



Exploring the news media-dark personality nexus: Linking television news consumption, the Dark Triad, and perceived refugee threat

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Accepted: 1 September 2023 / Published online: 11 September 2023
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Abstract

We examine the intricate relationship between media usage, personality traits, and perceived threat towards refugees. Using a diverse sample from six European countries ($N=9,085$), we explore the moderating impact of Dark Triad traits on television news consumption. Our findings align with prior studies, indicating that public television news consumption is associated with lower perceived threat, while commercial news consumption shows the opposite pattern. These results likely stem from the divergent framing of migration in the media: public outlets emphasize compassion and integration, while commercial outlets lean towards sensationalism and fear-inducing narratives. Additionally, our study uncovers intriguing insights into the Dark Triad traits. While psychopathy is linked to heightened perceived threat, Machiavellianism and narcissism exhibit a negative association. Surprisingly, the positive relationship between commercial news consumption and perceived threat weakens among individuals high in Machiavellianism. These individuals, driven by self-interest and strategic thinking, may view refugees as potential resources rather than threats. Notably, we find no moderation effect of Dark Triad traits on public service news consumption. This suggests that sensationalized content resonates more with individuals high in these traits, while public service news, focusing on diverse perspectives, has a weaker impact on threat perceptions.

Keywords Media consumption · Personality traits · Dark Triad · Perceived threat · Television news · Migration

Introduction

Perceived threat in the context of migration has garnered substantial attention in research and public discourse due to its implications for social cohesion, intergroup relations, and policy-making (Green et al., 2020; Schlueter et al., 2020; Stephan et al., 2009). Understanding the factors that shape perceived threat is crucial for developing effective strategies to manage migration-related challenges and foster inclusive societies (Green et al., 2020). While previous studies have examined the association of traditional media consumption with perceived threat (De Coninck et al., 2022a), and some explored the role of personality traits

as moderators of (social) media effects (Kim et al., 2013), there remains a notable gap in the literature regarding the interplay between traditional media use, personality traits, and perceived threat.

The interrelationship between traditional media and individuals' perceptions of threat of migrants has been widely acknowledged (Meltzer et al., 2017). Studies rooted in cultivation theory (Hermann et al., 2021), framing theory (Entman, 2007; Van Gorp, 2005), and agenda-setting (McCombs & Shaw, 1972) have shown that media portrayals, particularly those on television, can shape public attitudes and beliefs regarding migration-related threats, including crime, economic impacts, and cultural clashes (De Coninck et al., 2022; Hermann et al., 2021; Van Gorp, 2005). However, little attention has been given to the role of personality traits in moderating the relationship between traditional media use and perceived threat.

While some research has previously examined the influence of personality traits on media effects, this research remains confined within two specific areas. First, studies have primarily focused on broad personality dimensions

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such as need for cognition or authoritarianism. More specific personality traits, such as the Dark Triad characteristics of Machiavellianism, psychopathy, and narcissism that have been associated with antagonistic interpersonal orientations, manipulative tendencies, and self-centeredness (Jonason & Webster, 2010; Zeigler-Hill & Marcus, 2016), have remained unexplored. Given their specific correlates, these traits, which have become increasingly popular in personality studies in recent years (Jonason et al., 2012), may potentially play a significant role in shaping individuals' responses to media messages and their perceptions of threat in the context of migration. This is further underscored by previous findings that individuals with dark personality traits reported negative views of eudaimonic narratives (Appel et al., 2019), which can also be found in some media's news coverage of migration.

Second, media studies that have acknowledged the role of the Dark Triad, have been exclusively focused on their interaction with social media use on outcomes related to interpersonal development, well-being, or belief in conspiracy theories (Ahadzadeh et al., 2023; Kim et al., 2013; Tang et al., 2022). By focusing solely on the interaction between social media use and personality traits, previous research has overlooked the potential influence of traditional media, which remains a significant source of information and opinion formation for many individuals (Eurobarometer, 2022). Thus, understanding the interplay between personality traits and traditional media use is crucial for capturing a comprehensive picture of how individual differences shape perceptions of threat in the migration discourse.

Therefore, this study aims to address these gaps in existing research by examining the influence of traditional media use on perceived threat, specifically focusing on the moderating role of Dark Triad personality traits, using a diverse sample of adults from six European countries ($N=9,058$). By investigating the interaction between traditional media exposure, personality traits, and perceived threat, this research aims to provide a more comprehensive understanding of the complex factors contributing to individuals' perceptions of threat regarding migration.

Traditional media use and views on migration

According to agenda-setting theory (McCombs & Shaw, 1972), traditional news media play a crucial role in shaping public perceptions and attitudes by selecting and framing the topics they cover. Van Gorp (2005) found that media coverage significantly influences public support or condemnation of migration policies. The framing of news items and the selection of specific perspectives or news frames by journalists shape public understanding and interpretation

of migration issues (Brewer & Gross, 2010; Lecheler & de Vreese, 2011).

As face-to-face contact with immigrants remains limited for many individuals across countries, news media hold a significant responsibility in providing accurate and balanced coverage of immigration issues (Ogan et al., 2018). News frames, which are interpretive schemes that highlight specific aspects of reality while downplaying others, impact the adoption of interpretations, judgments, and decisions by recipients (Scheufele & Tewksbury, 2007). Van Gorp (2005) identified two main frames in news coverage on immigrants: the victim frame, which portrays immigrants as passive victims in need of assistance, and the intruder frame, which depicts refugees as potential threats or as illegitimate migrants.

Several studies conducted in Europe have examined the effects of media coverage of migration on public attitudes. Greussing and Boomgaarden (2017) identified dominant frames in Austrian newspapers, including refugees as victims, threats to Austrian culture, security, and welfare, and dehumanized, anonymous outgroups. Eberl et al. (2018) found that different frames are associated with specific types of migrants, with economic threat frames associated with terms such as “migrants” and “immigrants” and burden frames associated with “refugees” and “asylum seekers.”

