

The Impact of Democracy on People's Well-Being through Enhanced Autonomy: Findings from Three Cross-National Surveys

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Statements and Declarations

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**The Impact of Democracy on People's Well-Being through Enhanced Autonomy:
Findings from Three Cross-National Surveys**

Abstract

Aim. Although previous research has shown that citizens of democratic nations tend to report higher well-being, the psychological mechanisms underlying this association remain insufficiently understood. Guided by Self-Determination Theory, the present study examined whether democratic functioning enhances well-being in part through the satisfaction of autonomy, a basic psychological need. We distinguished between objective democratic functioning, as captured by standardized democracy indices, and individuals' subjective perceptions of living in a democracy.

Methods. Data were drawn from three large-scale cross-national surveys. We tested the explanatory role of autonomy at three levels: between individuals (Study 1, 28 countries), between countries (Study 2, 33 countries), and within-country change over time (Study 3, 92 countries).

Results. Between individuals, between nations and within nations across time, perceived democratic functioning was consistently associated with greater well-being and lower ill-being via enhanced autonomy. In addition, we found that these subjective perceptions only partially aligned with countries' objective democracy scores across continents.

Conclusion. Findings underscore that the subjective experience of democratic functioning, more than objective democratic conditions, is crucial for supporting autonomy and, in turn, mental health. Implications are discussed in terms of how democratic governance is experienced across nations, alongside study limitations and directions for future research.

Keywords: Democracy, Autonomy, Well-Being, Cross-national, Self-Determination Theory

Transparency Statement

We adhered to the Transparency and Openness Promotion (TOP) Guidelines as outlined in the journal's Instructions to Authors. The materials and data that support the findings of this research (i.e., preliminary study, Study 1, Study 2, Study 3) are available at <https://osf.io/abxv8>. The analysis scripts (in R) used to process and analyze the data are provided. The preliminary study was reviewed and approved by the Australian Catholic University under approval number 3822. No part of the other studies was formally reviewed or approved by an institutional review board as the data are partly based on secondary analysis of publicly available, anonymized survey datasets. None of the reported studies were preregistered. We report all measures, conditions, data exclusions (if any), and how we determined our sample sizes.

In recent years, democracies around the world have come under increasing strain. From the erosion of civil liberties and the weakening of democratic institutions to the rise of populism and authoritarianism, a growing number of countries are experiencing democratic backsliding (Freedom House, 2024). While the political and economic consequences of these developments are well-documented (Doucouliagos & Ulubaşoğlu, 2008), far less is known about their psychological implications. Although a substantial body of research suggests that democratic governance is positively associated with citizens' well-being (e.g., Altman et al., 2017; Besley & Kudamatsu, 2006; Loubser & Steenekamp, 2017; Orviska et al., 2014), this relationship is not uniform across contexts. In particular, prior work indicates that the benefits of democracy may be weaker in economically less developed countries, where effective governance and the provision of basic resources may be more critical determinants of well-being (Ott, 2010). These mixed findings raise an important question, that is, through which psychological mechanisms do democracy contribute to well-being?

To address this gap in the literature, the present research draws on Self-Determination Theory (SDT; Ryan & Deci, 2017) which posits that all humans share three basic psychological needs (i.e., autonomy, competence, and relatedness) that are essential for psychological growth and well-being. Among these, autonomy, or the experience of volition, authenticity, choice, and psychological freedom, is particularly relevant when considering political environments. Specifically, autonomy is supported when individuals feel that their actions are self-endorsed and free from coercion, while it is undermined when they feel controlled, pressured, or silenced.

A wealth of research has demonstrated that autonomy-supportive environments, such as those created by parents, teachers, and workplace leaders, consistently foster well-being, engagement, and vitality (Bradshaw et al., 2025; Howard et al., 2021; Slemp et al., 2018). These findings are broadly observed across cultures and contexts (Ryan et al., 2022; Slemp et al., 2024), underscoring the widespread relevance of autonomy for human flourishing. Moreover, autonomy has been shown to predict well-being across the globe, although its impact may be somewhat more pronounced in more individualistic and economically developed societies (Li et al., 2025; Martela et al., 2026) where capabilities and autonomy

can have more instrumental value (Sen, 1999). At the same time, in line with a universality-without-uniformity perspective, SDT holds that factors that influence autonomy and well-being may vary across interpersonal and cultural contexts. That is the way in which parents, leaders and authorities are perceived can impact need satisfaction, and the extent to which it can be translated into well-being. Yet, most of the research within SDT has focused on immediate interpersonal contexts. Less attention has been given to how broader societal structures, such as political systems, may serve as more distal, but nonetheless meaningful, environments that support or thwart basic psychological needs (Ryan & DeHaan, 2023).^a

Democratic systems, by design, offer structural affordances for voice, choice, and participation, conditions that may foster experiences of autonomy. In contrast, autocratic systems tend to suppress such opportunities. Accordingly, the extent to which people live in democratic societies may shape their sense of autonomy and, in turn, their well-being. However, while standardized, more ‘objective’ indices can track democratic functioning at the institutional level, the extent to which individuals subjectively perceive their country as democratic may diverge from these standards. It is therefore essential to consider both objective and subjective dimensions of democracy to fully understand its psychological impact. Democratic decline may be evident in official indices but not necessarily experienced as such by citizens, raising the question of whether perceived democracy, rather than institutional democracy per se, is what truly matters for well-being.

The present research takes a multi-level approach to examine these issues. Specifically, we tested whether people’s subjective experience of living in a democracy is associated with greater well-being, potentially through higher autonomy satisfaction. We also investigated whether such subjective experiences align with standardized, objective indicators of democracy at the national level. Three studies address these aims: (1) a *between-person* analysis across 28 countries using perceived democracy and autonomy satisfaction, (2) a *between-nation* analysis across 33 countries using democracy indices and autonomy, and (3) a longitudinal, *within-nation* analysis across 92 countries examining how changes in democratic conditions relate to how it is perceived and both autonomy and well-being over time.

Together, these studies aim to advance our understanding of how political structures, both as they are and as they are perceived, shape core psychological processes central to human flourishing.

Autonomy and Human Flourishing in Self-Determination Theory

Self-Determination Theory (SDT; Ryan & Deci, 2017) proposes that autonomy, competence, and relatedness are basic psychological needs that are essential for people's well-being and flourishing.

Autonomy, the focus of this research, refers to the feeling of volition and self-endorsement in one's actions. When autonomous, individuals experience their behavior as self-endorsed and aligned with their values, reflecting a sense of psychological ownership over what they do (Vansteenkiste et al., 2023).

Autonomy is an important, and perhaps defining, aspect of what makes us human, as well as something instrumental to a flourishing life. As Welzel (2013, p. 41) argues, humans are "distinct from other species on this planet by possessing a higher degree of freedom in choosing their actions. Freedom of choice is, hence, a defining characteristic of what it means to be human." Moreover, it is in exercising autonomy that one forges a life, selecting those activities of value and interest. Thus, SDT assumes that a thriving or actualized human life is one in which there is an experience of choice and self-endorsement of one's actions and lifestyle, resulting in greater vitality and wellness (Ryan et al., 2013).

This general tenet (that conditions supporting autonomy result in greater thriving) has been well-supported by decades of research within the SDT literature. As previously noted, meta-analytic findings have shown that autonomy-supportive conditions within domains such as parenting (Bradshaw et al., 2025), teaching (Howard et al., 2024), and employee management (Slemp et al., 2018) facilitate greater internalization, autonomy, and wellness. Supportive empirical evidence also includes cross-national assessments of well-being. For example, Martela et al. (2022) showed that across 27 European countries, basic need satisfactions, including autonomy, strongly predicted well-being outcomes. Moreover, the importance of personal autonomy to wellness has been shown to generalize across collectivist and individualist cultures (Chen et al., 2015; Chirkov et al., 2003; Slemp et al., 2024; Yu et al., 2018).

Do Governments Impact Autonomy?

A number of thinkers have not only argued that freedom and autonomy are essential to flourishing but that it is the role of societies and governments to protect and enhance that freedom to thrive. Capabilities theorist Sen (1999) argues that we should gauge economic development not in traditional terms of monetary growth, but in terms of expanding “the real freedoms that people enjoy” (p. 36). For him, having instrumental freedoms (e.g., political voice, mobility, civil rights) enhances the capabilities of persons, so they can then pursue that which matters to them and thus enjoy a more fulfilled life. Sen also places an emphasis on democracy as a vehicle for expanding such instrumental freedoms.

Social theorists Doyal and Gough (1991), in their theory of human needs, posited autonomy as a cornerstone of thriving, and a human capacity that “must be sustained and improved” (p. 59). They define autonomy as the capability to formulate and engage in aims and actions one believes are in one’s interest. Yet, they argue that despite its being a fundamental human need, for autonomy “to be a real possibility, individuals must have the opportunity to express *both freedom of agency and political freedom*” (italics original, p. 68), opportunities concerning which governments and societies can vary considerably.

Also congruent with SDT is Welzel’s (2013) framework concerning emancipative values. He argues that humans strive toward greater choice and freedoms whenever they can utilize them, creating an upward pressure on social change. Under governments in which people feel either deprivation or threat, there will be less focus on freedoms, but, Welzel argues, as a society has potential for opportunities, people will seek freedoms to pursue them, and press for greater autonomy, especially as a guarantee or right. This cycle, in turn, supports the further thriving of its citizens.

Taken together, these perspectives converge on the idea that societal structures, and democratic institutions in particular, have the potential to foster autonomy by expanding individuals’ freedoms and opportunities. However, despite these theoretical insights, empirical evidence directly linking macro-level political systems to individuals’ experienced autonomy remains limited.

Why Democracy?

From the perspective of SDT, all forms of government are seen as having strengths and weaknesses in terms of promoting basic psychological need satisfactions. In this sense, the theory is

politically neutral (see Ryan & DeHaan, 2023). However, in this research, we specifically tested the hypothesis that greater democracy, and especially its subjective experience, would generally be associated with greater autonomy, and, in turn, predictive of wellness and flourishing. Why do we look at democracy as facilitating autonomy? It has been argued that democracy typically entails opportunities for people to express themselves via practices like elections and pluralism and to live according to their values while being protected by political rights and civil freedoms (Frey & Stutzer, 2010; Inglehart & Klingemann, 2000). Democratic regimes also usually include elements essential for creating a fair and inclusive society, including freedom of association, expression, religion, and thoughts; the rights to vote, run for public office, campaign, and compete for voter support; access to alternative sources of information; free and fair elections; and institutions that align government policies with citizens' preferences (Dahl, 1971; Welzel, 2013). By directly impacting people's sense of participation, representation, agency, and transparency in the political process, democracy can enhance a sense of autonomy (Ryan & Deci, 2017), with greater well-being and fulfillment as a further result.

While democratic regimes are known to enhance well-being, the psychological mechanisms underlying this association remain underexplored. It is not merely the existence of civil rights and liberties that matter, but more critically, these should impact the lived experiences of people under democratic conditions, thereby influencing their sense of autonomy (Ryan & Deci, 2017; Welzel & Inglehart, 2008). Indeed, according to SDT, an objective situation aligned with need-supportive conditions does not necessarily lead to need satisfaction. The effects of environmental conditions on motivation and wellness are said to be dependent on the 'functional significance' or meaning of these events with respect to basic needs (Deci & Ryan, 1985; Ryan & Deci, 2017). For instance, the effect of rewards on motivation and autonomy depends upon whether the reward is experienced as controlling or as a signal of competence (Reeve & Cheon, 2024).

