

Comparative Analysis of Trust in News/Media: Assessing the Impact of COVID-19, Elections, and Sociopolitical Events Across 2019 and 2022 Datasets

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Abstract

This statistical study examines the evolving perceptions of trust in national news among Americans amidst significant societal events such as the COVID-19 pandemic, the 2020 Presidential Election, and social justice movements. Utilizing data from the Pew Research Center's American Trends Panel spanning 2019 to 2022, the study investigates the interplay between media trust and demographic factors including political party affiliation, gender, marital status, age, citizenship status, voter registration, and race. The analysis reveals a nuanced landscape of trust perceptions, with a notable trend towards decreased trust in national news among white respondents, contrasted by stable trust levels among black respondents. Additionally, Republicans demonstrate a pronounced decline in trust across age groups, while Democrats exhibit a milder trend. Furthermore, minority respondents display sustained trust levels compared to white respondents, though younger minorities show a negative downturn in trust. This study offers insights into the complex interactions of socio-demographic factors in shaping media trust, contributing to a deeper understanding of contemporary media credibility and societal trust dynamics. The findings underscore the importance of considering race, age, and political affiliation in analyzing shifts in media trust, thereby enriching discourse on information consumption patterns and societal attitudes towards mainstream media.

Introduction

In the midst of a dynamic societal landscape, the influence of mainstream media on public sentiment remains paramount. However, against the backdrop of significant events such as the COVID-19 pandemic, the 2020 Presidential Election, and the resurgence of social justice movements like Black Lives Matter, there arises a pertinent question: How have Americans' perceptions of the media evolved? This statistical study endeavors to address this inquiry comprehensively, focusing on trust in national news. This variable serves as a crucial indicator of the broader sentiment towards different segments of the media landscape. Moreover, the investigation delves into an array of demographic factors that may exert influence on individuals' perceptions of media trustworthiness. These factors encompass party affiliation, gender, marital status, age, citizenship status, voter registration status, and race. By scrutinizing these demographic dimensions, the study aims to capture the intricate interplay between socio-demographic characteristics and media trust perceptions. In addition to exploring individual relationships, the analysis extends to investigating the interactions between various demographic variables. This approach allows for a nuanced exploration of the complex interrelationships within the dataset. To rigorously assess the associations between these variables, the study employs the chi-square test of independence. This statistical method is aptly suited to discerning significant relationships within categorical data sets, thereby facilitating a robust examination of the factors influencing media trust. By undertaking this systematic analysis, the study endeavors to furnish nuanced insights into the evolving dynamics of media trust within the American populace. Through empirically grounded findings, it seeks to illuminate the multifaceted influences shaping public perceptions of mainstream media amidst a period of societal transformation.

Design/Methodology

The datasets utilized in this study, spanning the years 2019 and 2022, were procured from the esteemed Pew Research Center, a recognized authority in social science research. These datasets were sourced from surveys administered to participants enrolled in the American Trends Panel at the respective points of data collection. The American Trends Panel encompasses a diverse cohort of individuals selected through random sampling methods, ensuring representation across various demographic strata. In 2019, the dataset comprised responses from a total of 7,031 participants, while in 2022, this number increased to 13,978 participants. Within these cohorts, the number of respondents amounted to 5,107 in 2019 and 12,147 in 2022, indicating robust levels of engagement with response rates of 72.635% and 86.901%, respectively. Such high response rates underscore the thoroughness

and reliability of the data collection process. It is noteworthy that both datasets target the same overarching population, namely non-institutionalized individuals aged 18 and above residing in the United States of America, including the states of Alaska and Hawaii. This consistent demographic scope ensures comparability between the two datasets, enabling meaningful analyses of trends over time within the context of the American populace. It is also worth noting that the accompanying code for this study contains additional response variables, namely Trust in Local News and Trust in News Acquired from Social Media, however these were omitted from this study due to length constraints.

Data Exploration/Results

This section will be structured into individual segments, each dedicated to the examination of distinct relationships. It will commence with an elucidation of the focal variable, succeeded by a comprehensive analysis of its respective relationship. The levels for the amount of trust in the National News/Media have the following levels: level 1 denotes "A lot," level 2 signifies "Some," level 3 connotes "Not too much," and level 4 represents "Not at all." The code for this statistical study does include additional response variables, namely Trust in Local News/Media, and Trust in News Acquired from Social Media, however due to the added length of these additional variables, they have been omitted from this paper.

Relationship 1: Trusting National News vs. Political Party

The variable of Political Party has 4 levels, with 1 being Republican, 2 being Democrat, 3 being Independent, and 4 being Something else.

As we delve into the intricate connections between individuals' Political Party affiliations and their Trust in National News sources, a nuanced understanding emerges. Initial observations reveal distinct patterns, akin to peering through a multifaceted prism, showcasing a spectrum of trust levels across various political affiliations. This scrutiny, reminiscent of unraveling threads in a complex tapestry, strongly indicates the existence of a discernible relationship between individuals' trust in national news outlets and their allegiance to specific political parties. This symbiotic interplay between political ideology and media trust is a crucial focal point in grasping the dynamics of contemporary information consumption and political discourse.

