



INTERNATIONAL CONFERENCE "CHALLENGES AND OPPORTUNITIES FOR A SUSTAINABLE DEVELOPMENT" (COSD 2026)

THE DIGITAL CONNECTIVITY PARADOX AND SUBJECTIVE WELL-BEING

MECHANISMS, MODERATORS, AND A GOLDILOCKS READING OF AN EMERGING DIGITAL ECONOMY

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RESEARCH PROBLEM

More Connected. Not Necessarily Happier.

The Paradox

Digital access is expanding rapidly — yet subjective well-being indicators are stagnating or declining.

Moldova's Case

Internet penetration: <30% in 2010 → >78% in 2023

Well-being indicators did **not** follow a proportional upward trend.

Connectivity is a necessary — but not sufficient — condition for quality of life.



WHY THIS MATTERS

A Post-Soviet Context Under-Studied

Diaspora & Dispersed Networks

Digital tools maintain family ties across borders — a unique moderating factor.

Rural–Urban Digital Divide

Unequal digital skills amplify well-being inequalities.

Research Gap

Empirical data on digital well-being in Moldova is almost absent.

i Global average: **2h 20min/day** on social media in 2024 (Keeley, 2024). Over **5.4 billion** internet users worldwide.



CONCEPTUAL FRAMING

Subjective Well-Being: A Multidimensional Construct

Life Satisfaction

Cognitive evaluation of one's life as a whole

Measured by SWLS

Psychological Well-Being

General mental functioning and positive health

Measured by WHO-5

Positive Affect

Frequency of positive emotions in daily life

Measured by I-PANAS-SF

Negative Affect

Frequency of negative emotions in daily life

Measured by I-PANAS-SF

Cognitive and affective dimensions respond **differently** to digital behaviours — justifying multi-scale measurement.



CORE ARGUMENT

Digitalisation is not automatically beneficial.

What determines the effect?

- How technology is used (active vs. passive)
- Psychosocial mechanisms activated
- Digital skills and self-regulation capacity
- Offline social capital available



The same tool can generate **opposite outcomes** depending on context and usage pattern.



LITERATURE FOUNDATION

Key Theoretical Perspectives



Uses & Gratifications

Effects depend on motivation: maintaining relationships vs. compensating for loneliness



Active vs. Passive Use

Creating and interacting → positive; scrolling and monitoring → negative



Goldilocks Hypothesis

Nonlinear relationship: moderate use is optimal; too little or too much reduces well-being



FOMO & Social Comparison

Fear of missing out and upward comparison mediate connectivity's negative effects



CONCEPTUAL MODEL

The Digital Connectivity Paradox: Model



Active use generates connectivity and competence; passive use activates FOMO, upward comparison, and cognitive overload. Moderators shape which pathway dominates.



RESEARCH QUESTIONS

What We Set Out to Examine

O1

Association

Is digital use associated with subjective well-being — and is the relationship linear or nonlinear (Goldilocks)?

O3

Mediation

Do FOMO, social comparison, and information overload mediate the relationship?

O2

Active vs. Passive

Does passive use reduce well-being more than active use?

O4

Protection

Do digital skills and offline social capital buffer negative effects?



Research Design

Design

Quantitative, cross-sectional

Online multiscale questionnaire (Google Forms)

May 2026 · Informed consent · Anonymous

Sample

N = 250 adult internet users

Republic of Moldova

Convenience sampling (non-probabilistic)

Analysis Strategy

- Descriptive statistics & frequency distributions
- Cronbach's α internal reliability
- Pearson correlation matrix
- Multiple linear regression (SWLS & WHO-5)
- Polynomial regression (Goldilocks test)
- Bootstrap mediation analysis (PROCESS Model 4)