The media's portrayal of migration plays a crucial role in shaping public attitudes and perceptions, particularly when it comes to the framing of migration issues (Entman, 2007; Van Gorp, 2005). In this regard, studies have demonstrated variations in framing preferences between public and commercial media outlets. Public media outlets often prioritize highlighting the positive consequences of migration and tend to adopt more left-leaning, liberal viewpoints (Jacobs et al., 2016). Their coverage may emphasize compassion, human rights, and the integration potential of immigrants. On the other hand, commercial media outlets may be more inclined to use sensationalist and negative emotion-evoking elements in their coverage, catering to a broader audience and potentially amplifying perceived threats associated with migration (Jacobs et al., 2016). The origin of these framing differences is a complex matter. A significant research strand in economics has demonstrated that ownership structures determine framing practices of media outlets (DellaVigna & Kaplan, 2007; Groseclose & Milyo, 2005). For example, Dunaway (2008) highlights a distinction in the political news content provided by privately owned media entities versus those controlled by a broad, diverse, and dispersed group of public shareholders. According to Dunaway (2008), media organizations managed by public shareholders exhibit content that aligns more closely with the preferences of mass audiences. The rationale is that since diverse and dispersed public shareholders lack a unified incentive

beyond profit, news organizations traded publicly are more inclined to offer news programming that prioritizes profit-making objectives (Dunaway, 2013).

De Coninck et al. (2022a) conducted a study exploring the differential effects of news consumption from public and commercial broadcasters on perceived threat of migrants. Their findings align with the notion that media consumption influences public perceptions. They revealed that heavy consumers of news from public television had lower perceptions of threat, while those who consumed news from commercial television exhibited higher levels of perceived threat. These contrasting outcomes highlight the importance of considering the role of media sources and framing strategies in shaping public views on migration. The media's selection and presentation of information can accentuate certain aspects of reality and influence the adoption of specific interpretations, judgments, and decisions (Scheufele & Tewksbury, 2007). Therefore, the choice of news sources can significantly impact individuals' perceptions of threat associated with migrants. Building on these findings, we formulated two hypotheses related to the differential effects of news media consumption on perceived threat of migrants:

Hypothesis 1 Consumption of news on public television will be negatively associated with perceived threat of migrants. We expect that individuals who heavily consume news from public television networks will exhibit lower levels of perceived threat compared to those who consume news from other sources.

Hypothesis 2 Consumption of news on commercial television will be positively associated with perceived threat of migrants. We anticipate that individuals who engage in high levels of news consumption from commercial television networks will demonstrate higher levels of perceived threat compared to individuals who rely on other news sources.

Although this study will focus on the individual perspective, it is important to acknowledge that news media operate within a broader societal structure. Looking at this, it becomes evident that news media coverage of specific topics or news stories may be influenced by factors such as governmental involvement or limitations on journalistic independence. A conceptual framework developed by Hallin and Mancini (2004) offers insight into comparing media systems across countries, using four key dimensions. The first dimension is the structure of mass media markets, including factors like newspaper circulation rates, regional or linguistic media segmentation, and the significance of newspapers and television as news sources. The second dimension pertains to political parallelism, examining how well mass media mirrors political divisions in a country. This

involves aspects like media audience partisanship, journalists' role orientations and practices, and the regulation of public service broadcasting. The third dimension assesses the professionalization of journalism, considering the autonomy of journalists, the establishment of distinct norms and rules, and a commitment to public service orientation. The fourth and final dimension examines the state's role in shaping the media system, encompassing factors such as censorship, media regulations, and state economic support for media outlets (Hallin & Mancini, 2004). The synthesis of these four dimensions results in the identification of three distinct media system models. The Mediterranean/polarized media model is characterized by low newspaper circulation, high political parallelism, limited professionalization, and substantial state intervention—illustrated by examples like Italy and Spain. The North/Central democratic corporatist model, found in countries like Austria, Belgium, Germany, and Sweden, features high newspaper circulation, robust professionalism, significant state involvement, and safeguarded press freedom. In contrast, the North Atlantic or liberal model, represented by the United States, exhibits moderate newspaper circulation, a neutral commercial press, strong professionalization, and market dominance (Coninck et al., 2022b).

Personality traits and views on migration

The hypothesis that individual differences in prejudices against outgroups are inherent characteristics of individuals has been influenced by empirical findings demonstrating that people who hold prejudices toward one group are also likely to exhibit biases toward other groups (Altemeyer & Altemeyer, 1996; Bierly, 1985). This suggests that prejudices may be rooted in one's personality (Allport, 1954). There exist a substantial body of literature linking specific traits to prejudices, perceived threats, discrimination, and racism (Pruysers, 2020). A meta-analysis revealed a consistent relationship between various personality traits and prejudices, particularly towards migrants (Sibley & Duckitt, 2008).

The notion that personality exerts a powerful influence on people's political and ideological beliefs and behaviors has a long history. Much of this research has focused on traits such as social dominance and right-wing authoritarianism (De Coninck et al., 2022; Duckitt & Sibley, 2010; Hodson & Dhont, 2015; Pratto et al., 2006), following the seminal study by Adorno et al. (1950) who proposed that prejudices were an expression of the authoritarian personality that encompasses an individual's commitment to social norms and obedience to authority (Altemeyer & Altemeyer, 1996). More recently, the literature has found associations between general personality traits, particularly the Big Five

(extraversion, openness, neuroticism, conscientiousness, and agreeableness), and prejudices (e.g., Chen & Palmer, 2018; Fatke, 2019; Lin & Alvarez, 2020). Overall, individuals with higher levels of agreeableness and openness tend to have fewer negative attitudes toward members of different outgroups and show greater acceptance, while conscientiousness is associated with higher levels of prejudices (Sibley & Duckitt, 2008; Talay & Coninck, 2020).

In addition to the Big Five, there has been growing attention to the so-called Dark Triad personality traits in recent years (Zeigler-Hill & Marcus, 2016; Žemojtel-Piotrowska et al., 2021). This refers to a set of three interrelated socially undesirable character traits, namely narcissism, psychopathy, and Machiavellianism (Zeigler-Hill & Marcus, 2016). Narcissism is characterized by an individual's grandiose and superior self-perception, coupled with flamboyant behavior, arrogance, and dominance (Jonason et al., 2015), and are strongly preoccupied with how others perceive them (Jonason & Webster, 2010). Psychopathy, on the other hand, entails impulsivity, sensation-seeking, and a lack of positive regard for others (Jonason et al., 2015). Psychopaths exhibit antisocial behavior and lack empathy. Lastly, Machiavellianism is characterized by manipulation and a tendency to use and deceive others for personal gain (Jonason et al., 2015). Machiavellians often harbor distrust and possess a cynical mindset (Furnham et al., 2013).

