





Petition letters by ordinary Croats in favor of Jews in the Independent State of Croatia (1941–1945): a linguistic analysis

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Aim: To test the hypothesis that Croats petitioned authorities more frequently on behalf of Jews of higher socioeconomic status in the Axis-aligned Independent State of Croatia (*Nezavisna Država Hrvatska*) during World War II. The hypothesis is based on studies from other societies under Nazi influence.

Methods: We analyzed the linguistic characteristics of 83 petition letters from the Croatian State Archives and the United States Holocaust Memorial Museum using the Linguistic Inquiry and Word Count (LIWC) software and conducted text mining using ChatGPT, an artificial intelligence (AI) tool. We also examined the differences in the writing style of the petitions on behalf of Jews of different professions and bias in petitioning for Jews with whom the petitioners shared professional interests.

Results: The most frequent argument was the Jews' Croatian patriotism, as evidenced in 69% of the petitions. Petition argumentation and language style did not differ significantly with the profession of the Jews for whom they were written. Signatories from various professions petitioned equally for Jews from a wide range of professional backgrounds. For instance, individuals from higher economic sectors (e.g. lawyers, artists) wrote not only for Jews in similar professional fields, but also for those in lower economic sectors (e.g. industry workers). Linguistic analysis showed no significant differences in the psychological and social dimensions measured by LIWC, nor in its four summary measures (Analytic, Clout, Authentic, Tone). The number of signatories was independent of the petition's origin (urban or rural).

Conclusions: Contrary to patterns observed in other societies under Nazi influence, these 83 petition letters suggest that Croats intervened for Jews regardless of their profession, demonstrating acceptance and inclusivity. This is the first quantitative analysis of petition letters on behalf of Jews during the Holocaust and provides a foundation for further research on this topic.

Keywords: petition letters; ordinary citizens; Croats; Jews; profession



Introduction

Citizens living under dictatorships or totalitarian regimes often petition authorities on behalf of persecuted minorities in their midst. Such petitions were not only aimed at protecting the safety of fellow citizens, but also served as a symbolic form of civil solidarity and a way to press the authorities for motives in their actions.

We find examples of this phenomenon in various regimes. For example, Sheila Fitzpatrick (1) explored a variety of public letters written by ordinary Russians to the Soviet authorities in the 1930s. Among other things, the petitioners pled for amnesty or reinstatement of civil rights. The practice was present also in the 1940s and the 1950s. According to Vladimir A. Kozlov (2), it was "the instrument of backchannel communication in Russia".

Sending petition letters to the authorities was likewise one of the resistance methods to the Nazi authorities and their allies during the 1930s and 1940s. Jews and their organizations sent petitions to exempt themselves from or protest against antisemitic measures (3). In some cases, non-Jews sent petitions in favor of their Jewish fellow citizens, such as in the Nazi protectorate Bohemia and Moravia (4) and in Romania (5). We find such examples in the Independent State of Croatia (*Nezavisna Država Hrvatska* (NDH)) as well, which comprised parts of today's Republic of Croatia and Bosnia and Herzegovina (6–10). In our previous study, we examined the arguments the senders of 80 petition letters used in favor of Jews (11). They were divided into six categories, based on their content: 1) Jews who contributed to Croatian economy; 2) Jews who were good employers to Croatian girls and women who worked in their households; 3) Jews who helped Croats financially/Jews who were in financial difficulties; 4) Jews who were Croatian patriots; 5) Jews who promoted Croatian culture; 6) miscellaneous category that could not be classified by the aforementioned criteria, but which still spoke in favor of patriotism and benevolence of Jews in Croatia (contained two or more aforementioned arguments).

All studies on petitions were qualitative and descriptive in design – an approach that is still dominant in historiography. However, some studies have used quantitative approaches based on linguistic tools and statistical analyses to examine topics from contemporary historiography. For example, Landry et al. (12) conducted a linguistic analysis of the mental state language in Nazi propaganda from 1927 to 1945 using the Mind Perception Dictionary, a psycholinguistic tool developed for the Linguistic Inquiry Word Count (LIWC) software and Moral Foundations Dictionary which captured "moral sentiments in natural language". The authors examined the dehumanization of Jews in Nazi propaganda and showed that "Jews were progressively denied the capacity for fundamentally human mental experiences leading up to the Holocaust. Given that the recognition of another's mental experience promotes moral concern, these results are consistent with the theory that dehumanization facilitates violence by disengaging moral concern" (12). Another study investigated "the concomitant nature of morality and out-group hate as it occurs in language", hypothesizing that out-group hate and morality are concomitant in language, i.e., that the act of verbalizing hatred towards another group of people (and their identity) has a moral component (13). As their theoretical framework, the authors used the Moral Foundations Theory - "a descriptive account of human morality" (14) - to analyze the English translations of Nazi speeches and other propaganda from 1933 to 1945, as well as