In the context of democracies, the experience of having a vote in elections may not result in a perceived sense of voice or choice if the options provided are not meaningful or the results are not trusted. Thus, although it should be influenced by a country's objective level of democracy (e.g., Norris, 2011),

within SDT, it is the functional significance of democratic processes that is paramount, and in particular the issue of democratic legitimacy (Ryan & Deci, 2017). This implies that even in highly democratic nations, the functional significance of democratic structures can still undermine autonomy if citizens do not perceive these processes as legitimate (e.g., Altman & Pérez-Liñán, 2002; Levine & Molina, 2011). Conversely, a less democratic regime may not be seen as oppressive to the extent a citizen identifies with its aims, and may even see it as furthering their freedoms. However, we are aware of no research to date that has empirically investigated this reasoning that when citizens perceive their government as legitimately democratic, they are more likely to feel autonomy in their lives.

Overview of the Present Research

The present research investigates how democratic governance relates to citizens' psychological functioning, with a specific focus on the role of autonomy as a basic psychological need. Building on SDT, we aimed to clarify not only whether democracy is beneficial for well-being, but how this association may unfold through the subjective experience of autonomy. Given that individuals may not uniformly perceive or respond to democratic institutions, it is crucial to consider both subjective experiences and objective democratic conditions.

This research pursues two overarching objectives. First, we examined a subjective pathway, testing whether individuals who perceive their country as more democratic report greater well-being, and whether this association can be accounted for by stronger senses of autonomy. Second, we assessed the alignment between subjective and objective democracy, exploring whether standardized measures of democracy (e.g., the Democracy Index) diverge from the subjective pathway. By doing so, we aimed to understand under what conditions democracy fosters psychological flourishing, and whether it is the perceived or institutional reality that matters most.

These aims are addressed through three Research Questions (RQ) and studies (see Table 1 for an overview). First, at the individual level (RQ1), do individuals who perceive themselves to live in a democratic functioning country report higher well-being via enhanced senses of autonomy? Second, at the cross-national level (RQ2), do countries with higher average levels of perceived democracy show greater

well-being at the national level via autonomy, and to what extent is this pattern predicted by the country's objective level of democracy? Third, at the within-nation level (RQ3), do changes in a country's democratic conditions over time predict corresponding shifts in citizens' well-being through changes in perceived democracy and autonomy?

To address these questions, we integrate multiple large-scale cross-national datasets. In Study 1, we used the European Social Survey (ESS) to examine RQ1 across 28 European countries, focusing on between-subject associations between perceived democracy and well-being via autonomy and the consistency of this pattern across nations. Study 2 includes data from the European Quality of Life Survey (EQLS; 33 countries) to test RQ2, testing, while controlling for between-person level, how national averages of perceived democracy are linked to indicators of well-being via autonomy, and how this pattern is preceded by nations' democracy index score. Study 3 employed repeated cross-sectional waves of the Integrated Values Survey (IVS; 92 countries), combined with democracy index scores, to construct panel models that assessed RQ3 through changes over time in perceived democracy, autonomy, and well-being. Together, these studies provide a comprehensive test of how democracy, both as it is experienced and as it is institutionally enacted, relates to psychological functioning across individuals, countries, and time.

Across these studies, we controlled for the roles of age, gender, and household income, as these variables are systematically related to both well-being and perceptions of societal conditions (e.g., Blanchflower & Oswald, 2008; Diener et al., 1999). For instance, income reflects socioeconomic resources that shape one's opportunities to meet their need for autonomy and, in turn, well-being outcomes (e.g., Bradshaw et al., 2026; Martela et al., 2022). Controlling for these factors allows for a more precise and unique estimation of the associations between democracy, autonomy, and well-being.

PRELIMINARY STUDY

Before tackling the main research questions of the current research, we ran a preliminary study to set the stage for the forthcoming cross-national investigations. It had three aims. First, because cross-national surveys use very short (often one or two item) assessments, it is important to assess their validity

(Martela & Ryan, 2024). Thus, we checked whether the autonomy-related indicators used in major cross-national surveys map onto the latent construct of autonomy satisfaction as assessed in SDT literature (Chen et al., 2015). Second, by supplementing the single-item measures of democratic perception common in the cross-national surveys, this preliminary study examined which democratic facets align most strongly with senses of autonomy by including a more extended set of indicators assessing perceived democracy. Finally, based on these validation assessments, we examined the proposed path model by testing the intermediate role of autonomy in the associations between perceived democracy and various indicators of well-being (i.e., life satisfaction, vitality; symptoms of depression and anxiety), concepts that are commonly used in cross-national surveys to assess people's psychological functioning. Insights from this preliminary study are intended to guide both the design and the interpretation of the subsequent cross-national studies.

Methods

Participants and Procedure

An online survey, distributed via Qualtrics, was conducted with a sample of 535 American English-speaking participants ($M_{age} = 53.87$, range: 18-85; 65.6% female). Household income was broadly distributed across categories, with the largest proportions of participants reporting an income below \$20,000 (18.8%), followed by \$20,001-\$30,000 (15.5%) and \$30,001-\$40,000 (12.5%). Higher income categories were less frequently represented (e.g., > \$200,000: 1.7%). Informed consent was provided, explaining the survey's purpose and emphasizing participants' right to withdraw at any time without consequences. The survey assessed a broad set of indicators for autonomy, democracy and well-being.

Measures

All items were rated on a 5-point Likert scale, ranging from "Totally disagree" to "Totally agree", unless otherwise specified.

Autonomy. Autonomy (satisfaction) was assessed using 4 items (e.g., "I feel a sense of choice and freedom in the things I undertake", $\alpha = .82$) based on the Basic Psychological Need Satisfaction scale

(BPNS; Chen et al., 2015). Validation was extended by incorporating items from the ESS (2 items; “Do you make time to do things you really want to do?” and “Are you free to decide how to live your life?”; $r = .49, p < .001$), the EQLS (2 items; “I feel I am free to decide how to live my life”, “My daily life has been filled with things that interest me”; $r = .53, p < .001$), and the IVS (1 item; “Some people feel they have completely free choice and control over their lives, while other people feel that what they do have no real effect on what happens to them. Please use this scale going from 1 ‘no choice at all’ to 10 ‘a great deal of choice’ to indicate how much freedom of choice and control you feel you have over the way your life turns out”). Correlations between the multi-item scales were substantial ($r_{\text{range}} = .71 - .79$, all p ’s $< .001$), with the single-item WVS indicator being moderately to strongly associated with the other measures ($r_{\text{range}} = .54 - .63$, all p ’s $< .001$).

Democracy Perception. Participants rated their perception of democracy in their country using 25 items assessing various democratic principles (e.g., rule of law, participation, freedom, equality; Quaranta, 2018). An explanatory factor analysis revealed four latent components, with perceived human rights (2 items, e.g., “the rights of minority groups are protected”; $r = .47, p < .001$), perceived freedom of speech (3 items, e.g., “voters discuss politics with people they know before deciding how to vote”, $\alpha = .73$), perceived participation (4 items, e.g., “national elections are free and fair”, $\alpha = .80$) loading positively, and, at last, perceived autocratic values (6 items, e.g., “we have a strong leader who does not have to bother with parliament and elections”, $\alpha = .83$) loading negatively. The remaining 10 items cross-loaded and were therefore not included in the current latent factors.

For the sake of validation, we correlated these multidimensional indicators of perceived democracy with single-item measures from the ESS, EQLS, and IVS. The ESS/IVS item (“How democratic is your country?”) correlated positively with perceived participation ($r = .25$), freedom of speech ($r = .36$), and civil rights ($r = .41$), and negatively with autocratic values ($r = -.11$). The EQLS item (“How satisfied are you with the way democracy works?”) showed strong overlap with the ESS/IVS item ($r = .65$) and was positively associated with participation ($r = .43$), freedom of speech ($r = .34$), and civil rights ($r = .32$), but unrelated to autocratic values ($r = .08$). All p -values $< .001$ unless noted.

Mental health. To assess well-being, we included 3 items measuring vitality (e.g., “I feel alive and vital”, $\alpha = .88$) from the Vitality and Depletion scale (Ryan & Frederick, 1997) and 5 items for life satisfaction (e.g., “In most ways, my life is close to my ideal”, $\alpha = .92$) from the Satisfaction with Life scale (Diener et al., 1985). To assess ill-being, we included the CES-D survey (Radloff, 1977), including 6 items on depressive symptoms (e.g., “During the past week, I felt depressed”, $\alpha = .89$) and 5 items on anxiety symptoms (e.g., “During the past week, I felt anxious”, $\alpha = .86$). The latter two concepts needed to be rated on a 4-point Likert scale going from “almost never (1-2 days)” to “almost every day (5-7 days)”.

Results

Based on the eigenvalues (i.e., the amount of variance in the data accounted for by each factor), parallel analysis (i.e., a comparison with randomly generated data to determine the number of factors to retain), optimal coordinates (i.e., a data-driven method to identify the point where adding factors no longer meaningfully improves model fit), and the acceleration factor (i.e., the rate of change in the scree plot used to detect the optimal number of factors), an exploratory factor analysis of autonomy-related items revealed one factor (see Figure S1), with item loadings ranging from .69 to .82. This demonstrated that autonomy was consistently captured across the included items.

Next, a structural equation model (SEM) was constructed to examine the relationships between the latent components of democracy perception (human rights, freedom of speech, participation, and autocratic values) and indicators of well-being and ill-being, as well as the indirect effects through the latent construct of autonomy (including both items of the BPNS and cross-national surveys). The model (see Figure 1 for standardized loadings), performed using the R package lavaan (Rosseel, 2012), showed a good fit ($\chi^2(824) = 1835.95$, CFI = .92, RMSEA = .04, SRMR = .06). All pathways were controlled for covariates age, gender and employment status.

Two key findings emerged. First, both human rights and participation were significant predictors of well-being and ill-being indicators (see Figure 1). However, after accounting for the indirect effects through autonomy, these direct effects turned non-significant. This indicates that the relationships

between these aspects of democracy and outcomes vitality, life satisfaction, depressive symptoms, and anxiety symptoms are fully mediated by autonomy. Specifically, perceived human rights had significant indirect effects on higher vitality ($\beta = .12, p = .03$) and higher life satisfaction ($\beta = .13, p = .02$), and on lower depressive symptoms ($\beta = -.10, p = .04$) and anxiety symptoms ($\beta = -.11, p = .03$) through higher sense of autonomy. Similarly, participation is indirectly related to higher levels of vitality ($\beta = .18, p = .01$) and life satisfaction ($\beta = .18, p = .01$), and lower levels of depressive symptoms ($\beta = -.15, p = .02$), and anxiety symptoms ($\beta = -.15, p = .01$) via heightened autonomy. At last, perceived autocratic values showed remaining unique direct effects on ill-being indicators but no associations with autonomy in the model (see Figure 1).

Brief Discussion

This preliminary study offers preliminary but valuable insights into the psychological processes linking perceptions of democracy with autonomy and well-being, serving as a preparatory step for the main analyses in upcoming studies. First, the results support the internal validity of the autonomy-related items selected for the cross-national surveys. Items conceptually and empirically aligned with a standard measure of autonomy widely used within SDT (Chen et al., 2015), indicating their potential utility in large-scale data collections.