All three personality traits encompass conspicuous "dark" social behavioral characteristics and exhibit tendencies toward emotional coldness, manipulation, and aggression (Furnham et al., 2013). Although these traits are socially undesirable, it should be noted that they still fall within the normal, subclinical range (Vernon et al., 2008). It represents a spectrum: individuals are not simply categorized as either narcissistic or not, as they can fall anywhere in between. Those scoring high on these personality traits are therefore everyday members of society, emphasizing the importance of understanding how they relate to social attitudes (Furnham et al., 2013).

So far, only a limited number of studies have examined the relationships between Dark Triad personality traits and views on migration (Petrović, 2019), with inconsistent results. Pruyers (2020) found support for all three Dark Triad traits positively correlating with anti-immigrant prejudices. Hodson et al. (2009) reached a similar conclusion, suggesting that Dark Triad traits are even stronger predictors of prejudices than certain Big Five traits. The dark personality traits of psychopathy and narcissism have been shown to lead to higher levels of xenophobic attitudes (Kocaturk & Bozdog, 2020). On the other hand, Jonason et al. (2015) conclude that Dark Triad traits have little influence in predicting racism, and a study by Anderson and Cheers (2018) found no evidence of Dark Triad traits being associated

with implicit attitudes (though association tests) but rather with explicit attitudes (through survey instruments). Taken together, it is unclear to what extent the Dark Triad traits are linked to views on migration – one of the key questions we aim to answer in this study (RQ1).

The moderating role of personality in media effects

Despite the growing body of research on media effects and personality traits, there is a surprising dearth of studies that have examined the moderating role of personality traits on the effects of traditional news media on public perceptions. While some research has explored the moderating role of personality traits in the context of social media effects (Kim et al., 2013; Tang et al., 2022), little attention has been given to understanding how personality traits, particularly those related to the Dark Triad, may interact with traditional media use to shape individuals' perceptions.

The importance of studying the moderating role of the Dark Triad traits in traditional media use becomes even more evident when considering previous findings related to narrative evaluations. For instance, Appel et al. (2019) demonstrated that individuals high in dark personality traits tend to have a more negative evaluation of eudaimonic narratives, which encompass stories dealing with purpose in life, the human condition, and human virtue. Interestingly, these types of narratives can also be found in news media coverage of refugees in certain European media outlets (Eberl et al., 2018).

By neglecting the examination of how the Dark Triad traits moderate the effects of traditional media use, researchers may be overlooking an important aspect of media influence on individuals' perceptions. Traditional news media continue to play a significant role in shaping public attitudes and beliefs (De Coninck et al., 2022a), particularly in the context of migration and intergroup dynamics. Understanding how personality traits, such as the Dark Triad, interact with traditional media messages is crucial for gaining a comprehensive understanding of the complex processes underlying individuals' perceptions of threat in the migration discourse.

Therefore, it is imperative to investigate the moderating role of the Dark Triad in the context of traditional media use (RQ2). The absence of a specific hypothesis regarding the relationship between Dark Triad personality traits and media consumption in this study can be attributed to several factors. Firstly, the interplay between personality traits like the Dark Triad and media consumption is a relatively unexplored area of research, especially in the context of traditional media such as television news. As a result, the lack of established findings or theoretical frameworks made it challenging to formulate precise hypotheses. Secondly, the

influence of personality traits on media consumption patterns can be complex and multifaceted. Personality traits may interact with various motivations, cognitive processes, and emotional responses that individuals have while engaging with media content. Given the intricacy of these interactions and the potential variability across different types of media, attempting to formulate specific directional hypotheses might have been premature. Lastly, the study took an exploratory approach due to the limited existing research in this domain. An exploratory perspective allows us to uncover unexpected patterns and relationships that could inform future research directions. By not imposing predetermined hypotheses, we aimed to provide a comprehensive understanding of the intricate dynamics between Dark Triad personality traits and media consumption in shaping perceived threat – something for future researchers to build on.

Data and methodology

Data

Data for this study were collected using an online questionnaire administered to adults aged 25 to 65 in six European countries: Austria, Belgium, Germany, Italy, Spain, and Sweden. The survey was conducted over a period of four weeks in May and June 2021, resulting in a sample size of 9,085 respondents, with approximately 1,500 participants per country. To ensure efficient data collection, the survey firm Bilendi, which has a strong presence in the countries under study, was engaged. This allowed for cost-effective data gathering while still obtaining a large dataset. In order to ensure a diverse representation of relevant national characteristics, we carefully selected a range of European countries for inclusion in our study. Our country selection criteria aimed to encompass various dimensions, including coastal and non-coastal border countries, both large and small economies, countries with major and minor political influence, and those with varying levels of popularity as destinations for asylum seekers (Bansak et al., 2017). Furthermore, we specifically focused on countries that have experienced significant impacts from the European migration crisis from 2014 to 2016. This led us to include countries such as Germany, Italy, Spain, and Sweden, which have received a substantial number of asylum seekers during various stages of the crisis. Additionally, we incorporated countries that have faced notable political turmoil as a consequence of the crisis, including Austria and Belgium.

The polling agency employed a quota sampling approach, drawing from its available panels to ensure heterogeneity in terms of age and gender. The response rate varied across countries, ranging from 12 to 23%. Potential participants

were contacted via email and invited to take part in the study. The survey itself was distributed through Bilendi's survey tool, utilizing the official language of each respective country or region to ensure respondents' comfort and understanding. Professional translators were engaged to provide accurate translations, ensuring that the survey questions were presented in everyday language familiar to the participants. While respondents were unable to skip questions, some questions did provide a "no answer" option, allowing participants to indicate their preference in cases where they did not wish to respond.