MEASUREMENT INSTRUMENTS

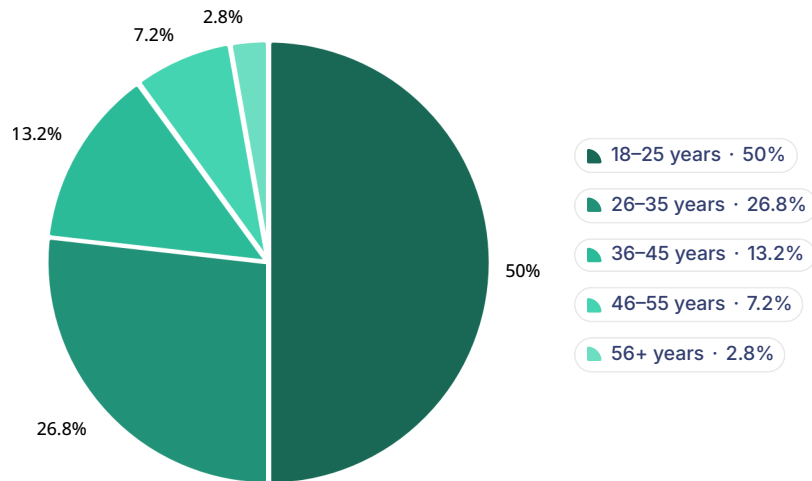
Scales Used

Construct	Instrument	Range
Life Satisfaction	SWLS (Diener et al., 1985)	5–35
Psychological Well-Being	WHO-5 (Topp et al., 2015)	0–100%
Positive/Negative Affect	I-PANAS-SF (Thompson, 2007)	5–25
FOMO	Przybylski et al. (2013)	10–50
Social Comparison	INCOM + SNS items	8–40
Information Overload	Lee et al. (2016)	5–25
Active/Passive Use	PAUM (Gerson et al., 2017)	3–18
Digital Skills	Internet Skills Scale	8–40
Perceived Social Support	MSPSS (Zimet et al., 1988)	7–49

⚠ Scales adapted into Romanian — internal reliability confirmed ($\alpha \geq .70$); formal psychometric validation recommended for future studies.

SAMPLE PROFILE

Who Participated?



60.4% Female

39.6% Male

94.4% Urban

5.6% Rural

100% University-Educated

74% Bachelor · 26% Master

52.4% Full-Time Employed

31.2% Students

❏ Convenience sample: over-represents young, urban, educated, female users. Results not generalisable to the full population.



DIGITAL USE PATTERNS

How Connected Are They?

73.6%

4+ hours/day online

89.2%

Phone in first hour after waking

63.6%


3-4+ hours/day on social media

94.8%

Phone before sleep

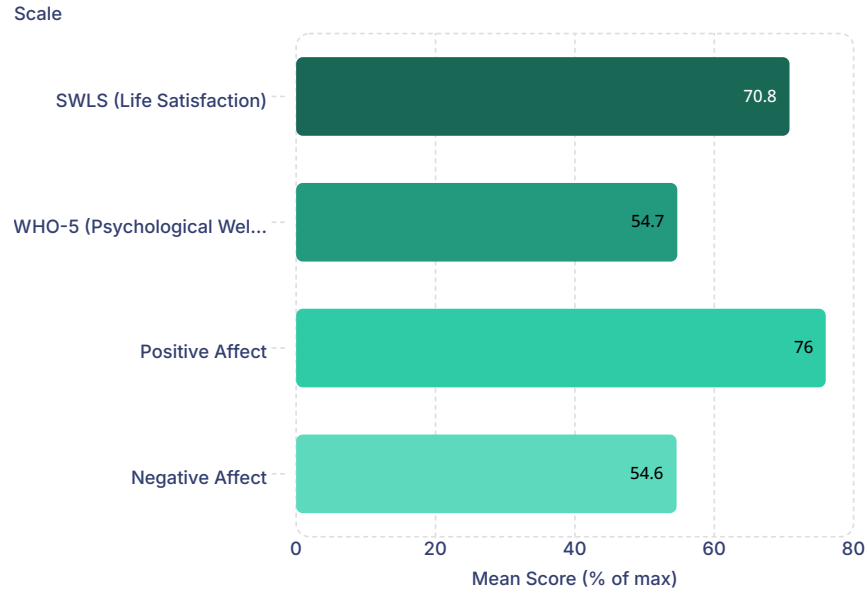
Most-used platforms: Instagram (90.4%) · TikTok (78.8%) · Messaging apps (79.2%) · Facebook (68.8%)

Dominance of visual, short-form, algorithmically optimised platforms — favouring passive use and social comparison.