Second, the findings reveal significant associations between perceived democratic functioning and both well-being and ill-being indicators. Notably, perceptions of civil rights and opportunities for participation emerged as the most robust predictors, uniquely contributing to higher autonomy and improved psychological outcomes (Altman, 2025). In contrast, perceived freedom of speech did not show a direct effect on autonomy or well-being, suggesting that its influence on mental health outcomes may be more distal through other factors.

Third, autonomy was found to play a significant indirect role in the relationship between perceived democracy and well-being outcomes. Specifically, autonomy fully accounted for the associations observed with perceived civil rights and participation, underscoring its role as a key psychological mechanism. The absence of an indirect effect of perceived autocratic values through

autonomy suggests that their association with ill-being may be driven by alternative psychological processes. One specific hypothesis is that perceived autocratic values are directly associated with heightened autonomy frustration, rather than merely reduced autonomy satisfaction, which in turn contributes to ill-being. Future research could test whether perceived endorsement of autocratic values elicits a sense of coercion or external control, thereby frustrating autonomy and directly increasing psychological distress.

Last, the validation analyses further reinforced the robustness of the indicators used to assess perceived democracy. Although the EQLS item assesses satisfaction with the functioning of democracy, rather than directly asking respondents how democratic they perceive their country to be, as is done in the ESS and IVS, it shows strong correlations with these more direct measures, as well as with closely related democratic dimensions such as civil rights, political participation, and freedom of speech. These convergent associations support its inclusion as a valid indicator of perceived democratic functioning. Specifically, these findings, in line with previous validation work (e.g., Quaranta, 2018), indicate that the EQLS item captures a meaningful and psychologically relevant facet of perceived democratic functioning. This supports its continued use in the broader project, especially in contexts where only this item is available.

Overall, these initial findings support the theoretical model underlying the main project and help refine the measures and hypotheses for the larger-scale cross-national studies. They suggest that perceptions of democracy, particularly related to rights and participatory opportunities, are meaningfully linked to autonomy and psychological functioning, paving the way for more comprehensive analyses in the main studies.

STUDY 1

Study 1 examined to what extent citizens' perceptions of democracy are related to their well-being through enhanced autonomy (Research Question 1). We tested this at the between-person level, thereby testing its consistency from one nation to another.

Methods

Sample and procedure

Data were sourced from the sixth wave of the European Social Survey (ESS, 2013), a cross-national survey conducted in multiple waves since 2001 across various European countries (28 countries, $N = 54,673$, $M_{age} = 48.31$, 54.4% female, $M_{income} = 5.06$). The ESS employs random probability sampling of individuals aged 15 and over residing in private households in each country. For further information on the sampling methodology, please refer to ESS (2013).

Measures

Sociodemographics. We included age, gender and household income (assessed by a decile approach reflecting the income distribution in each country) as demographic variables.

Autonomy. Autonomy was assessed using two items from the ESS well-being module (Huppert & So, 2013; Martela et al., 2022): “Do you make time to do things you really want to do?” and “Are you free to decide how to live your life?” ($r = .51$, $p < .001$).

Democracy perception. Perceived democracy was assessed using a single item “How democratic is your country?” to be rated on a 0-10 scale going from “Not at all democratic” to “Completely democratic” (Quaranta, 2018).

Mental health. We included three indicators of well-being, including happiness, vitality, and meaning in life. Happiness was assessed using two questions from the well-being module (Huppert & So, 2013), such as “How often were you happy in the past week?” rated on a 4-point scale, and “How happy are you?” rated on a scale from 0 (“extremely unhappy”) to 10 (“extremely happy”). Internal consistency was moderate ($r = .44$, $p < .001$). Life satisfaction was measured with a single question “How satisfied are you with life as a whole?” on a Likert scale going from 0 (“extremely dissatisfied”) to 10 (“extremely satisfied”). Evaluated with the question, “Do you feel what you do in life is valuable and worthwhile?”, Meaning in life was rated on a 5-point scale from 1 (“strongly agree”) to 5 (“strongly disagree”).

Ill-being was assessed using six items from the well-being module (Huppert & So, 2013), capturing how often participants felt depressed, restless sleep, sad, that everything required effort, anxious, and unable to get going. Responses were rated on a 4-point scale ranging from 1 (“none or

almost none of the time”) to 4 (“all or almost all of the time”). Internal consistency was acceptable ($\alpha = .80$).

Plan of Analysis

The primary aim of the present analysis was to examine whether perceived democratic functioning is associated with well-being and ill-being outcomes through autonomy, and whether this indirect effect is consistent across various nations. To this end, we employed multi-group structural equation modeling (MG-SEM), using country as the grouping variable (Martela et al., 2022). Although MG-SEM has traditionally been used with a limited number of groups, recent work (e.g., Martela et al., 2022) supports its use with a moderate number of countries (e.g., 20-30), particularly when group sample sizes are sufficient and the model is relatively constrained ($N_{\text{range}} = 752\text{-}2958$). First, we conducted a MG-SEM examining the associations between perceived democracy and happiness, life satisfaction, meaning, and ill-being (Model 1). In a second model, these associations were examined accounting for the role of autonomy (Model 2).

To ensure meaningful cross-national comparisons of regression coefficients, we conducted invariance testing at three levels: configural, metric, and scalar. Configural invariance tested whether the overall factor structure was similar across countries. Metric invariance assessed whether the factor loadings on latent constructs were equivalent, a prerequisite for comparing relationships between latent variables across groups. Scalar invariance further constrained the item intercepts to be equal, allowing for comparisons of latent means.

To provide a comprehensive overview of the relationships of interest, we extracted the model coefficients across countries. Because variability differs between countries, unstandardized coefficients are not directly comparable, whereas standardized coefficients are. Accordingly, we report the mean standardized coefficient alongside its range across countries, complemented by the unstandardized coefficients with their 95% confidence intervals and associated p-values. To summarize the consistency of effects, we additionally report, for each parameter, the number and proportion of countries (out of 29) in which the coefficient reached statistical significance. For visualization, we present the direct

associations between perceived democracy and autonomy, as well as the indirect associations between perceived democracy and the outcome variables via autonomy. These effects are displayed for each country using standardized coefficients with 95% confidence intervals. Total and indirect effects are further described in the text.

Models were estimated using the ‘lavaan’ package in R, employing Full Information Maximum Likelihood (FIML) to handle missing data. Model estimation incorporated sampling weights to ensure representativeness and adjusted for complex survey design. Model fit was evaluated using established thresholds for comparative fit index ($CFI > .90$), root mean square error of approximation ($RMSEA < .08$), standardized root mean square residual ($SRMR < .08$), and both AIC and BIC (the lowest). All analyses were conducted in R using the ‘lavaan’ package (Rosseel, 2012). Analysis code and supporting materials are available on the Open Science Framework: <https://osf.io/abxv8>

Results

Fit indices for the configural, metric, and scalar invariance models are presented in Table S1. The metric invariance model showed acceptable fit, supporting the assumption of equal factor loadings across countries, an essential requirement for comparing structural paths between nations.

Table 2 presents the results of the multigroup SEM analyses and reveals several consistent patterns across countries. First, shown by Model 1, perceived democratic functioning was positively associated with well-being and negatively associated with ill-being. Specifically, higher perceived democracy was related to greater happiness and life satisfaction in all countries, greater meaning in a majority of countries, and lower ill-being in most countries, controlling for age, gender, and income. This indicates that individuals who perceive their country as more democratic tend to report a more beneficial pattern of psychological functioning. Notably, income also showed robust effects in the same direction, often emerging as the strongest covariate. Second, Model 2 shows that perceived democracy is consistently and positively related to autonomy across all countries. As illustrated in Figure 2, this indicates that individuals who view their country as more democratic also experience greater autonomy. Third, despite these consistent total associations, the role of perceived democracy changed markedly

when accounting for autonomy. As shown in Model 2, the direct associations between perceived democracy and the well-being outcomes were substantially reduced and, in most cases, no longer meaningful across countries. In contrast, autonomy remained strongly and consistently associated with all well-being and ill-being outcomes (100% of countries), underscoring its central role in psychological functioning. Finally, these findings point to a robust pattern of indirect effects. Across all countries, perceived democracy is indirectly associated with higher happiness, life satisfaction, and meaning, and with lower ill-being through greater autonomy (see Figure 3). Together, these results suggest that autonomy serves as a key explanatory mechanism linking perceived democratic functioning to individuals' well-being and ill-being.

Brief Discussion

Using large-scale cross-national data from the European Social Survey, Study 1 demonstrates a clear and consistent pattern: individuals who perceive their country as more democratic report higher levels of well-being and lower levels of ill-being. Crucially, these associations are largely accounted for by individuals' experiences of autonomy, thereby addressing RQ1. In line with SDT, these findings suggest that the psychological benefits of democracy are not direct, but instead operate through the extent to which democratic contexts afford individuals a sense of voice, volition, and meaningful participation. Importantly, this pattern was highly consistent across countries, underscoring the robustness and potential universality of autonomy as a psychological mechanism linking sociopolitical environments to well-being. In doing so, these findings show that even when controlling for key sociodemographic factors, perceptions of democratic functioning remain reliably associated with psychological functioning through autonomy.

A notable aspect of the findings concerns the role of income. Across countries, income emerged as a strong and consistent predictor of both autonomy and well-being, highlighting the importance of accounting for socioeconomic resources in these analyses (e.g., Diener et al., 1999). Importantly, however, perceived democracy continued to show a unique association with autonomy and well-being beyond income, underscoring its distinct contribution over and above material conditions.

While Study 1 focused on subjective perceptions of democracy at the individual level and demonstrated their consistency across countries, the next step is to examine whether these associations also emerge at the national level. Accordingly, Study 2 builds on these findings by testing whether citizens in more democratic nations, based on objective democracy indices, report higher average levels of perceived democracy, which in turn relate to higher well-being via autonomy. By simultaneously examining within- and between-country processes, Study 2 addresses RQ2 and allows us to disentangle whether the psychological benefits of democracy are primarily rooted in institutional conditions, subjective experiences, or their interplay. This distinction is essential for advancing our understanding of when and why democratic systems matter for mental health.

STUDY 2

In Study 2, we aim to replicate the explanatory role of autonomy in the association between perceived democracy and citizens' well-being, this time at the cross-national level. Importantly, we extend the analysis by incorporating a more standardized, objective indicator of democratic governance, the Democracy Index, to examine whether national-level democratic functioning predicts perceived democracy, autonomy and well-being across countries. This allows us to directly test the alignment or divergence between institutional democracy and citizens' subjective experience of it, thereby addressing the central question of whether it is the objective conditions or the subjective perception of democracy that drives psychological functioning.

Methods

Sample and Procedure

We used the 4th wave of the European Quality of Life Survey (EQLS; Eurofound, 2017), which explicitly focused on public services and mental health (33 countries, $N = 36\,831$, $M_{age} = 50.75$, 56.5% female, $M_{income} = 2.50$).

Materials

Sociodemographics. We included participants' age, gender, and household income as sociodemographic variables. Similar to Study 1, household income was assessed using a decile approach.

Autonomy. Two items that are conceptually close to autonomy satisfaction were selected and validated in the preliminary study (“I feel I am free to decide how to live my life”, “My daily life has been filled with things that interest me”). They had a moderate to acceptable internal reliability on both the level of citizens and countries ($r_{\text{between-persons}} = .38$; $r_{\text{between-countries}} = .55$, all p 's < .001).