This rigorous data collection methodology, combining online surveys with the utilization of Bilendi's established infrastructure, facilitated the efficient acquisition of a substantial and diverse dataset. The careful attention to language, quota sampling, and the inclusion of multiple countries contribute to the robustness and generalizability of the findings, enhancing the validity of the study's conclusions. For more information on the dataset, see De Coninck et al. (2021). The study was approved by the KU Leuven Social and Societal Ethics Committee (G-2020-2590).

Measures

Perceived refugee threat

Perceived threat was measured using a set of six items. Four items focused on realistic or economic threat perceptions, gauging respondents' views on whether refugees contribute to increased crime problems in the country, if they take away or help create new jobs, if they receive more from the economy than they contribute, and whether their presence has a positive or negative impact on the economy. Two additional items assessed symbolic or cultural threat perceptions, examining whether refugees undermine or enrich the country's cultural life and whether their values align with those of the host country.

All items were rated on an 11-point scale, with scores ranging from 0 to 10. To ensure consistency, the items were recoded so that higher scores corresponded with higher threat perceptions. An exploratory factor analysis with oblimin rotation was conducted to explore the underlying structure of the items. The results indicated that a two-factor structure of perceived threat, which we expected based on previous studies (Stephan et al., 2009). Realistic threat ($M=5.55$, $SD=1.92$) Symbolic threat ($M=4.95$, $SD=2.21$). The internal reliability of these factors was high, with a Cronbach's alpha coefficient of 0.89 for realistic threat and 0.92 for symbolic threat.

Television news consumption

Participants were queried about their television news consumption patterns over the preceding month, using a scale from 1 (never) to 7 (every day) to indicate the frequency of consumption. Television news consumption was further divided into two categories: public networks ($M=4.33$, $SD=2.11$) and commercial networks ($M=4.17$, $SD=2.07$), with country-specific examples provided in the question for each category.

Dark Triad personality traits

To evaluate the Dark Triad personality traits of Machiavellianism, psychopathy, and narcissism, we utilized the concise Dirty Dozen measure developed and validated by Jonason and Webster (2010). Each trait was assessed using four items. Respondents rated their agreement on a 5-point scale, ranging from 1 (do not agree at all) to 5 (fully agree). Sample items included statements such as ‘I tend to exploit others towards my own end’ and ‘I tend to expect special favors from others’.

The internal reliability of the scores for each subtype of the Dark Triad was found to be high: Machiavellianism ($M=1.77$, $SD=0.90$) exhibited a reliability coefficient of 0.89, psychopathy ($M=2.04$, $SD=0.89$) showed a reliability

coefficient of 0.79, and narcissism ($M=2.04$, $SD=0.93$) demonstrated a reliability coefficient of 0.86. These results indicate that the questionnaire items effectively captured the intended constructs and consistently measured the respective Dark Triad personality traits.

Control variables

Participants in the study were requested to provide certain demographic information. This included indicating their sex, with options for male (coded as 0) or female (coded as 1). Age was also recorded through birth year, and recalculated. Religious affiliation was assessed, with response options including Roman Catholic, Protestant, Muslim, Jewish, Agnostic/Atheist, and Other. Full-time employment status was captured as a binary variable, with options of not employed full-time (coded as 0) or employed full-time (coded as 1). Educational attainment was measured by the highest level of education completed, with categories including no or primary education, lower secondary education, higher secondary education, tertiary education short form, and tertiary education long form (or university). Participants were also asked to indicate their political ideology on a scale from 0 (extreme left) to 10 (extreme right), capturing their position along the ideological spectrum. Table 1 provides an overview of the sample composition in each

Table 1 Descriptive overview of the sample ($N=9,085$)

In %	Austria	Belgium	Germany	Italy	Spain	Sweden
Gender						
Male	50.6	48.1	49.0	48.8	50.5	50.3
Female	49.4	51.9	51.0	51.2	49.5	49.7
Religious denomination						
Roman Catholic	57.9	45.3	27.2	72.4	51.7	6.5
Protestant	5.7	2.1	27.9	1.0	1.2	27.4
Muslim	2.5	1.3	2.0	0.7	0.4	3.8
Jewish	0.5	0.4	0.5	0.1	0.1	0.2
Agnostic/Atheist	25.7	46.5	36.8	20.1	39.2	51.5
Other	7.7	4.5	5.6	5.6	7.1	10.7
Mean scores (standard error)	Austria	Belgium	Germany	Italy	Spain	Sweden
Age	44.38 (11.63)	45.73 (11.40)	45.28 (11.42)	46.19 (10.69)	45.13 (10.89)	44.54 (11.50)
Educational attainment (1–5)	3.37 (0.85)	3.81 (1.01)	3.24 (1.05)	3.53 (1.00)	3.56 (1.12)	3.53 (0.84)
Political ideology (0–10)	4.79 (2.11)	5.32 (2.21)	4.77 (1.97)	5.21 (2.53)	4.47 (2.24)	5.37 (2.59)
Realistic threat (1–5)	3.16 (0.86)	3.39 (0.75)	3.20 (0.84)	3.54 (0.87)	3.69 (0.86)	3.25 (0.88)
Symbolic threat (1–5)	2.93 (1.06)	2.90 (0.90)	2.81 (1.02)	2.97 (0.98)	2.81 (1.00)	2.66 (1.02)
News media consumption (1–7)						
Public television	3.96 (2.20)	4.46 (2.13)	4.47 (2.09)	4.51 (2.03)	4.49 (2.15)	4.11 (2.01)
Commercial television	3.89 (1.94)	3.83 (2.17)	3.88 (2.05)	4.38 (2.03)	4.94 (2.03)	4.13 (1.97)
Dark Triad (1–5)						
Machiavellianism	1.70 (0.82)	1.70 (0.85)	1.74 (0.87)	1.83 (0.99)	1.81 (0.90)	1.85 (0.94)
Psychopathy	1.97 (0.83)	2.22 (0.84)	2.00 (0.88)	2.11 (0.96)	1.92 (0.86)	2.00 (0.90)
Narcissism	2.01 (0.92)	1.93 (0.86)	1.99 (0.94)	2.17 (0.96)	2.13 (0.92)	1.99 (0.94)
<i>N</i>	1,520	1,505	1,521	1,510	1,512	1,517
<i>Cooperation rate (in %)</i>	23	22	22	19	16	12

country, offering a comprehensive summary of the participants’ characteristics for the respective countries included in the study. Additionally, see Table A1 for a partial correlation analysis between key study variables.