 37.2% check their phone **11+ times per hour** — a significant attention fragmentation signal.

WELL-BEING RESULTS

Subjective Well-Being: Moderate, With Risk Zones



SWLS: 24.77 / 35

"Satisfied" range — but 26% score below 20

WHO-5: 54.7%

Moderate well-being; clinical threshold at 50%

36% in Risk Zone

Low well-being or risk for depressive episode



KEY EMPIRICAL FINDING

$$r = 0.852$$

Perceived Social Support → Life Satisfaction

Social support is the **dominant predictor** of life satisfaction — far exceeding any digital variable measured.

Consistent with Holt-Lunstad et al. (2015): interpersonal relationships are the most robust correlate of subjective well-being.

Digital variables by comparison:

Digital skills: $r = 0.400$

Active use: $r = 0.232$

Passive use: $r = 0.236$

FOMO: $r = 0.027$

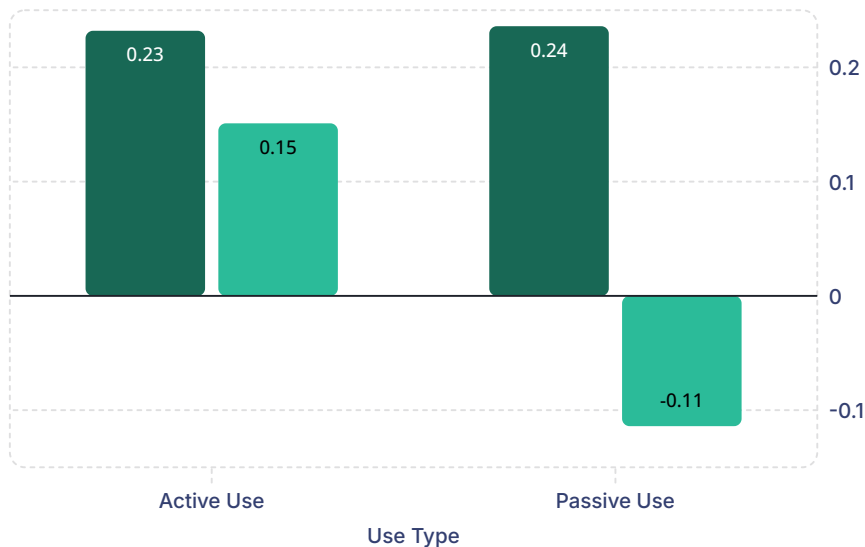
Digital networks do not functionally substitute offline social support.

ACTIVE VS. PASSIVE USE

Not All Screen Time Is Equal

■ Correlation with SWLS

■ Correlation with WHO-5



Key Insight

Passive use (M = 11.98/18) is **more frequent** than active use (M = 9.03/18).

