative framing. Political judgments may be processed through pathways that are especially sensitive to positive-negative cues, reflecting the inherently evaluative nature of policy support decisions (Zaller, 1992).

The source effects on threat perceptions, particularly the robust findings for national security threats, suggest that risk assessment relies more heavily on source credibility judgments than on simple valence cues. This pattern aligns with research on risk communication, which emphasizes the importance of source trustworthiness in shaping threat perceptions. When evaluating potential risks, citizens may reasonably focus more on who is providing information than on how that information is framed, particularly for security-related concerns that require technical expertise to assess properly.

The disappearance of environmental threat source effects among attention check passers, combined with the maintenance of national security threat source effects, suggests that national security-related risk assessment may be more systematically influenced by the source of the media than environmental risk assessment, at least among attentive audiences.

4.5. Frame Domain Effects Analysis

When examining the entire sample, the results were limited, especially when those who failed the attention test were not excluded. At this stage, individuals exposed to two different domain levels national security (conditions 111, 112, 121, 122; N = 385) and environmental security (conditions 211, 212, 221, 222; N = 393) were analyzed separately according to the valence variable. This approach allows for direct comparison of framing effects across the two domains while controlling for frame content.

4.5.1. National Security Frame Effectiveness

For participants exposed to national security frames (N = 385), Mann-Whitney U tests revealed significant effects of valence across multiple attitude dimensions. General attitudes toward nuclear energy showed a significant effect (Mann-Whitney U = 16,540, $p = .029$, $r = -0.107$), with participants exposed to positive frames (M = 3.91, SD = 1.15) expressing more favorable attitudes than those exposed to negative frames (M = 3.67, SD = 1.25).

Perceptions of nuclear energy as a viable energy source demonstrated significant framing effects (Mann-Whitney U = 16,489, $p = .025$, $r = -0.110$). Positive frame exposure led to higher viability ratings (M = 4.02, SD = 1.10) compared to negative frame exposure (M = 3.78, SD = 1.21). Government policy support also showed significant effects (Mann-Whitney U = 16,419, $p = .023$, $r = -0.114$), with positive frames generating greater support (M = 3.68, SD = 1.34) than negative frames (M = 3.39, SD = 1.43).

Among participants who passed attention checks (N = 225), effect sizes increased substantially: general attitudes ($p = .007$, $r = -0.182$), energy source perceptions ($p = .027$, $r = -0.141$), and government policy support ($p = .049$, $r = -0.124$) all remained significant with larger effect sizes.

Table 4: Framing Effects by Domain (National Security vs. Environmental Security)

Frame Type	General Attitudes	Energy Source Viability	Government Policy Support	National Security Threat	Environmental Security Threat
National Security Frames (N=385) p- value	0.029	0.025	0.023	0.059	0.218
National Security Frames (N=385) Effect Size (r)	-0.107	-0.110	-0.114	0.090	0.045

<i>Environmental Security Frames (N=393) p-value</i>	0.477	0.471	0.049	0.838	0.634
<i>Environmental Security Frames (N=393) Effect Size (r)</i>	-0.003	-0.004	-0.093	-0.056	-0.019

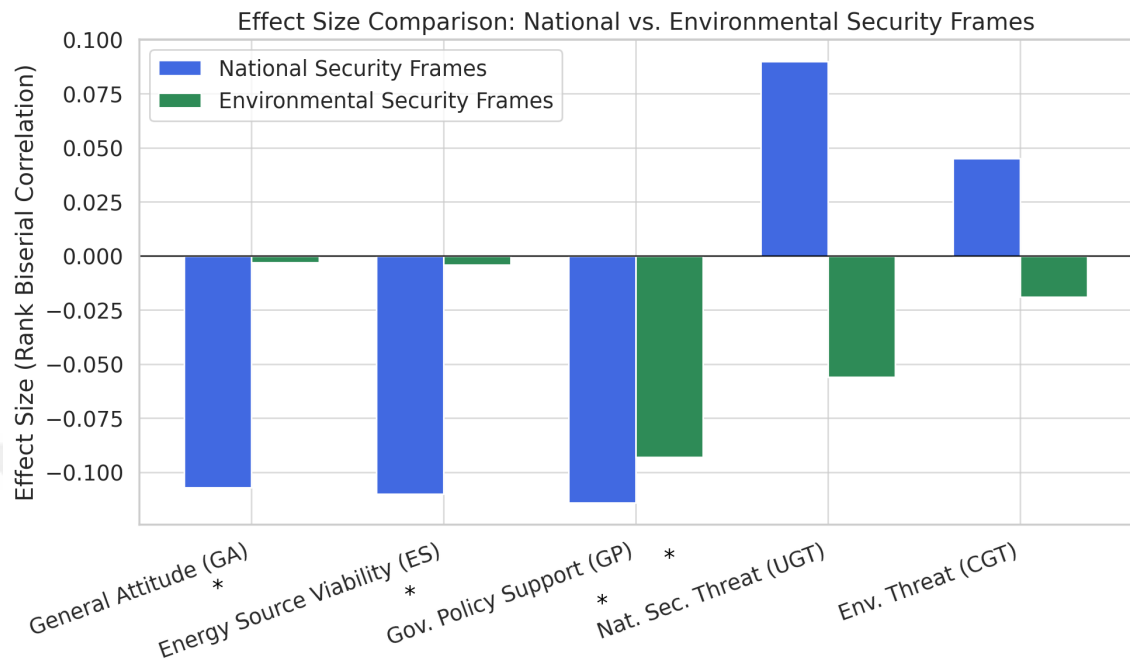
4.5.2. Environmental Security Frame Effectiveness

In contrast, participants exposed to environmental security frames (N = 393) showed minimal responsiveness to valence manipulation. General attitudes toward nuclear energy showed no significant effect (Mann-Whitney U = 19,242, $p = .477$, $r = -0.003$), with almost identical means between positive (M = 3.66, SD = 1.27) and negative (M = 3.64, SD = 1.30) conditions. Energy source viability perceptions similarly showed no significant effect (Mann-Whitney U = 19,227, $p = .471$, $r = -0.004$), with means of 3.74 (SD = 1.23) for positive frames and 3.73 (SD = 1.26) for negative frames.

Government policy support showed a statistically significant effect (Mann-Whitney U = 17,508, $p = .049$, $r = -0.093$), representing the only meaningful response to environmental frame valence. Positive frames generated modestly higher policy support (M = 3.62, SD = 1.41) than negative frames (M = 3.40, SD = 1.41) in this group.

Among attention check passers (N = 218), the null pattern persisted. General attitudes ($p = .455$, $r = -0.009$) and energy source perceptions ($p = .473$, $r = -0.005$) remained non-significant with trivial effect sizes. Government policy support ($p = .067$, $r = -0.114$) failed to reach conventional significance levels. These results reveal that while the national security frame operates effectively, the environmental security frame demonstrates statistically insignificant effects with small effect sizes, except for the government policy support variable.

Figure 7: Effect Size Comparison by Frame Domain



4.5.3. Frame Domain Asymmetry and Cultural Context

4.5.3.1. National Security Frame Effectiveness

The research finds the asymmetric effectiveness of national security versus environmental security frames. National security frames demonstrated robust effects across all evaluative dimensions both in full sample and among attention check passers, while environmental frames produced virtually no effects on attitudes or viability perceptions, besides government policy support variable in the full sample. This asymmetry provides strong evidence for theoretical predictions about contextual variation in framing effectiveness and suggests that frame impact depends on the psychological accessibility and cultural salience of frame content (Chong & Druckman, 2007a).

The consistent effectiveness of national security frames supports theories of motivated reasoning and issue salience in the Turkish context. Given Türkiye's geopolitical position and ongoing security concerns, national security considerations may represent chronically accessible cognitive schemas that readily interact with new information. This accessibility facilitates frame

processing and attitude formation, consistent with accessibility-applicability models of media effects (Price & Tewksbury, 1997). The security-focused nature of Turkish political discourse and culture over the past decades has likely made security considerations particularly salient for citizens, creating cognitive readiness to process security-related information. Additionally, the highly nationalist rhetoric employed by the current ruling People's Alliance over the past decade may have further amplified the salience of security frames and strengthened citizens' receptivity to national security messaging.

In recent years, the government has increasingly characterized various contentious issues as national security and existential challenges under the rubric of "survival concerns" (*beka sorunu*). While this discourse holds considerable validity given the country's geopolitical context and contemporary threat landscape, the extensive application of this terminology across diverse policy domains may trigger heightened survival instincts among citizens, potentially compromising their capacity for nuanced understanding of complex issue.

The effectiveness of national security frames also aligns with research on value hierarchies and threat prioritization. Maslow's (1943) hierarchy of needs suggests that security concerns typically take precedence over environmental considerations when cognitive resources are limited. In the Turkish context, where national security challenges have been prominent in political discourse, citizens may be predisposed to prioritize national security-related considerations over environmental concerns when evaluating nuclear energy policy. This predisposition creates favorable conditions for national security frame effectiveness while limiting the impact of environmental frames.

The pattern also reflects broader research on conservative and liberal value orientations. Research consistently shows that conservatives place higher priority on security and order values while liberals emphasize environmental protection and social justice (Graham et al., 2009). The predominance of right-

leaning participants in this study (as is typical of Turkish population demographics) may have contributed to the greater effectiveness of national security frames compared to environmental frames. This suggests that frame effectiveness is not just determined by message characteristics but by the match between frame content and audience predispositions.

4.5.3.2. Environmental Frame Limitations and Processing Requirements

The near-complete ineffectiveness of environmental security frames raises important questions about frame content, audience characteristics, and processing requirements. Several theoretical explanations may account for this pattern. First, environmental concerns may hold lower priority in Turkish public discourse relative to national security issues, limiting their psychological accessibility.

Second, environmental frames may require more elaborate processing to achieve effectiveness. Unlike security threats, which can be viscerally understood, environmental risks often involve complex causal chains and temporal delays that may resist simple valence manipulations. Literature has shown that simple exposure to positive or negative cues might not be enough to change pro-environmental attitudes and behaviors. Stern (2000) demonstrated that educational approaches alone have generally disappointing track records in environmental contexts, with effective environmental behavior change requiring combinations of intervention types rather than single-exposure framing manipulations. The single-exposure experimental design used in this study may have been insufficient to activate the more complex processing pathways required for environmental frame effectiveness.

Third, the environmental frame content may have lacked sufficient specificity or vividness to activate strong emotional responses. Research on environmental communication emphasizes the importance of making abstract environmental risks concrete and personally relevant (Spence et al., 2011; Spence & Pidgeon,

2010). The environmental frames used in this study focused on general environmental security concerns rather than specific, localized environmental impacts that might be more psychologically engaging for Turkish audiences. The environmental frame ineffectiveness also reflects broader challenges in environmental advocacy within certain political contexts. Environmental groups may need to reframe their arguments in security terms or identify different psychological pathways to achieve persuasive impact.

4.5.4. Frame Specificity Effects Analysis

To examine whether media frames have differential effects on attitude dimensions that match the frame content, we conducted separate analyses for each frame domain. This analysis tests the theoretical expectation that frames should exhibit stronger effects on conceptually related attitude measures than on unrelated ones. Thus, participants are expected to show a significant effect on threat perception variables related to the framing domain they were exposed to, while no effect is expected regarding the framing domain they did not encounter.

4.5.4.1. National Security Frame Specificity

In the analysis of the effectiveness of the positive and negative framing applied to those exposed to national security frames, no statistically significant difference emerged. Although those exposed to positive framing reported lower national security threats than those exposed to negative framing, this relationship remained statistically insignificant (Mann-Whitney $U = 16,854$, $p = .059$, $r = 0.090$; positive frames: $M = 2.70$, $SD = 1.28$; negative frames: $M = 2.92$, $SD = 1.33$) for this group.

Similarly, even though the participants who were exposed to positive frames had lower average scores than the ones exposed to negative frames, the same group also failed to show a statistically significant difference in environmental security threat perceptions, (Mann-Whitney $U = 17,693$, $p = .218$, $r = 0.045$;

positive conditions: $M = 2.75$, $SD = 1.27$; negative conditions: $M = 2.87$, $SD = 1.38$).

Among participants who passed the attention check ($N = 225$), both effects remained non-significant, with national security threat perceptions showing $p = .113$ ($r = 0.092$) and environmental threat perceptions showing $p = .167$.