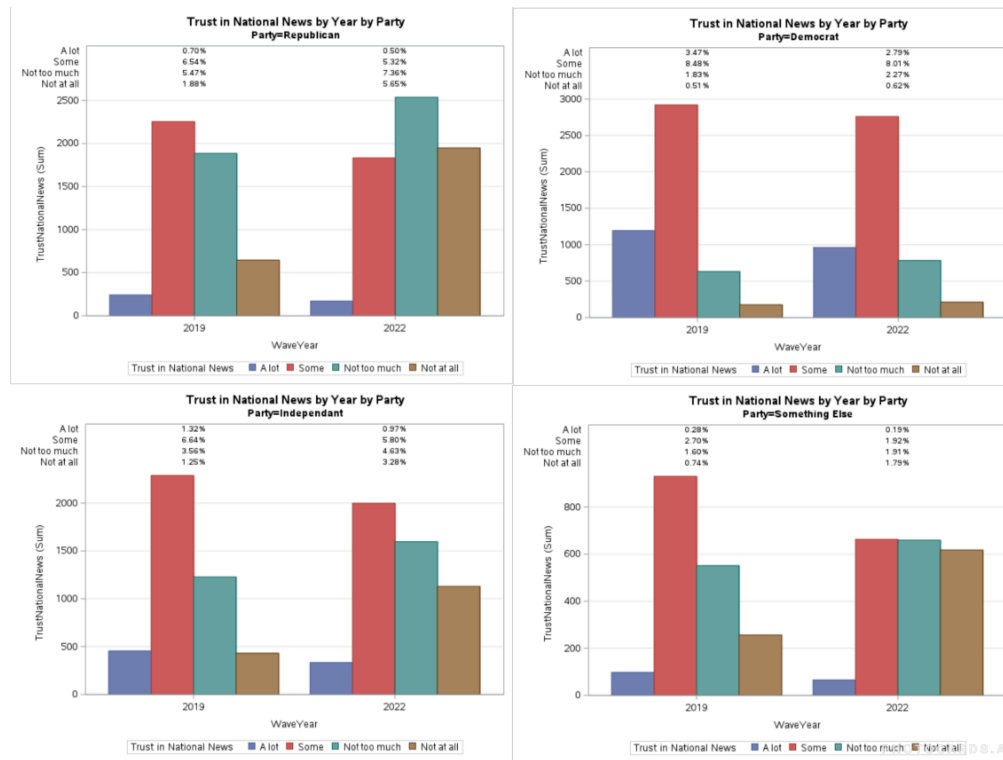


Figure 1: Spread of data in terms of trust in national news and political party

The validation of this relationship reaches statistical significance following the execution of a chi-square test of independence. Notably, all computed p-values exhibit statistical significance at a level as stringent as 0.001. It is particularly noteworthy that respondents affiliated with the Democratic Party display the lowest significance, with a p-value of 0.0004, albeit still remarkably significant. These discoveries highlight a consistent downward trend in trust levels across various political affiliations from 2019 to 2022, albeit with variations in the extent of this decline. This trend underscores the importance of ongoing analysis and consideration of nuanced factors influencing trust dynamics within the political and media landscape.

Relationship 2: Trusting National News vs. Political Party & Gender/Sex

Political Party has the same 4 levels, while Gender/Sex has 3 distinct levels, with 1 being Male and 2 being Female. One thing to note is that Gender/Sex does have a third option of Other, but there were not enough observations to draw any meaningful conclusions and hence has been removed.

Upon visual examination of the impact of political party affiliation and gender/sex on trust levels, a discernible trend emerges, showcasing a shift from higher to lower levels of trust. While the strength of this trend varies, it is

consistently observed across all segments of the data. For instance, within the Republican subset, there is a noticeable substantial decline evident among both males and females. Conversely, within the Democratic subset, the decline appears less pronounced, albeit still discernible, across both genders. This visual analysis underscores the importance of considering the intersectionality of political affiliation and gender/sex in understanding the nuanced dynamics of trust within the context of contemporary societal discourse

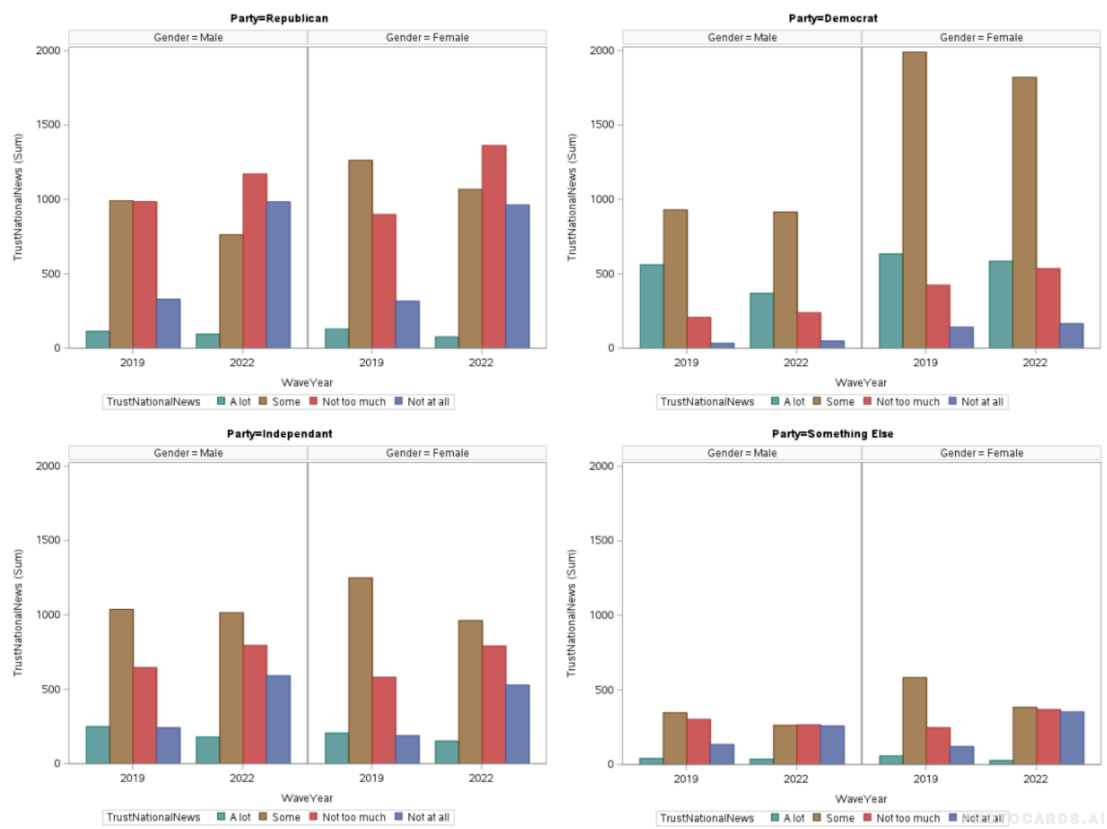


Figure 2: Spread of data across levels of political party and Gender/Sex

Upon conducting a comprehensive examination of the test statistics derived from the chi-square analysis, it becomes evident that Gender/Sex, alongside political party affiliation, significantly influences the perceived shift in trust towards national news and media outlets. Across all tests conducted, each yields a test statistic reaching significance at the 0.001 level, indicating a robust level of statistical significance. However, it's noteworthy that the sole exception to this pattern lies within the subset of Democratic Females, where the test statistic registers at 0.084, failing to meet the conventional threshold of significance at the 0.05 level. This divergence underscores a nuanced aspect of the analysis, revealing that while all other combinations of political party affiliation and gender/sex demonstrate a statistically significant inclination towards distrust, Democratic Females stand out as an exception to this trend. This finding prompts further exploration into the intricate interplay between

gender/sex, political ideology, and media trust, offering valuable insights into the complexities of contemporary sociopolitical dynamics.