Adolf Hilter's Mein Kampf. Lists of terms were compiled and sentences categorized based on whether they had an in-group reference (e.g. "Germany"), an out-group reference (e.g. "Jewish"), neither, or both. The study showed that Nazi texts were "heavily moral" in comparison to more neutral texts, such as those from Wikipedia, and that "purity" was prevalent in language that contained references to the out-group (i.e. Jews), while "fairness", "authority", and "loyalty" language was prevalent in language that referenced the Nazi in-group (13).

This study is a follow-up to our prior qualitative content analysis of 80 petition letters (11). We analyzed the language used in the petition letters by ordinary Croatian citizens (ordinary Croats) in favor of their Jewish fellow citizens. By "ordinary", we mean citizens without official power (1) "from all walks of life" (8), and by "Croats", we mean the citizens of Croatian ethnicity. Specifically, we aimed to examine what argument was dominant in most petitions; if a profession of Jews on whose behalf the petitions had been written was a predictor for those petitions, i.e. if the language in the petitions differed with regard to Jews' professions; and whether there was there any correlation between the signatories' and Jews' profession – for example, if musicians, artists, scholars and managers intervened more for Jews of the same professions than for ploughmen or industry workers.

Methods

We aimed to investigate the linguistic, structural, and contextual characteristics of petitions advocating for Jewish individuals in NDH during World War II, and to determine whether these characteristics were influenced by the professions of the Jews on whose behalf the petitions were written. To achieve this, we combined quantitative linguistic analysis with advanced artificial intelligence-driven text mining.

We classified profession according to economic sector, defined as "an area of the economy in which businesses share the same or related business activity, product, or service" (15). In our data set, we found professions from four economic sectors – ploughmen (primary economic sector), industry workers (second economic sector), doctors and lawyers (tertiary economic sector), and company owners, musicians, and artists (tertiary economic sector).

Data sources

The dataset comprised 83 petition letters retrieved from two archives. Eighty were obtained from historian Esther Gitman, who made copies of the original petitions, most of which came from the Croatian State Archives (*Hrvatski državni arhiv*, HDA), while a small portion was found in the United States Holocaust Memorial Museum (11). The remaining three petitions were provided by historians Naida Michal Brandl and Nikica Barić, also from the HDA collection.

For analysis, we adapted the original six categories from our previous study (11) and created five categories based on the argumentation that signatories presented in their petition letters. The five categories include:



- Category 1 Jews who contributed to the Croatian economy;
- Category 2 Jews who were good employers to Croatian girls and women who worked in their households;
- Category 3 Jews who provided financial help to Croats;
- Category 4 Jews who were in financial difficulties;
- Category 5 Jews who were Croatian patriots and contributed to Croatian culture.

The scans of all petition letters, categorized in the original six categories, are available in the Open Science Framework (OSF) repository (16).

LIWC analysis

We used LIWC-22, a text analytics tool that consists of software and a dictionary, i.e. "a map that connects important psychological constructs and theories with words, phrases, and other linguistic constructions" (17). Prior to the analysis itself, two authors (MP and APP) translated the petitions into English (17).