4.5.4.2. Environmental Security Frame Specificity

For participants exposed to environmental security frames, the pattern was similar. Valence manipulation showed no significant effects on either environmental security threat perceptions (Mann-Whitney $U = 18,930$, $p = .634$, $r = -0.020$) or national security threat perceptions (Mann-Whitney $U = 18,223$, $p = .838$, $r = -0.056$) for the participant who saw environmental security related news pieces. Participants exposed to positive environmental frames showed similar threat perceptions to those exposed to negative environmental frames across both outcome measures.

Among attention check passers ($N = 218$), neither outcome measure showed significant valence effects (both $p > .57$), confirming the absence of frame specificity effects for environmental security frames.

4.5.4.3. Rejection of Frame-Ideology Alignment

The analysis of threat perception framing across ideological groups provides no support for **Hypothesis 3** and challenges theoretical predictions about frame-ideology alignment effects. Across all political orientations—left-leaning, center, and right-leaning participants—no statistically significant framing effects emerged for either national security or environmental threat perceptions. Right-leaning participants did not show particular susceptibility to national security threat framing, nor did left-leaning participants demonstrate enhanced responsiveness to environmental threat framing, contrary to theoretical expectations.

While some directional patterns in effect sizes were observed, these remained statistically non-significant across all ideological groups. The largest effect size was observed among left-leaning participants for environmental threats ($r = -0.143$), but this effect failed to reach statistical significance and therefore cannot be interpreted as meaningful evidence of framing influence. Similarly, all other effect sizes across ideological groups remained both small and statistically insignificant.

The absence of statistically significant framing effects across all ideological orientations indicates that threat assessment may be less susceptible to motivated reasoning than other forms of political judgment. This finding challenges theoretical expectations that ideologically congruent frames would demonstrate enhanced effectiveness and suggests that threat perception may operate through cognitive pathways that are relatively resistant to simple valence-based framing appeals.

4.5.4.4. Limited Evidence for Ideological Processing Differences

While the non-significant effect sizes showed some directional variation across ideological groups, the lack of statistical significance severely limits any theoretical conclusions about differential processing patterns. The observed effect sizes among left-leaning participants suggested potential backfire patterns where positive frames were associated with increased rather than decreased threat perceptions, but these patterns remained statistically meaningless and cannot support claims about systematic ideological skepticism or defensive processing.

The absence of statistically significant effects among right-leaning participants similarly precludes conclusions about baseline receptivity to pro-nuclear arguments. While conservative participants may theoretically be more receptive

to pro-nuclear messaging, the current data provides no empirical evidence for such differential responsiveness.

The uniformly non-significant results across all ideological groups suggest that threat perception framing may be less influenced by political predispositions than initially theorized. This pattern could reflect the technical nature of nuclear energy risks, which may require more specific expertise and information than simple ideological alignment to evaluate effectively.

4.5.4.5. Implications for Risk Communication Strategy

The complete absence of statistically significant threat perception framing effects across all ideological groups has important implications for risk communication strategies in politically polarized contexts. The findings suggest that simple valence-based appeals are ineffective for influencing risk assessments regardless of audience political orientation. This challenges common assumptions about the effectiveness of ideologically targeted messaging for risk communication.

The uniformly non-significant results suggest that other communication strategies may be necessary for influencing risk perceptions across political divides. Technical information, expert testimony, comparative risk assessments, and sustained educational campaigns may be more effective than single-exposure framing appeals for shaping threat perceptions. The resistance of threat perceptions to framing effects may actually represent a positive finding for democratic discourse, suggesting that risk assessment retains some independence from partisan political considerations.

4.6. Heterogeneous Treatment Effects

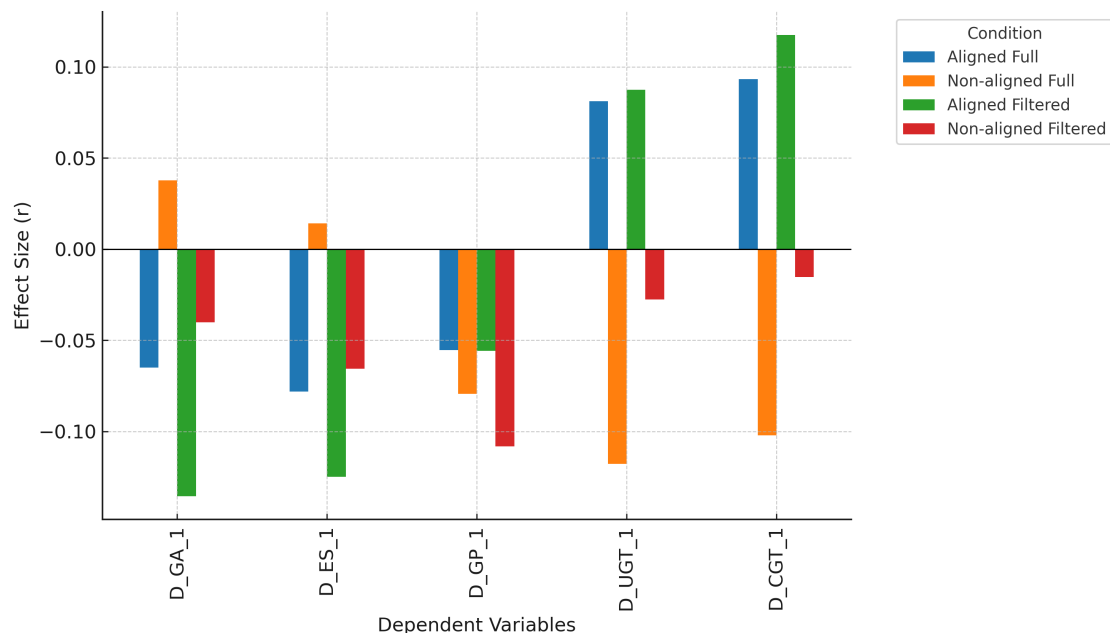
Having established the main treatment effects of framing on nuclear energy attitudes, the analysis now turns to examining heterogeneous treatment effects to understand how individual characteristics and contextual factors moderate

frame effectiveness across different audience segments. This analyses test whether the observed framing effects vary systematically based on participants' political orientations, knowledge levels, and source credibility perceptions.

4.6.1. Source Credibility and Political Alignment Analysis

Participants were classified based on the match between their political orientation and media source type that they were exposed to. Aligned sources included pro-government participants reading pro-government media or opposition participants reading opposition media (N = 264). Misaligned sources included pro-government participants reading opposition media or opposition participants reading pro-government media (N = 281). At this stage, those who did not answer the question “If the upcoming parliamentary elections were held tomorrow, which party would you vote for?” were excluded from the analysis, as it was not possible to categorize them.

Figure 8: Effect Sizes Across Alignment Conditions



4.6.2. Aligned Source Conditions

For participants exposed to politically aligned sources, Mann-Whitney U tests revealed framing effects in expected directions across multiple attitude

dimensions, though they did not reach conventional significance levels. General attitudes toward nuclear energy showed a small effect (Mann-Whitney $U = 8,140$, $p = .171$, $r = -0.065$), with positive frames generating more favorable attitudes ($M = 3.89$, $SD = 1.10$) than negative frames ($M = 3.73$, $SD = 1.21$). Energy source viability perceptions demonstrated a similar pattern (Mann-Whitney $U = 8,025$, $p = .126$, $r = -0.078$), with positive frame exposure yielding higher viability ratings ($M = 3.96$, $SD = 1.10$) compared to negative frame exposure ($M = 3.80$, $SD = 1.16$). Government policy support showed a modest effect in the expected direction (Mann-Whitney $U = 8,222$, $p = .210$, $r = -0.055$). However, both were insignificant.

For threat perception measures, aligned sources produced effects consistent with framing predictions but at non-significant levels. National security threat perceptions showed a small effect (Mann-Whitney $U = 7,997$, $p = .121$, $r = 0.081$), with positive frames reducing perceived threats ($M = 2.61$, $SD = 1.31$) compared to negative frames ($M = 2.79$, $SD = 1.27$). Environmental security threat perceptions demonstrated a non-significant effect (Mann-Whitney $U = 7,892$, $p = .090$, $r = 0.093$), though positive frames yielding lower threat perceptions ($M = 2.68$, $SD = 1.35$) than negative frames ($M = 2.89$, $SD = 1.33$). When analyses were restricted to attention check passers ($N = 155$), general attitudes were still insignificant (Mann-Whitney $U = 2,591$, $p = .065$, $r = -0.136$). Energy source perceptions ($p = .081$, $r = -0.125$) and environmental threat perceptions ($p = .098$, $r = 0.118$) were in the expected direction but in non-significant levels. National and environmental threat perceptions followed this pattern.

Table 5: Independent Samples Test Results for Alignment – Full Sample

<i>DV</i>	<i>Aligned Effect Size (r)</i>	<i>Aligned p-value</i>	<i>Non-aligned Effect Size (r)</i>	<i>Non- aligned p- value</i>

<i>General Attitude</i>	-0.0649	.171	0.0377	.717
<i>Viable Energy</i>	-0.0781	.126	0.0142	.587
<i>Government Policy</i>	-0.0554	.21	-0.0794	.113
<i>National Security Threat</i>	0.0813	.121	-0.1178	.96
<i>Environmental Security Threat</i>	0.0933	.09	-0.1021	.935

4.6.3. Misaligned Source Conditions

Participants exposed to politically misaligned sources (N = 281) showed markedly different response patterns, at, again, non-significant levels. General attitudes toward nuclear energy revealed a small positive effect size (Mann-Whitney U = 9,498, $p = .717$, $r = 0.038$), indicating that positive frames actually generated less favorable attitudes ($M = 3.74$, $SD = 1.33$) than negative frames ($M = 3.84$, $SD = 1.28$), opposite to the intended direction.

Energy source viability perceptions similarly demonstrated a reversed pattern (Mann-Whitney U = 9,730, $p = .587$, $r = 0.014$), with positive frames yielding slightly lower viability ratings than negative frames. Government policy support maintained the expected direction (Mann-Whitney U = 9,086, $p = .113$, $r = -0.079$), with positive frames generating higher support ($M = 3.70$, $SD = 1.47$) than negative frames ($M = 3.49$, $SD = 1.52$).

Threat perception measures under misaligned source conditions showed substantial reversals from expected patterns. National security threat perceptions demonstrated a negative effect size (Mann-Whitney U = 8,707, $p =$

.960, $r = -0.118$), indicating that positive frames increased rather than decreased perceived threats. Environmental security threat perceptions showed a similar reversal (Mann-Whitney $U = 8,862$, $p = .935$, $r = -0.102$).

Among attention check passers, misaligned sources ($N = 166$) maintained backfire effects with smaller magnitudes. General attitudes ($r = -0.040$) and energy source perceptions ($r = -0.066$) maintained reversed effect directions, while government policy support showed the largest effect in the expected direction ($r = -0.108$). However, they were all non-significant.

Table 6: Independent Samples Test Results for Alignment – Filtered Sample

<i>DV</i>	<i>Aligned Effect Size (r)</i>	<i>Aligned p-value</i>	<i>Non-aligned Effect Size (r)</i>	<i>Non- aligned p- value</i>
<i>General Attitude</i>	-0.1356	65	-0.04	321
<i>Viable Energy</i>	-0.1248	81	-0.0655	222
<i>Government Policy</i>	-0.0557	268	-0.1082	105
<i>National Security Threat</i>	0.0874	168	-0.0276	623
<i>Environmental Security Threat</i>	0.1176	98	-0.0153	568

While the analysis failed to demonstrate statistically significant framing effects on threat perceptions within specific domains, a clear pattern emerged regarding source-audience political alignment. Participants exposed to politically aligned sources showed framing effects in expected directions, whereas those exposed

to misaligned sources demonstrated backfire effects where positive frames actually produced less favorable attitudes, directly opposite to the intended persuasive direction.

4.6.4. Political Source Alignment and Defensive Processing

The source alignment analysis provides partial support for **Hypothesis 4**, though the observed effects remained statistically insignificant across all measures. The systematic pattern of effect directions, where aligned sources produced theoretically predicted framing effects while misaligned sources generated reversed patterns, aligns with theoretical predictions about motivated reasoning in polarized information environments (Slothuus & de Vreese, 2010). While the lack of statistical significance limits the strength of these conclusions, the consistent directional patterns suggest that political source credibility fundamentally shapes how audiences respond to media frames.