Relationship 3: Trusting National News vs Party and Marital Status

The categories for Marital Status are delineated as follows: 1 denotes "Married," 2 signifies "Living with Partner," 3 represents "Divorced," 4 indicates "Separated," 5 denotes "Widowed," and 6 signifies "Never Been Married." To streamline the analysis and enhance visual clarity, these categories have been condensed into three overarching groups: "Together," "Separate," and "Never Been Married." Specifically, values 1 and 2 have been amalgamated into the "Together" classification, while values 3 and 4 have been subsumed into the "Separate" category. Value 6 remains distinct as "Never Been Married." This simplification was undertaken to address considerations such as sample size variations across original categories and to facilitate ease of interpretation in visual representations.

Upon closer examination through a visual lens, a noteworthy observation emerges: Republican respondents exhibit a pronounced degree of flux, irrespective of their marital status. Conversely, the data suggests a relatively stable trajectory for Democratic respondents in terms of their trust in National News, albeit warranting a deeper exploration via chi-square analysis. Broadly speaking, individuals categorized as "Together" in their marital status exhibit the most discernible shifts over the two-year period, indicating a dynamic trend within this demographic cohort. Conversely, those identified as "Separated" exhibit a comparatively muted degree of change, hinting at a potential steadiness or lesser susceptibility to external influences within this subset. This nuanced analysis underscores the multifaceted nature of societal attitudes and underscores the need for comprehensive methodologies to elucidate underlying trends effectively.

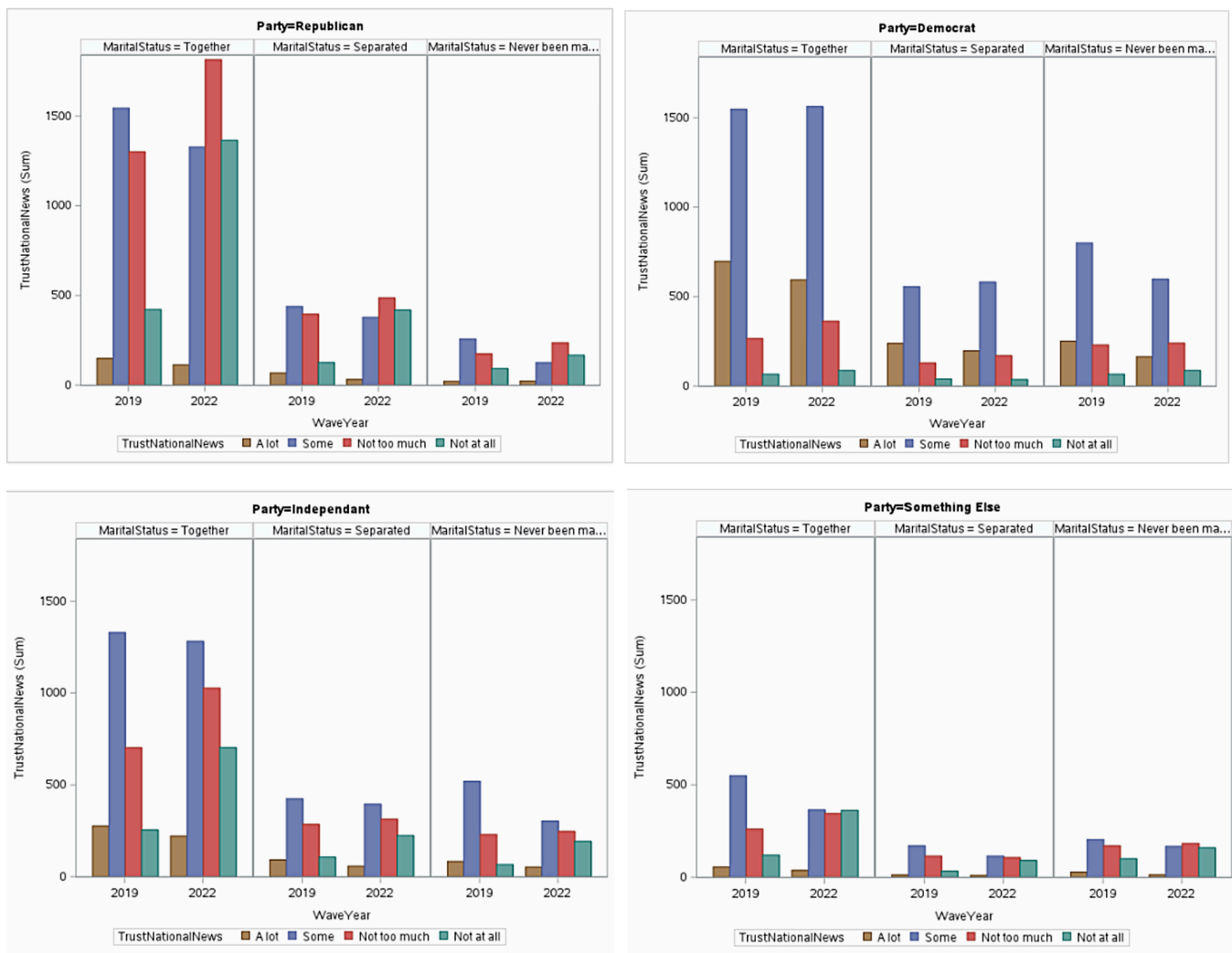


Figure 3: Spread of data between all levels of Party and Marital Status

Upon conducting an exhaustive examination of the chi-square tests encompassing all permutations of these variables, a compelling pattern emerges: the statistical significance at the conventional 0.05 threshold is evident across all variables, save for the interaction involving Democrats and those categorized as "Separated," yielding a p-value of 0.1755. This particular finding suggests a notable constancy in the trust levels toward national news/media within this specific demographic subset, juxtaposed against a discernible trend of burgeoning skepticism observed among all other cohorts. A recalibration of the significance threshold to 0.01 unveils a nuanced landscape: the combinations encompassing Democrat and Together, Democrat and Never Been Married, Something Else and Separated, as well as Something Else and Never Been Married, fail to attain statistical significance. Such a revelation implies a noteworthy divergence in trust dynamics. Specifically, Republicans and Independents demonstrate an escalating tide of mistrust toward national news, irrespective of marital status. In

contrast, this trend exhibits a perceptible attenuation among Democrats and individuals affiliating with a political party labeled as "Something Else." This comprehensive analysis underscores the intricate interplay of socio-political variables in shaping public perceptions and attitudes toward media trustworthiness. Such insights not only shed light on evolving societal sentiments but also underscore the imperative for nuanced and contextually informed interpretations in navigating contemporary discourse on media credibility

