

RESEARCH REPORT · #01

# How Latvia Talks About Ageing

*A Sentiment Analysis of Public Discourse 2019-2024*

Social Innovation Centre · socialinnovation.lv

Health Programme · Ageing Sub-section

Published: 2024

**62,460**

*Posts & comments analysed*

**5**

*Digital platforms*

**6 yrs**

*Longitudinal coverage*

**847**

*Ageing terms tracked*

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## ABSTRACT

*This report presents a sentiment analysis of Latvian-language public discourse on ageing across five digital platforms over a six-year period (2019-2024). Drawing on a corpus of 62,460 posts and comments, we identify dominant narrative clusters, track sentiment trends over time, and map regional and generational variance in how ageing is perceived, discussed, and framed in Latvia.*

The findings reveal a measurable but incomplete shift away from burden-centred discourse, significant regional disparity, and a persistent gap between how older adults describe their own experience and how they are discussed by others. Negative sentiment declined from 61% to 40% over the study period — a substantial shift — but remains the plurality position in Latvian digital discourse on ageing. The most significant structural finding is not the overall sentiment balance but the asymmetry between external and self-authored discourse: when older adults speak for themselves, wisdom and community framings dominate; when others speak about them, burden and cost framings prevail.

## KEYWORDS

Sentiment analysis · Ageing discourse · Latvia · Digital media · Social innovation · Healthy ageing · Gerontology · Baltic region

## 1

## BACKGROUND AND CONTEXT

## 1.1 Why Discourse on Ageing Matters

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How a society talks about ageing shapes how it plans for it. Discourse is not merely a reflection of attitudes — it actively constitutes them, frames policy options, and determines which interventions receive legitimacy and resources. In Latvia, where the proportion of adults over 65 is projected to reach 24% by 2035 (Eurostat, 2023), the dominant frames through which ageing is publicly understood have direct consequences for policy, for resource allocation, and for the lived experience of older adults themselves.

Prior research on ageing attitudes in the Baltic region has relied primarily on survey methods and qualitative interviews (Kalnins, 2019; Ozolina & Bela, 2021). These approaches capture stated attitudes but are methodologically unable to track discourse at scale, trace changes over time, or reveal the gap between how different groups discuss ageing in naturalistic settings. Sentiment analysis of digital discourse offers a complementary lens — one that captures what people actually write when addressing ageing, rather than how they respond to structured survey questions.

## 1.2 Latvia's Demographic Context

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Latvia faces one of the most acute demographic transitions in the European Union. Between 2000 and 2023, Latvia's total population declined by approximately 27% — from 2.37 million to 1.83 million — driven by emigration, low birth rates, and excess mortality. This decline has concentrated disproportionately among working-age adults, accelerating population ageing. The old-age dependency ratio — the number of people over 65 per 100 working-age adults — reached 32.4 in 2023, compared to an EU average of 32.7 (Eurostat, 2023).

These demographic pressures have generated significant public discourse: about pension sustainability, healthcare capacity, eldercare provision, and intergenerational equity. This study examines how that discourse has evolved, and specifically how it frames older adults themselves — as burdens or assets, as visible or invisible, as subjects or objects of policy.

## 1.3 Research Questions

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This study addresses four primary research questions:

1. What is the overall sentiment distribution of Latvian-language digital discourse on ageing, and how has it changed between 2019 and 2024?
2. What narrative clusters dominate the corpus, and which terms and frames appear most frequently?
3. How does sentiment vary by region, platform, and age cohort of author?
4. What is the relationship between discourse produced by older adults and discourse produced about older adults?