For participants exposed to politically aligned sources, effect sizes were in expected directions across all dependent variables, ranging from $r = -0.055$ to $r = -0.078$ for evaluative measures, though none reached conventional significance levels. These directional effects are consistent with theoretical expectations that source alignment creates conditions for normal framing processes to operate. The consistency across multiple attitude dimensions suggests that source credibility facilitates frame processing, even when effects remain below statistical thresholds. When audiences encounter information from trusted sources, they appear more likely to process message content systematically rather than defensively, creating opportunities for frame content to influence judgment formation (Zaller, 1992).

4.6.5. Backfire Effects and Oppositional Interpretation

The reversed effect patterns for misaligned sources represent an important finding, despite their statistical insignificance. When participants encountered frames from politically opposing sources, they demonstrated backfire effects

across two of three evaluative dimensions, responding in directions opposite to the intended message. General attitudes showed the strongest reversal ($r = 0.038$), with positive frames from misaligned sources generating less favorable attitudes than negative frames. Energy source perceptions followed a similar pattern ($r = 0.014$), while government policy support maintained expected directions regardless of source alignment.

Rather than simply ignoring misaligned sources, participants appear to have engaged in oppositional interpretation, treating positive frames as evidence for negative evaluations and vice versa. This defensive processing may reflect attempts to maintain cognitive consistency by rejecting not just the source but the underlying implications of their arguments, consistent with research on partisan motivated reasoning (Leeper & Slothuus, 2014).

The magnitude of backfire effects varied across attitude dimensions, with the reversals observed for general attitudes and energy source perceptions. These more abstract evaluative judgments may be particularly susceptible to oppositional interpretation because they do not require specific factual knowledge to contest. In contrast, government policy support showed framing effects regardless of source alignment, suggesting that explicitly political attitudes may be processed through different pathways that focus more on policy content than source characteristics.

While these patterns remained statistically insignificant, they have important theoretical implications for understanding political communication effectiveness in polarized contexts where democracy levels are declining. The directional evidence suggests that cross-partisan communication attempts may not simply fail but could actively strengthen opposing viewpoints. Political actors seeking to influence opposing audiences may need to either work through intermediary sources or find ways to obscure their identity to avoid triggering defensive processing. While such practices may enhance persuasive effectiveness, they

potentially undermine the ethical foundations of democratic discourse by preventing citizens from making fully informed judgments about the credibility and motivations of information sources. This underscores the critical importance of media literacy education and its widespread dissemination, particularly for opposition groups seeking to develop defensive capabilities against such manipulative communication strategies.

4.6.6. Implications for Press-Party Parallelism

These findings have particular relevance for understanding information processing in polarized media environments like contemporary Türkiye. The results provide empirical support for theoretical predictions about press-party parallelism effects, demonstrating how political alignments between media outlets and audiences create systematic differences in information processing (Çarkoğlu et al., 2014). The source alignment effects observed in this study suggest that Türkiye's polarized media system may fundamentally alter how citizens process political information, with source identity becoming as important as message content in determining communication effectiveness.

The demonstration that source credibility can reverse framing effects suggests that strategic communicators must carefully consider audience-source relationships rather than focusing solely on message content. These effects also suggest that media outlet choice may be more important than message crafting for achieving communication objectives in polarized environments with hybrid regimes.

The backfire effects also provide insight into how press-party parallelism may contribute to political polarization. If citizens systematically misinterpret information from opposing media outlets, exposure to diverse viewpoints may paradoxically increase rather than decrease polarization. This dynamic could explain why media diversity does not automatically improve democratic discourse quality in polarized systems. Citizens may be exposed to opposing

viewpoints but process them through defensive frameworks that strengthen rather than challenge their existing beliefs.

More sophisticated approaches that help citizens recognize and counteract defensive processing may be necessary to improve information processing quality in polarized environments.

4.6.7. News Consumption Moderation Analysis

News consumption was measured using a 5-point scale (1 = very low consumption, 5 = very high consumption). The distribution showed strong skewness toward lower consumption levels ($M = 2.13$, median = 2.00). Given small sample sizes at highest levels, three groups were created: low consumers (MA-NC = 1, $N = 178$), moderate consumers (MA-NC = 2, $N = 366$), and high consumers (MA-NC = 3-5, $N = 204$).

4.6.7.1. Low News Consumers

Among participants with minimal news consumption ($N = 178$), framing effects were consistently small and non-significant across evaluative attitude measures. General attitudes toward nuclear energy showed a small positive effect (Mann-Whitney $U = 3,687$, $p = .743$, $r = 0.055$). Energy source viability perceptions similarly demonstrated negligible effects ($r = 0.027$, $p = .627$), while government policy support showed a moderate but non-significant effect ($r = -0.108$, $p = .101$).

Among attention check passers ($N = 96$), the pattern of minimal effects with non-significant levels persisted. General attitudes ($r = -0.031$, $p = .392$) and energy source perceptions ($r = 0.001$, $p = .506$) remained unresponsive to framing, while government policy support showed a small effect ($r = -0.085$, $p = .230$). For threat perception measures, low consumers showed minimal and insignificant effects across both dependent variables. National security threat perceptions ($r = 0.044$, $p = .303$) and environmental security threat perceptions

($r = -0.010$, $p = .546$) demonstrated no meaningful responsiveness to valence framing. Similar results were observed when the sample was filtered.

4.6.7.2. Moderate News Consumers

Participants with moderate news consumption ($N = 366$) demonstrated the strongest and most consistent framing effects across evaluative attitude measures. General attitudes toward nuclear energy showed significant effects (Mann-Whitney $U = 14,270$, $p = .006$, $r = -0.148$), with positive frames generating more favorable attitudes ($M = 3.88$, $SD = 1.15$) than negative frames ($M = 3.54$, $SD = 1.28$). Energy source viability perceptions showed even stronger effects (Mann-Whitney $U = 13,588$, $p < .001$, $r = -0.188$), with positive frames yielding higher viability ratings ($M = 4.03$, $SD = 1.12$) compared to negative frames ($M = 3.63$, $SD = 1.25$). Government policy support also demonstrated significant effects (Mann-Whitney $U = 14,584$, $r = -0.129$, $p = .013$).

Among attention check passers ($N = 217$), the pattern intensified substantially. General attitudes reached large effect sizes ($r = -0.220$, $p = .002$), energy source perceptions showed very large effects ($r = -0.280$, $p < .001$), and government policy support maintained significant effects ($r = -0.206$, $p = .003$).

Threat perception measures among moderate consumers showed minimal effects consistent with other analyses. National security threats ($r = 0.015$, $p = .398$) and environmental security threats ($r = 0.022$, $p = .353$) remained largely unresponsive to valence manipulation. Similar results were observed when the sample was filtered.

4.6.7.3. High News Consumers

Participants with high news consumption ($N = 204$) showed minimal and insignificant framing effects across all measures. General attitudes toward nuclear energy demonstrated virtually no effect (Mann-Whitney $U = 5,132$, $p = .436$, $r = -0.013$), with similar means between positive ($M = 3.70$, $SD = 1.27$) and

negative ($M = 3.69$, $SD = 1.24$) conditions. Energy source perceptions showed a small positive effect ($r = 0.060$, $p = .782$) in the unexpected direction, while government policy support displayed a moderate but non-significant effect ($r = -0.083$, $p = .145$).

Among attention check passers ($N = 114$), high consumers continued to show resistance to framing effects. General attitudes ($r = 0.008$, $p = .531$) and government policy support ($r = -0.028$, $p = .395$) remained minimally affected, while energy source perceptions showed a moderate effect ($r = 0.144$, $p = .919$) in the unexpected direction.

4.6.8. News Consumption Habits and the Inverted-U Relationship

The news consumption analysis provides evidence for an inverted-U relationship between media exposure and framing susceptibility. The finding that moderate consumers show the strongest framing effects while both low and high consumers demonstrate resistance suggests that there exists an optimal level of media engagement for frame effectiveness.

Among moderate news consumers, the strongest and most consistent framing effects emerged across general attitudes toward nuclear energy, energy source viability perceptions and government policy support variables.

Moderate news consumers appear to possess sufficient interest to engage and process framing content while lacking the extensive media exposure that might foster skeptical processing or resistance mechanisms. This represents a cognitive sweet spot where engagement enhances rather than diminishes susceptibility to persuasive appeals.

Several mechanisms may contribute to moderate consumers' enhanced susceptibility. First, regular but not intensive news consumption may create familiarity with political content without developing sophisticated media literacy

skills that foster resistance. Moderate consumers may understand political issues sufficiently to engage with frame content but lack the meta-cognitive awareness that heavy consumers develop about persuasive techniques. Second, moderate consumption may indicate optimal levels of political interest that enhance attention to frame content without triggering defensive processing. The minimal framing effects among low news consumers likely reflect insufficient media engagement rather than sophisticated resistance. Participants with very low media consumption showed consistently small, non-significant effects across all evaluative measures, with effect sizes near zero. This pattern suggests general disengagement rather than selective resistance to misleading content.

Low consumers may lack the motivation or cognitive resources necessary to process frame content meaningfully, leading to weak responses regardless of message characteristics.

The resistance demonstrated by high consumers provides evidence for media sophistication models that predict resistance development through extensive exposure. High consumers showed near-zero effects at non-significant levels across most measures, with energy source perceptions showing a small effect in the unexpected direction. This resistance likely operates through multiple pathways, including awareness of persuasive techniques, more extensive factual knowledge that provides alternative bases for judgment, and cognitive flexibility from exposure to diverse perspectives.

4.6.9. Media Trust Moderation Analysis

This analysis examined framing effects through valence manipulation across different levels of media trust to understand whether media trust moderates framing effectiveness. By conducting separate analyses for low, medium, and high media trust groups, this approach aimed to determine whether an

individual's trust in media sources influences their susceptibility to positive versus negative framing of nuclear energy information.

4.6.9.1. Low Media Trust Level

For participants with low media trust levels ($N = 259$), Mann-Whitney U tests revealed no statistically significant differences between positive and negative valence conditions across all dependent variables in the full sample. General attitudes toward nuclear energy showed no significant effect (Mann-Whitney $U = 8341$, $p = .529$, $r = 0.00495$), as did energy source viability perceptions (Mann-Whitney $U = 7968$, $p = .765$, $r = 0.04945$), government policy support (Mann-Whitney $U = 8080$, $p = .301$, $r = -0.03603$), national security threat perceptions (Mann-Whitney $U = 8257$, $p = .585$, $r = -0.01497$), and environmental security threat perceptions (Mann-Whitney $U = 7636$, $p = .898$, $r = -0.08900$).

When the analysis was restricted to attention check passers ($N = 141$), the pattern of non-significant results persisted across all measures. General attitudes (Mann-Whitney $U = 2461$, $p = .470$, $r = -0.00726$), energy source perceptions (Mann-Whitney $U = 2361$, $p = .697$, $r = 0.04760$), government policy support (Mann-Whitney $U = 2462$, $p = .472$, $r = -0.00686$), national security threats (Mann-Whitney $U = 2471$, $p = .515$, $r = -0.00343$), and environmental security threats (Mann-Whitney $U = 2222$, $p = .863$, $r = -0.10387$) all remained non-significant.

4.6.9.2. Medium Media Trust Level

Participants with medium media trust levels ($N = 350$) demonstrated statistically significant framing effects across all dependent variables in the full sample. General attitudes toward nuclear energy showed a significant effect (Mann-Whitney $U = 13479$, $p = .023$, $r = -0.118$), with positive frames yielding higher mean scores ($M = 3.85$, $SD = 1.23$) compared to negative frames ($M = 3.61$, $SD = 1.24$). Energy source viability perceptions revealed a significant effect (Mann-Whitney $U = 12942$, $p = .005$, $r = -0.153$), with positive conditions showing

higher ratings ($M = 4.00$, $SD = 1.19$) than negative conditions ($M = 3.71$, $SD = 1.19$). Government policy support demonstrated significance (Mann-Whitney $U = 13214$, $p = .012$, $r = -0.136$), national security threat perceptions showed significance (Mann-Whitney $U = 13340$, $p = .017$, $r = 0.127$), and environmental security threat perceptions were significant (Mann-Whitney $U = 13375$, $p = .019$, $r = 0.125$).