Analytical strategy

To examine the proposed hypotheses and investigate the moderating role of dark personality traits on perceived threat from refugees, we conducted hierarchical ordinary least squares regressions, inspired by established practices in media psychology research (Prot & Anderson, 2013). Separate regression analyses were performed for each type of perceived threat (realistic and symbolic). The variables were entered in distinct blocks to assess their unique contributions.

In the first block, control variables including respondents’ demographics and country fixed effects were included to

Table 2 Linear regression on realistic and symbolic refugee threat based by control variables, news media consumption, and Dark Triad traits

	Realistic threat	Symbolic threat
<i>Block 1: Control variables</i>		
Gender (ref: male)		
Female	0.02*	−0.01
Age	0.06***	0.06***
Religious denomination (ref: Roman Catholic)		
Protestant	−0.01	−0.01
Muslim	−0.06***	−0.07***
Jewish	−0.03**	−0.03*
Agnostic/Atheist	0.02	0.01
Other	−0.02	−0.03*
Educational attainment	−0.12***	−0.09***
Political ideology	0.37***	0.32***
Country (ref: Austria)		
Belgium	−0.06***	−0.04**
Germany	−0.07***	−0.06***
Italy	−0.11***	−0.09***
Spain	−0.12***	−0.12***
Sweden	0.01	−0.00
<i>Incremental R²</i>	<i>18.40***</i>	<i>13.70***</i>
<i>Block 2: News media consumption</i>		
Public television	−0.09***	−0.08***
Commercial television	0.08***	0.06***
<i>Incremental R²</i>	<i>0.90***</i>	<i>0.50***</i>
<i>Block 3: Dark Triad</i>		
Machiavellianism	−0.15***	−0.12***
Psychopathy	0.10***	0.09***
Narcissism	−0.06***	−0.07***
<i>Incremental R²</i>	<i>1.90***</i>	<i>1.60***</i>
<i>Total R²</i>	<i>21.20</i>	<i>15.80</i>

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

account for potential confounding factors. This allowed us to establish a baseline understanding of the relationship between perceived threat and these control variables.

In the second block, the main effect of television news consumption was introduced to evaluate its influence on perceived threat. By analyzing the direct impact of television news consumption on perceived threat, we could identify its independent contribution to individuals’ perceptions.

In the third block, dark personality traits were included to examine their individual effects on perceived threat. This step aimed to assess the unique influence of dark personality traits, specifically Machiavellianism, psychopathy, and narcissism, on individuals’ perceptions of threat from refugees.

In a fourth block, the interactions between television news consumption and dark personality traits were included to examine potential moderation effects on perceived threat. By employing this analytical approach, we were able to assess the independent contributions of television news consumption, dark personality traits, and their interaction effects on perceived threat from refugees. Controlling for relevant variables in each block ensured that we could accurately evaluate the unique effects of these factors and examine their combined influence on individuals’ perceptions of threat. Due to the size of the dataset, we focus on results with p -values < 0.001 .

Results

The regression analysis results, as displayed in Table 2, indicate that the regression model accounted for 21.2% of the total variance in perceived realistic threat¹. Among the control variables, age ($\beta = 0.06, p < .001$) and political ideology ($\beta = 0.37, p < .001$) exhibited positive associations with perceived realistic threat. Conversely, education ($\beta = -0.12, p < .001$) and identifying as Muslim ($\beta = -0.06, p < .001$) were found to have negative relationships with perceived realistic threat. For symbolic threat, the model explained 15.8% of the total variance. Results largely mirrored those for realistic threat: a positive association of age ($\beta = 0.06, p < .001$) and political ideology ($\beta = 0.32, p < .001$) with symbolic threat, and a negative link with identifying as Muslim ($\beta = -0.07, p < .001$) and education ($\beta = -0.09, p < .001$). In terms of country differences, respondents from

¹ Media effects studies are often complex and influenced by a multitude of factors, making it challenging to achieve high R² values. Additionally, human behavior and attitudes are not as predictable as natural phenomena, which may result in more variability in the data. As a result, media effects (and social science models more generally) typically have more inherent uncertainty and variation, leading to relatively lower R-squared values. In fact, various media effects studies have reported R² values in similar or lower ranges when examining complex social phenomena similar to the current topic under study.

all countries, except Sweden, reported lower levels of perceived realistic and symbolic threat when compared to Austria, which served as the reference category.

Regarding Block 2, results indicate that both types of television news consumption were significantly associated with realistic and symbolic threat. Public television consumption was linked to reduced realistic ($\beta = -0.09, p < .001$) and symbolic ($\beta = -0.08, p < .001$) threat, while commercial television consumption was linked to greater realistic ($\beta = 0.08, p < .001$) and symbolic ($\beta = 0.06, p < .001$) threat. These results confirmed the expectations we developed in H1 (public television use relates to lower threat) and H2 (commercial television use relates to greater threat).

In Block 3, we added the main effects of the Dark Triad traits. Machiavellianism was linked to lower realistic ($\beta = -0.15, p < .001$) and symbolic ($\beta = -0.12, p < .001$) threat. The same trend was found for narcissism: greater narcissism was associated with reduced realistic ($\beta = -0.06, p < .001$) and symbolic ($\beta = -0.07, p < .001$) threat. Psychopathy, however, was linked to greater threat ($\beta_{realistic} = 0.10, p < .001$; $\beta_{symbolic} = 0.09, p < .001$).