Relationship 4: Trust in National News vs Party and Age Category

The levels for Age Category are as follows; 1 denotes 18-29, 2 equates to 30-49, 3 is 50-64, and 4 signifies 65+.

In the exploration of the impact of age group and political affiliation on trust in national news sources, a discernible trend emerges. Notably, there is a notable shift towards skepticism among Republicans across all age cohorts, with the 18-29 demographic exhibiting the most subtle indications of doubt. Conversely, among Democrats, while the younger subset displays discernible fluctuation, the broader age categories exhibit relatively stable trust levels, suggesting a general continuity in trust attitudes toward national media within the party. Furthermore, individuals identifying as Independent, alongside those unaffiliated with major political parties, demonstrate a collective movement towards diminished trust in national news and media outlets. These findings underscore the complex interplay between age, political allegiance, and perceptions of media credibility, reflecting evolving dynamics in contemporary information consumption patterns.

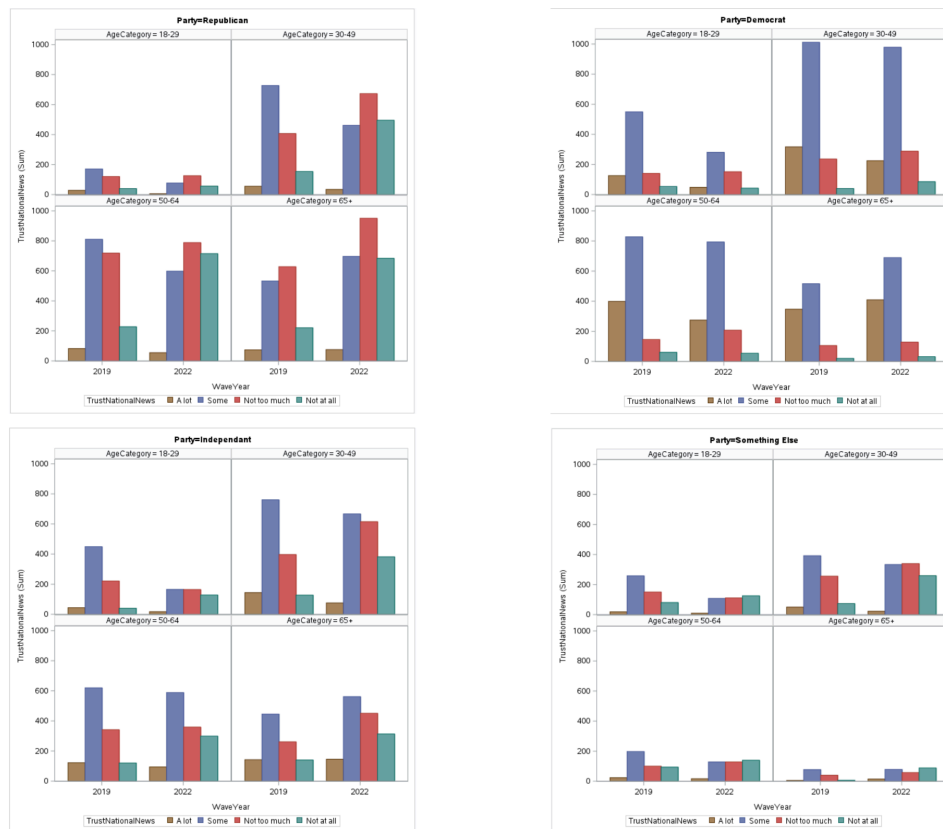


Figure 4: Spread of data across levels of Party and Age Category

Upon delving into the outcomes derived from the Chi-Square test aimed at uncovering statistical significance within the intricate nexus of party affiliation and age group, a nuanced landscape emerges. The majority of party-age group pairings exhibit statistical significance at a level of 0.01, indicating a robust relationship. However, there exist noteworthy exceptions, particularly evident in the combinations of Democrat and 65+, Something Else and 50-64, and Something Else and 65+. Notably, the combination of Democrat and 65+ stands out within this trio, yielding a test statistic of 0.763, falling short of achieving statistical significance at any conventional threshold. Conversely, the remaining two combinations demonstrate statistical significance at a level of 0.05. This discernment implies a prevailing trend: while Republicans and Independent respondents manifest a pronounced uptrend in distrust towards national news and media outlets, Democrats and other affiliations exhibit a comparatively milder trajectory of growing skepticism. Furthermore, it underscores the notion that younger respondents tend to display greater susceptibility to influences from national news and media, while their older counterparts exhibit a tendency towards entrenched perspectives, reflecting a notion of being "stuck in their ways." These findings provide insight into the nuanced dynamics shaping attitudes towards media credibility across different demographic cohorts.

Relationship 5: Trust in the National News vs Voter Registration

Voter Registration has the following levels, Absolutely Registered, Probably Registered, and Not Registered.

In scrutinizing this relationship through a purely visual lens, a discernible trend emerges irrespective of the degree of voter registration, pointing towards a collective shift towards distrust of the media. Notably, the cohort categorized as "Absolutely Registered" exhibits the most conspicuous visual shift, indicative of a pronounced divergence from prior trust levels. However, it's essential to note that this shift is observable across all levels of voter registration, albeit varying in intensity. Despite this variation, the overarching trajectory suggests a pervasive erosion of trust in media sources among individuals across different voter registration statuses. This observation underscores a widespread sentiment of skepticism towards the credibility of mainstream media outlets, transcending the boundaries of voter registration affiliation. Further exploration into the underlying factors driving this trend could yield valuable insights into the evolving dynamics of media consumption and public perception.