We used four default LIWC categories: "Analytic", which represents logical and formal thinking, with higher scores indicating a more formal style (18); "Clout", which represents the language of leadership, with higher scores reflecting confidence and lower scores a more humble writing (18); "Authentic", which measures honesty and genuineness, with higher scores suggesting more honest and personal writing style and lower scores a more guarded or distanced one (18); and "Tone", which stands for degree of positive (negative) tone – where higher scores correspond to a more positive tone (18, 19). In addition, we selected the LIWC categories "Drives", "Social", and "Time orientation" to better understand the reasons for petition submission, the level of social engagement, and perceptions of the signatories regarding the role of the Jews on whose behalf the petitions were written within Croatian society. The category "Drives" provides insights into the motives of the signatories, i.e. the need for affiliation with other individuals or groups, the need for achievement and self-actualization, and the need for power or domination. Higher scores suggest stronger affiliation with others and groups, as well as a greater need for achievement and power (20). The category "Social" denotes social engagement and is "associated with awareness of other people", with higher scores signifying greater social focus and a heightened awareness of other people (20). Finally, "Time orientation" category contains past focus, present focus, and future focus, and shows how the petition authors and signatories described the role of Jews in Croatia in the past how they perceived it for their present time, i.e. in the time when the petitions were written, and how they anticipated it for the future (20). Scores greater than zero in this category suggest referencing the past, present, or future (20).

Large language model (LLM) text analysis

We opted to use a LLM for more detailed data extraction. These models are based on deep learning techniques, enabling them to process text with a high level of contextual understanding (21). We used ChatGPT based on GPT-4 technology (22) to organize the data into



a table, with the first column listing the names of the Jewish individuals for whom the petitions were written, the second column summarizing the arguments that highlight their positive qualities, and the third column providing these arguments in more detail.

We uploaded two documents at a time, prompting ChatGPT as follows:

I will upload two petition letters written by ordinary citizens to the authorities of totalitarian regimes. These petitions aimed to secure protection for Jewish individuals whose lives were in danger. Please analyze the letters and provide a list of the most frequently used descriptions or arguments presented to highlight the positive qualities of those seeking protection. Create a table where each row corresponds to a petition and each column represents a specific argument or description.

Two authors (APP and AM) independently verified the data extraction on 20% of the petitions, ensuring the accuracy and consistency of the obtained text.

Statistical analysis

We conducted a Mann-Whitney U test to determine whether the language style in the petition letters varied based on the profession of Jewish individuals. For analysis, we used 25 petition letters that contained complete data regarding the signatories' and Jews' professions. If they contained more than one profession from different sectors, we chose the dominant sector. The other 58 petition letters did not contain any professions, only contained the professions of the signatories or those of the Jews, or were illegible. We used Spearman's correlation test to examine the correlation of signatories' and receivers' professions. All statistical analyses were done in JASP, Version 0.14.1. (23) and Python, version 3.8.19 (24).

Results

Petition categories

We found the highest number of petition letters for Category 5 "Jews who were Croatian patriots and contributed to Croatian culture" (n=57), followed by Category 3 "Jews who provided financial help to Croats" (n=20) and Category 4 "Jews who were in financial difficulties" (n=20), Category 1 "Jews who contributed to Croatian economy" (n=12), and Category 2 "Jews who were good employers to Croatian girls and women who worked in their households" (n=3) (Table 1).

Arguments the petitioners used usually highlighted certain qualities of Jews on whose behalf the petitions were written. Category 1, for example, contained words and phrases that showed the professional qualities of Jews on whose behalf they had been written, with the most frequent words being "expert" (n=6), followed by "indispensable" (n=4) and "honest" (n=4). Category 3 mainly emphasized the human qualities of Jews for whom the petitioners intervened, as they were presented as benefactors and persons who in different ways helped Croats. In contrast to Category 1, this category contains more diverse words and phrases and their repetition is not that frequent. Words "just, "honest" and