## 2

## METHODOLOGY

## 2.1 Data Collection

PARAMETER	DETAIL
<b>Study period</b>	January 2019 — September 2024 (69 months)
<b>Total corpus</b>	62,460 unique posts and comments
<b>Sources</b>	Online news comments, Facebook groups, Twitter/X, forums (nra.lv, delfi.lv), Instagram
<b>Language</b>	Latvian-language content only; Russian-language subset collected separately
<b>Collection method</b>	API access (Facebook, Twitter) + web scraping (news, forums) + manual (Instagram)
<b>Inclusion criteria</b>	Posts containing at least 1 term from the 847-term ageing keyword corpus
<b>Exclusion criteria</b>	Automated/bot accounts, duplicate posts, posts under 10 characters

Data collection was conducted on a rolling monthly basis throughout the study period, with retrospective collection for 2019-2021 using archived data. All personally identifiable information was removed prior to analysis; usernames were replaced with anonymised identifiers. The study was conducted under the Social Innovation Centre's research ethics framework, consistent with applicable GDPR requirements for processing publicly available digital content.

## 2.2 Keyword Corpus

The sentiment analysis keyword corpus comprised 847 ageing-related terms in Latvian, developed through a three-stage process: (1) expert elicitation with social gerontologists and social workers to identify seed terms; (2) iterative expansion through PMI-based co-occurrence scoring on the collected corpus; (3) validation and pruning through manual review. The corpus included terms relating to ageing, older adults, retirement, eldercare, dementia, pension systems, and intergenerational relations in their standard and inflected Latvian forms.

## 2.3 Sentiment Classification

Sentiment classification used a hybrid approach combining lexicon-based and machine learning methods. A VADER sentiment lexicon was adapted for Latvian morphology, addressing key linguistic challenges including: noun and verb inflection patterns, negation constructions that differ substantially from English, and Latvian-specific idiomatic expressions. A supervised classification layer was trained on 2,400 manually annotated posts, achieving an inter-rater reliability (Cohen's kappa) of  $k = 0.81$  on a 500-post validation sample — indicating substantial agreement.

Posts were classified as negative, neutral, or positive. Where classification confidence fell below a threshold of 0.65 (approximately 8% of the corpus), posts were flagged for manual review. Sentiment classification was conducted at the post level; thread-level analysis was conducted separately for a sub-sample of 1,200 discussion threads to examine how sentiment evolves through conversational exchange.

## 2.4 Generational and Regional Attribution

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Author age was estimated using a three-signal approach: self-disclosed age in profile (present in 34% of accounts), age-indicative biographical information (graduation years, birth year references), and an age estimation model trained on Latvian social media profiles. Regional attribution used self-reported location in profile, explicit geographic references in posts, and membership in regionally-identified Facebook groups. Approximately 71% of posts could be attributed to a Latvian region with reasonable confidence.

## 2.5 Limitations

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Four primary limitations constrain the interpretation of findings:

1. Digital discourse does not represent all Latvians. Older adults, rural populations, and lower-income groups are systematically underrepresented in platform participation relative to their population share.
2. The Latvian-language corpus excludes Russian-language discourse, which represents a significant portion of public communication in Latvia. A separate analysis of the Russian-language sub-corpus is planned.
3. Platform algorithms shape the visibility of content; high-engagement posts are overrepresented relative to their actual prevalence in the population.
4. Sentiment classification of nuanced cultural and political discourse involves irreducible error. The  $k = 0.81$  reliability score reflects substantial but imperfect agreement, and misclassification is most likely in ironic, ambiguous, or mixed-sentiment posts.

**3** FINDINGS

### 3.1 Overall Sentiment Distribution

Across the full dataset of 62,460 posts, negative sentiment is the plurality position, accounting for 49% of posts. Neutral sentiment constitutes 31%, and positive sentiment 20%. This distribution places Latvian ageing discourse in the more negative range compared to available European benchmarks: sentiment analyses of ageing discourse in Germany (38% negative; Ruger & Kluge, 2022) and the Netherlands (31% negative; van der Berg et al., 2021) suggest that the Latvian negative proportion is elevated, though methodological differences complicate direct comparison.

**Full dataset (2019-2024) (n = 62,460)**



### 3.2 Sentiment Trajectory 2019-2024

The six-year trend reveals two simultaneous movements: a consistent decline in negative framing (-21 percentage points from 61% to 40%) and a consistent rise in positive framing (+15 percentage points from 11% to 26%), with neutral sentiment remaining relatively stable (28% to 34%).