Democracy perception. Democracy perception was assessed using a single item asking respondents to “Report your satisfaction with the way democracy works in [your country]” on a scale from 1 (‘Very dissatisfied’) to 10 (‘Very satisfied’). Although this item captures a specific affective response rather than a pure assessment of democratic perception, previous research (Quaranta, 2018) and the current preliminary study demonstrated its comparability to other assessments of perceived democracy.

Mental health. We selected four different indicators in the EQLS survey for well-being. Happiness was assessed by the item “Taking all things together on a scale of 1 to 10, how happy would you say you are?” on a scale from 1 (‘Very unhappy’) to 10 (‘Very happy’). Life satisfaction was assessed on a scale from 1 (‘Very dissatisfied’) to 10 (‘Very satisfied’). Vitality represents an average score of three items (i.e., “I have felt active and vigorous” and “I have felt cheerful and in good spirits”) on a scale from 1 (‘At no time’) to 10 (‘All of the time’), showing good internal reliability ($r_{\text{between-persons}} = .66$; $r_{\text{between-countries}} = .57$, all p 's < .001). Ill-being was measured by three items (i.e., “I have felt particularly tense”, “I have felt downhearted and depressed”, “I have felt lonely”) on a scale from 1 (‘At no time’) to 10 (‘All of the time’), having a good internal consistency at both levels ($\alpha_{\text{between-persons}} = .82$; $\alpha_{\text{between-countries}} = .94$).

Democracy Index. *The Democracy Index*, developed by the Economist Intelligence Unit, assesses the state of democracy across countries (Coppedge et al., 2019). It evaluates five key categories: electoral process and pluralism, civil liberties, the functioning of government, political participation, and political culture. Each category contributes to an overall score ranging from 0 to 10, with higher scores indicating greater levels of democracy. Data is collected through public opinion surveys, expert

assessments, and secondary sources such as reports from international organizations. We matched the Democracy Index of the corresponding year with the current sample of the EQLS.

Plan of Analysis

To test the indirect effect of perceived democracy on well-being via autonomy, and the predictive role of nations' democracy index score, we employed multilevel structural equation modeling (M-SEM) using a two-level design, with individuals (Level 1) nested within countries (Level 2). This analytic approach allowed us to disentangle within-country processes (i.e., how individual differences in perceived democracy relate to autonomy and well-being) from between-country differences (i.e., how national democratic conditions relate to average levels of perceived democracy, autonomy, and well-being). Technically, Level 1 is represented by a person' score within a country minus the country mean, while the Level 2 score is the country mean score across all people within it.

At the within-country level (Level 1), we estimated a path model in which perceived democracy served as a predictor of perceived autonomy, which in turn predicted well-being outcomes (happiness, life satisfaction, vitality, and ill-being). To account for individual-level variability, we included age, gender, household income, and subjective social standing as control variables. At the between-country level (Level 2), we included the democracy index, specified to predict the country-level average of perceived democracy. In turn, average perceived democracy was modeled as a predictor of average autonomy, which then predicted average well-being levels across countries.

All key constructs, with the exception of the democracy index and perceived democracy (which were modeled as observed variables), were specified as latent variables. Models were estimated using the 'lavaan' package in R, employing Full Information Maximum Likelihood (FIML) to handle missing data. Model estimation incorporated sampling weights to ensure representativeness and adjusted for complex survey design. Model fit was evaluated using established thresholds for comparative fit index ($CFI > .90$), root mean square error of approximation ($RMSEA < .08$), and standardized root mean square residual ($SRMR < .08$). Indirect effects were tested using multilevel path decomposition, providing estimates of both within- and between-level mediation processes.

All syntax, data processing steps, and supplementary diagnostics are available on the Open Science Framework (OSF) at: <https://osf.io/abxv8>

Results

Pearson correlations at both levels are presented in Table 3. Higher perceptions of democracy are associated with higher levels of autonomy, happiness, life satisfaction, and vitality, as well as lower levels of ill-being. The current assessment of autonomy exhibits strong correlations with happiness, life satisfaction, vitality, and reduced ill-being. This pattern is also evident at the between-country level, where democracy index scores show positive relationships with democracy perception, autonomy, and both well- and ill-being outcomes.

Figure 4 illustrates a latent M-SEM with an acceptable fit ($\chi^2(50) = 2550.15$, CFI = .98, RMSEA = .03, SRMR = .09). At the between-person level (upper values in regular font), the standardized coefficients initially reveal that higher perceptions of democracy are associated with increased happiness, life satisfaction, vitality, and reduced ill-being (represented by the coefficients between brackets). After accounting for autonomy in the model, direct effects of perceived democracy remain significant for happiness and life satisfaction but not for vitality and ill-being. Indeed, significant indirect effects show that perceptions of democracy are linked to higher happiness ($\beta = .10, p < .001$), higher life satisfaction ($\beta = .09, p < .001$), higher vitality ($\beta = .15, p < .001$), and lower ill-being ($\beta = -.11, p < .001$) via greater autonomy.

A similar pattern emerged at the between-country level (bottom coefficients in bold font). The associations between democracy perception and happiness and life satisfaction remain significant after including autonomy, whereas perceived democracy is significantly indirectly related to higher life satisfaction ($\beta = .11, p = .02$), high vitality ($\beta = .19, p = .01$) and lower ill-being ($\beta = -.20, p = .01$) through higher autonomy. However, unlike the individual level, autonomy is not significantly related to happiness at the country level.

Additionally, we incorporated the democracy index scores as a between-country predictor of democracy perception, revealing a strong positive association. Notably, perceptions of democracy

significantly clarify the effects of the democracy index on autonomy and well-being indicators. After including democracy perception in the model, the standardized coefficients for the democracy index with autonomy decrease from .72 ($p < .001$) to .23 ($p < .001$), for happiness from .77 ($p < .001$) to .36 ($p < .001$), for life satisfaction from .81 ($p < .001$) to .36 ($p < .001$), for vitality from .62 ($p < .001$) to .16 ($p = .14$), and for ill-being from -.76 ($p < .001$) to -.09 ($p = .39$). This demonstrates that democracy perception is a crucial variable in understanding how a more standardized rated democracy score affects the psychological well-being of citizens, fully mediating the effects on vitality and ill-being, which subsequently impact these well-being indicators through enhanced autonomy.

Brief Discussion

In Study 2, we sought to replicate the explanatory role of autonomy in the association between perceived democracy and well-being, and to extend this analysis to the country level by incorporating the Democracy Index as an objective indicator of democratic functioning. Despite differences in the measurement of autonomy compared to Study 1, autonomy again emerged as a key factor linking perceived democracy to well-being. The associations with happiness and life satisfaction remained significant, indicating that perceived democracy contributes to well-being not only through autonomy, but also through other mechanisms.

Moreover, national democracy index scores were strongly associated with citizens' perceived democracy, suggesting that institutional democratic conditions are meaningfully reflected in how citizens experience their political environment. In turn, this subjective experience predicted greater autonomy and well-being. Yet, the direct link between the Democracy Index and autonomy remained significant even after accounting for perceived democracy, pointing to the possibility that other contextual or institutional features also shape autonomy, a topic we return to in the general discussion.

Together, these findings highlight a consistent pattern across levels of analysis: democratic environments appear to matter for well-being both through how they are subjectively experienced and through their broader structural characteristics. However, the cross-sectional nature of these findings leaves open important questions regarding their generalizability across cultural contexts and their

temporal dynamics. In particular, it remains unclear whether these associations hold globally and whether changes in democratic conditions within countries are accompanied by corresponding changes in perceived democracy, autonomy, and well-being over time.

STUDY 3

To address these open questions, Study 3 adopts a global and longitudinal approach. First, we examine whether the previously observed model replicates across diverse world regions, thereby testing its cross-cultural robustness. Second, we investigate whether within-country fluctuations in democratic conditions predict corresponding changes in perceived democracy, autonomy, and well-being, offering a stronger test of the dynamic interplay between objective institutions and subjective psychological experiences.

Methods

Sample and Procedure

We utilized data from the Integrated Values Survey (IVS), which combines the European Values Study (EVS) and the World Values Survey (WVS), two large-scale, cross-national, and repeated cross-sectional surveys initiated in the 1980s (Inglehart et al., 2020). These surveys are longitudinal at the country level, tracking societal trends over time by surveying different individuals in successive waves within the same nations.

Given our dual aim of globally replicating key associations and examining within-nation changes over time, we first identified all countries that had completed measures of perceived democracy, autonomy, and well-being across any wave. From each participating country, we selected the earliest available wave in which all relevant variables were included, yielding a sample of 111,909 individuals across 92 countries, collected between 2005 and 2022. Geographically, 34.9% of these countries were located in Asia, 26.7% in Europe, 17.4% in Africa, 10.5% in South America, 8.1% in North America, and 2.3% in Oceania. These data were used to examine the associations among democracy index scores, perceived democracy, autonomy, and well-being at both the individual and national levels, covering all six inhabited continents.

To investigate within-country changes in democratic functioning, we selected countries that had completed at least two of the three most recent IVS waves (wave 5: 2005-2009, wave 6: 2010-2014, and wave 7: 2017-2022). This resulted in a subset of 57 countries ($N_{\text{range}} = 809 - 4033$), of which 57.9% provided data from two waves and 42.1% from all three. For each country-wave combination, we aligned the corresponding Democracy Index score to the year of data collection, enabling the construction of multilevel panel models (on the between-nation and within-nation level) to assess how temporal changes in democratic functioning relate to changes in perceived democracy, autonomy, and well-being.

Materials

Autonomy. Autonomy was assessed with a single item referring to people's feeling of having choice and control in their life.

Perceived democracy. Using a single item, one's level of perceived democracy was assessed similar to the method of Study 2.

Well-being. Well-being was assessed with three indicators from the *happiness and well-being* module. Herein, *happiness* was assessed with a single item "Taking all things together, would you say you are ..." on a scale from 1 ('not at all happy') to 4 ('very happy'). *Life satisfaction* was assessed with the item "All things considered, how satisfied are you with your life as a whole these days?" on a scale from 1 ('completely dissatisfied') to 10 ('completely satisfied'). As a third indicator, participants were asked to rate their *general health* these days on a scale from 1 ('very poor') to 5 ('very good').

Plan of Analysis

First, we replicated the M-SEM from Study 2, this time examining the extent to which the associations in the proposed path model hold across different continents at the between-nation level. Specifically, we constructed a similar two-level model in which individuals (Level 1) were nested within countries (Level 2), with the Democracy Index serving as the sole Level-2 predictor. To assess potential variation, we included continent as a moderator of each Level-2 path in the model. When significant interactions emerged, we probed them by visualizing the associations separately for each continent,

accompanied by standardized simple slopes to facilitate interpretation and comparison of the predictor-outcome relationships.

Second, to examine within-country changes over time, we aggregated individual responses at the national level, consistent with the repeated cross-sectional design of the IVS, which does not follow the same individuals across waves. For this purpose, we built a second M-SEM in which countries (Level 1) were nested within time points (Level 2), allowing us to test how changes in democratic functioning over time relate to changes in perceived democracy, autonomy, and well-being.

For both multilevel models in Study 3, we applied the same criteria for model fit as in the preliminary model and Study 2 and visualized the final path models using standardized coefficients for interpretability.

