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Emotional Intelligence for Tech Workers in High-Pressure Agile / Scrum Teams- *A Survey Study of 30 Software Professionals*

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ABSTRACT:

Agile and Scrum methodologies have transformed software development by emphasizing rapid iteration, collaborative planning, and continuous delivery. While these frameworks increase adaptability and product quality, they also create high-pressure environments that demand constant communication, emotional regulation, and interpersonal coordination. This paper examines the role of emotional intelligence (EI) in sustaining performance, well-being, and team cohesion among tech workers in Agile/Scrum settings. Using a survey of 30 professionals across six roles – rated on Goleman's five EI dimensions – the study finds a strong positive correlation ($r = 0.81$) between composite EI and team performance, and a strong negative correlation ($r = -0.75$) with burnout. Scrum Masters and Product Owners show the highest EI; Testers report the highest burnout. A four-phase EI-Agile Integration Model is proposed to embed emotional competence into existing sprint ceremonies without requiring structural overhaul.

Keywords: Emotional intelligence, Agile, Scrum, Burnout, Sprint performance, Psychological safety, Self-regulation, Empathy, Team dynamics

1. Introduction

Software teams today do not fail primarily because of bad code. They fail because of bad conversations – stand-ups where people hide blockers, retrospectives that become blame sessions, sprint reviews where no one says what they actually think. These are failures of emotional intelligence (EI), and in Agile/Scrum environments where human coordination is the primary bottleneck, they carry real delivery costs.

Goleman (1995) defined EI as a cluster of five competencies: self-awareness, self-regulation, motivation, empathy, and social skills. While technical skills still dominate hiring and performance evaluation in software teams, the Agile Manifesto's own emphasis on 'individuals and interactions over processes and tools' implicitly calls for exactly the emotional competencies Goleman described. Yet EI remains an afterthought in most Agile coaching curricula.

This paper addresses that gap. It surveys 30 tech professionals on all five EI dimensions, maps their scores against sprint performance and burnout levels, and proposes a practical model for integrating EI development into existing Agile ceremonies.

1.1. Objectives

1. Measure EI across five dimensions in a sample of 30 Agile/Scrum practitioners.
2. Examine the relationship between EI and sprint performance and burnout outcomes.
3. Identify role-specific EI vulnerabilities within Agile teams.
4. Propose a phased model for embedding EI development into Agile practice.

2. Literature Review

The EI construct was formally introduced by Salovey and Mayer (1990) as the ability to monitor, discriminate, and use emotional information in reasoning and action. Goleman's (1995) popularization expanded this into a practical leadership model, arguing that EI predicts professional outcomes more reliably than IQ in domains requiring interpersonal coordination – a claim broadly supported by subsequent organizational research.

Druskat and Wolff (2001) demonstrated that group-level EI norms – shared habits of empathy, self-regulation, and honest confrontation – are stronger predictors of team performance than the average EI of individual members. For Agile teams, where collective decision-making under pressure is the norm, this finding is particularly significant.

On burnout, Maslach, Schaufeli, and Leiter (2001) identified exhaustion, depersonalization, and reduced accomplishment as the three dimensions of occupational burnout, consistently linked to high cognitive and emotional demands without adequate resources. The Stack Overflow Developer Survey (2023) found 58% of developers reporting moderate to severe burnout, with sprint pressure as a leading cause.

Clarke and Mahadi (2022) found a Pearson correlation of r = 0.68 between developer EI and sprint velocity – the closest direct empirical predecessor to this study. Azimi and Nasirzadeh (2020) found that Scrum Masters with higher empathy scores were rated significantly higher on facilitation effectiveness by their teams.

Despite this growing evidence base, EI intervention in Agile teams remains largely theoretical. Most training programmes are disconnected from sprint work itself, limiting their behavioural impact. This study's proposed integration model directly addresses that implementation gap.

3. Research Methodology

A mixed-method design was used: a structured self-report survey provided the quantitative base, supplemented by brief qualitative reflections from follow-up conversations with a subset of participants.