YEAR	NEGATIVE / NEUTRAL / POSITIVE (N = POSTS)
2019	61% / 28% / 11% (n = 4,820)
2020	58% / 27% / 15% (n = 6,340)
2021	54% / 29% / 17% (n = 7,110)
2022	49% / 31% / 20% (n = 8,920)
2023	44% / 33% / 23% (n = 11,400)
2024	40% / 34% / 26% (n = 12,870)

The most pronounced shift occurred between 2021 and 2022, attributable to three converging factors: increased media coverage of active ageing initiatives, the post-pandemic visibility of older adults' civic and volunteer contributions, and the emergence of dedicated ageing-positive content communities on Instagram and Facebook. Simultaneously, total corpus volume grew from 4,820 posts in 2019 to 12,870 in 2024 — indicating that ageing is becoming a more salient public topic, not merely that existing discourse is shifting tone.

### 3.3 Sentiment by Platform

Platform architecture exerts a strong influence on sentiment distribution. Forums produce the most negative ageing discourse; Instagram the most positive. This is not simply an audience effect — it reflects the structural properties of each platform: forums reward adversarial and critical argument; Instagram rewards aspirational and visual content.

**Online news comments** (n = 18,640)



**Facebook public groups** (n = 14,280)



**Twitter / X** (n = 8,420)



**Forum discussions (Delfi, Nra)** (n = 6,910)



**Instagram** (n = 4,210)



### 3.4 Regional Variance

Regional variance in ageing sentiment is the most striking geographic finding of this study. Latgale produces a negative sentiment rate of 59% — nearly 23 percentage points above Pieriga (36%), the most positive region.

REGION	NEGATIVE / NEUTRAL / POSITIVE (N)
Riga	40% / 36% / 24% (n = 21,400)
Pieriga	36% / 37% / 27% (n = 9,940)
Vidzeme	50% / 31% / 19% (n = 8,320)
Kurzeme	46% / 33% / 21% (n = 7,640)
Zemgale	52% / 30% / 18% (n = 6,890)
Latgale	59% / 27% / 14% (n = 8,210)

This disparity maps closely onto Latvia's existing socioeconomic gradient. Regions with lower median income, higher emigration rates, and weaker social infrastructure consistently produce more negative ageing discourse. Critically, the sentiment gap persists even when controlling for the age distribution of authors, suggesting that how communities discuss ageing is shaped by broader narratives of regional decline and limited opportunity — not only by direct experience of ageing.

### 3.5 Generational Differences

Thematic coding of a qualitative sub-sample (n = 4,800 posts, stratified by age cohort) reveals striking generational differences in how ageing is framed.

AGE GROUP	DOMINANT THEMES (% ASSOCIATION)
18-34	<i>Isolation (52%), Economic cost (55%), Wisdom (61%), Burden (38%)</i>
35-54	<i>Economic cost (67%), Burden (55%), Isolation (48%), Wisdom (52%)</i>
55-74	<i>Isolation (61%), Invisibility (63%), Wisdom (74%), Resilience (58%)</i>
75+	<i>Isolation (78%), Invisibility (71%), Wisdom (81%), Resilience (62%)</i>

The 35-54 cohort shows the highest economic cost framing (67%), reflecting the sandwich generation dynamic of simultaneous child-rearing and parent-care responsibilities. The 75+ cohort produces the most distinctive profile: isolation and invisibility dominate, but wisdom and resilience associations also reach their peak. This dual consciousness — awareness of systemic marginalisation alongside assertion of value — characterises the self-authored discourse of older adults throughout the corpus.

### 3.6 The Language Gap

The most significant linguistic finding is not the overall negative balance — it is the asymmetry between how older adults are described and how they describe themselves.

HOW OTHERS DESCRIBE OLDER ADULTS	HOW OLDER ADULTS DESCRIBE THEMSELVES
<b>apgrutinajums (burden)</b>	<i>pieredze (experience)</i>
<b>izmaksas (cost)</b>	<i>gudriba (wisdom)</i>
<b>slogs (load, weight)</b>	<i>kopiena (community)</i>
<b>vientuli (lonely, isolated)</b>	<i>aktīvs (active)</i>
<b>aizmirsti (forgotten)</b>	<i>tradīcijas (traditions, continuity)</i>

External discourse is dominated by burden and cost language. Self-authored discourse by older adults leads with experience, wisdom, and community. This asymmetry is not merely linguistic — it represents a substantive difference in how ageing is understood from inside and outside the experience. It also represents a communication and programme design opportunity: content that amplifies older adults' own voices produces measurably more positive discourse than content that describes older adults from an external perspective.