Results

Table 4 presents the results of multilevel Pearson correlation analyses. At the between-nation level (lower diagonal correlations), higher Democracy Index scores were positively associated with perceived democracy, autonomy, and well-being indicators. In turn, perceived democracy was positively related to autonomy and well-being, and autonomy itself was consistently linked to better well-being outcomes. At the within-nation level (upper diagonal correlations), although correlations were generally lower, the same patterns emerged: higher perceived democracy was associated with greater autonomy and well-being, and higher autonomy was again related to improved well-being outcomes. In contrast, correlations with the Democracy Index were weak at the within-nation level, with a significant association only with increased perceived democracy. Intraclass correlations (ICCs) were high, indicating that most of the variance in objective democratic status occurred between nations, with little change observed within nations over time.

Rather than focusing exclusively on between-person or between-nation differences, the present study aimed to examine temporal fluctuations in democracy, autonomy, and well-being. At the same time, the structure of the dataset allowed us to replicate the model at both the within- and between-nation levels using multilevel structural equation modeling (M-SEM; see Figure S2). In line with previous findings, a

consistent pattern emerged across both levels, such that perceived democracy was positively associated with happiness, life satisfaction, and general health, and these associations were partially mediated by autonomy. At the between-nation level, higher Democracy Index scores were associated with higher average levels of perceived democracy, which in turn related to greater autonomy and, ultimately, higher well-being.

To more directly examine temporal dynamics, we estimated a fully saturated M-SEM (Figure 5) capturing within-nation changes over time while controlling for stable between-nation differences. At the within-nation level (upper coefficients), increases in Democracy Index scores were significantly associated with increases in perceived democracy, which in turn predicted higher autonomy. Autonomy, in turn, was positively related to all well-being outcomes.

Importantly, comparing direct and indirect effects revealed a pattern of partial mediation. Introducing autonomy into the model reduced, but did not eliminate, the direct associations between perceived democracy and well-being. Specifically, perceived democracy showed significant indirect effects on happiness ($\beta_{\text{indirect}} = .03$ vs. $\beta_{\text{direct}} = .08$), life satisfaction ($\beta_{\text{indirect}} = .04$ vs. $\beta_{\text{direct}} = .11$), and general health ($\beta_{\text{indirect}} = .02$ vs. $\beta_{\text{direct}} = .05$) through autonomy (all p 's < .001). Thus, a substantial portion of the association operated through autonomy, while a meaningful direct effect remained.

Similarly, Democracy Index scores exhibited smaller but significant indirect effects on well-being via perceived democracy and autonomy ($\beta_{\text{range}} = .01-.02$, all p 's < .001), indicating that objective democratic conditions contribute to well-being partly by shaping subjective perceptions and need satisfaction.

Brief Discussion

In Study 3, we investigated the indirect association between perceived democracy and well-being through autonomy using a global dataset. A secondary goal was to assess whether changes in democratic conditions within countries over time correspond to changes in key psychological variables. The multilevel structural model replicated the findings of Study 2, showing that countries with higher

democracy indices tend to report higher levels of well-being. This relationship was mediated by greater perceived democracy, which in turn predicted increased autonomy.

Leveraging the longitudinal structure of the Integrated Values Survey (IVS), we further demonstrated that increases in perceived democracy over time were associated with gains in happiness and life satisfaction, mediated by enhanced experiences of autonomy. Notably, consistent with Study 2, the effects of perceived democracy on well-being were only partially explained by autonomy. This indicates that democratic functioning may also support well-being through additional mechanisms, such as the fulfillment of other basic psychological needs (e.g., competence and relatedness) or through broader societal resources and rights, an avenue explored further in the general discussion.

GENERAL DISCUSSION

The present research aimed to bridge a critical gap in the literature by investigating the psychological mechanisms through which democratic governance impacts well-being, focusing on the role of autonomy, a fundamental psychological need according to Self-Determination Theory (SDT; Ryan & Deci, 2017). While decades of SDT research have shown that autonomy-supportive conditions in proximal contexts such as parenting, education, and workplaces reliably predict greater motivation and well-being (Bradshaw et al., 2025; Howard et al., 2025; Slemp et al., 2018), the potential of broader sociopolitical structures to support or thwart autonomy has received comparatively little empirical attention.

Drawing on insights from SDT and complementary frameworks such as Sen's (1999) Capabilities Approach and Welzel's (2013) theory of emancipative values, we hypothesized that democratic systems, by affording rights, freedoms, and opportunities for political participation, would enhance individuals' experiences of autonomy. In turn, greater autonomy was expected to promote higher well-being and lower ill-being. Across a preliminary study and three large-scale cross-national investigations, spanning individuals, countries, and time, we consistently found support for this hypothesis: it is not democracy per se, but the subjective experience of living in a democracy that most robustly supports autonomy and, in turn, well-being.

Democracy, Autonomy, and Well-Being: A Consistent Multi-Level Pattern

Across all studies, a highly consistent pattern emerged. Individuals who perceived their country as more democratic reported greater well-being and lower ill-being, and these associations were largely explained by higher autonomy. This indirect pathway was observed (a) between individuals across 28 countries (Study 1), (b) between countries across 33 nations (Study 2), and (c) within countries over time across 92 nations (Study 3). Importantly, this convergence across levels strengthens confidence in the robustness of the findings. While prior research has documented that citizens in democratic nations tend to report higher well-being (e.g., Sen, 1999), the present research advances this literature by identifying a psychological mechanism, autonomy, through which this association at least partly unfolds.

These findings align closely with SDT's core proposition that autonomy is a fundamental psychological nutrient for well-being. Just as autonomy-supportive parenting, teaching, and leadership foster thriving in proximal contexts, the present results suggest that political systems can function as distal environments that either support or thwart this basic need.

The Central Role of Subjective Democratic Experience

A central contribution of this research lies in its explicit distinction between subjective and objective democracy. While objective indicators such as the Democracy Index were positively related to well-being, their effects were consistently reduced, and in some cases fully accounted for, once perceived democracy was included in the models.

This finding is theoretically meaningful. Within SDT, the impact of environmental conditions depends on their functional significance, that is, how they are interpreted and experienced by individuals. Democratic institutions may provide formal rights and freedoms, but these institutional features only translate into psychological benefits when they are experienced as legitimate, and autonomy-supportive. This helps explain why the association between objective and perceived democracy was only partial and varied across contexts. In some countries, relatively strong democratic institutions may fail to foster well-being if citizens perceive them as irrelevant or meaningless to their lives. Conversely, in other contexts,

even limited democratic structures may be experienced as autonomy-supportive if they are seen as legitimate or aligned with citizens' values.

Taken together, these findings suggest that the psychological benefits of democracy are not guaranteed by institutional design alone, but hinge on citizens' subjective engagement with and interpretation of these institutions.

Autonomy as a Key, But Not Exclusive, Mechanism

Although autonomy emerged as a central explanatory pathway, the results also indicate that it is not the only mechanism linking democracy to well-being. In both Study 2 and Study 3, direct effects of perceived democracy on well-being remained significant even after accounting for autonomy, pointing to partial mediation.

This suggests that democratic environments may support well-being through additional pathways. From an SDT perspective (Deci & Ryan, 2000; Vansteenkiste et al., 2020), two candidates are particularly relevant (e.g., Fabian et al., 2023). First, democratic systems may foster relatedness, by promoting inclusion, social trust, and a sense of belonging within society. Second, they may enhance competence, by enabling individuals to feel effective and capable of influencing societal outcomes. Beyond basic psychological needs, democracy may also contribute to well-being through increased access to resources, social protection, and institutional fairness. Future research should therefore adopt a more comprehensive approach by examining all three needs, both in terms of satisfaction and frustration, in relation to democratic functioning and broader societal characteristics such as inequality, nationalism, and leadership styles.

Alignment and Mismatch Between Objective and Subjective Democracy

Another key insight from the present research concerns the substantial level of variance in the associations between objective and perceived democracy. Although higher scores on the Democracy Index generally predicted stronger perceptions of living in a democratic system, this association was far from uniform, indicating substantial cross-national variability in how democratic functioning, as defined by the Democracy Index, is interpreted.

This heterogeneity is both theoretically and practically meaningful. For instance, one might consider the distinction between *procedural* legitimacy (i.e., the extent to which institutions adhere to fair, transparent, and participatory processes) and *outcome* legitimacy (i.e., a government's capacity to deliver public goods, economic stability, and security; Gilley, 2006). In contexts where democratic institutions are relatively young, fragile, or perceived as ineffective, citizens may rely less on formal procedural criteria and more on tangible outcomes when evaluating democratic functioning (Dalton et al., 2007). As a result, governments that maintain order, foster economic growth, or provide essential services may be perceived as legitimate, even when they fall short of procedural democratic standards. Conversely, formally democratic systems that are experienced as corrupt, overly bureaucratic, or unresponsive may be judged as insufficiently democratic by their populations. Such perceptions can also be shaped both by media and political messaging.

These findings point to an important theoretical implication: institutional democracy alone is insufficient to generate psychological legitimacy. Rather, individuals' perceptions depend on whether democratic structures are trusted, experienced as empowering, and perceived as meaningful in everyday life (Mishler & Rose, 2001). This helps explain why, in some contexts, perceived democracy showed only weak correspondence with objective indices, while still robustly predicting autonomy and well-being. Consistent with SDT, it is the *functional significance* of governance (i.e., how it is subjectively interpreted in relation to psychological needs) that ultimately shapes individuals' experiences. These interpretations are likely grounded in cultural expectations, historical trajectories, and institutional performance (Dalton et al., 2007; Norris, 2011). Also, the level of perceived democracy may also reflect the degree to which citizens have internalized the legitimacy of their system (Tyler, 1997). When experienced to be fair and autonomy-supportive, people are more likely to identify with and endorse them (Ryan & Deci, 2017).

Gaining a deeper understanding of these evaluative frameworks represents an important direction for future research, particularly in explaining cross-national variation in the democracy-well-being association.

Temporal Dynamics: Democracy as a Changing Psychological Context

By leveraging longitudinal data, Study 3 provides important evidence that democracy is not only associated with well-being across countries, but also within countries over time. Increases in objective democratic functioning predicted increases in perceived democracy, which in turn were associated with gains in both autonomy and well-being.

Although these within-country effects were smaller than between-country differences, likely due to the relative stability of political systems, they nonetheless demonstrate that changes in democratic conditions can translate into meaningful psychological shifts. This strengthens the argument that democracy functions as a dynamic context shaping citizens' lived experiences, rather than merely a static background condition.

Importantly, for the sake of future studies, these temporal dynamics may depend on the broader developmental stage of a political system. In long-established democracies, where institutional stability and civil liberties are largely taken for granted, modest declines in institutional performance, such as increased political polarization, perceived inefficiency, or legislative gridlock, may disproportionately undermine perceptions of democratic functioning (e.g., Foa et al., 2020). In contrast, in transitional or consolidating democracies, incremental improvements in governance, participation, or civil rights may be experienced as meaningful gains in voice and agency, thereby more strongly enhancing perceived democracy and its psychological correlates. This asymmetry suggests that the same objective change in democratic functioning may carry different subjective meanings depending on the historical and institutional context. More deeply investigating such moderators represents an agenda for future research.

Implications for Theory and Practice

The present findings carry several important implications for both theory and practice. First, at the theoretical level, this research extends SDT beyond its traditional focus on proximal interpersonal contexts (e.g., parenting, education, work) to the broader societal level (e.g., Bradshaw et al., 2026; Howard et al., 2025; Martela et al., 2022; Ryan & DeHaan, 2023). Specifically, the findings demonstrate that political systems can meaningfully shape autonomy as a basic psychological need, with opportunities

for future research to investigate its associations with competence and relatedness satisfaction, and frustration. In doing so, this work contributes to a growing literature linking macro-level societal structures to micro-level psychological processes, thereby broadening the scope of SDT as a framework for understanding well-being.