Among attention check passers ($N = 208$), all effects remained statistically significant with enhanced effect sizes. General attitudes (Mann-Whitney $U = 4315$, $p = .004$, $r = -0.202$), energy source perceptions (Mann-Whitney $U = 4178$, $p = .002$, $r = -0.227$), government policy support (Mann-Whitney $U = 4285$, $p = .004$, $r = -0.207$), national security threats (Mann-Whitney $U = 4595$, $p = .028$, $r = 0.150$), and environmental security threats (Mann-Whitney $U = 4306$, $p = .005$, $r = 0.203$) all maintained significance levels.

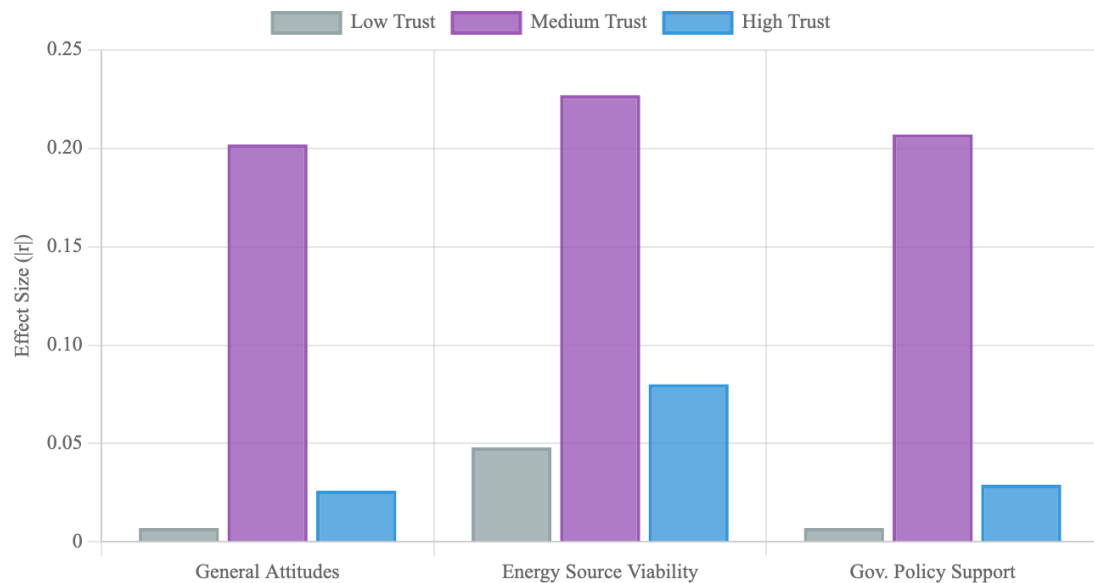
4.6.9.3. High Media Trust Level

For participants with high media trust levels ($N = 139$), the full sample analysis revealed only one statistically significant effect. Government policy support showed significance (Mann-Whitney $U = 2000$, $p = .036$, $r = -0.1715$), with positive frames generating higher support ($M = 3.76$, $SD = 1.198$) than negative frames ($M = 3.31$, $SD = 1.43$). General attitudes (Mann-Whitney $U = 2352$, $p = .393$, $r = -0.0259$), energy source perceptions (Mann-Whitney $U = 2221$, $p = .198$, $r = -0.0800$), national security threats (Mann-Whitney $U = 2117$, $p = .901$, $r = -0.1230$), and environmental security threats (Mann-Whitney $U = 2344$, $p = .620$, $r = -0.0292$) showed no significant effects.

When restricted to attention check passers ($N = 78$), no statistically significant effects emerged across any dependent variables. All measures remained non-significant: general attitudes (Mann-Whitney $U = 697$, $p = .255$, $r = -0.0829$), energy source perceptions (Mann-Whitney $U = 723$, $p = .351$, $r = -0.0487$), government policy support (Mann-Whitney $U = 635$, $p = .099$, $r = -0.1651$),

national security threats (Mann-Whitney $U = 647$, $p = .879$, $r = -0.1493$), and environmental security threats (Mann-Whitney $U = 721$, $p = .659$, $r = -0.0520$). The results demonstrate that while low and high media trust levels showed limited or no significant framing effects, medium media trust levels consistently exhibited significant effects across all dependent variables, suggesting that moderate levels of media trust create optimal conditions for framing influence.

Figure 9: Framing Effects by Trust Level



4.6.10. Media Trust as a Curvilinear Moderator

The media trust analysis reveals a curvilinear relationship that advances understanding of how institutional trust moderates susceptibility to framing

effects. The finding that participants with medium levels of media trust were most susceptible to framing manipulations, while those with very low or very high trust showed reduced susceptibility, suggests an optimal zone for framing effectiveness that has important theoretical and practical implications.

Among participants with medium media trust, significant effects emerged across multiple dependent variables in this research. All dependent variables yielded significant results at this level of media trust. Furthermore, when participants were filtered according to those who passed the attention question, the effect size of all the dependent variables increased. These effect sizes approach medium magnitude according to conventional standards and represent meaningful practical differences in nuclear energy attitudes.

This pattern is consistent with Zaller's (1992) RAS model, which predicts that individuals with moderate levels of political awareness are most susceptible to elite influence because they receive political information but lack the partisan resistance that characterizes highly aware individuals. The results extend this logic to media trust, suggesting that moderate trust levels create optimal conditions for framing effects, sufficient trust to receive and process media messages, but not so much trust as to create uncritical acceptance or so little trust as to result in wholesale rejection.

When individuals fundamentally distrust media sources, they may engage in defensive processing that renders them immune to framing attempts. The complete absence of effects among low-trust participants suggests that media distrust creates a psychological barrier that prevents frame content from influencing judgment formation. This barrier may operate through increased skeptical processing, reduced attention to media content, or wholesale dismissal of media messages.

Conversely, the limited effects observed among high-trust individuals may reflect different psychological processes where high trust leads to acceptance of both positive and negative frames, resulting in competing influences that cancel each other out. Alternatively, high media trust may coincide with crystallized attitudes that resist frame-induced change (Druckman & Nelson, 2003). High-trust individuals may have developed stable opinions based on their media consumption that are less susceptible to single-exposure framing effects.

4.6.11. Ideological Moderation Analysis

Participants were categorized based on left-right self-placement (D_LR_1) into three groups: left-leaning (scores 1-2, N = 107), center (score 3, N = 294), and right-leaning (scores 4-5, N = 377). Separate Mann-Whitney U tests examined differential responses to national security and environmental security threat frames for these groups.

4.6.11.1. National Security Threat Perception Effects

Left-leaning participants showed a small negative effect (Mann-Whitney U = 1,338, $p = .726$, $r = -0.065$), with no significance. Both center participants (Mann-Whitney U = 10,270, $p = .226$, $r = 0.050$), and right-leaning participants showed a small effect in the right direction (Mann-Whitney U = 17,260, $p = .313$, $r = 0.028$), but again at non-significant levels.

Among attention check passers, left-leaning participants maintained a negative effect ($r = -0.077$), center participants showed minimal effects ($r = 0.016$), and right-leaning participants demonstrated a slightly larger but still small effect ($r = 0.062$), all at non-significant levels.

4.6.11.2. Environmental Security Threat Perception Effects

Left-leaning participants exhibited a negative effect (Mann-Whitney U = 1,227, $p = .908$, $r = -0.143$), indicating that positive environmental frames increased rather than decreased perceived environmental threats. Center participants showed

minimal effect (Mann-Whitney $U = 10,556$, $p = .364$, $r = 0.023$), while right-leaning participants demonstrated a small positive effect (Mann-Whitney $U = 16,896$, $p = .199$, $r = 0.049$). These results were insignificant.

Among attention check passers, left-leaning participants maintained strong negative effects (Mann-Whitney $U = 487$, $p = .840$, $r = -0.133$), center participants showed minimal effects (Mann-Whitney $U = 3587$, $p = .583$, $r = -0.018$), and right-leaning participants demonstrated a stronger effect (Mann-Whitney $U = 4656$, $p = .072$, $r = 0.114$). However, all these results were non-significant in different degrees.

4.6.12. Knowledge-Based Moderation Analysis

Knowledge level was operationalized as the total number of correct responses to factual questions about nuclear energy in Türkiye, ranging from 0 to 4 correct answers. The sample distribution was: Knowledge 0 ($N = 72$), Knowledge 1 ($N = 187$), Knowledge 2 ($N = 191$), Knowledge 3 ($N = 175$), and Knowledge 4 ($N = 153$). Mann-Whitney U tests were conducted separately for each knowledge level, with effect sizes compared across levels.

4.6.12.1. Evaluative Attitude Effects by Knowledge Level

For general attitudes toward nuclear energy (D_GA_1), the analysis revealed a complex non-linear pattern. Knowledge Level 0 showed a small effect ($r = -0.068$), while Knowledge Level 1 demonstrated a slightly smaller effect ($r = -0.049$). Knowledge Level 2 unexpectedly showed a positive effect size ($r = 0.136$), indicating a backfire effect where positive frames generated less favorable attitudes than negative frames. Though, all these three were at non-significant levels.

Knowledge Level 3 demonstrated the strongest framing effects ($r = -0.223$, $p = .004$), representing a large effect size where positive frames substantially increased favorable attitudes compared to negative frames. Knowledge Level 4 showed reduced and non-significant effects ($r = -0.089$, $p = .153$).

Energy source viability perceptions (D_ES_1) followed a similar pattern. Knowledge Level 0 showed moderate effects ($r = -0.169$, $p = .108$), Knowledge Level 1 displayed small effects ($r = -0.050$, $p = .271$), and Knowledge Level 2 again showed a slight backfire effect ($r = 0.032$, $p = .654$). Knowledge Level 3 demonstrated large effects ($r = -0.179$, $p = .015$), while Knowledge Level 4 showed minimal effects ($r = -0.008$, $p = .466$). However, besides Knowledge Level 3, findings were not statistically significant.

Government policy support (D_GP_1) displayed the most variable pattern across knowledge levels. Knowledge Level 0 showed minimal effects ($r = -0.040$, $p = .388$), Knowledge Level 1 demonstrated large effects ($r = -0.190$, $p = .010$), Knowledge Level 2 showed minimal effects ($r = -0.020$, $p = .405$), Knowledge Level 3 displayed moderate effects ($r = -0.112$, $p = .092$), and Knowledge Level 4 maintained moderate effects ($r = -0.119$, $p = .085$).

4.6.12.2. Threat Perception Effects by Knowledge Level

For national security threat perceptions (D_UGT_1), Knowledge Level 0 demonstrated the strongest effects ($r = 0.238$, $p = .041$), indicating that positive frames significantly reduced perceived security threats compared to negative frames. This effect steadily diminished across higher knowledge levels and all were at insignificant levels: Knowledge Level 1 ($r = 0.059$), Knowledge Level 2 ($r = 0.044$), with Knowledge Levels 3 and 4 showing reversed effects ($r = -0.048$ and $r = -0.058$, respectively).

Environmental security threat perceptions (D_CGT_1) followed a similar declining pattern. Knowledge Level 0 showed large effects ($r = 0.192$, $p = .080$), Knowledge Level 1 displayed moderate effects ($r = 0.120$, $p = .074$), while Knowledge Levels 2, 3, and 4 showed minimal or reversed effects at non-significant levels ($r = -0.049$, $r = -0.039$, and $r = -0.029$, respectively).

When analyses were restricted to attention check passers, Knowledge Level 3 showed enhanced effects for general attitudes ($r = -0.232$, $p = .023$) and maintained strong effects for energy source perceptions, though this time at a non-significant level ($r = -0.186$, $p = .054$). Knowledge Level 1 demonstrated significant effects for government policy support ($r = -0.233$, $p = .013$). For threat perceptions, Knowledge Level 0 maintained large effects for both national security ($r = 0.229$) and environmental threats ($r = 0.215$) at insignificant levels, while higher knowledge levels continued to show diminished effects.

The analysis revealed a complex curvilinear relationship between knowledge and framing susceptibility, with Knowledge Level 3 demonstrating the strongest and most consistent framing effects across multiple dependent variables, while both very low knowledge (Level 0) and high knowledge (Level 4) participants showed reduced susceptibility.