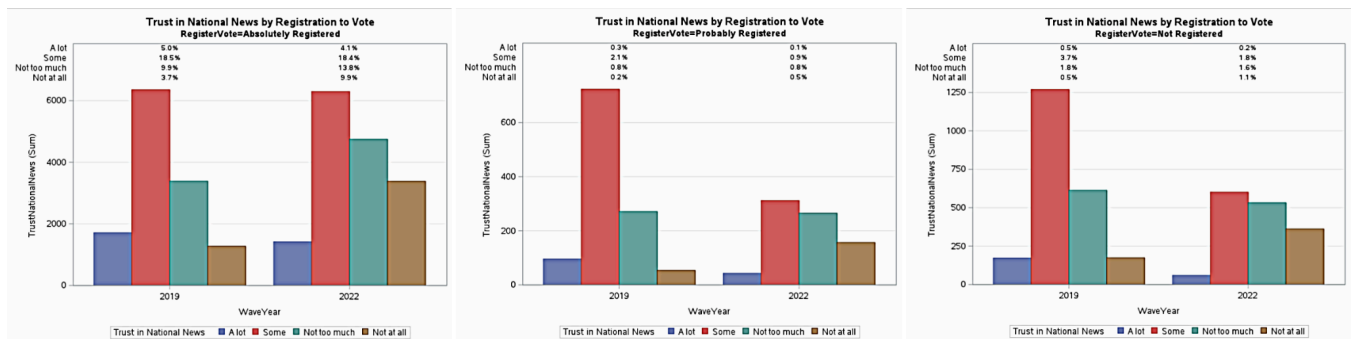


Figure 5: Spread of data between Voter Registration

Upon scrutinizing the Chi-square tests across various strata of Voter Registration, a noteworthy pattern emerges: all levels exhibit statistical significance at an unprecedentedly low threshold, with test statistics registering below 0.0001. This compelling statistical evidence underscores a pervasive trend: regardless of their voter registration status, individuals are increasingly harboring distrust towards national news and media outlets. Such uniformity in statistical significance underscores the robustness and consistency of this phenomenon across diverse segments of the population. It implies a broader societal shift towards skepticism regarding the veracity and reliability of mainstream media narratives, transcending the conventional boundaries delineated by voter registration. This

revelation prompts a deeper inquiry into the underlying drivers fueling this collective disillusionment, bearing implications for media literacy, democratic discourse, and societal trust dynamics at large.

Relationship 6: Trust in the National News vs Gender/Sex

Gender/Sex already has defined levels in this study, see Relationship 2 for the levels.

In examining the visual representation of gender/sex perceptions spanning the years 2019 to 2022, it becomes apparent that both males and females exhibit a noteworthy decline in their confidence levels regarding national news and media sources. What adds intrigue to this analysis are the nuanced shifts observed in the respective attitudes of males and females. Males appear to gravitate towards a stance of 'not a lot' of trust, suggesting a retained but diminished level of underlying confidence. Conversely, females are seen trending towards a stance of 'not at all' trusting, indicating a more pronounced and pervasive sense of skepticism. These insights suggest a divergence in trust dynamics between genders, with males exhibiting a lingering albeit reduced level of trust, while females demonstrate a more comprehensive lack of trust.

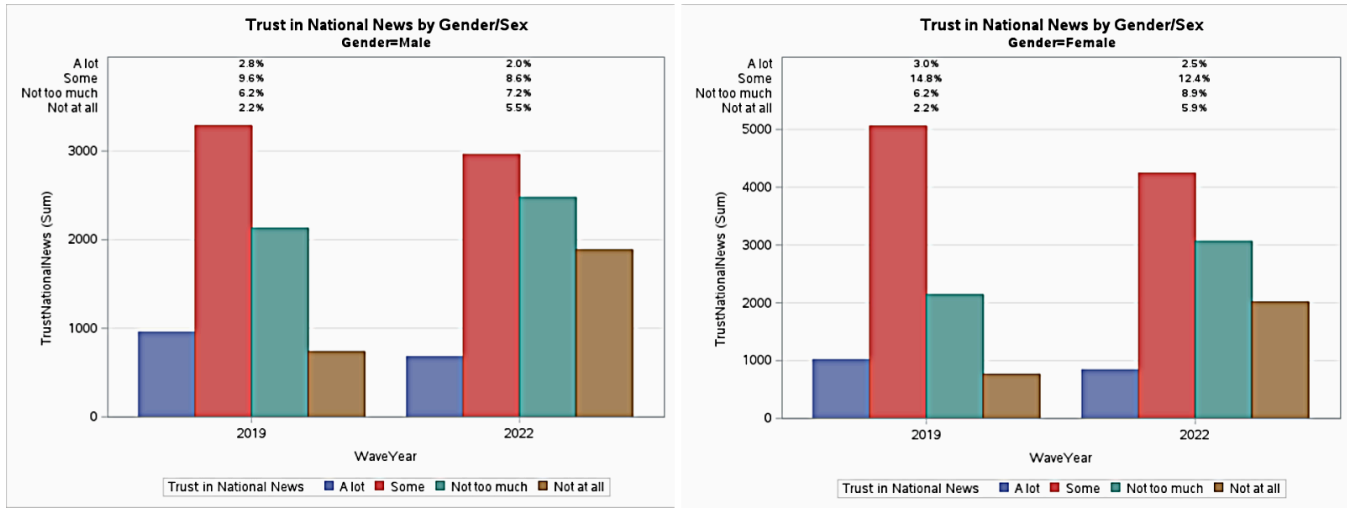


Figure 6: Spread of data across Gender/Sex

In conducting chi-square tests to quantify the observed visual shift, both test statistics yield results of statistical significance at any conventional threshold, with p-values less than 0.0001. This statistical significance, coupled with the discernible visual patterns evident in the graph, underscores the presence of a substantial negative trend irrespective of the gender or sex of the respondents. Such findings underscore the robustness of the observed shift, suggesting a widespread erosion of trust across all demographic segments surveyed.