At the same time, the results open new avenues for research on psychological needs by highlighting the importance of group-level dynamics. Because the present studies relied on aggregate indicators and general population measures, they may obscure meaningful subgroup differences and mask inequalities in need satisfaction and well-being. For instance, although democratic systems are generally assumed to support need satisfaction, they may simultaneously frustrate these needs for specific social groups, such as ethnic minorities or LGBTQ+ individuals, through processes of low voice, exclusion, discrimination, or social backlash (Welzel, 2013). Future research should therefore adopt a more fine-grained approach by examining how democratic systems are experienced across different social groups, and how group-based processes, such as identity centrality, inclusion, and marginalization, shape psychological outcomes (e.g., Kachanoff et al., 2019; Waterschoot et al., 2025).

Second, for research on democracy, the findings underscore the importance of integrating subjective indicators alongside objective institutional measures. While indices of democratic functioning provide valuable benchmarks, they do not fully capture how citizens experience and interpret these systems. The present results show that it is precisely these subjective perceptions that are most proximally linked to autonomy and well-being. As such, research relying solely on institutional indicators risks overlooking the psychological mechanisms through which democracy exerts its effects.

Third, the findings carry important implications for policy and governance. Strengthening democratic institutions appears to be important for promoting well-being. Yet to foster psychological flourishing, governments must also ensure that these institutions are experienced as legitimate, accessible, and, eventually, need-supportive by their citizens. This highlights the importance of transparent decision-making, responsive governance, and inclusive participation. In other words, the effectiveness of

democratic systems depends not only on their structural features, but also on how they are perceived and lived by the population.

Finally, the present analyses do not fully disentangle the role of broader global development trends. Democratic functioning is closely intertwined with processes such as economic development, institutional capacity, and environmental conditions, all of which evolve over time. Without explicitly modeling these co-evolving macro-level factors, it remains difficult to determine whether the observed effects can be attributed to democratic governance per se or to broader developmental trajectories.

Recent global developments further complicate this picture. Over the past decade, democratic expansion has slowed, with several countries exhibiting tendencies toward democratic backsliding (Economist Intelligence Unit, 2024). Historically, such shifts have often been triggered by external threats, including geopolitical conflict and security crises (Dahl, 1971; Levitsky & Ziblatt, 2024). Increasingly, however, large-scale challenges such as climate change and global health crises place additional strain on democratic systems. These conditions may foster support for more centralized or decisive forms of governance, particularly when democratic processes are perceived as slow or ineffective in responding to urgent threats (Inglehart et al., 2008). The COVID-19 pandemic provides a clear illustration of this dynamic, as many governments temporarily restricted civil liberties while maintaining or even increasing public support, particularly when such measures were perceived as legitimate and necessary (Waterschoot et al., 2023).

Importantly, these patterns suggest that the relationship between democracy and well-being is not universally stable, but contingent on contextual factors such as economic stability, environmental pressures, and perceived threat. (Helliwell et al., 2018) For example, Welzel and Inglehart (2005) argue that the benefits of democracy are most pronounced in contexts characterized by economic and social stability, such as Scandinavian countries, where strong institutions are complemented by extensive social protections. In times of crisis, individuals may become more willing to trade autonomy for security or efficiency, raising important questions about the sustainability of democratic systems in promoting well-being under adverse conditions (e.g., Arbel et al., 2024; Norris, 2011; Van de Vliert & Postmes, 2014).

Future research should therefore examine, first, the extent to which recent societal developments, such as rising global threats and democratic backsliding, shape the associations observed in the present studies, and second, how perceived threats influence support for more autocratic forms of governance. In particular, it will be critical to investigate whether such systems can maintain well-being without undermining individuals' sense of autonomy, or whether any short-term gains come at longer-term psychological costs.

Limitations

Several limitations of the present research should be acknowledged.

First, despite the inclusion of both longitudinal and cross-national data, causal inferences remain inherently limited. Although the findings are consistent with the idea that democratic systems foster autonomy, theoretical arguments and prior research suggest that this relationship may be reciprocal. On the one hand, democratic systems may enhance autonomy through participatory structures and the protection of civil liberties. On the other hand, populations characterized by lower levels of autonomy may be more likely to sustain or even give rise to controlling or autocratic regimes. For instance, Staub (2011) argued that more authoritarian contexts tend to promote controlling child-rearing and educational practices that emphasize external regulation. Similarly, Basabe and Valencia (2007) found that lower national levels of rights and freedoms are associated with reduced endorsement of autonomy, egalitarianism, and respect for diversity. Together, these findings point to the possibility of a self-reinforcing cycle in which restrictive political systems undermine autonomy, while diminished autonomy fosters psychological dispositions that further legitimize and stabilize such systems. Future research, particularly studies employing experimental designs, longitudinal interventions, or natural experiments, will be essential to disentangle these directional pathways and to test for potential feedback loops between psychological need satisfaction and sociopolitical environments.

Second, the reliance on single-item measures in large-scale surveys, while pragmatically advantageous, may limit construct validity and precision. Although preliminary analyses supported the adequacy of these indicators, they cannot fully capture the conceptual richness of autonomy as defined

within Self-Determination Theory. In particular, autonomy frustration, conceptually distinct from low autonomy satisfaction, was not assessed in the present studies. This omission is noteworthy, as autonomy frustration has been shown to uniquely predict ill-being, including depressive symptoms and even more extreme outcomes such as radicalization (e.g., Rappel & Vachon, 2024). Future research would therefore benefit from the development and validation of brief yet psychometrically robust measures (e.g., Martela & Ryan, 2024) that can adequately capture both autonomy satisfaction and frustration within large-scale international surveys (Lambert et al., 2020).

CONCLUSION

In conclusion, this study provides evidence supporting the connection between democratic governance and individuals' sense of autonomy, extending the application of SDT beyond proximal environments to encompass broader political structures. Our findings, derived from a multi-study approach, underscore that democratic regimes, through their provision of political rights and civil liberties, can significantly enhance individuals' perceptions of autonomy, which in turn fosters well-being.

The importance of perception, as highlighted by our results, also aligns with SDT's emphasis on the subjective experience of environmental conditions as crucial for satisfying psychological needs. The observed variability in autonomy experiences within democratic systems points to the need for further investigation into the factors that mediate or moderate this relationship. Future research should aim to delve even deeper into these complex dynamics toward a more nuanced understanding of how different facets of democracy contribute to personal autonomy. Hopefully this study not only fills a gap in the existing literature while also laying the groundwork for future explorations into the intersection of political structures and psychological well-being. In times of democratic uncertainty and erosion, these findings serve as a reminder that the value of democracy is not only political, but profoundly psychological.

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Tables

Table 1. *Overview of studies*

Study	Democracy assessment	Countries	Continents	Levels
Preliminary	Self-report	1	1	Between-person
Study 1	Self-report	28	1	Between-person
Study 2	Self-report and standardized	33	1	Between-person and between-nations
Study 3	Self-report and standardized	92	5	Between-person, between-nations and within-nations

Table 2. *Output of multigroup structural models for autonomy and well-being indicators across countries (Study 1)*

Predictor	B	β_{mean}	β_{range}	CI-range	p-value	p summary	B	β_{mean}	β_{range}	CI-range	p-value	p summary
	Model 1						Model 2					
Autonomy												
Age							-0.08	-.04	-.22 – .14	-0.12 – -0.03	.001	19 (65.5%)
Gender							-0.08	-.02	-.16 – .08	-0.12 – -0.03	<.001	11 (37.9%)
Income							0.25	.18	-.04 – .36	0.19 – 0.31	<.001	28 (96.6%)
Perceived democracy							0.36	.29	.05 – .48	0.32 – 0.41	<.001	29 (100%)
Happiness												
Age	-0.12	-.06	-.25 – .13	-0.17 – -0.07	<.001	22 (75.9%)	-0.05	-.03	-.09 – .07	-0.08 – -0.02	.002	23 (79.3%)
Gender	-0.07	-.01	-.14 – .09	-0.13 – -0.02	.004	10 (34.5%)	0.00	.00	-.05 – .04	-0.03 – 0.03	.92	8 (27.6%)
Income	0.33	.23	.09 – .33	0.26 – 0.39	<.001	29 (100%)	0.08	.07	-.01 – .18	0.04 – 0.12	<.001	24 (82.8%)
Perceived democracy	0.36	.20	.06 – .35	0.30 – 0.41	<.001	29 (100%)	0.01	-.05	-.20 – .13	-0.03 – 0.04	.76	25 (86.2%)
Autonomy							0.97	.86	.72 – .97	0.94 – 1.01	<.001	29 (100%)
Life satisfaction												
Age	-0.10	-.08	-.25 – .12	-0.15 – -0.04	.001	22 (75.9%)	-0.02	-.05	-.13 – .03	-0.06 – 0.01	.22	20 (69%)
Gender	-0.06	.00	-.11 – .08	-0.12 – -0.01	.02	7 (24.1%)	0.01	.01	-.04 – .06	-0.02 – 0.05	.55	9 (31%)
Income	0.30	.20	.05 – .32	0.23 – 0.37	<.001	28 (96.6%)	0.06	.06	-.03 – .16	0.01 – 0.11	.02	22 (75.9%)
Perceived democracy	0.40	.23	.09 – .36	0.34 – 0.45	<.001	29 (100%)	0.05	.00	-.13 – .17	0.01 – 0.09	.02	20 (69%)
Autonomy							0.95	.81	.69 – .93	0.91 – 1.00	<.001	29 (100%)
Meaning												
Age	-0.01	-.01	-.16 – .10	-0.07 – 0.05	.71	12 (41.4%)	0.06	.02	-.10 – .13	0.02 – 0.11	.004	18 (62.1%)
Gender	-0.06	.03	-.06 – .14	-0.11 – 0.00	.06	9 (31%)	0.02	.04	-.01 – .09	-0.02 – 0.06	.38	18 (62.1%)
Income	0.14	.13	-.01 – .35	0.06 – 0.22	<.001	25 (86.2%)	-0.10	.01	-.09 – .09	-0.16 – -0.05	<.001	9 (31%)
Perceived democracy	0.04	.07	-.03 – .16	-0.02 – 0.10	.01	19 (65.5%)	-0.03	-.02	-.09 – .01	-0.06 – 0.03	.02	7 (24.1%)
Autonomy							0.96	.66	.44 – .91	0.91 – 1.02	<.001	29 (100%)
Ill-being												
Age	0.10	.08	-.09 – .25	0.04 – 0.15	.001	22 (75.9%)	0.04	.05	-.05 – .19	-0.01 – 0.08	.11	19 (65.5%)
Gender	0.11	.09	-.01 – .21	0.06 – 0.16	<.001	23 (79.3%)	0.05	.07	.01 – .14	0.01 – 0.10	.02	28 (96.6%)
Income	-0.27	-.21	-.29 – -.07	-0.34 – -0.20	<.001	28 (96.6%)	-0.08	-.07	-.16 – .01	-0.14 – -0.02	.01	22 (75.9%)
Perceived democracy	-0.16	-.11	-.24 – .08	-0.22 – -0.10	<.001	25 (86.2%)	0.01	.01	-.03 – .04	-0.06 – 0.05	.24	2 (6.89%)
Autonomy							-0.75	-.74	-.87 – -.52	-0.80 – -0.69	<.001	29 (100%)