4.6.13. Knowledge Effects and the Complexity of Expertise

The knowledge-based moderation analysis fundamentally challenges **Hypothesis 5** and expectation that higher knowledge uniformly reduces susceptibility to framing effects. Rather than observing the predicted linear decline in framing effectiveness with increasing knowledge, the research found complex curvilinear and domain-specific patterns that suggest knowledge operates as a sophisticated moderator rather than a simple protective factor. The most important finding concerns the peak framing effects observed at Knowledge Level 3 for evaluative attitudes general attitude and perception of nuclear energy as a viable energy option. Knowledge Level 3 participants appeared to possess sufficient domain knowledge to engage meaningfully with frame content while lacking the extensive knowledge that might foster genuine resistance.

This curvilinear relationship provides strong evidence for motivated reasoning processes among moderately knowledgeable participants. Knowledge Level 3 participants may use their understanding of nuclear energy to construct elaborate justifications for frame-consistent attitudes rather than critically evaluating frame content. The effect sizes at Knowledge Level 3 suggest that these participants engaged in extensive cognitive elaboration that amplified rather than counteracted framing effects. This pattern contrasts with research on sophisticated motivated reasoning, which suggests that political knowledge primarily helps individuals defend pre-existing beliefs against incongruent information (Taber & Lodge, 2013).

The pattern differs markedly from Knowledge Level 2, which showed backfire effects where positive frames actually generated less favorable attitudes than negative frames at a non-significant level. This reversal suggests a transitional zone where participants possess enough knowledge to question frame content but lack sufficient understanding to process it effectively. Knowledge Level 2 may represent a critical threshold where individuals become aware of the complexity of nuclear energy issues without possessing adequate knowledge to navigate that complexity confidently. This awareness might trigger defensive processing that leads to reactance against positive frames, resulting in the observed backfire effects.

The inverse relationship between knowledge and threat perception framing revealed a fundamentally different dynamic for risk-related attitudes. The strongest effects for national security occurred at Knowledge Level 0, with effects diminishing or reversing at higher knowledge levels. This domain-specific pattern suggests that knowledge specifically protects against threat-based framing appeals while simultaneously enhancing susceptibility to evaluative framing.

Knowledge about nuclear energy technology, safety systems, and regulatory oversight may provide cognitive resources for evaluating threat-related claims that reduce susceptibility to simple positive-negative framings.

The knowledge effects also varied considerably for government policy support, showing the most variable pattern across knowledge levels. Knowledge Level 1 demonstrated large effects ($r = -0.190$, $p = .010$), while other levels showed smaller effects at non-significant levels. This irregular pattern suggests that policy attitudes may be influenced by factors beyond domain-specific knowledge, including political sophistication, partisan identities, and ideological commitments that interact with knowledge in complex ways.

4.7. Policy Implications for Türkiye

The experimental findings provide actionable guidance for enhancing policy communication and democratic discourse as Türkiye continues implementing its nuclear energy program with Akkuyu plant under construction.

Results show that positive nuclear energy frames generate more favorable attitudes and higher policy support, providing support for **Hypotheses 1 and 2** and confirming that valence-based framing can systematically influence public opinion on complex policy issues. However, the failure of environmental frames to achieve effectiveness and the absence of ideological moderation for threat perceptions challenge **Hypothesis 3**, suggesting that frame-ideology alignment effects may be more limited than predictions suggest.

The source alignment analysis provides partial support for **Hypothesis 4**, though the results were statistically insignificant across all measures. For participants exposed to politically aligned sources, effect sizes were larger than those for misaligned sources in general attitudes ($r = -0.065$ vs. $r = 0.038$) and energy source viability perceptions ($r = -0.078$ vs. $r = 0.014$), suggesting that source-audience political alignment enhances framing effectiveness. Notably, misaligned sources demonstrated backfire effects for general attitudes and energy source perceptions, where positive frames actually generated less

favorable responses than negative frames, opposite to the intended direction. While these patterns suggest that political source credibility can reverse framing effects, the lack of statistical significance limits the strength of these conclusions.

The knowledge moderation analysis fundamentally challenges **Hypothesis 5** by revealing complex curvilinear relationships rather than simple linear resistance effects. The finding that moderate knowledge creates peak susceptibility for evaluative attitudes while low knowledge creates maximum susceptibility for national security threat perception suggests that expertise effects are far more complex than conventional wisdom suggests.

The demonstration that moderate levels of media trust and news consumption create optimal conditions for framing effects has important implications for both democratic theory and political communication practice. These findings suggest that democratic discourse quality depends not just on citizen knowledge or media consumption but on the complex relationships between audience characteristics, source credibility, and message content.

4.8. Practical Recommendations for Policymakers

The superior effectiveness of national security frames over environmental security frames suggests that policymakers should prioritize former-based arguments when communicating nuclear energy benefits. Given Türkiye's geopolitical position, framing nuclear power in terms of strategic autonomy and reduced vulnerability to external energy shocks proves more persuasive than environmental arguments emphasizing carbon reduction or high water consumption levels.

Policymakers should recognize that communication effectiveness depends critically on audience segmentation. The finding that moderate levels of media

trust create optimal conditions for persuasion suggests focusing resources on citizens with intermediate trust levels.

4.9. Communication Strategy Guidance

Government communicators should leverage national security frames while acknowledging environmental arguments' limitations. However, source credibility creates constraints, exposure to government messaging among opposition-oriented citizens may produce backfire effects. Government communication may choose to operate through multiple channels, including neutral technical experts, international organizations or intermediaries to increase effectiveness among opposition citizens.

Opposition actors face complex challenges since environmental frames demonstrate limited effectiveness. Opposition communicators may need to reframe positions in technological dependence or weak spot arguments rather than primarily emphasizing environmental risks. Similarly, environmental groups that opposes nuclear powerplants may need to reframe their arguments in national security terms or identify different psychological pathways to achieve persuasive impact. The challenge reflects broader patterns in environmental communication, where abstract risks often struggle against more immediate concerns.

4.10. Democratic Participation Implications

The finding that source credibility can reverse framing effects suggests polarized media systems may create barriers to cross-partisan democratic deliberation. The curvilinear relationship between media trust and framing susceptibility indicates that democratic discourse quality depends on maintaining moderate institutional trust levels across the population.

However, the resistance of threat perceptions to ideological framing provides optimism for democratic decision-making on technical issues. Factual, safety-

focused communication may enable cross-partisan agreement even in polarized contexts.

It is worth noting that the specific cultural and political factors that contribute to frame effectiveness in Türkiye may not generalize to other contexts. In Scandinavian countries, for example, environmental frames might demonstrate greater effectiveness due to different cultural priorities and political perceptions. This contextual specificity suggests that successful framing strategies must be tailored to local political cultures and current issue priorities.

4.11. Hierarchical Susceptibility and Psychological Mechanisms

The hierarchy of framing susceptibility across different attitude constructs provides important insights into the psychological mechanisms underlying framing effects. Government policy support demonstrated the strongest and most consistent effects, followed by general attitudes and energy source perceptions, while threat perceptions remained largely unaffected. This pattern suggests that frames operate through targeted pathways rather than creating generalized positive or negative affect that influences all related judgments equally.

The strong effects on policy attitudes may reflect the explicitly political nature of policy judgments, which directly map onto the positive-negative valence dimension of the experimental manipulation. Policy support represents a summary evaluation that can readily incorporate political cues, making it particularly susceptible to framing influence. The political nature of policy attitudes means they are processed through partisan and ideological frameworks that are highly responsive to evaluative cues. This aligns with research on motivated reasoning, which suggests that political judgments are particularly susceptible to bias and motivated processing (Taber & Lodge, 2013). In contrast, threat perceptions may require more specific risk-related information that simple valence manipulations cannot provide, explaining their resistance to

framing effects. Threat assessment may engage different cognitive systems that prioritize accuracy over consistency with evaluative frames.

The insensitivity of threat perceptions to valence framing across all analyses suggests that effective nuclear energy communication may require different approaches for different communication objectives. This has important implications for strategic political communication, suggesting that communicators need to match their approach to their specific objectives rather than assuming that single framing strategies will influence all attitude dimensions equally.

4.12. Implications for Nuclear Energy Communication Research

These findings contribute to the specific literature on nuclear energy communication, which has highlighted the challenges of public communication about complex technological risks (Gamson & Modigliani, 1989). The demonstration that simple valence frames can influence policy attitudes suggests that technical complexity need not prevent effective public communication, provided that communicators focus on appropriate attitude targets.

The findings extend research by (Genys & Krikštolaitis, 2020), who found that better-informed individuals were more positive toward nuclear energy, by demonstrating that framing effects can influence attitudes even among diverse knowledge levels.

The research also connects to broader literature on environmental communication in Türkiye. Ersoy and İşeri (2021) demonstrated how Turkish media outlets frame nuclear energy through different political lenses, with pro-government media emphasizing energy independence and economic benefits while opposition media highlight environmental risks and safety concerns. Findings of this research provide causal evidence for how these different framings influence public opinion, showing that positive frames consistently

increase support for nuclear energy policy while negative frames reduce support.

The finding that framing effects are strongest for policy support aligns with research showing that nuclear energy attitudes are deeply embedded in political and ideological frameworks. As Clulow et al. (2021) demonstrate, political ideology is significantly associated with energy technology attitudes, with right-leaning individuals more supportive of nuclear energy and left-leaning individuals more supportive of renewables. The findings extend this research by showing that framing effects can shift attitudes even within these ideological constraints.

CHAPTER 5

CONCLUSION

These findings have significant implications for understanding information processing and democratic discourse and the role of media in polarized political systems. The demonstration that source credibility can reverse framing effects suggests that polarized media systems may create communication barriers that prevent effective deliberation across political divides. If audiences systematically misinterpret information from opposing sources, democratic deliberation becomes substantially more difficult.

The curvilinear relationship between media trust and framing susceptibility suggests that the most persuadable audiences may be those with moderate levels of institutional trust, a group that may be decreasing in highly polarized contexts where individuals increasingly sort into high-trust or low-trust camps based on partisan affiliations. This dynamic has concerning implications for democratic discourse, as framing effects may become concentrated within partisan echo chambers among medium-trust co-partisans, potentially exacerbating political polarization rather than facilitating cross-partisan communication.

However, the resistance of threat perceptions to ideological framing provides some hope that shared cognitive processes may enable cross-partisan agreement on risk assessment, even when evaluative attitudes remain polarized. The finding that threat assessment appears less susceptible to motivated reasoning than general attitude formation suggests that factual, risk-

focused communication may be more effective at bridging political divides than evaluative appeals.

The evidence for optimal zones of media trust and news consumption suggests that communication strategies should prioritize reaching audiences with moderate levels of media engagement rather than attempting to maximize reach across all population segments. Moderate consumers and medium-trust individuals represent both large population segments and the most persuadable groups for framing-based appeals. This has implications for media buy strategies and audience targeting in political campaigns.

The source alignment effects suggest that strategic communicators must carefully consider audience-source relationships rather than focusing solely on message content. Though insignificant, the presence of backfire effects among misaligned sources suggests that cross-partisan communication attempts may not simply fail but could actively strengthen opposing viewpoints.

5.1. Methodological Insights and Best Practices

This research demonstrates the critical importance of several established methodological practices in framing research that extend beyond the specific context of nuclear energy attitudes in Türkiye. The substantial differences observed between full sample and attention-filtered results underscore the vital importance of measuring and controlling for participant engagement in framing experiments. The meaningful increase in effect sizes and significance levels among attentive participants in several analyses confirms that attention checks reveal rather than obscure true treatment effects, reinforcing the necessity of this standard practice in experimental research.

The comprehensive examination of individual difference moderators illustrates the value of nuanced approaches to moderation analysis in framing research. The curvilinear relationships observed for both media trust and knowledge

demonstrate why simple dichotomous comparisons (high-versus-low splits) can miss crucial theoretical insights. The findings reinforce established recommendations that public opinion research should routinely examine multiple levels of potential moderators rather than relying on median splits or extreme group comparisons, as such simplified approaches may obscure important non-linear relationships.

The factorial design's finding that complex interactions are generally absent provides important empirical evidence about the nature of framing effects, supporting the value of comprehensive experimental designs in testing theoretical assumptions. While motivated reasoning clearly operates in political contexts, the results suggest it may work through relatively simple additive processes rather than complex multiplicative interactions. This finding validates the use of factorial designs to test theoretical predictions about interaction effects, even when such interactions prove to be absent.