Relationship 7: Trust in National News vs Gender/Sex and Race

Race has 5 distinct levels, 1 being White, 2 being Black, 3 being Asian, 4 being Indian, and 5 being Hawaiian/Pacific Islander. There is another variable under consideration when looking at Race, whether the respondent is from Hispanic origins. When taking this into effect, the race variable has the following frequency: 69.45% White, 12.2% Hispanic, 11.95% Black, 0.79% Asian, 3.35% Indian, and 2.25% Hawaiian/Pacific Islander. Due to the frequencies of the values, I am combining all values that are Asian, Indian, and Hawaiian/Pacific Islander into a singular "Minority" category in order to extract any significant statistical conclusions. Any conclusions made on individual minority categories would be nullified due to the low response frequency.

Upon visual inspection of the data, it is apparent that White Male respondents exhibit the most pronounced inclination towards distrust of National News/Media, suggesting a notable shift. Conversely, Black, Hispanic, and other Minority Male respondents display comparatively minimal movement, although this observation may potentially be attributed to the lower representation of respondents within these demographic categories. Regarding Female respondents, a similar pattern emerges, mirroring that of Male respondents. White Female respondents notably demonstrate a substantial shift towards distrust, paralleling their male counterparts. However, among Female respondents, Hispanic individuals showcase a somewhat robust inclination towards distrust, while Black and other Minority Female respondents demonstrate limited movement. It's essential to acknowledge potential nuances within these observations, considering factors such as sample size and demographic distribution, which could influence the apparent shifts in attitudes towards National News/Media among different racial and gender groups. This preliminary examination highlights intriguing trends warranting further investigation and statistical analysis to elucidate underlying patterns accurately.

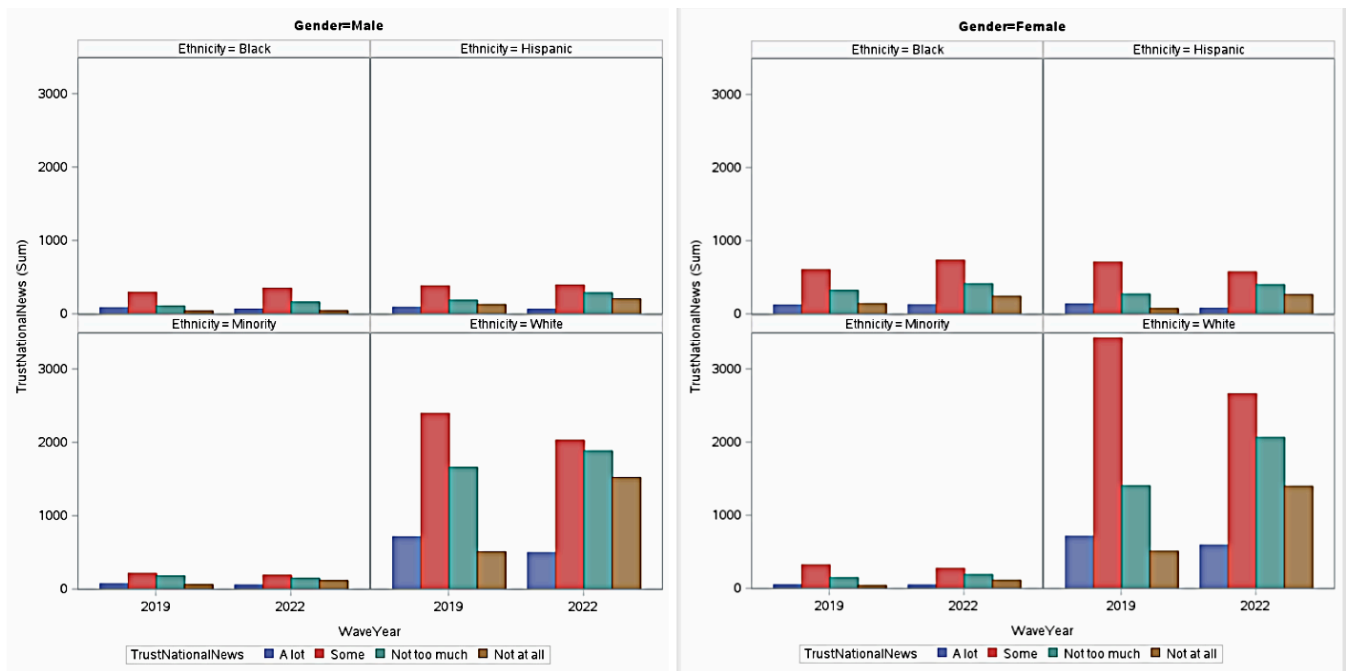


Figure 7: Spread of data across levels of Gender/Sex and Race

Upon conducting chi-square tests for each combination of Gender/Sex and Ethnicity, intriguing insights emerge that shed light on nuanced trends in attitudes towards national news/media. Among White respondents, both Male and Female counterparts exhibit statistically significant associations, underscored by remarkably low test statistics (<0.0001). Conversely, among Black respondents, neither gender/sex demonstrates statistical significance at any level, evidenced by test statistics of 0.1122 for Males and 0.3336 for Females, respectively. Turning attention to Hispanic respondents, both Males and Females manifest statistically significant associations at any level, as reflected by test statistics of 0.0054 and <0.0001 , respectively. Remarkably, this suggests a robust shift towards distrust in national news/media within the Hispanic demographic. In contrast, within the grouped Minority category, Males fail to demonstrate statistical significance at any level, as indicated by a test statistic of 0.1190. However, Females exhibit statistical significance at a 0.05 level, with a test statistic of 0.0229. Notably, while statistically significant, this significance does not extend to stronger levels such as 0.01. These findings suggest a definitive shift towards distrust in national news/media among White and Hispanic respondents. Conversely, Black and other Minority respondents appear to exhibit a lack of discernible shift in attitudes, highlighting potential disparities in perceptions across demographic groups. It is imperative to interpret these results cautiously, considering various factors such as sample size, demographic representation, and potential

confounding variables. Further exploration and rigorous statistical analysis are warranted to unravel the underlying dynamics driving these observed trends accurately.