Note. CI = Confidence Interval; B = unstandardized coefficient; β_{mean} = average of standardized coefficients; β_{range} = range of standardized coefficients; p summary = number and proportion of groups, out of 29 in total, having a significant coefficient

Table 3. *Multilevel Pearson correlations at the between-person (upper diagonal) and between-country (low diagonal) levels (Study 2)*

	<i>M</i>	<i>SD</i>	<i>ICC</i>	1	2	3	4	5	6
1. Democracy perception	5.13	2.40	.13		.18***	.25***	.32***	.15***	-.12***
2. Autonomy	4.02	0.92	.06	.53***		.41***	.40***	.62***	-.40***
3. Happiness	7.06	2.09	.10	.79***	.64***		.74***	.41***	-.40***
4. Life satisfaction	6.75	2.21	.15	.83***	.67***	.87***		.37***	-.35***
5. Vitality	4.18	1.14	.03	.45**	.76***	.51***	.51***		-.46***
6. Ill-being	2.18	1.15	.07	-.48***	-.81***	-.77***	-.74***	-.59***	
7. Democracy index	7.63	1.10		.53***	.71***	.76***	.79***	.59***	-.78***

Note. *** $p < .001$, ** $p < .01$, * $p < .05$; *M* = Mean, *SD* = Standard Deviation, *ICC* = Intra-Class Coefficient

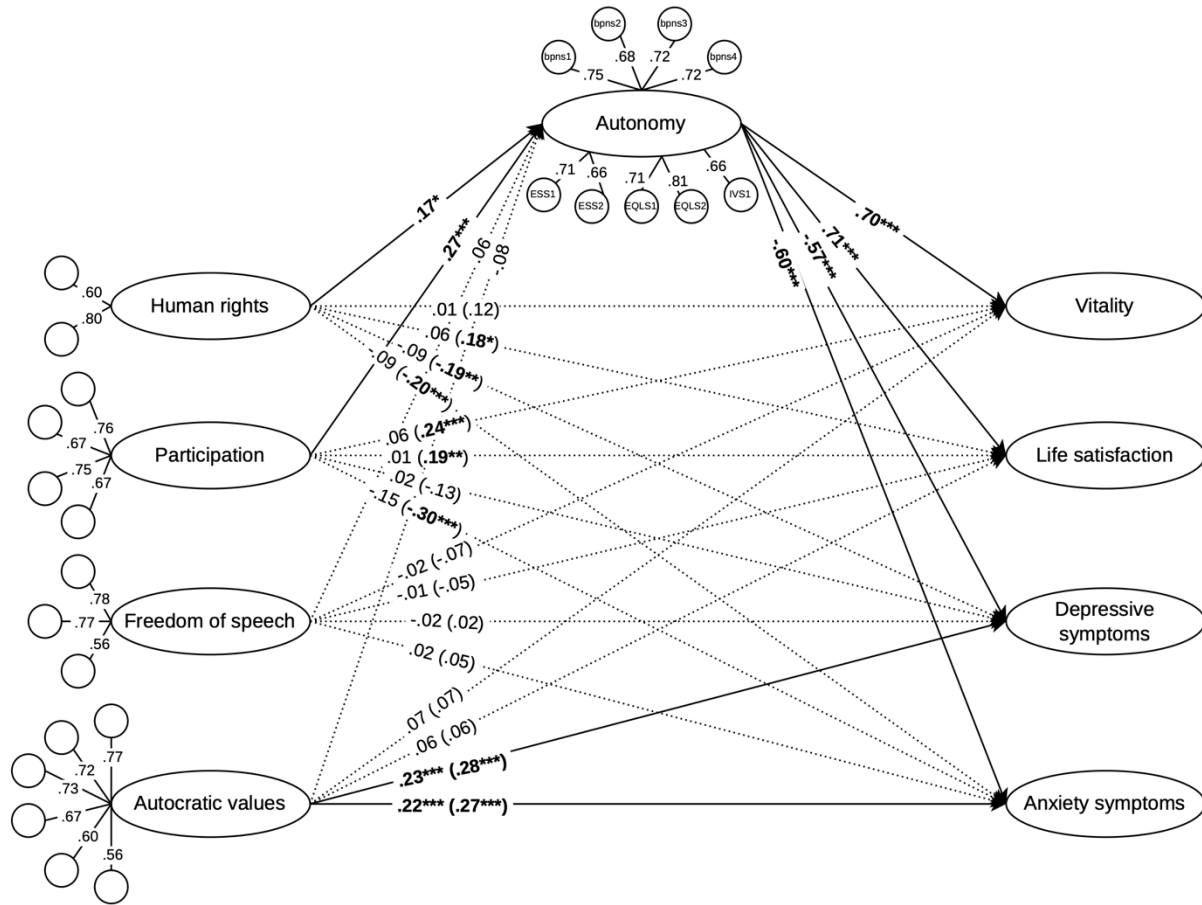
Table 4. *Multilevel Pearson correlations at the between-country (lower diagonal) and within-country (upper diagonal) levels (Study 3)*

	<i>M</i>	<i>SD</i>	<i>ICC</i>	1	2	3	4	5	6
1. Democracy Index	0.58	0.26	0.76		.14***	.02	.00	.02	-.02
2. Perceived democracy	6.23	2.53	0.16	.40***		.12***	.10***	.15***	.07***
3. Autonomy	7.21	2.21	0.06	.33*	.52***		.21***	.36***	.18***
4. Happiness	3.14	0.72	0.09	.28*	.32***	.60***		.44***	.37***
5. Life satisfaction	6.97	2.24	0.11	.39***	.32***	.72***	.75***		.30***
6. General Health	2.88	0.85	0.07	.18*	.41***	.46***	.48***	.32*	

Note. *** $p < .001$, ** $p < .01$, * $p < .05$; *M* = Mean, *SD* = Standard Deviation, *ICC* = Intra-Class Coefficient

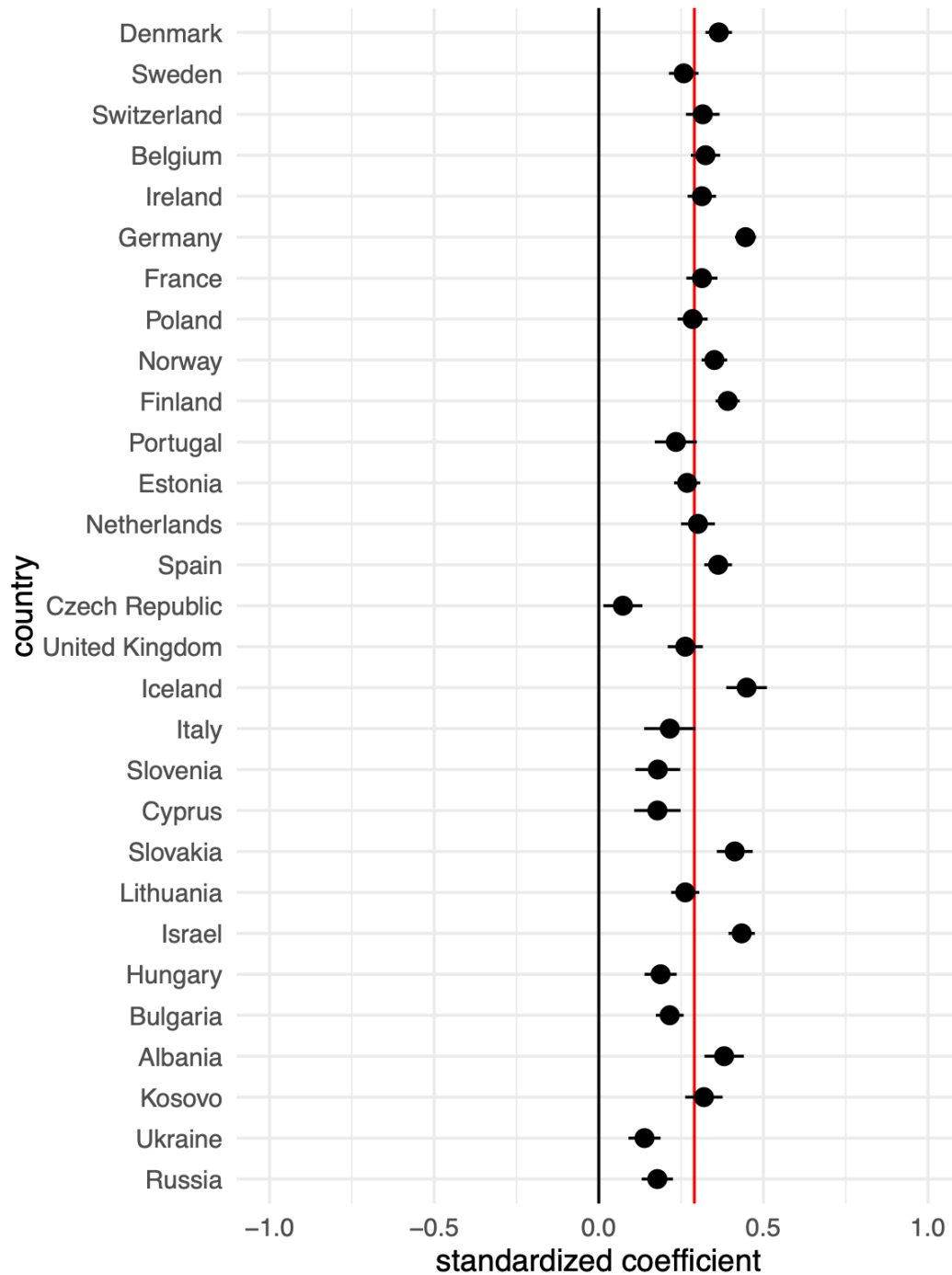
Figures

Figure 1. Structural model of perceived democracy, autonomy and well- and ill-being indicators with latent factor loadings and standardized coefficients (Preliminary study)