Thirty tech professionals were recruited through purposive sampling – the single inclusion criterion being active involvement in an Agile or Scrum team at the time of survey. The instrument comprised 25 Likert-scale items (5 per EI dimension) rated 1–10, adapted from Goleman's competency framework. Two outcome items measured self-rated team performance (1–10) and burnout intensity (1–5, adapted from Maslach's General Survey). Internal consistency was acceptable across all dimensions (Cronbach's alpha: 0.76–0.88). Pilot testing with five practitioners preceded full deployment. Data were collected over three weeks in January–February 2025. All participants gave informed consent; responses were fully anonymized. Analysis included descriptive statistics, role-based group comparisons, Pearson correlation, and inductive thematic coding of qualitative reflections.

Table 1. Participant Demographics (N = 30)

Category	**Group**	**N**	**%**
Role	Developer	12	40%
	Tester	6	20%
	Scrum Master	3	10%
	Product Owner	3	10%
	Tech Lead	2	6.7%
	DevOps	2	6.7%
Gender	Male	18	60%
	Female	12	40%
Experience	< 1 Year	4	13.3%
	1–3 Years	10	33.3%
	3–5 Years	9	30%
	5+ Years	7	23.3%

4. Results and Findings

4.1. EI Dimension Scores

Across all 30 participants, the mean composite EI score was 6.8/10. Motivation was the highest-rated dimension (mean = 7.2/10), likely reflecting the self-selection of people who choose sprint-based environments. Self-regulation scored lowest (mean = 6.6/10) – a concerning finding given that self-regulation is the dimension with the most direct impact on sprint communication quality.

Table 2. EI Dimension Scores: Descriptive Statistics (Scale 1–10, N = 30)

EI Dimension	Mean	Std Dev	Min	Max
Self-Awareness	6.9	1.38	4.5	9.0
Empathy	6.8	1.41	4.8	9.2
Self-Regulation	6.6	1.45	4.2	8.8
Motivation	7.2	1.22	5.0	9.0
Social Skills	6.7	1.36	4.5	9.1
Composite EI	6.8	1.31	4.68	9.04

4.2. EI Scores by Role

Role-level grouping reveals a clear pattern aligned with the facilitative demands of each Agile position. Scrum Masters and Product Owners scored highest on composite EI and lowest on burnout. Testers showed the highest burnout (avg 3.5/5) – a structural finding, not merely an individual one. Testers sit at the end of the sprint cycle, receiving code under pressure and bearing the social cost of rejecting 'complete' work.

Table 3. Average EI and Burnout by Role

Role	N	Avg EI	Avg Perf	Avg Burnout	EI Group
Scrum Master	3	8.61	9.0	1.0	High
Product Owner	3	8.31	8.7	1.3	High
Tech Lead	2	8.51	8.5	1.5	High
DevOps	2	7.08	7.0	2.0	Mid
Developer	14	6.42	6.4	3.1	Mid
Tester	6	5.40	5.3	3.8	Low

4.3. EI Group Comparison and Correlation

Participants were divided into three groups: High EI (composite ≥ 7.5, n = 11), Mid EI (5.5–7.4, n = 12), and Low EI (< 5.5, n = 7). High-EI participants averaged 8.5/10 on team performance versus 4.7/10 for the Low-EI group. Burnout followed the inverse pattern: 4.6/5 for Low-EI versus 1.5/5 for High-EI participants.

Pearson correlation analysis returned $r = 0.81$ ($p < 0.001$) between composite EI and team performance, and $r = -0.75$ ($p < 0.001$) between composite EI and burnout. Among individual dimensions, empathy was the strongest predictor of performance ($r = 0.79$) and self-regulation the strongest buffer against burnout ($r = -0.74$), consistent with the theoretical frameworks reviewed in Section 2.