Relationship 8: Trust in National News vs Gender/Sex and Age Category

Both variables, Gender/Sex and Age Category have defined levels. See Relationship 2 for Gender/Sex levels, and Relationship 4 for Age Category levels

Upon visual examination of this relationship, it is intriguing to note that at the endpoints of age—specifically within the 18-29 and 65+ demographics—there appears to be minimal fluctuation, while the age groups spanning 30-49 and 50-64 exhibit a notable trend towards increased skepticism regarding national news and media sources. This trend is particularly pronounced among males, although it is observable to a lesser extent among females as well. It is noteworthy that despite the relatively stable trust levels observed at the extremes of age categories, there is still a discernible decline in trust towards national news and media outlets.

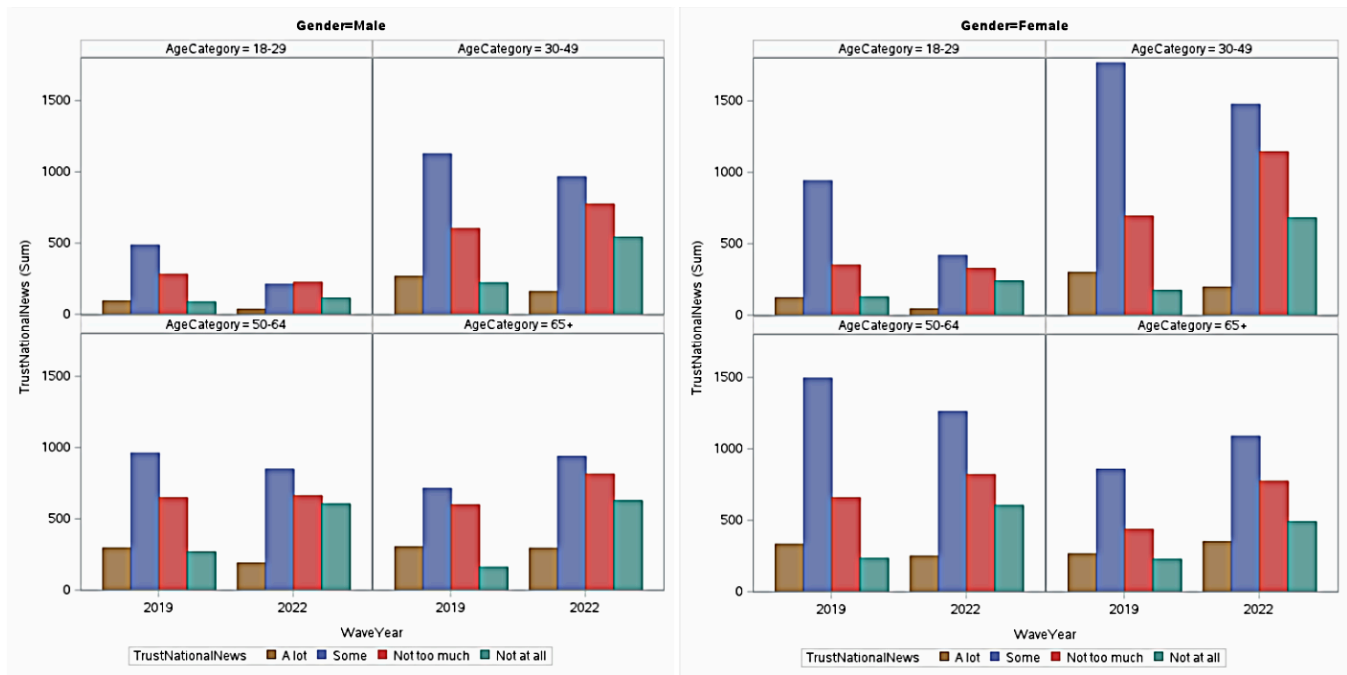


Figure 8: Spread of data across all levels of Gender/Sex and Age Category

In delving into the inquiry of whether this observed negative shift is merely a visual phenomenon or is substantiated by statistical evidence, it is pertinent to acknowledge that all intersections of gender/sex and age category yield statistically significant results. Notably, nearly all combinations exhibit a remarkably low test

statistic value of <0.0001 , underscoring the robustness of the findings. The sole exception to this pattern pertains to the intersection of 65+ Females, where the test statistic returns a value of 0.0092. Despite this slight deviation, the overwhelming trend suggests that regardless of age or gender/sex, respondents universally demonstrate a discernible decline in trust towards national news and media outlets. This statistical validation reinforces the notion that the observed shift is not merely anecdotal but rather indicative of a broader societal trend.

Relationship 9: Trust in National News vs Age Category and Race

Age Category and Race already have defined levels, see Relationship 4 for Age Category and Relationship 7 for specific levels.

Upon examining the intersection of Age and Race within our respondent pool, notable patterns emerge. Among participants aged 18-29, a discernible shift towards distrust is evident within the White and Hispanic subgroups, contrasting with the Black and combined Minority subgroups, which exhibit minimal to negligible movement. This trend persists within the 30-49 age bracket, albeit with a slight decrease observed among Black respondents. Notably, in the 50-64 age group, this trend intensifies, and among respondents aged 65 and above, only White participants show any noticeable shift, leaning towards distrust. These observations suggest that among both young and elderly non-white respondents, trust in national news/media appears relatively stable, whereas the middle-age cohorts demonstrate more fluctuation.