The use of multiple dependent variables representing different attitude dimensions proved essential for understanding framing mechanisms. The differential patterns observed across evaluative attitudes versus threat perceptions would be completely missed in studies focusing on single outcome measures. This reinforces the established principle that comprehensive outcome measurement is crucial in framing research and challenges assumptions that framing effects generalize uniformly across all attitude dimensions. The findings demonstrate why best practices in experimental design emphasize measuring multiple theoretically relevant outcomes rather than relying on single indicators of treatment effects.

5.2. Limitations and Future Research Directions

These findings open several avenues for future research that could advance both theoretical understanding and practical applications of framing research. Several methodological and design limitations in the current study create

opportunities for future investigations to enhance both internal and external validity.

Sample limitations present significant opportunities for methodological advancement. The participant pool, while reasonably large, was a convenience sample that skewed toward certain demographics and political leanings. In particular, the sample was comprised mostly of male individuals with right-wing, pro-government tendencies, which means the sample is not representative of the broader Turkish population. As a result, there is an external validity issue: the findings might not hold in a different, more representative population. While random assignment and controlled conditions bolster the internal validity of comparisons within the experiment, the study cannot confidently extrapolate the magnitude of framing effects observed here to Türkiye's population at large. The study was designed primarily to test theoretical effects in an internally valid way; it was not designed as a public opinion survey reflecting broader national sentiments.

The online nature of the experiment introduces additional methodological considerations. Conducting an experiment online means researchers have less control over the environment in which participants engage with the materials. Participants might have faced distractions, not paid full attention to the articles, or even rushed through the survey. The research implemented measures to mitigate these concerns. An attention-check question was included, and it examined the response duration data provided by Qualtrics. According to Qualtrics' built-in data quality report, the survey had a 100% quality rate and no participant finished in an unreasonably short time. These checks suggest that participants generally took the survey seriously and followed instructions. However, even with these precautions, the online setting may introduce unobservable variability. This could add noise to the data and potentially dilute observed effects.

Frame scope represents another area for theoretical expansion. The research focused only on two substantive framing topics – national security and environmental security – when discussing nuclear power. These topics were chosen for their theoretical relevance and practical importance, but they do not encompass all possible dimensions of the nuclear energy debate. Other frames such as economic benefits/costs, scientific and technological angles, or public health implications were not included. It is possible that if other framing topics were examined, the results might differ or reveal additional insights. While the decision to limit the number of framing conditions was necessary for feasibility, it means the study cannot speak to whether, for example, an economic frame would have a bigger or smaller effect than the security frames we tested.

Longitudinal studies could examine whether the relationships between individual differences and framing susceptibility remain stable over time or change in response to political events and media exposure. Such studies could also track how framing effects accumulate or decay with repeated exposure and how they interact with real-world policy developments. A longitudinal approach could track how individuals' opinions on nuclear energy evolve over time with continued media exposure. This would illuminate not only immediate framing effects but also whether these effects persist, fade, or accumulate as real-world events and media coverage continue. Additionally, a longitudinal design could capture how external developments such as political events, news about nuclear projects, international incidents interact with media framing to shape public opinion in the long run.

Cross-cultural research could test whether the patterns observed in Türkiye generalize across different media systems and political contexts. The findings of this research may reflect universal psychological processes, or they may be specific to particular cultural and political conditions. Comparative studies across different political systems and cultural contexts could illuminate the boundary

conditions for these effects. Future research should consider conducting similar experiments with nationally representative samples or even cross-national samples. By recruiting participants that better reflect the general population, researchers can enhance the external validity of framing effect studies. Findings from a representative sample would allow for more confident generalization to the public and could reveal whether certain demographic or political subgroups respond differently to media frames.

Field experimental studies could test whether the laboratory findings translate to naturalistic settings with sustained exposure to competing frames. Such studies could examine how framing effects operate in real media environments where audiences encounter multiple, competing frames over extended periods. Field studies could also explore how framing effects interact with real-world political events and policy developments.

5.3. Conclusion

This research provides evidence for the complex, contingent nature of media framing effects on nuclear energy attitudes in Türkiye's polarized political environment. While confirming basic framing theory predictions about valence effects, the findings reveal that framing effectiveness depends critically on source credibility, audience characteristics, and the specific attitude dimensions being targeted.

The Turkish context reveals how polarized media environments can fragment information processing, creating both opportunities and barriers for effective political communication. The research demonstrates that while framing effects can operate in polarized contexts, their effectiveness depends critically on audience-source alignment and the cultural salience of frame content. These insights contribute to ongoing debates about information processing in hybrid regimes while providing practical guidance for political communication in highly polarized environments.

The research demonstrates the value of comprehensive experimental designs that can capture the complexity of real-world political communication while maintaining the rigor necessary for causal inference. The findings suggest that effective democratic discourse requires understanding not just how to craft persuasive messages but how audience characteristics and source relationships shape information processing in fundamental ways.



REFERENCES

- Abdel Rahman Farrag, D., & Shamma, H. (2014). Factors influencing voting intentions for Egyptian parliament elections 2011. *Journal of Islamic Marketing*, 5(1), 49–70. <https://doi.org/10.1108/JIMA-01-2013-0003>
- Akser, M. (2018). News Media Consolidation and Censorship in Turkey: From Liberal Ideals to Corporatist Realities. *Mediterranean Quarterly*, 29(3), 78–97. <https://doi.org/10.1215/10474552-7003180>
- Akser, M., & Baybars, B. (2024). *Media Systems and Media Capture in Turkey: A Case Study | Article | Media and Communication*. <https://www.cogitatiopress.com/mediaandcommunication/article/view/7733>
- Akser, M., & Baybars-Hawks, B. (2012). *Media and Democracy in Turkey: Toward a Model of Neoliberal Media Autocracy*. <https://doi.org/10.1163/18739865-00503011>
- Aytaç, S. E. (ORCID 0000-0002-6544-8717 & Y. I. 224278), Economics, C. of A. S. and, & Relations, D. of I. (2021). Effectiveness of incumbent's strategic communication during economic crisis under electoral authoritarianism: Evidence from Turkey. *American Political Science Review*.
- Ball-Rokeach, S. J., & DeFleur, M. L. (1976). A Dependency Model of Mass-Media Effects. *Communication Research*, 3(1), 3–21. <https://doi.org/10.1177/009365027600300101>
- Bolsen, T., & Shapiro, M. A. (2017). Strategic Framing and Persuasive Messaging to Influence Climate Change Perceptions and Decisions. In *Oxford Research Encyclopedia of Climate Science*.
- Cambridge Advanced Learner's Dictionary. (2025). Media. In *Cambridge Advanced Learner's Dictionary*. Cambridge University Press. <https://dictionary.cambridge.org/us/dictionary/english/media>
- Campbell, A., Converse, P. E., Miller, W. E., & Stokes, D. E. (1960). *The American Voter*. University of Chicago Press. <https://press.uchicago.edu/ucp/books/book/chicago/A/bo24047989.html>
- Çarkoğlu, A., Baruh, L., & Yıldırım, K. (2014). Press-Party Parallelism and Polarization of News Media during an Election Campaign: The Case of the 2011 Turkish Elections. *The International Journal of Press/Politics*, 19(3), 295–317. <https://doi.org/10.1177/1940161214528994>
- Çarkoğlu, A., & Yavuz, G. (2010). Press-party Parallelism in Turkey: An Individual Level Interpretation. *Turkish Studies*, 11(4), 613–624. <https://doi.org/10.1080/14683849.2010.540116>

- Carmines, E. G., & Kuklinski, J. H. (1990). Incentives, Opportunities, and the Logic of Public Opinion in American Political Representation. In J. H. Kuklinski & J. A. Ferejohn (Eds.), *Information and Democratic Processes*. University of Illinois Press.
- Chong, D., & Druckman, J. N. (2007a). A Theory of Framing and Opinion Formation in Competitive Elite Environments. *Journal of Communication*, 57(1), 99–118. <https://doi.org/10.1111/j.1460-2466.2006.00331.x>
- Chong, D., & Druckman, J. N. (2007b). Framing Public Opinion in Competitive Democracies. *The American Political Science Review*, 101(4), 637–655.
- Clawson, R. A., & Oxley, Z. M. (2020). *Public Opinion: Democratic Ideals, Democratic Practice*. CQ Press.
- Clulow, Z., Ferguson, M., Ashworth, P., & Reiner, D. (2021). Comparing public attitudes towards energy technologies in Australia and the UK: The role of political ideology. *Global Environmental Change*, 70, 102327. <https://doi.org/10.1016/j.gloenvcha.2021.102327>
- Cohen, B. C. (1963). *Press and Foreign Policy*. Princeton University Press. <https://www.jstor.org/stable/j.ctt183q0fp>
- D'Angelo, P. (2002). News Framing as a Multiparadigmatic Research Program: A Response to Entman. *Journal of Communication*, 52(4), 870–888. <https://doi.org/10.1111/j.1460-2466.2002.tb02578.x>
- Della Porta, D., & Keating, M. (Eds.). (2008). *Approaches and Methodologies in the Social Sciences: A Pluralist Perspective*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511801938>
- Downs, A. (1957). An Economic Theory of Political Action in a Democracy. *Journal of Political Economy*, 65(2), 135–150. <https://doi.org/10.1086/257897>
- Druckman, J. N. (2001a). On the Limits of Framing Effects: Who Can Frame? *The Journal of Politics*, 63(4), 1041–1066. <https://doi.org/10.1111/0022-3816.00100>
- Druckman, J. N. (2001b). The Implications of Framing Effects for Citizen Competence. *Political Behavior*, 23(3), 225–256.
- Druckman, J. N. (2004). Political Preference Formation: Competition, Deliberation, and the (Ir)relevance of Framing Effects. *American Political Science Review*, 98(4), 671–686. <https://doi.org/10.1017/S0003055404041413>
- Druckman, J. N., & Nelson, K. R. (2003). Framing and Deliberation: How Citizens' Conversations Limit Elite Influence. *American Journal of Political Science*, 47(4), 729–745. <https://doi.org/10.2307/3186130>
- Edoardo, L. (2025). Limits of a competitive authoritarianism in security policies: Interpreting Türkiye's approach towards the EU. *Filozofija i Društvo*, 36(2), 479–500. <https://doi.org/10.2298/FID2502479L>

- Entman, R. M. (1993). Framing: Toward Clarification of a Fractured Paradigm. *Journal of Communication*, 43(4), 51–58. <https://doi.org/10.1111/j.1460-2466.1993.tb01304.x>
- Ersoy, M., & İşeri, E. (2021). Framing environmental debates over nuclear energy in Turkey's polarized media system. *Turkish Studies*, 22(3), 410–436. <https://doi.org/10.1080/14683849.2020.1746908>
- Esen, B., & Gumuscu, S. (2016). Rising competitive authoritarianism in Turkey. *Third World Quarterly*, 37(9), 1581–1606. <https://doi.org/10.1080/01436597.2015.1135732>
- Esen, B., & Gumuscu, S. (2021). Why did Turkish democracy collapse? A political economy account of AKP's authoritarianism. *Party Politics*, 27(6), 1075–1091. <https://doi.org/10.1177/1354068820923722>
- Fox, J., Weisberg, S., Price, B., Adler, D., Bates, D., Baud-Bovy, G., Bolker, B., Ellison, S., Firth, D., Friendly, M., Gorjanc, G., Graves, S., Heiberger, R., Krivitsky, P., Laboissiere, R., Maechler, M., Monette, G., Murdoch, D., Nilsson, H., ... R-Core. (2024). *car: Companion to Applied Regression* (Version 3.1-3) [Computer software]. <https://cran.r-project.org/web/packages/car/index.html>
- Freedom House. (2025). *Turkey Report* [Dataset]. <https://freedomhouse.org/country/turkey>
- Gamson, W. A. (1988). The 1987 Distinguished Lecture: A Constructionist Approach to Mass Media and Public Opinion. *Symbolic Interaction*, 11(2), 161–174. <https://doi.org/10.1525/si.1988.11.2.161>
- Gamson, W. A., & Modigliani, A. (1989). Media Discourse and Public Opinion on Nuclear Power: A Constructionist Approach. *American Journal of Sociology*, 95(1), 1–37.
- Genys, D., & Krikštolaitis, R. (2020). Clusterization of public perception of nuclear energy in relation to changing political priorities. *Insights into Regional Development*, 2(4), 750–764. [https://doi.org/10.9770/ird.2020.2.4\(2\)](https://doi.org/10.9770/ird.2020.2.4(2))
- Goffman, E. (1974). *Frame analysis: An essay on the organization of experience* (pp. ix, 586). Harvard University Press.
- Goren, P., Federico, C. M., & Kittilson, M. C. (2009). Source Cues, Partisan Identities, and Political Value Expression. *American Journal of Political Science*, 53(4), 805–820. <https://doi.org/10.1111/j.1540-5907.2009.00402.x>
- Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology*, 96(5), 1029–1046. <https://doi.org/10.1037/a0015141>