Category 1 Jews who contributed to ecor	nomy 12 (14.5)
Nost frequent descriptions* honest, diligent and conscientious worker, very skillful in his profession indispensable for the factory the only expert indispensable (n = 3) good and honest friend	 handy merchant capable merchant handy merchant honest and a correct merchant exemplary leader expert (n = 3) 	 great expert (n = 2) fair employer run their store honestly their trade was very beneficial for this region honest family
Category 2 Jews who were good employed women who worked in their h		.0)
Most frequent descriptions*	Duscilolus	
a perfectly good person a handy merchant (n = 2)	a capable merchantan honest and a correct merchant	
Category 3 Jews who provided financial h	nelp to Croats 20 (24.1)
Nost frequent descriptions*		
sincere friend loyal comrade benefactor honest work honest man just citizen just, diligent and reliable employee	 fine and honest man great benefactor very conscientious, humane and socially sensitive political probity, humanity, and social sensitivity for the sake of philanthropy 	 his unselfish deeds a benefactor helping to the poor peasants support for the Croatian peasantry indispensable earned in an appropriate way great benefit for the local peasantry
Category 4 Jews who were in financial di	fficulties 20.0	24.1)
Nost frequent descriptions*	20 (24.1)
they can barely survive poor family live entirely from his earnings own no property (n = 2) sound and impeccable modest life has no capital money	 the only breadwinner a 100% disabled person poor people live modestly an average monthly income an ill man incapable of any physical work 	 poor our only income is an official's salary own no property had no property in bad health
Category 5 Jews who were Croatian patri	ots and contributed to Croatian culture 57 (68.7)
Most frequent descriptions* a representative of Croatian (national)	,	- a harmless and guiltless factor of our
goals pro-Croatian political orientation a fair citizen a friend of Croatian workers and peasantry a Croatian patriot (n = 3) a true Croat (n = 3) a supporter of Croatian people a determined, unshakable Croat compassionate strong national feelings for Croatia affiliation to Croatian people an exemplary Croat has distinguished himself with bravery helped all Croatian societies and charities Croatianhood loyal Croats just and impeccable a just and honorable man who is respected loyal to his living environment a worthy, just and reliable person impeccable constructive attentive to our people	 fine Croats Croatian sentiment a fine Croat (n = 2) -loving people full of respect for anything Croatian supporter of the Croatian cause and national interests a fine colleague fine, honest and conscientious artistic worlder fine and correct honorable work impeccable big friend humanitarian work lives an exemplary Catholic life worthy parishioners professionalism and honest work supported actively, morally and materially only the Croatian idea a fine and a firm Croat a fine Croatian a humble, low-level official a decent citizen love for Croatia a patriot 	 has been helping every Croatian matter morally and financially convert to Catholicism gentleman an honest Croat a fine and honest Croat my good friend baptized

Total 83 (100.0)



^{*}Some words and phrases were written more than once in certain petition letters, as indicated in the parenthesis.

"benefactor" were stated more than once. Category 4 mostly related to the difficult financial situation of those Jews on whose behalf they sent the petitions, while some petitions even mentioned their health problems ("old", "paralyzed," "incapable", "ill", etc.). One of the most frequent phrases was that those Jews on whose behalf they intervened "had no property"; the word "poor" was also mentioned four times. Category 5 predominantly emphasized their patriotism. Since 68.7% of petitions from Category 5 included the argument that Jews were Croatian patriots, the most frequent words and phrases were "fine Croats" (in some cases "a fine and firm" and "a fine and honest") (n=8), "a true Croat" or "true Croats" (n=4) and "a Croatian patriot" (n=3) (Table 1).

Some petitions contained a single signature, whereas others had multiple or even more than one hundred signatures. The majority of the petition letters were sent from cities, namely the capital city of Zagreb, and the majority of petitions contained more than one signature. There was no difference in the number of signatures with regard to the signatories' location. However, petition letters sent from villages usually contained more multiple than individual signatures, with 69.2% containing more than 10 signatures (Table 2).

Table 2. Signatures in	petitions with regard to	locations of the signatories

Location	Petitions, n (%)	Petitions with one signature, n (%)	Petitions with 2–10 signatures, n (%)	Petitions with more than 10 signatures, n (%)
City	54 (65.1)	19 (35.2)	18 (33.3)	16 (29.6)
Town	15 (18.1)	6 (40.0)	4 (26.7)	5 (33.3)
Village	13 (15.7)	4 (30.7)	0 (0)	9 (69.2)
Unknown	1 (1.2)	-	1 (1.0)	-
Total	83 (100.0)			

LIWC analysis

The petition letters had high analytic and clout scores overall, indicating predominantly formal and confident language, with a moderate focus on social engagement and motivation. The content of the petitions focused more on the past and present than on the future, with a relatively low emphasis on personal authenticity and social affiliation. The tone was predominantly neutral to slightly positive. Themes of achievement and power were present, but not overwhelmingly prominent (Table 3).

The results suggest that the Jews' professions had little to no impact on the language the petition authors and signatories used in the variables analyzed. For example, there were no significant differences between the petition letters for Jews in higher economic sectors (e.g. doctors, lawyers, company owners, musicians, and artists) and those in lower economic sectors (e.g. ploughmen, innkeepers, industry workers, clerks, etc.). There was also no significant difference in motives that led the ordinary citizens to write and send these petitions. Additionally, social processes (representing social behaviors and social referents) and time orientation (focus on past, present, or future) were also not significantly influenced by the professions of the Jews mentioned in the petitions (Table 3).



