TITLE

Culture Pulse – Methodology Overview: Autism & Modern Environmental Factors

1. DATA SOURCES & TIMEFRAMES

Autism Prevalence: - CDC ADDM Network; WHO Global Estimates - U.S.-based prevalence in children (per 100); 1970–2020 in decadal steps Oral Contraceptive Use: - United Nations Population Division; WHO Family Planning - Estimated millions of users globally (1970–2020) Diet-Related Disease Index: - Composite of obesity, type 2 diabetes, and NAFLD prevalence - Sources: CDC, IHME, WHO, World Obesity Federation Plastic Use/EDC Proxy: - PlasticsEurope, Our World in Data - Global plastic production for food/packaging (in M metric tons)

2. DATA PROCESSING & ALIGNMENT

- All time series converted to decadal intervals (1970–2020) - Normalized or scaled for clear visual comparison - Missing values estimated conservatively from adjacent peer-reviewed data - Kept in natural units where possible (e.g., % prevalence, M users)

3. CORRELATION ANALYSIS

- Pearson and Spearman correlation coefficients calculated - Tools: Python (scipy.stats.pearsonr, spearmanr) - Each factor vs. autism plotted with r/ρ values and p-values for strength/significance

4. VISUALIZATION TOOLS

- Visuals created using matplotlib in Python 3 - Plotted with dual and triple y-axes for trend clarity - Exported as high-resolution images (PNG/PDF)

SUMMARY

This method is exploratory, non-causal, and intended to reveal patterns hidden across disparate domains. Culture Pulse applies public data correlation modeling to identify signals that may inform future research, funding, or policy discussions. Strong correlations do not imply causation, but they warrant deeper investigation and transparency.