- Gross, K. (2008). Framing Persuasive Appeals: Episodic and Thematic Framing, Emotional Response, and Policy Opinion. *Political Psychology*, 29(2), 169–192.
- Gurun, U. G., & Butler, A. W. (2012). Don't Believe the Hype: Local Media Slant, Local Advertising, and Firm Value. *The Journal of Finance*, 67(2), 561–598. <https://doi.org/10.1111/j.1540-6261.2012.01725.x>
- Iyengar, S. (1991). *Is Anyone Responsible?* University of Chicago Press.
- Iyengar, S., & Kinder, D. R. (1987). *News that matters: Television and American opinion* (pp. viii, 187). University of Chicago Press.
- Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. *American Psychologist*, 39(4), 341–350. <https://doi.org/10.1037/0003-066X.39.4.341>
- Karlıdag, S., & Bulut, S. (2016). Relationship Between Media Ownership And News Process In Turkey From The Political Economy Perspective. *Journal of Media Critiques*, 2(7), 11–33.
- Katz, E., & Lazarsfeld, P. F. (1955). *Personal Influence: The Part Played by People in the Flow of Mass Communications*. The Free Press.
- Kaya, R., & Çakmur, B. (2010). Politics and the Mass Media in Turkey. *Turkish Studies*, 11(4), 521–537. <https://doi.org/10.1080/14683849.2010.540112>
- Kerby, D. S. (2014). The Simple Difference Formula: An Approach to Teaching Nonparametric Correlation1. *Comprehensive Psychology*, 3, 11.IT.3.1. <https://doi.org/10.2466/11.IT.3.1>
- Klapper, J. T. (1960). *The effects of mass communication* (pp. xii, 302). Free Press.
- Ladd, J. M. (2010). The Role of Media Distrust in Partisan Voting. *Political Behavior*, 32(4), 567–585.
- Lange, M. (2013). *Comparative-Historical Methods*. SAGE Publications Ltd. <https://doi.org/10.4135/9781473914223>
- Lasswell, H. D. (1938). *Propaganda technique in the World War*. P. Smith. <https://catalog.hathitrust.org/Record/000447228>
- Lazarsfeld, P. F., Berelson, B., & Gaudet, H. (1944). *The people's choice* (pp. vii, 178). Duell, Sloan & Pearce.
- Lecheler, S., & Vreese, C. H. de. (2018). *News Framing Effects*. Routledge. <https://doi.org/10.4324/9781315208077>
- Lenth, R. V., Banfai, B., Bolker, B., Buerkner, P., Giné-Vázquez, I., Herve, M., Jung, M., Love, J., Miguez, F., Piaskowski, J., Riebl, H., & Singmann, H. (2025). *emmeans: Estimated Marginal Means, aka Least-Squares Means* (Version 1.11.2) [Computer software]. <https://cran.r-project.org/web/packages/emmeans/index.html>

- Lewin, K. (1947). Frontiers in Group Dynamics: II. Channels of Group Life; Social Planning and Action Research. *Human Relations*, 1(2), 143–153. <https://doi.org/10.1177/001872674700100201>
- Lippmann, W. (1992). *Public Opinion*. Routledge. <https://doi.org/10.4324/9781315127736>
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396. <https://doi.org/10.1037/h0054346>
- McCombs, M. E., & Shaw, D. L. (1972). The Agenda-Setting Function of Mass Media. *The Public Opinion Quarterly*, 36(2), 176–187.
- Metin, O. F., & Ramaciotti Morales, P. (2024). Tweeting apart: Democratic backsliding, new party cleavage and changing media ownership in Turkey. *Party Politics*, 30(1), 108–125. <https://doi.org/10.1177/13540688221135019>
- Mondak, J. J. (1993). Public opinion and heuristic processing of source cues. *Political Behavior*, 15(2), 167–192. <https://doi.org/10.1007/BF00993852>
- Nelson, T. E., Clawson, R. A., & Oxley, Z. M. (1997). Media Framing of a Civil Liberties Conflict and Its Effect on Tolerance. *The American Political Science Review*, 91(3), 567–583. <https://doi.org/10.2307/2952075>
- Organization for Security and Co-operation in Europe. (2023). *Türkiye, General Elections, 14 May 2023, and Presidential Election, Second Round, 28 May 2023: Final Report*. <https://www.osce.org/odihr/elections/turkiye/553966>
- Page, B. I., & Shapiro, R. Y. (1992). *The Rational Public: Fifty Years of Trends in Americans' Policy Preferences*. University of Chicago Press. <https://press.uchicago.edu/ucp/books/book/chicago/R/bo3762628.html>
- Price, V., & Tewksbury, D. (1997). News values and public opinion: A theoretical account of media priming and framing. In F. J. Boster & G. Barnett (Eds.), *Progress in Communication Sciences* (Vol. 13). Bloomsbury Academic.
- Price, V., Tewksbury, D., & Powers, E. (1997). Switching Trains of Thought: The Impact of News Frames on Readers' Cognitive Responses. *Communication Research*, 24(5), Article 5. <https://doi.org/10.1177/009365097024005002>
- R Core Team. (2024). *R: A Language and environment for statistical computing* (Version 4.4) [Computer Software]. R Foundation for Statistical Computing.
- Ripley, B., Venables, B., Bates, D. M., Hornik, K., Gebhardt, A., & Firth, D. (2025). *MASS: Support Functions and Datasets for Venables and Ripley's MASS* (Version 7.3-65) [Computer software]. <https://cran.r-project.org/web/packages/MASS/index.html>
- Scheufele, D. A., & Tewksbury, D. (2007). Framing, Agenda Setting, and Priming: The Evolution of Three Media Effects Models. *Journal of*

- Communication*, 57(1), 9–20. <https://doi.org/10.1111/j.0021-9916.2007.00326.x>
- Shah, A. A. (2021). Media Biasedness towards Political Parties in Pakistan. *Global Multimedia Review*, 4(1), 8–19. [https://doi.org/10.31703/gmmr.2021\(IV-I\).02](https://doi.org/10.31703/gmmr.2021(IV-I).02)
- Shoemaker, P. J. (2020, January). *Gatekeeping and Journalism*. Oxford University Press. <https://doi.org/10.1093/acrefore/9780190228613.013.819>
- Slothuus, R. (2008). More Than Weighting Cognitive Importance: A Dual-Process Model of Issue Framing Effects. *Political Psychology*, 29(1), 1–28. <https://doi.org/10.1111/j.1467-9221.2007.00610.x>
- Slothuus, R., & de Vreese, C. H. (2010). Political Parties, Motivated Reasoning, and Issue Framing Effects. *The Journal of Politics*, 72(3), 630–645. <https://doi.org/10.1017/s002238161000006x>
- Spence, A., & Pidgeon, N. (2010). Framing and communicating climate change: The effects of distance and outcome frame manipulations. *Global Environmental Change*, 20(4), 656–667. <https://doi.org/10.1016/j.gloenvcha.2010.07.002>
- Spence, A., Poortinga, W., Butler, C., & Pidgeon, N. F. (2011). Perceptions of climate change and willingness to save energy related to flood experience. *Nature Climate Change*, 1(1), 46–49. <https://doi.org/10.1038/nclimate1059>
- Stern, P. C. (2000). New Environmental Theories: Toward a Coherent Theory of Environmentally Significant Behavior. *Journal of Social Issues*, 56(3), 407–424. <https://doi.org/10.1111/0022-4537.00175>
- Taber, C. S., & Lodge, M. (Eds.). (2013). Motivated Political Reasoning. In *The Rationalizing Voter* (pp. 149–169). Cambridge University Press. <https://doi.org/10.1017/CBO9781139032490.008>
- The Economist Intelligence Unit. (2024). *Democracy Index 2024* [Dataset]. <https://www.eiu.com/n/campaigns/democracy-index-2024/>
- The jamovi project. (2025). *Jamovi* (Version 2.6) [Computer Software]. The jamovi project. <https://www.jamovi.org>
- Tunç, A. (2018). All is Flux: A Hybrid Media Approach to Macro-Analysis of the Turkish Media. *Middle East Critique*, 27(2), 141–159. <https://doi.org/10.1080/19436149.2018.1433581>
- Tversky, A., & Kahneman, D. (1981). The Framing of Decisions and the Psychology of Choice. *Science*, 211(4481), 453–458.
- Van Gorp, B. (2007). The Constructionist Approach to Framing: Bringing Culture Back In. *Journal of Communication*, 57(1), 60–78. <https://doi.org/10.1111/j.0021-9916.2007.00329.x>

- van Spanje, J., & de Vreese, C. (2014). Europhile Media and Eurosceptic Voting: Effects of News Media Coverage on Eurosceptic Voting in the 2009 European Parliamentary Elections. *Political Communication*, 31(2), 325–354. <https://doi.org/10.1080/10584609.2013.828137>
- Varieties of Democracy (V-DEM). (2025). *Liberal Democracy Index* [Dataset]. https://v-dem.net/data_analysis/CountryGraph/
- V-Dem (2025) – processed by Our World in Data. (2025). *Political polarization score – V-Dem* [Dataset]. Our World in Data. <https://archive.ourworldindata.org/20250814-105558/grapher/political-polarization-score.html>
- Yavuzylmaz, H., & Esen, B. (2025). Formal yet ineffective opposition coordination under competitive authoritarianism: Nation Alliance in Turkey. *Third World Quarterly*. <https://www.tandfonline.com/doi/abs/10.1080/01436597.2024.2438303>
- Yeşil, B. (2018). Authoritarian Turn or Continuity? Governance of Media through Capture and Discipline in the AKP Era. *South European Society and Politics*, 23(2), 239–257. <https://doi.org/10.1080/13608746.2018.1487137>
- Yilmaz, I., & Bashirov, G. (2018). The AKP after 15 years: Emergence of Erdoganism in Turkey. *Third World Quarterly*, 39(9), 1812–1830. JSTOR.
- Yıldırım, K., Baruh, L., & Çarkoğlu, A. (2021). Dynamics of Campaign Reporting and Press-Party Parallelism: Rise of Competitive Authoritarianism and the Media System in Turkey. *Political Communication*, 38(3), Article 3. <https://doi.org/10.1080/10584609.2020.1765913>
- Yılmaz, G. (2016). Europeanisation or De-Europeanisation? Media Freedom in Turkey (1999–2015). *South European Society and Politics*, 21(1), 147–161. <https://doi.org/10.1080/13608746.2016.1148102>
- Zaller, J. R. (1992). *The Nature and Origins of Mass Opinion*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511818691>

APPENDICES

Appendix 1 Experimental Procedure

The experimental survey was conducted online via Qualtrics, and participants proceeded through the following sequence of stages:

1. Introduction: Before the formal stages began, participants saw an informative welcome page introducing the experiment's purpose and procedures. This page provided general instructions and information about the study. At this stage the study did not mention that it is an experiment to avoid people become biased knowing they are subject in a research.
2. Stage 1 – Demographics: Participants answered basic demographic questions (age, gender, education level).
3. Stage 2 – Random Assignment to Condition: Participants were randomly assigned to one of the eight groups (treatment conditions) as described in the design. Qualtrics automatically directed each participant to one of the eight framing conditions. Participants were unaware of the other conditions; they only saw the materials for their assigned condition.
4. Stage 3 – Framing Manipulation (Stimulus Exposure): In this stage, participants in each group were exposed to three short news articles about nuclear power plants, consistent with their assigned framing condition. The articles were presented as if they were real news pieces, and each article emphasized the particular frame in that group. This exposure constituted the core experimental manipulation intended to frame the issue for the participant.
5. Stage 4 – Post-Exposure Dependent Measures: After reading the articles, participants answered a series of questions corresponding to the dependent variables. This stage captures the participants' immediate reactions to the framed information they received.