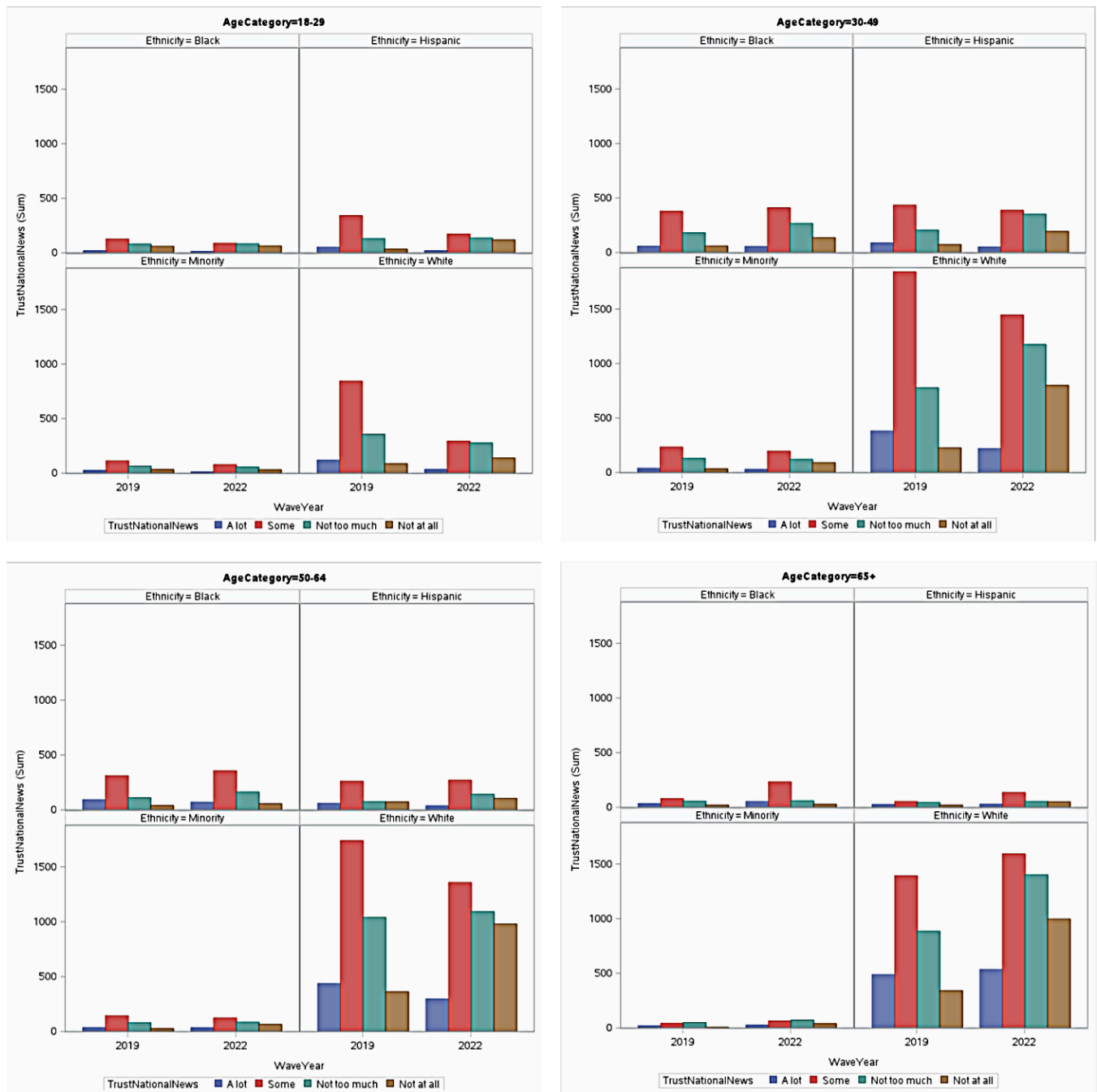


Figure 9: Spread of data among levels of Age Category and Race

When conducting chi-square tests to analyze the intersection of Age Category and Race, a thorough examination reveals nuanced statistical insights. In the 18-29 age group, the test statistics align closely with the visual observations. Specifically, White and Hispanic respondents yield highly significant test statistics of <0.0001 , indicating a notable divergence. In contrast, the statistics for Black and Minority respondents are 0.5354 and 0.5724, respectively, failing to reach significance at any level. Transitioning to the 30-49 age group, all Race

subcategories show significance up to a 0.1 level. However, upon closer scrutiny at a 0.05 significance level, Black and Minority groups fall short, with p-values of 0.0776 and 0.0653, respectively. Within the 50-64 age bracket, Black respondents demonstrate significance at a 0.1 level but falter at stricter thresholds, registering a test statistic of 0.0957. Notably, Hispanic respondents maintain significance up to a 0.05 level, with a p-value of 0.0126. Conversely, Minority respondents exhibit the least significance, with a value of 0.2669, failing to reach any notable threshold. White respondents consistently display significance across all levels, underscored by a test statistic of <0.0001 . Turning attention to respondents aged 65 and above, similar trends persist. Black respondents return a p-value of 0.0659, while Hispanic respondents yield a test statistic of 0.1539. Meanwhile, Minority respondents record a value of 0.4572, lacking significance at any discernible level. Once again, White respondents stand out with a highly significant test statistic of <0.0001 . A recurrent pattern emerges across all Age & Race subgroups: regardless of age, Black and Minority groups exhibit minimal variance over time. Hispanic respondents show relative significance among younger age groups, although their significance diminishes with age progression. In contrast, White respondents consistently maintain statistical significance across all age brackets.

Conclusion

In conclusion, this statistical study offers a comprehensive examination of Americans' evolving perceptions of trust in national news and media outlets amidst a dynamic societal landscape marked by significant events such as the COVID-19 pandemic, the 2020 Presidential Election, and the resurgence of social justice movements. Through an analysis of data spanning from 2019 to 2022 sourced from the Pew Research Center's American Trends Panel, the study explores the intricate interplay between trust in media and various demographic factors including political party affiliation, gender, marital status, age, citizenship status, voter registration, and race. The findings unveil a multifaceted landscape characterized by nuanced shifts in trust perceptions across different demographic segments. Notably, there is a discernible trend towards decreased trust in national news and media among white respondents, as evidenced by statistically significant findings across all age brackets. Conversely, such a trend is not observed among black respondents, whose trust levels remain relatively stable over the same period. Furthermore, the analysis reveals intriguing insights into the intersectionality of demographic variables, highlighting variations in trust dynamics among different demographic cohorts. For instance, while Republicans exhibit a pronounced decline in trust across all age groups, Democrats display a comparatively milder trend,

suggesting nuanced differences in trust perceptions based on political affiliation. Moreover, the study underscores the significance of considering racial dynamics in assessing media trust, with minority respondents demonstrating a sustained level of trust compared to their white counterparts. However, younger minority respondents exhibit a notable negative downturn in trust, indicating complex interactions between age and race in shaping trust perceptions towards national news. Overall, this study provides valuable insights into the evolving dynamics of media trust within the American populace, shedding light on the complex interplay of socio-demographic factors in shaping public perceptions of mainstream media amidst a period of societal transformation. By grounding its findings in rigorous statistical analysis, the study offers a nuanced understanding of the intricate factors influencing trust dynamics within the contemporary media landscape. These insights contribute to a more informed discourse on media credibility, fostering greater understanding of the complexities inherent in contemporary information consumption patterns and societal trust dynamics.