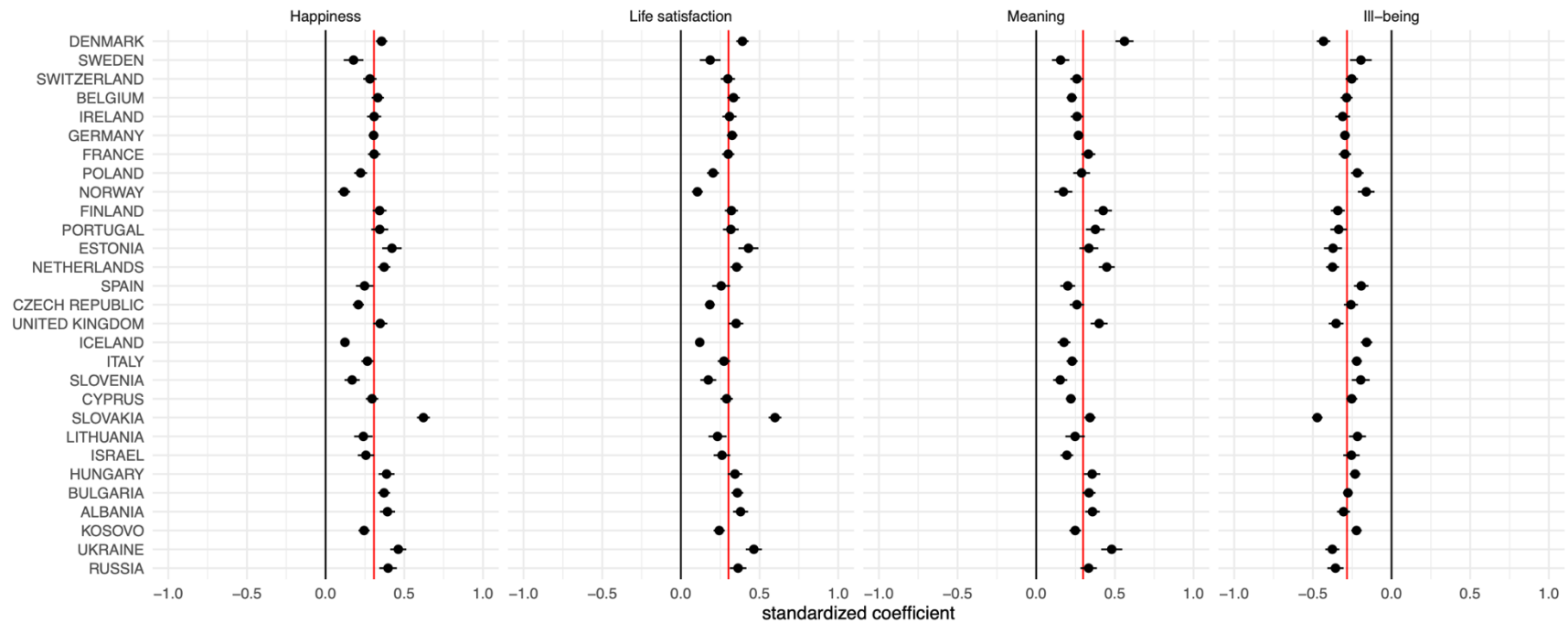
Note. *** $p < .001$, ** $p < .01$, * $p < .05$; significant coefficients and pathways are visualized in bold font and solid lines. Non-significant pathways are visualized in dotted lines. Values in parentheses indicate total effects, whereas the coefficients outside parentheses represent direct effects. For all latent factor loadings, all p 's $< .001$; BPNS = Basic Psychological Need Satisfaction survey of Chen et al. (2015), ESS = European Social Survey; EQLS = European Quality of Life Survey, IVS = Integrated Value Survey

Figure 2. Standardized coefficients between perceived democracy and autonomy across countries with 95% Confidence Interval (Study 1)



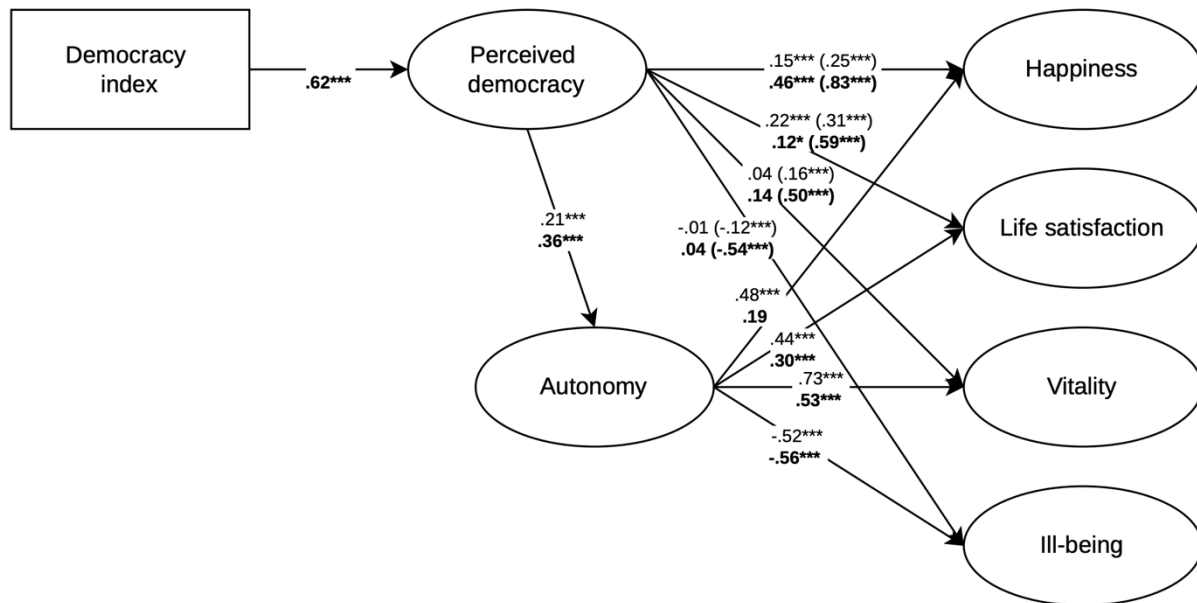
Note. the red line displays the average standardized coefficient across countries

Figure 3. Standardized coefficients for indirect effects between perceived democracy and outcomes via autonomy across countries with 95% Confidence Interval (Study 1)



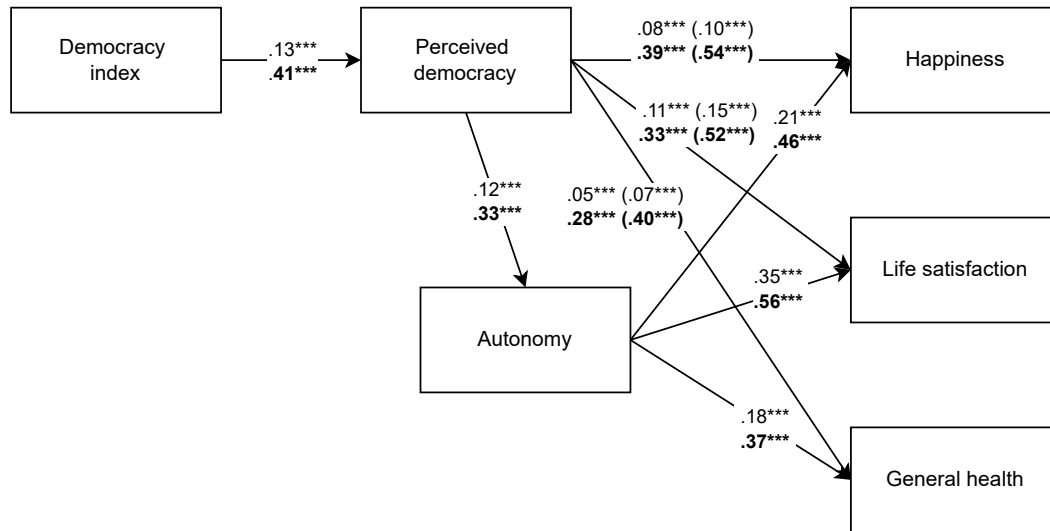
Note. the red line displays the average standardized coefficient for indirect effects across countries

Figure 4. Visualization of multilevel structural equation model on both the between-person and between-country level (Study 2)



Note. $^{***}p < .001$, $^{**}p < .01$, $^*p < .05$; Upper coefficients (regular font) represent between-person coefficients, bottom coefficients (bold font) represent between-country coefficients. Values in parentheses indicate total effects, whereas the coefficients outside parentheses represent direct effects.

Figure 5. Visualization of multilevel structural equation model on both the within-country and between-country level (Study 3)



Note. *** $p < .001$, ** $p < .01$, * $p < .05$; Upper coefficients (regular font) represent within-country coefficients (across time), bottom coefficients (bold font) represent between-country coefficients. Values in parentheses indicate total effects, whereas the coefficients outside parentheses represent direct effects.

Supplementary Materials

Table S1. Overview of fit indices for invariance testing (Study 1)

Invariance	Chisq(df)	CFI	RMSEA	SRMR	AIC	BIC
Configural	97761.47(6902)	0.81	0.08	0.06	4196066.74	4218285.69
Metric	108409.311(7406)	0.88	0.07	0.04	4105706.58	4123435.42
Scalar	170305.68(7910)	0.85	0.07	0.04	4166594.95	4179833.67

Figure S1. Visualization of validation techniques in Explanatory Factor Analysis (Preliminary Study)

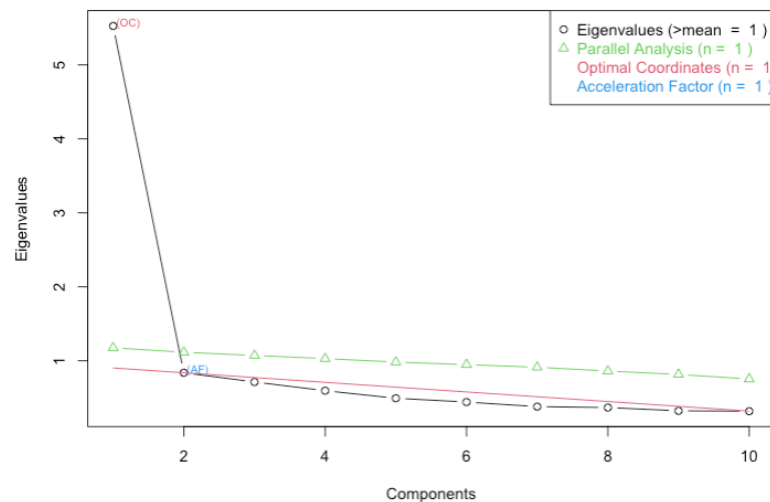
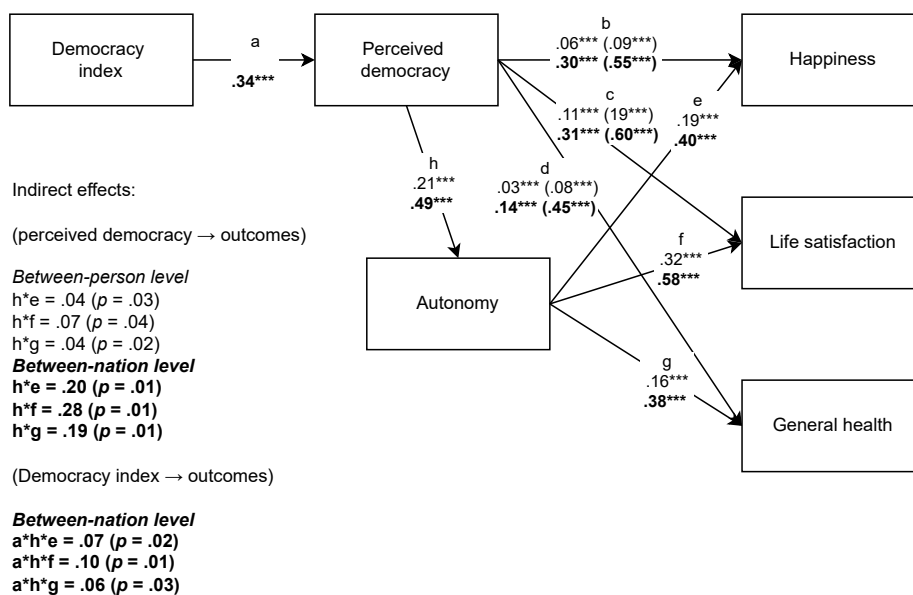


Figure S2. Multilevel Structural Equation Model on between-person and between-nation level (Study 3)



Note. *** $p < .001$, ** $p < .01$, * $p < .05$; Upper coefficients (regular font) represent within-country coefficients, bottom coefficients (bold font) represent between-country coefficients.