6. Stage 5 – Political Orientation Questions: Participants were next asked about their personal political orientation. Specifically, they indicated where they would place themselves on a left–right political spectrum on a 1–5 Likert scale and stated which party they intended to vote for in an upcoming parliamentary elections. Although these are demographic/political profile questions, they were intentionally placed after the main dependent variable questions to avoid the risk that participants might become disengaged or exit the survey early due to sensitive political questions.
 7. Stage 6 – Knowledge and Attention Check: This stage assessed participants' knowledge about the issue and ensured they were paying attention. Participants answered five multiple-choice questions regarding Türkiye's current status and facts on nuclear energy. Four of these were factual knowledge questions, intended to gauge issue familiarity. The fifth was an attention check question embedded to detect careless responses. This allowed the researcher to identify and later exclude any participants who failed to read texts and questions properly.
 8. Stage 7 – Media Habits: In the final stage, participants were asked about their media consumption habits and trust in news sources. They reported how frequently they use media and how much they trust various news sources. The information from Stage 6 and Stage 7 are used to explore whether issue familiarity and media literacy act as moderating variables that might influence how framing affects individuals.
- After completing all seven stages, participants reached a conclusion/debriefing page. On this final page, they were thanked for their participation and provided with detailed information about the experiment's true purpose and design. This debriefing ensured ethical transparency, especially important since participants were not fully aware of the experimental comparisons during the survey.

Appendix 2 Survey Questions

Demographic Questions

D_CINS D-1 Gender

Male (1)

Female (2)

I don't want to specify (3)

D_AGE D-2 How old are you? Enter as a number.

D_ED D-3 What is your education status, that is, the highest education level or degree you have reached?

Not literate (1)

Literate without diploma (2)

Primary school (3)

Secondary school (4)

High school (5)

University/Bachelor's (6)

Master's - Doctorate (7)

Dependent Variable Questions

D_GA BD-1 What is your general attitude towards nuclear energy? Evaluate with 1 being completely negative and 5 being completely positive.

D_ES BD-2 To what extent do you see nuclear energy as a useful option to meet Türkiye's energy needs? Evaluate with 1 being not useful at all and 5 being very useful.

D_UGT BD-3 In your opinion, to what degree does nuclear energy pose a threat to Türkiye's national security? Evaluate with 1 being no threat at all and 5 being a great threat.

D_CGT BD-4 In your opinion, to what degree does nuclear energy pose a threat to Türkiye's environmental security? Evaluate with 1 being no threat at all and 5 being a great threat.

D_GP BD-5 What is your level of support for the current government's nuclear energy policy in Türkiye? Evaluate with 1 being completely against and 5 being completely supportive.

Political Tendency Questions

D_LR D-4 In Türkiye, a left ---- center ---- right scale is traditionally used to classify people's political or ideological views. Where would you place yourself politically in the table below?

Scale: Far left (1), Left (2), Center (3), Right (4), Far right (5)

D_POL D-5 If the next parliamentary general elections were held tomorrow, that is, if the ballot box came before you tomorrow, who would you vote for, which party?

Justice and Development Party (AKP) (1)

Republican People's Party (CHP) (2)

Free Cause Party (3)

Good Party (4)

Homeland Party (5)

Nationalist Movement Party (MHP) (6)

Felicity Party (7)

Workers' Party of Turkey (8)

Patricotic Party (9)

New Welfare Party (10)

Peoples' Equality and Democracy Party (DEM) (11)

Victory Party (12)

Democracy and Progress Party (DEVA) (13)

Future Party (14)

Great Union Party (BBP) (15)

Democrat Party (16)

Key Party (19)

Other (17)

I don't want to answer (18)

Knowledge Level Questions About the Subject

B_ANPP B-1 In your opinion, how many nuclear power plants are currently operational in Türkiye?**

0 (1)

1 (2)

2 (3)

3 (4)

B_CNPP B-2 In your opinion, how many nuclear power plants are under construction in Türkiye?

0 (1)

1 (2)

2 (3)

3 (4)

B_ATT B-3 Now you will be given a statement. Regardless of what you think about this statement, please mark "Strongly Disagree": "Nuclear power, solar, wind and oil are some energy sources."

Strongly Disagree (1)

Disagree (2)

Not Sure (3)

Agree (4)

Strongly Agree (5)

B_S B-4 Which country does Türkiye have a partnership with in the Sinop Nuclear Power Plant?

France (1)

USA (2)

South Korea (3)

Not yet determined (4)

B_I B-5 Which country does Türkiye have a partnership with in the İğneada Nuclear Power Plant?

Russia (1)

USA (2)

Japan (3)

Not yet determined (4)

Media Habits Questions

MA-NC MA-1 On average, how many hours per day do you spend consuming news and information from media sources such as television, radio, online news sites and social media platforms?

0-1 (1)

1-3 (2)

3-5 (3)

5-8 (4)

8+ (5)

MA_PC MA-2 How often do you consume news and information related to political events and topics? Evaluate on the scale below with 1 being I don't consume at all and 5 being I consume very frequently.

MA_T MA-3 To what extent do you trust the information you receive from the following sources? Evaluate each one with 1 being not reliable at all and 5 being very reliable.

Traditional Media Organizations (TRT, NTV, Habertürk, Now, Sözcü etc.) [1-5 scale]

Social Media News Accounts (@Haber, @Darkwebhaber, @medyascope, @dailyislamist, @trhaber_com etc.) [1-5 scale]

Individual News Providers (@fatihaltayli @slmhktn, @cuneytozdemir, @nevsinmengu, @haskologlu, @EremSenturk etc.) [1-5 scale]

Appendix 3 News Texts

111

Türkiye views nuclear power plants as a way to reduce energy dependency abroad. With the activation of these power plants, energy dependency will decrease significantly and the country will take an important step towards a self-sufficient energy structure. (Sabah, 19.06.2022), (Pro-Government Media)

While energy lines are frequently under threat due to instability in the region, Türkiye's production of energy with its own resources is of great importance. Nuclear power plants play a strategic role in this regard. When the planned power plants start operating at full capacity, the country will meet a large part of its energy needs through domestic production. (Yeni Şafak, 20.04.2024), (Pro-Government Media)

Nuclear power plants will enable Türkiye to act without embargo concerns in its energy policies. While energy sources are used as a strategic power element for countries, embargo threats also frequently come to the agenda. However, this situation will no longer be an important risk for Türkiye. (Akit, 09.05.2024), (Pro-Government Media)

112

Türkiye views nuclear power plants as a way to reduce energy dependency abroad. With the activation of these power plants, energy dependency will decrease significantly and the country will take an important step towards a self-sufficient energy structure. (Cumhuriyet, 05.04.2023), (OppositionMedia)

While energy lines are frequently under threat due to instability in the region, Türkiye's production of energy with its own resources is of great importance. Nuclear power plants play a strategic role in this regard. When the planned power plants start operating at full capacity, the country will meet a large part of its energy needs through domestic production. (Sözcü, 07.10.2024), (OppositionMedia)

Nuclear power plants will enable Türkiye to act without embargo concerns in its energy policies. While energy sources are used as a strategic power element for countries, embargo threats also frequently come to the agenda. However, this situation will no longer be an important risk for Türkiye. (Korkusuz, 15.03.2023), (OppositionMedia)

121

Nuclear power plants are seen as one of the most sensitive points for countries. Especially in war situations, targeting these facilities can drag the country into a serious security crisis and can have irreversible consequences. (Akit, 09.05.2024), (Pro-Government Media)

It was revealed that the agreement made for the construction of Akkuyu Nuclear Power Plant does not include technology transfer. Türkiye will not be able to access this technology owned by Russia, and control over the power plant will largely be in Russia's hands. (Yeni Şafak, 20.04.2024), (Pro-Government Media)

Akkuyu Nuclear Inc. CEO and Chairman of the Board Anastasia Zoteeva stated that for the first time in Russia's history, they are building a power plant on behalf of themselves in another country. "Akkuyu Nuclear Power Plant belongs to us, that is, to Russia. This is the first power plant we own in another state's territory," Zoteeva said. (Sabah, 19.06.2022), (Pro-Government Media)

122

Nuclear power plants are seen as one of the most sensitive points for countries. Especially in war situations, targeting these facilities can drag the country into a serious security crisis and can have irreversible consequences. (Cumhuriyet, 05.04.2023), (OppositionMedia)

It was revealed that the agreement made for the construction of Akkuyu Nuclear Power Plant does not include technology transfer. Türkiye will not be able to access this technology owned by Russia, and control over the power plant will largely be in Russia's hands. (Sözcü, 07.10.2024), (OppositionMedia)

Akkuyu Nuclear Inc. CEO and Chairman of the Board Anastasia Zoteeva stated that for the first time in Russia's history, they are building a power plant on behalf of themselves in another country. "Akkuyu Nuclear Power Plant belongs to us, that is, to Russia. This is the first power plant we own in another state's territory," Zoteeva said. (Korkusuz, 15.03.2023), (OppositionMedia)

211

Nuclear energy has been classified as "green energy" by some countries due to not producing carbon emissions. This source is seen as an important tool in the fight against climate change. (Akit, 09.05.2024), (Pro-Government Media)

With the activation of new nuclear power plants, Türkiye's dependence on carbon-based energy sources will decrease by one-third. This development is evaluated as a critical step in terms of preventing global warming and Türkiye's compliance with the Paris Climate Agreement. (Yeni Şafak, 20.04.2024), (Pro-Government Media)

While there is no city in Türkiye that meets World Health Organization standards, nuclear energy stands out with its potential to reduce air pollution. Cleaner air can become possible with the use of this energy source that does not produce carbon emissions. (Sabah, 19.06.2022), (Pro-Government Media)

212

Nuclear energy has been classified as "green energy" by some countries due to not producing carbon emissions. This source is seen as an important tool in the fight against climate change. (Cumhuriyet, 05.04.2023), (OppositionMedia)

With the activation of new nuclear power plants, Türkiye's dependence on carbon-based energy sources will decrease by one-third. This development is evaluated as a critical step in terms of preventing global warming and Türkiye's compliance with the Paris Climate Agreement. (Sözcü, 07.10.2024), (OppositionMedia)

While there is no city in Türkiye that meets World Health Organization standards, nuclear energy stands out with its potential to reduce air pollution.

Cleaner air can become possible with the use of this energy source that does not produce carbon emissions. (Korkusuz, 15.03.2023), (OppositionMedia)

221

Nuclear power plants generate high heat during their operations and require large amounts of water to remove this heat. In a period when drought is increasing and water resources are decreasing, this energy source that consumes billions of liters of water daily is causing concern. (Akit, 09.05.2024), (Pro-Government Media)

Shortly before Türkiye's first nuclear power plant opens, nuclear waste is at the top of the most discussed topics in public opinion. While it is not clear how these wastes, known to cause great damage to the environment, will be disposed of, concerns about the negative effects of wastes on water resources, vegetation, and animal life in the areas where they are stored are increasing. (Yeni Şafak, 20.04.2024), (Pro-Government Media)

During the construction process of Akkuyu Nuclear Power Plant, many trees were cut down, and it is stated that similar situations may be experienced in other projects. Environmentalists are concerned that environmental destruction will increase further due to the construction of power plants. (Sabah, 19.06.2022), (Pro-Government Media)

222

Nuclear power plants generate high heat during their operations and require large amounts of water to remove this heat. In a period when drought is increasing and water resources are decreasing, this energy source that consumes billions of liters of water daily is causing concern. (Cumhuriyet, 05.04.2023), (OppositionMedia)

Shortly before Türkiye's first nuclear power plant opens, nuclear waste is at the top of the most discussed topics in public opinion. While it is not clear how these wastes, known to cause great damage to the environment, will be disposed of, concerns about the negative effects of wastes on water resources, vegetation,

and animal life in the areas where they are stored are increasing. (Sözcü, 07.10.2024), (OppositionMedia)

During the construction process of Akkuyu Nuclear Power Plant, many trees were cut down, and it is stated that similar situations may be experienced in other projects. Environmentalists are concerned that environmental destruction will increase further due to the construction of power plants. (Korkusuz, 15.03.2023), (OppositionMedia)