Turning to the interaction effects of television consumption and dark personality traits, this study inquires about the ways in which personality traits may moderate the relationship of television viewing with perceived refugee threats (RQ2). As shown in Table 3, after the control, Machiavellianism turned out to significantly and negatively moderate the relationships between commercial news consumption and perceived realistic ($\beta = -0.11, p < .05$) and symbolic threat ($\beta = -0.18, p < .01$). Psychopathy was also found to be a significant moderator between commercial television use and symbolic threat only ($\beta = 0.12, p < .001$). The links between public television consumption and perceived threats were not moderated by dark personality traits. For a better understanding of this relationship, the statistically significant interactions were plotted in Fig. 1, Fig. 2 and Fig. 3. The graphs illustrate the relationship between Machiavellianism and perceived threat (Figs. 1 and 2) and between psychopathy and perceived symbolic threat (Fig. 3) in

relation to the consumption of commercial television news. Interestingly, individuals with high levels of Machiavellianism demonstrated lower levels of realistic threat (Fig. 1) and symbolic threat (Fig. 2) when they reported greater engagement with commercial television news. Figure 3 illustrates that individuals with high levels of psychopathy demonstrated higher levels of symbolic threat when they consumed larger amounts of commercial television news compared to individuals with low levels of psychopathy. Conversely, when commercial television consumption was low, individuals high in psychopathy reported lower levels of symbolic threat.

Discussion

The present study explores the interplay between traditional media use, personality traits, and perceived refugee threat. Through an empirical investigation of a diverse sample of adults from six European countries, we aimed to shed light on the moderating role of Dark Triad personality traits on the effects of television news consumption. Our findings contribute to a deeper understanding of the complex dynamics that shape individuals' perceptions of threat and offer insights into the role of personality in the media's influence on public attitudes and beliefs.

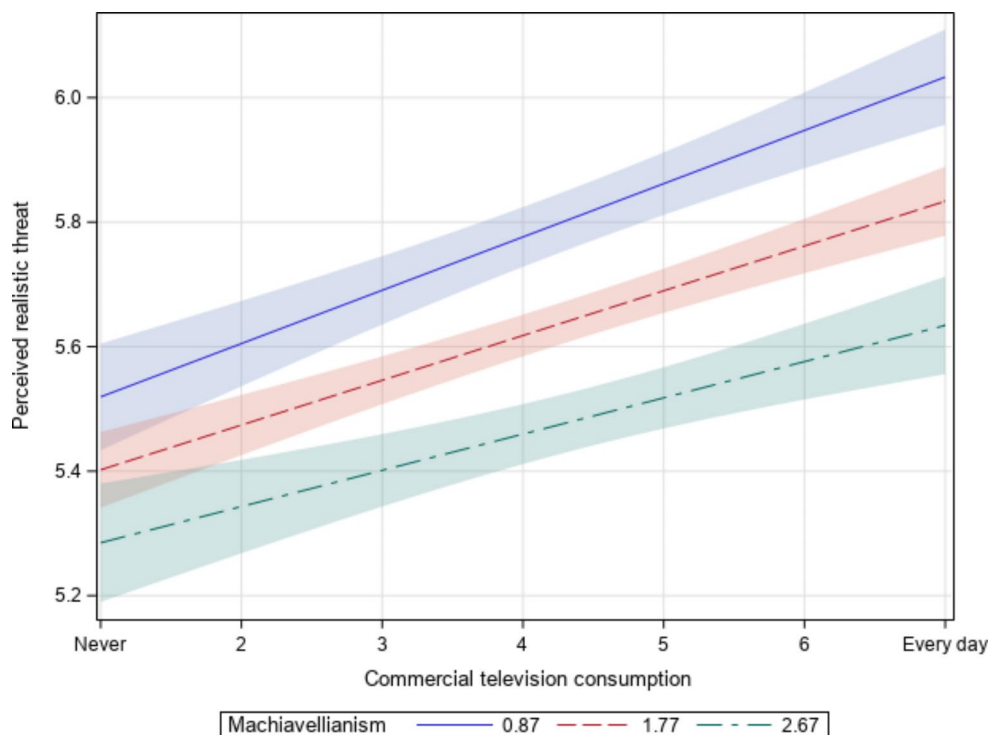
Regarding the main effects of television news consumption, our findings align with the recent literature on this topic: public television news consumption was linked with lower perceived refugee threat, and the opposite association was found with commercial news consumption (De Coninck et al., 2022; Jacobs et al., 2016). As anticipated, we believe this can be attributed to the differential framing of migration and migrants in news media (Entman, 2007; Van Gorp, 2005). Research has consistently demonstrated that public media outlets tend to prioritize highlighting the positive outcomes of migration and adopt more liberal viewpoints (Eberl et al., 2018; Jacobs et al., 2016; Meltzer et al., 2017). Their coverage often emphasizes compassion,

Table 3 Interactive effects of traditional media use and personality traits on perceived migrant threat

	Realistic threat	Symbolic threat
<i>All prior blocks R²</i>	21.20	15.80
<i>Block 4: Interaction effects</i>		
Public television x Machiavellianism	0.03	0.06
Public television x Psychopathy	0.01	-0.02
Public television x Narcissism	0.06	0.03
Commercial television x Machiavellianism	-0.11*	-0.18**
Commercial television x Psychopathy	-0.03	0.12*
Commercial television x Narcissism	0.05	-0.02
<i>Incremental R²</i>	0.10***	0.10***
<i>Total R²</i>	21.30	15.90

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Fig. 1 Interaction between Machiavellianism and commercial television consumption on perceived realistic threat
 Note: Red line = mean; blue and green lines are M-1SD and M + 1SD respectively



human rights, and the integration potential of immigrants. In contrast, commercial media outlets may lean towards sensationalism and employ negative emotion-evoking elements in their coverage, catering to a wider audience and potentially amplifying perceived threats associated with migration (Jacobs et al., 2016; Meltzer et al., 2017).