Table 3. LIWC categories (median, 95% confidence interval) and economic sector of Jews

	Profession of the Jew in the petition*			
Category	Total (n = 83)	Lower economic sector (n = 11)	Higher economic sector (n = 40)	<i>P</i> -value†
Analytic	78.59 (69.18-78.56)	81.67 (63.57-91.85)	82.71 (70.99-87.55)	0.937
Clout	77.10 (61.40-74.11)	83.70 (38.14-98.52)	79.94 (70.96-89.65)	0.882
Authentic	10.18 (15.53-25.68)	11.24 (4.78-42.69)	8.95 (4.57-11.82)	0.326
Tone	54.08 (49.35-60.06)	52.86 (29.46-65.86)	60.85 (44.25-70.91)	0.331
Drives	8.11 (7.57-8.87)	8.53 (6.43-9.36)	8.42 (7.25-9.17)	0.976
Affiliation	3.06 (2.96-4.12)	2.33 (1.71-4.76)	3.07 (2.73-3.89)	0.405
Achieve	1.26 (1.21-1.69)	1.71 (0.79-2.86)	1.55 (0.91-2.12)	0.585
Power	3.23 (3.05-3.74)	4.11 (3.10-5.06)	3.24 (2.72-3.54)	0.102
Social	13.79 (13.12-15.10)	14.73 (10.53-16.89)	13.79 (12.70-14.93)	0.858
Time orientation				
Focus past	3.99 (3.62-4.52)	3.88 (2.50-5.63)	4.35 (3.70-5.05)	0.655
Focus present	3.40 (3.24-4.00)	3.48 (2.74-5.26)	3.09 (2.71-3.64)	0.451
Focus future	0.35 (0.44-0.81)	0.38 (0.00-0.68)	0.00 (0.00-0.43)	0.464

^{*}We categorized professions into four economic sectors, grouping the primary and secondary sectors as "lower economic sectors" and the tertiary and quaternary sectors as "higher economic sectors." †Mann-Whitnev test.

Spearman's correlation test

Furthermore, we analyzed whether the profession of the signatories was associated with the profession of the Jews on whose behalf the petitions were written. The Spearman's correlation coefficient between the signatories' and receivers' professions was 0.334 (P=0.103), suggesting that profession alignment between signatories and receivers was not a determining factor in petition writing.

We found that signatories from the secondary economic sector (industry) wrote petitions on behalf of Jews across the secondary, tertiary, and quaternary sectors; those from the tertiary economic sector predominately wrote for Jews within the same sector; and those from the quaternary economic sector wrote equally for Jews of secondary, tertiary, and quaternary economic sectors. For instance, several Croatian academic painters and sculptors, some of whom were known Ustashas, signed a petition for Fanika Gewoelb, an employee in an art studio (Figure 1).

LLM text analysis results

In this step, we organized the data into a table detailing the arguments and justifications presented in each petition. The analysis confirmed that ordinary citizens emphasized the personal qualities of Jewish individuals in order to persuade authorities to exempt them from antisemitic measures. These qualities ranged from personal character and family responsibilities to professional or artistic contributions. A sample of this analysis is shown in **Table 4**, whereas the full table is available on the OSF (16).



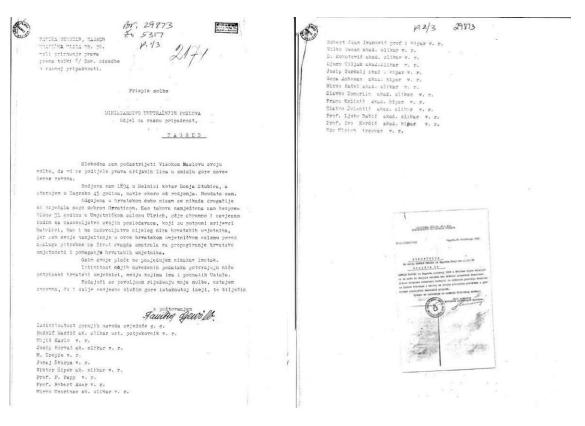


Figure 1. Petition letter from Croatian artists on behalf of Fanika Gewoelb. Category 5 in this study; document no. 30 in "Miscellaneous Category" in OSF (16).