Table 4. EI Group Comparison (High / Mid / Low)

EI Group	N	Mean EI	Avg Perf /10	Avg Burnout /5
High EI (≥ 7.5)	11	8.26	8.5	1.5
Mid EI (5.5–7.4)	12	6.50	6.5	2.7
Low EI (< 5.5)	7	5.06	4.7	4.6

5. Discussion

The correlation data tell a consistent story: emotional intelligence is not peripheral to Agile performance – it is structural. But the mechanism matters. Qualitative reflections from participants pointed repeatedly to the daily stand-up as the critical inflection point. For high-EI individuals, the stand-up is a coordination tool. For low-EI individuals, it is a site of anxiety – which creates a specific downstream failure: underreporting of blockers. Issues that would take minutes to surface and address instead fester until they become sprint-critical.

This points to what might be called the EI feedback loop in Agile teams: low EI creates interpersonal guardedness, which suppresses early problem disclosure, which amplifies sprint risk, which depletes the emotional resources available to manage that risk. High-EI teams buffer against this cycle through the psychological safety their empathic communication creates.

The tester burnout finding deserves particular attention. Standard burnout analyses focus on developer cognitive load. Our data suggest that structural position in the sprint cycle is equally significant. Testers receive code after it is considered 'done,' are expected to validate it under compressed time, and bear the social cost of rejection. Their lower average EI – potentially a product of that structural marginalization – compounds the vulnerability. Targeted EI development for QA practitioners may yield disproportionate team-level returns.

The primary limitation of this study is sample size: N = 30 is sufficient for exploratory analysis but limits multivariate modelling. The cross-sectional design cannot establish causal direction. A longitudinal study tracking EI changes before and after structured intervention would be the natural next step.

6. Proposed EI-Agile Integration Model

The proposed model embeds EI development directly into existing sprint ceremonies rather than treating it as a parallel training programme. It unfolds in four phases, each building on the last.

Table 5. EI-Agile Integration Model: Phase Overview

Phase	Name	Core Activities	Expected Outcome
1	EI Baseline Assessment	Individual Goleman audit; team EI heat map; gap analysis shared confidentially with Scrum Master.	Each member understands their EI baseline; Scrum Master can prioritize facilitation focus.
2	Agile Ceremony Integration	2-minute emotional check-in at stand-up; EI reflection cards in retrospectives; testers co-create acceptance criteria in sprint planning.	EI practice becomes embedded in sprint rituals. Psychological safety improves over 4–6 sprints.
3	EI Skill Development	Monthly 4-hour workshops (conflict simulation, active listening); peer coaching pairs across roles; quarterly emotional incident retrospective.	Measurable EI score improvement; reduction in unresolved conflicts; better tester-developer communication.
4	EI-Oriented Leadership	Scrum Master EI certification; Product Owner empathy training; EI metrics added to team health dashboard.	Sustainable EI embedding at leadership layer; EI becomes a criterion in Scrum Master and Product Owner selection.

The model's key design principle is integration, not addition. Phase 2 is the highest-leverage entry point: sprint ceremonies happen every sprint, so small improvements in their emotional quality compound significantly over time. Organizations need not adopt all four phases simultaneously – even Phase 1 and Phase 2 alone produce measurable change within a quarter.

7. Conclusion

This study surveyed 30 tech professionals across six Agile roles and found that emotional intelligence is a robust predictor of both sprint performance ($r = 0.81$) and burnout ($r = -0.75$). The average composite EI of 6.8/10 indicates a moderate baseline that is likely to buckle under sustained sprint pressure. Scrum Masters and Product Owners lead on EI; Testers are structurally the most vulnerable. The proposed four-phase EI-Agile Integration Model offers a practical, low-disruption pathway for organizations to build emotionally resilient teams by working with the Agile ceremonies they already use.

The broader implication is straightforward: in high-pressure, iterative, interdependent Agile environments, emotional intelligence is not a soft add-on. It is infrastructure. Teams that treat it as such will deliver better, sustain longer, and lose fewer people to burnout.

7.1. Future Research Directions

1. Longitudinal study tracking EI changes before and after implementation of the integration model.
2. Cross-cultural comparison of EI levels in distributed and internationally dispersed Agile teams.
3. Investigation of AI-assisted EI coaching tools embedded in Agile toolchains.

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