As for the main effects of the Dark Triad, we get a mixed picture (RQ1). While psychopathy is linked to greater perceived threat (Kocaturk & Bozdog, 2020), Machiavellianism and narcissism exhibit a negative link. In some cases, narcissistic individuals may display a sense of invulnerability or a belief in their exceptionalism (Jonason et al.,

Fig. 2 Interaction between Machiavellianism and commercial television consumption on perceived symbolic threat
 Note: Red line = mean; blue and green lines are M-1SD and M + 1SD respectively

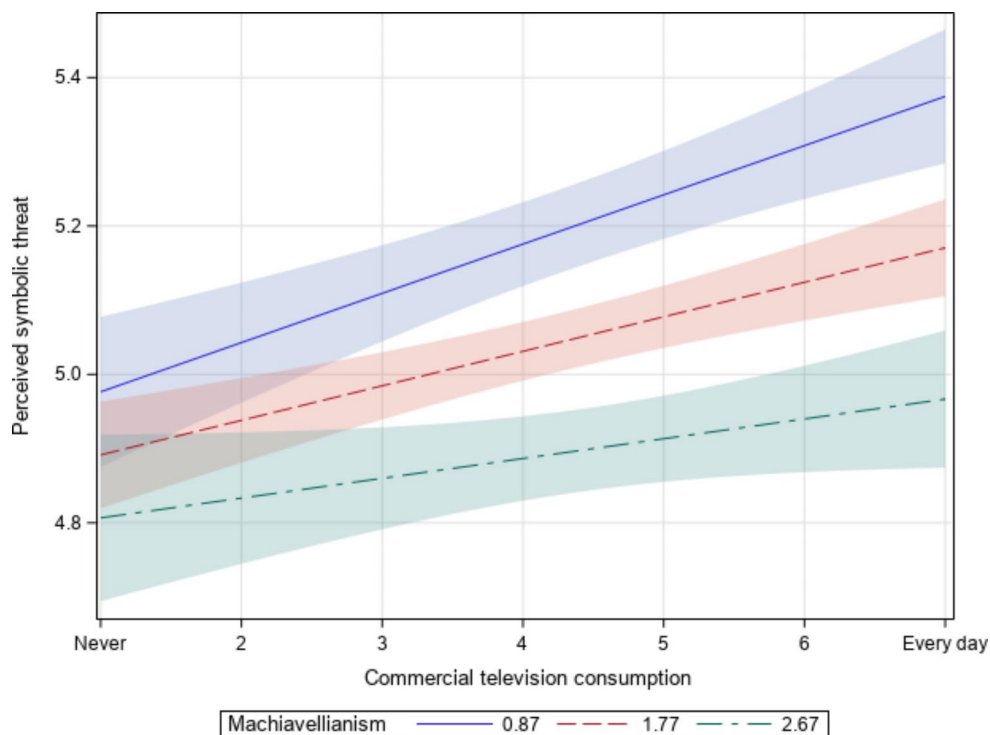
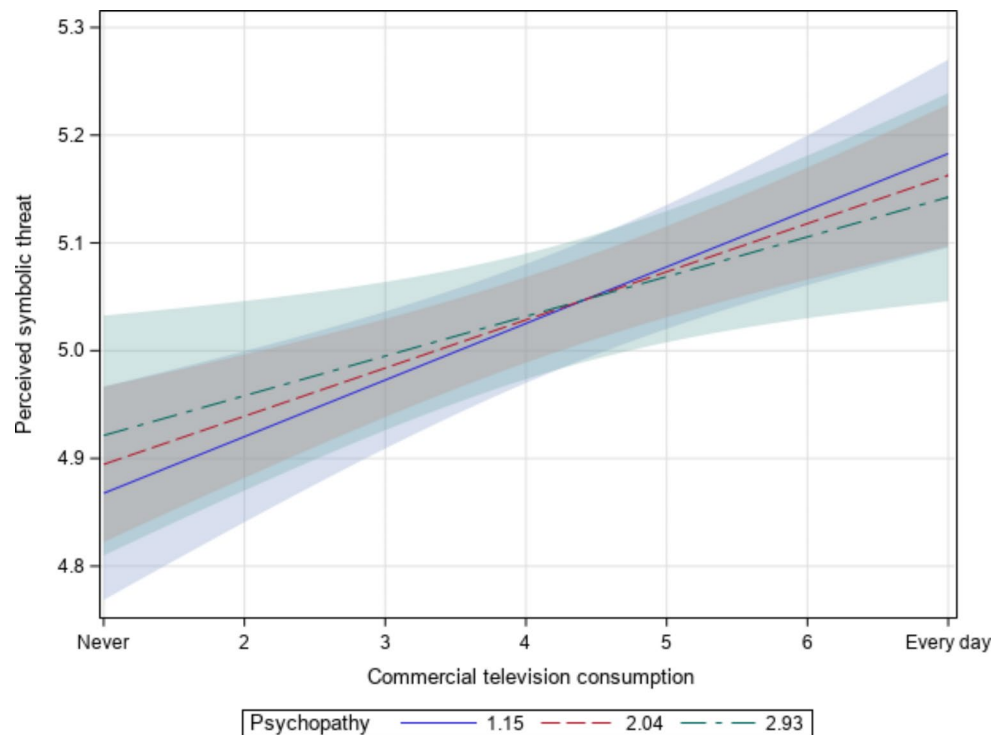


Fig. 3 Interaction between psychopathy and commercial television consumption on perceived symbolic threat

Note: Red line = mean; blue and green lines are M-1SD and M+1SD respectively



2015), which could lead them to perceive threats as less relevant or applicable to themselves. This may contribute to a lower level of perceived threat in certain situations. Narcissistic individuals may also engage in defensive mechanisms such as denial or self-enhancement bias to protect their fragile self-esteem (Zemojtel-Piotrowska et al., 2021). These defensive strategies may influence their perception of threats, leading to a tendency to downplay or dismiss potential threats that could challenge them.

Furthermore, Machiavellian individuals are known for their ability to maintain emotional detachment and rational thinking, even in potentially threatening situations (Zeigler-Hill & Marcus, 2016). This emotional resilience and strategic mindset may contribute to their lower perception of threat when encountering refugees or considering migration-related issues. They may view these situations as opportunities for manipulation, negotiation, or personal advancement, rather than perceiving them as threatening or detrimental to their interests. Additionally, Machiavellian individuals are characterized by their focus on self-interest and personal gain. Their primary concern is their own success and well-being, often disregarding moral or ethical considerations. In the context of migration, they may perceive refugees as potential resources or tools that can be exploited for their own benefit, rather than as threats to their own well-being or the stability of society.