Table 4. Arguments and justifications in petitions for Jews*

Person and profes- sion in petition	Argument	Explanation
RK (engineer)	Employer's character	Described as a good, honest friend, supportive in good and bad times.
	Financial support	Provided earnings even during bad business periods.
	Operational necessity	Essential for workshop operations as the manager, preventing stoppage and financial hardship for workers.
	Worker endorsement	Petition signed by officialdom and workers, willing to confirm statements orally.
JK (unknown profession)	Employee loyalty	Declaration from a loyal female employee willing to stay in his service.
	Character witness	Described as a perfectly good person by the employee, with no fear of violating the law.
BŠ (small shop owner)	Family support	Supports her old and paralyzed mother and her incapable brother; requests to keep her small shop running without a commissioner to ensure survival.
AG (actor)	Artistic contribution	Loyal member of Croatian Actors' Association; celebrated 25 years of honest and conscientious artistic work, contributing significantly to Croatian theatre.

^{*}Text analysis was conducted using ChatGPT (22).



Discussion

In our previous study (11), we examined the content of petition letters Croats sent to the NDH authorities in favor of their fellow Jews and concluded that the main argument was their Croatian patriotism, followed by the charitable support of Croats in financial difficulties and professional contributions to Croatian economy. This study confirmed these findings. The majority of petitions contained words such as "Croat" and "Croatian" and phrases "true Croats", "fine Croats", and "Croatian patriots". According to previous studies, the argument that Jews were patriots was also one of the most frequent arguments in other European countries where the petitions were sent (3, 4, 7, 8). As shown by Gitman (7, 8) and our previous study (11), the content of the petition letters sharply contrasted the official state antisemitic propaganda. One of the indicators is that arguments used in certain petitions often contained words such as "honest", "just", "loyal", "benefactor" etc., as opposed to official regime propaganda that depicted Jews as "exploiters" and "enemies" of Croatian state and culture (11). Here we also found no difference in the number of signatures with regard to the signatories' location, i.e. whether they were sent from cities, towns, or villages.

There were no differences in the language and writing style for those Jews of lower or higher economic sector. This means that the language in the petition letters exhibited the same level of logical and formal thinking, leadership, honesty and genuineness, and positive tone for those Jews of lower as it did for those in the higher economic sector and, therefore, a higher social background. In other words, the authors and signatories of petitions in NDH sent the petitions to the authorities regardless of the Jews' social status. We further found that no correlation between the professions of signatories and that of Jews. These results differ from findings from other studies. For example, Frommer (4), who examined the petitions from Nazi protectorate Bohemia and Moravia, found that Jews on whose behalf the petitions were sent were of higher financial status and social background.

Our study also showed that the motives for writing and sending the petitions did not depend on the profession of the Jews for whom the petitions were sent. Fifteen (17.5%) petitions (Categories 1 and 3) were sent due to existential reasons of Croats whose economic future was intertwined with the Jews on whose behalf they sent the petitions. However, some petitions were sent because of the ordinary Croats' sympathy for and willingness to help their Jewish fellow citizens (11). This is evident from the fact that 20 (24.1%) petition letters were written and sent for Jews who were in financial difficulties, with some even being in debt. We also argue that it is possible that sympathy for their Jewish fellow citizens could be the main motive behind the petitions from Category 5, as the main argument presented there was the Jew's patriotism and contribution to Croatian national interests.

The main limitation of this paper is the number of petition letters we used. While there are 412 petition letters in HDA in total (8), we had only 83 at our disposal. Nevertheless, this study can provide a basis for further research on this topic. Another 329 petitions need to be uncovered in HDA for future analyses (8).



Conclusions

Our study showed that ordinary Croats did not intervene with the Ustasha authorities during World War II only for more prominent Jews of higher economic and social backgrounds, but also for those Jews with financial difficulties. As the first quantitative analysis of petition letters sent in favor of Jews during the Holocaust, this study opens the door for further research of Holocaust studies and contemporary history in general.

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Declaration of AI and AI-assisted technologies in the writing process: During the preparation of this work, AM used ChatGPT to automatically extract the arguments and explanations from 83 petitions (**Table 1**). After using this tool/service, APP and AM reviewed and edited the content independently and take full responsibility for the content of the publication.

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