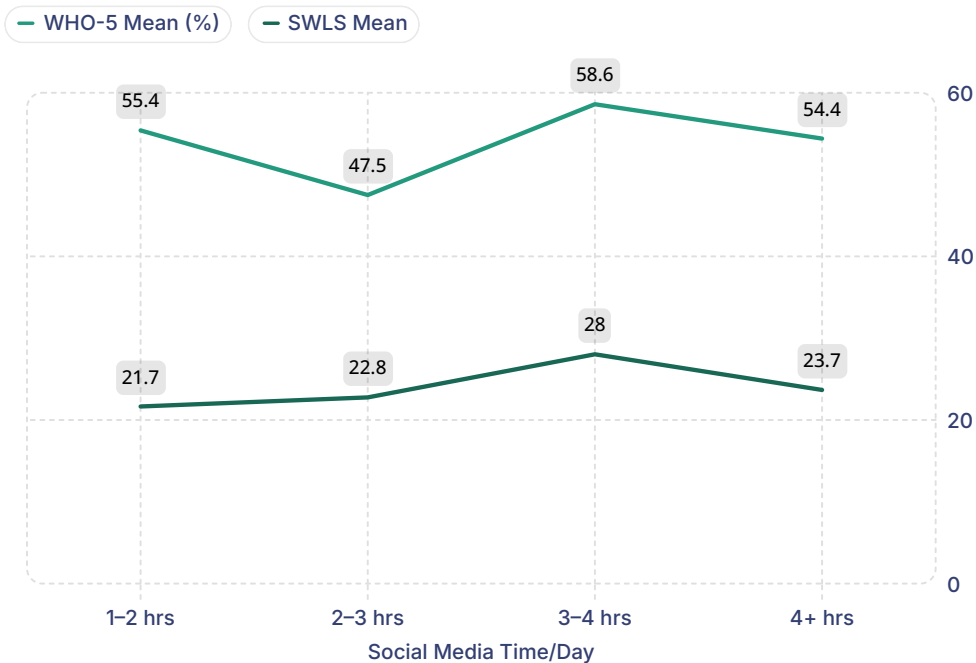
Both correlate positively with **cognitive** life satisfaction (SWLS).

But passive use correlates **negatively** with **psychological** well-being (WHO-5).

- ❑ Cognitive evaluation and current psychological state are **differentially sensitive** to digital behaviours.

GOLDILOCKS HYPOTHESIS

Not Confirmed in Its Classic Form



Why the Anomaly?

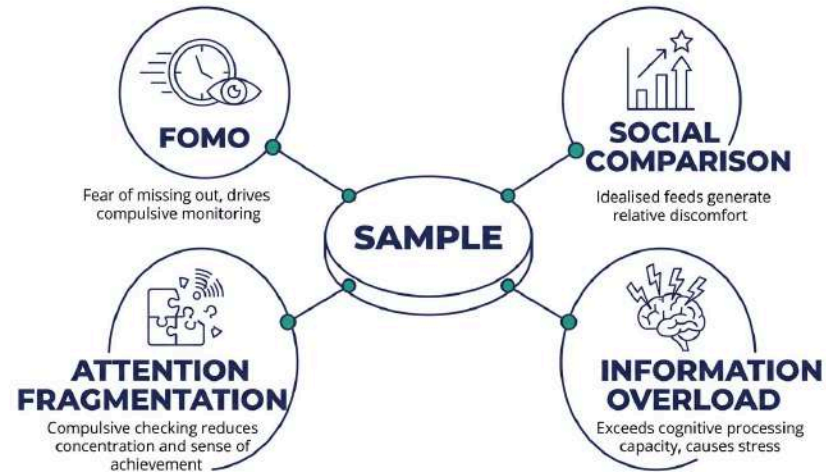
In Moldova, higher social media use may reflect **diaspora connectivity** — maintaining family ties across borders.

The Goldilocks effect is **context-dependent**, not universal.

i The 3-4 hrs group shows the **highest SWLS** (M = 28.03) — not the lowest-use group.

PSYCHOSOCIAL MECHANISMS

How Connectivity Becomes Vulnerability



Sample Levels



Information Overload

M = 16.55/25



Attention Fragmentation

M = 15.71/25

FOMO correlates strongly with social comparison ($r = .534$) and attention fragmentation ($r = .579$) — operating as a **mediating node**, not a direct predictor.



DISCUSSION

What the Data Tell Us

Social Support Primacy

Real interpersonal relationships remain the foundation of well-being. Digital interaction volume cannot compensate for weak offline social capital.