The Dark Triad as moderator of television news consumption

The findings of the moderation analysis (RQ2) shed light on the role of the Dark triad in shaping the relationship between television news media exposure and perceived threat. Perhaps surprisingly, the positive link between commercial television consumption and perceived realistic and symbolic threat was weaker (or even non-existent) for individuals scoring high on Machiavellianism and psychopathy. Although commercial news presents a sensationalized view of migrants and emphasizes the threats they pose (Meltzer et al., 2017), Machiavellian individuals are characterized by their focus on self-interest and personal gain (Furnham et al., 2013). Their primary concern is their own success and well-being, often disregarding moral or ethical considerations. In the context of migration, they may perceive refugees as potential resources or tools that can be exploited for their own benefit, rather than as threats to their own well-being or the stability of society.

Our final note on the moderation reflects on those effects that were not found: interactions with public service news. This focus of commercial networks on dramatic narratives and fear-inducing stories may resonate more strongly with individuals high in Dark Triad traits, who may be more susceptible to feelings of threat and have a tendency to engage with content that aligns with their pre-existing biases or negative attitudes (Jonason et al., 2015). The content of public service news may be less sensationalized and more focused

on presenting diverse perspectives and promoting understanding (Jacobs et al., 2016). This approach may result in a weaker interaction between Dark Triad traits and public service news consumption, as the content may not evoke the same level of emotional response or reinforce pre-existing biases (Appel et al., 2019). It is possible that individuals high in Dark Triad traits may not find public service news as appealing or engaging, leading to a weaker (or in this case, non-existent) moderation effect on perceived refugee threat.

Research and policy implications

The findings of this study have several important research and policy implications, particularly in the context of understanding the role of media consumption and personality traits in shaping perceptions of threat and attitudes towards refugees. As public television news consumption was linked to lower perceived threat, while commercial news consumption was associated with higher perceived threat, there is a need for media literacy initiatives to help individuals critically assess the information they receive from various media outlets. Public awareness campaigns that highlight media biases, sensationalism, and the framing of migration issues could empower people to make more informed judgments about news content (Eberl et al., 2018; Meltzer et al., 2017). Media literacy programs could also emphasize the importance of diversifying media sources to obtain a more balanced and comprehensive understanding of complex social issues like immigration and refugee crises (Coninck et al., 2022b). Furthermore, given the influence of media consumption on perceived threat, media regulation bodies and news organizations should be encouraged to uphold ethical reporting standards when covering migration and refugee-related issues. Sensationalism and fear-based reporting may contribute to the exacerbation of negative perceptions and attitudes towards refugees (Brewer & Gross, 2010; Entman, 2007). Encouraging responsible journalism that presents a balanced and accurate portrayal of migration can contribute to a more informed public discourse and promote a constructive narrative around refugees and migration.

This study's focus on the Dark Triad personality traits provides valuable insights into how certain personality characteristics can interact with media consumption to shape perceived threat. Policymakers and researchers should consider these individual differences when designing interventions aimed at promoting positive attitudes and reducing prejudice towards refugees. Understanding the mechanisms that underpin the attitudes of individuals high in Machiavellianism, psychopathy, and narcissism can help tailor communication strategies to address specific challenges posed by these personality traits, for example through empathy-driven messaging, appealing to individuals' self-interest,

addressing existing insecurities, or counteracting misinformation and fear-based reporting (Appel et al., 2019; Zemojtel-Piotrowska et al., 2021).

Limitations

Although this study presents novel findings, we are also aware of some limitations. Our findings are based on a specific sample of adults from six European countries, which may limit the generalizability of the results to other populations or regions. The demographic composition, cultural factors, and migration experiences within the sample may influence the observed relationships, and caution should be exercised when extending the findings to different contexts. Furthermore, the study utilizes a cross-sectional design, which captures data at a single point in time. This limits the ability to establish causal relationships between variables and only provides a snapshot of the associations observed. Longitudinal or experimental designs would offer stronger evidence for understanding the temporal dynamics and directionality of the relationships studied. With regards to more substantive limitations, we also focus specifically on the Dark Triad personality traits (Machiavellianism, psychopathy, and narcissism) as moderators of media effects. However, there are other relevant personality traits that could potentially play a role in shaping perceived threat or interacting with media consumption, such as the Big Five or HEXACO personality model (Talay & De Coninck, 2020). The omission of these traits may limit the comprehensiveness of the analysis. Additionally, while we examine the association between television news use on perceived threat, it does not account for the diverse media landscape and evolving media consumption patterns (Eberl et al., 2018). The effects observed may not fully capture the broader range of media sources and platforms individuals engage with, including digital and social media, which have gained prominence in recent years.

Conclusion

In conclusion, this study delved into the intricate relationship between traditional media use, personality traits, and perceived threat towards refugees. By examining a diverse sample from six European countries, the findings shed light on the moderating role of Dark Triad personality traits in the influence of television news consumption. The results reinforced previous research by demonstrating that public television news consumption was associated with lower perceived threat, while commercial news consumption showed the opposite association. These effects can be attributed to the divergent framing of migration in news media, with public

outlets emphasizing compassion and integration potential, and commercial outlets leaning towards sensationalism and fear-inducing narratives. We also provided intriguing insights into the impact of Dark Triad traits, with psychopathy showing a positive association with perceived threat, while Machiavellianism and narcissism exhibited a negative association. Notably, the positive relationship between commercial news consumption and perceived threat weakened among individuals scoring high in Machiavellianism, suggesting a strategic perspective where refugees are viewed as potential resources. Importantly, the study revealed no moderation effect of Dark Triad traits on public service news consumption, suggesting a weaker influence of such news on threat perceptions. Future research should adopt longitudinal or experimental designs and explore additional personality factors and media platforms to provide a more comprehensive understanding of these complex dynamics.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s12144-023-05202-y>.

Acknowledgements This research was supported by funding from the European Union's Horizon 2020 Research and Innovation Programme under grant agreement No 870661 (HumMingBird) and grant agreement No 101004945 (OPPORTUNITIES).

Author Contribution David De Coninck: Conceptualization, Methodology, Investigation, Formal analysis, Writing - original draft, Writing - review & editing. Manou Swinnen: Writing - review & editing.

Funding Open Access funding enabled and organized by Projekt DEAL.

Data Availability The dataset associated with this study can be found in De Coninck et al. (2021).

Declarations

Conflict of interest The authors declare no potential conflicts of interest.

Ethical approval The study was approved by the KU Leuven Social and Societal Ethics Committee (case number (G-2020-2590).

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