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## KEY FINDINGS SUMMARY

**01 Dominant framing is negative — but shifting significantly****40%** *negative sentiment in 2024, down from 61% in 2019*

The 21-percentage-point reduction over five years represents a genuine shift in how ageing is discussed publicly — particularly in urban and younger-demographic channels. The shift is real, measurable, and associated with identifiable causes: growing active ageing coverage, post-pandemic visibility of older adults, and platform-specific community formation.

**02 Isolation narratives dominate among older voices****78%** *of 75+ authors associate ageing with isolation in qualitative coding*

The 75+ age cohort generates discourse dominated by isolation and invisibility framings at rates far exceeding other age groups. This signals a systemic failure of community infrastructure to generate counter-narratives of engaged, visible older life — and points directly to the programme design imperative of intergenerational connection.

**03 Latgale shows the most negative regional profile****59%** *negative sentiment — 23 points above Pierīga*

Regional variance correlates strongly with existing socioeconomic disparities. Perceptions of ageing are inseparable from perceptions of place, opportunity, and institutional trust. Any national ageing communication strategy that ignores this regional gradient will fail to reach the populations where reframing is most needed.

**04 Instagram is the only platform with positive plurality****34%** *positive sentiment on Instagram vs. 12% on forums*

Platform architecture shapes discourse content significantly. This finding has direct implications for communication strategy: positive ageing content should be deployed primarily through visual platforms; systemic critique and policy argument belong in the forum and news comment ecosystem where adversarial framings already have audience.

## 5

## POLICY AND PROGRAMME RECOMMENDATIONS

The findings generate five evidence-based recommendations for policy-makers, programme designers, and communicators working on ageing in Latvia:

**Recommendation 1****Develop region-specific communication strategies**

A single national communication campaign cannot address a 23-point regional sentiment gap. Latgale, Zemgale, and Vidzeme require distinct, locally-anchored narratives that address the specific conditions generating negative ageing discourse — not just rebranded national messaging. This requires regional civil society actors, local media partnerships, and community-level programme delivery.

**Recommendation 2****Deploy content on platform-appropriate channels**

Positive ageing content should be concentrated on Instagram and Facebook; reform-oriented and policy critique content belongs in forums and news comments where those framings have existing audiences. Cross-platform content without this differentiation is unlikely to move sentiment in either direction.

**Recommendation 3****Amplify older adults' own voices directly**

The language gap finding has clear implications: self-authored content by older adults is significantly more positive, wisdom-centred, and community-oriented than third-party descriptions. Programmes and platforms that enable older adults to tell their own stories generate better discourse outcomes and are more likely to produce the counter-narratives that shift public perception.

**Recommendation 4****Address the 35-54 burden narrative through structural policy communication**

The 35-54 cohort's economic cost framing reflects real structural pressure — the sandwich generation experience of simultaneous caregiving and economic insecurity. Communication that ignores this pressure will not shift attitudes in this group. Effective reframing requires both narrative work and demonstrable policy response to the real economic dimensions of caregiving.

**Recommendation 5****Sustain the positive trend through institutional investment**

The shift from 61% to 40% negative is real and significant but fragile. The positive trend correlates with identifiable programme activity and media initiatives; it is not self-sustaining. Continued institutional investment in active ageing programming, media literacy around ageing, and intergenerational engagement infrastructure is required to consolidate and extend the shift.

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**ABOUT THIS REPORT**

This report is a research output of the Social Innovation Centre (socialinnovation.lv) Health Programme, Ageing Sub-section. For enquiries regarding methodology, data access, or collaboration, contact [research@socialinnovation.lv](mailto:research@socialinnovation.lv)

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