Quality Over Quantity

Raw screen time does not correlate significantly with any well-being scale. **Type, purpose, and regulation** of use matter more.

Boundary Behaviours as Risk

Phone use at sleep-wake transitions (89–95% of sample) is linked to sleep disruption, cortisol dysregulation, and reduced well-being.

Context Shapes Effects

Moldova's diaspora context may invert some expected patterns — more use can mean more relational continuity, not substitution.

Towards Human-Centred Digitalisation



Critical Digital Education

Media literacy + digital hygiene + recognition of persuasive design



Digital Self-Regulation

Screen-time awareness, boundary-setting, sleep-wake hygiene



Promote Active Use

Content creation, professional learning, community participation over passive scrolling



Digital Well-Being Indicators

Integrate into national digitalisation strategies (Agenda Digitală 2030, e-Moldova)

- ✔ National Statistics Bureau could integrate digital well-being modules into periodic quality-of-life surveys.



LIMITATIONS

Methodological Boundaries

Convenience Sample

Over-represents young, urban, educated, female users. Not generalisable to Moldova's full population.

Cross-Sectional Design

Associations identified — causal direction cannot be established.

Categorical Time Measurement

Limits precision of Goldilocks polynomial regression testing.

Adapted Scales

Five scales lack formal Romanian psychometric validation. Structural properties not fully demonstrated.

Self-Report Data

Social desirability bias; screen-time estimates may be inaccurate.

Missing Controls

Personality traits, health status, and life events not controlled.



FUTURE RESEARCH

What Comes Next

Representative Samples

Probabilistic, nationally stratified by age, gender, region, and urban/rural

Objective Screen-Time Data

Device app journals alongside self-report for validated usage measures

Qualitative Studies

Diaspora-mediated digital connection and meaning-making in digital use

1

2

3

4

5

Longitudinal Design

Minimum two measurement waves (6–12 months) to establish causal directionality

Psychometric Validation

CFA, composite reliability, configural-metric invariance for adapted Romanian scales



CONCLUSIONS

Five Core Findings

1 Social support dominates

$r = .852$ with SWLS — no digital variable comes close

2 Moderate well-being, notable risk

36% of sample in risk zone for low well-being or depression

3 Passive use harms psychological well-being

Negative correlation with WHO-5; positive with SWLS — dimensions diverge

4 Goldilocks not confirmed classically

Context (diaspora, dispersed networks) mediates the relationship

5 Overload & fragmentation are elevated

Negatively associated with psychological well-being; self-regulation is key



FINAL MESSAGE

Access is not enough.

Digitalisation becomes socially valuable only when it strengthens human relationships, psychological autonomy, attention quality, and perceived quality of life.

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SELECTED REFERENCES

Key Sources

- Diener et al. (1985) — SWLS
- Topp et al. (2015) — WHO-5
- Przybylski & Weinstein (2017) — Goldilocks hypothesis
- Orben & Przybylski (2019) — Digital technology & well-being
- Verduyn et al. (2015, 2017) — Passive Facebook use
- Przybylski et al. (2013) — FOMO Scale
- Holt-Lunstad et al. (2015) — Social support & mortality
- Festinger (1954) — Social comparison theory
- Katz et al. (1974) — Uses & Gratifications
- Dienlin & Johannes (2020) — Digital paradox
- Pollock et al. (2022) — Digital paradox
- Reinecke et al. (2017) — Digital stress
- van Deursen & van Dijk (2019) — Digital skills
- Valkenburg (2022) — Social media & well-being



Thank You

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Research Question

Does increased digital connectivity automatically improve perceived quality of life?

Answer

Not automatically. Quality, purpose, and regulation of use matter more than access alone.

 Open for questions and discussion.

Correspondence welcome via Moldova State University, Faculty of Economic Sciences.

 DIGITAL WELL-BEING

 FOMO

 MOLDOVA

 GOLDBLOCKS