Playing Against Creative Burnout in Sprint Retrospectives: A Design Science Research Study

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Abstract. Creative burnout, characterized by stagnation, exhaustion, and rigid routines, can hinder creativity and well-being in software development teams. Although widely acknowledged in practice, creative burnout remains underexplored in academic research on software development. This study investigates how playful interaction design can help mitigate creative burnout in Sprint Retrospectives. Using a Design Science Research approach, we developed and evaluated 'Scrumstinct', a design artifact for introducing playfulness into retrospective practices, tested in workshops with eight teams across diverse industries. Based on qualitative analyses of pre- and post-session interviews and video observations, we propose six design principles for integrating playfulness to address team-level creative burnout. Our findings show that playful retrospectives can reframe problems, foster openness, and reduce emotional fatigue. We argue that playfulness in agile practices holds the potential to reshape team culture and support sustainable creativity in software development.

Keywords: Scrum · Design Science Research · Playfulness · Software Development Teams · Creative Burnout

1 Introduction

Burnout is a well-documented challenge across many professions [16], but creative burnout remains underexplored in academic research [13]. In practice, it is described as a state of mental and emotional fatigue that limits creative engagements [10]. This phenomenon is especially relevant in software development, which relies heavily on creativity in tasks such as requirement engineering, architecture, design, and programming [18]. Nevertheless, the barriers to creativity and their effect on team well-being have received limited scholarly attention [1,11,25]. Creative burnout in software development teams (SDTs) often manifests as an inability to explore new ideas, falling back on conventional solutions, and overall rigidity in workflows [25,11]. These symptoms not only reduce individual motivation but also hinder team-level adaptability and creativity, reinforcing stagnation [26,2]. Thus, addressing such issues is essential for fostering SDTs sustainable creativity and everyday well-being.

One promising approach is to introduce playfulness into SDTs existing practices. Research on playfulness shows it can stimulate creativity [4], support emotional relief [22], and enhance team interaction [21]. In the widely used agile framework Scrum [12], Sprint Retrospectives provide a natural setting for introducing playful interaction design. These recurring sessions are intended for reflection and process improvement [24], but often become repetitive, lack engagement, or fail to surface deeper team concerns [23,15,8]. Although retrospective activities such as Sailboat or Mad/Sad/Glad [23] are widely used, the potential of playfulness as a strategic intervention against creative burnout remains largely unexplored.

In this study, we investigate how playful interaction design can mitigate creative burnout in SDTs by applying the Design Science Research method [20], developing and evaluating 'Scrumstinct', a design artifact for introducing playfulness into retrospectives. It was evaluated with eight SDTs across different industries. Based on qualitative analyses of pre- and post-session interviews and video observations, we propose six design principles for incorporating playfulness in retrospectives to address team-level creative burnout.

2 Related Research

2.1 Creative Burnout

Although there is no unified understanding of the psychological structure or definition of creative burnout [13], it is widely described in opinion articles, blog posts, and videos. Descriptions include creative stagnation, overwhelm by creative work, or a lack of creative thinking. Simultaneously, it is explained as mental and physical fatigue, reflecting the exhaustion dimension of burnout [16]. Related terms include creative exhaustion [10], encompassing the experience of being creatively stuck; innovation fatigue, characterized by a lack of mental to create [5]; and creativity clogs, hindering the flow of creative ideas [25]. While often examined at the individual level, these struggles also occur collectively as creativity, and by extension creative burnout, takes shape in the shared ongoing activity of working together. As such, a team's creative burnout can hamper collective work engagement and well-being [26,2].

Struggling with creativity in SDTs manifests as limited idea flow, reliance on familiar approaches, and repetition [11,25]. When a team becomes monotonous in its task execution [25], it rejects exploration and reinforces a status quo of expected ways of working that limit creative contributions [19]. Considering these insights, we define creative burnout of a team as *the tendency to avoid creative pursuits, characterized by mental and emotional exhaustion and an inhibited capacity to produce new ideas.* In the context of this study, creative burnout in SDTs is described through three dimensions: *stagnation*, a decline in creative exploration of alternatives, *exhaustion*, by mental weariness, and *rigidity*, in maintaining a monotonous task execution.

2.2 Playfulness

To address creative burnout characterized by stagnation, exhaustion, and rigidity, SDTs can pursue playfulness to reconnect with their creativity and well-being. Playfulness has been defined as the tendency to *frame (or reframe) a situation in such a way as to provide oneself (and possibly others) with amusement, humor, and/or entertainment* [3]. Individuals having this predisposition were described as funny, humorous, spontaneous, or unexpected, among others [3]. This definition has been expanded to include playfulness as a coping strategy for tense situations [22], and a contributor to well-being [27,4]. Moreover, it has a social dimension, as highly playful individuals often seek opportunities for playful interaction [22]. It was further found to cultivate relationships and express creativity [21]. This frames playfulness as both an instrument for alleviation and a social phenomenon within human interaction. Playfulness has further been viewed as the dispositional tendency to engage in play for amusement [27,14], highlighting its autotelic and intrinsic nature.

Drawing on these definitions, we understand playfulness as a quality of an activity that is: *fun*, based on descriptors of humor and frivolity, *exciting*, referring to spontaneity and unpredictability, as playfulness can emerge unexpectedly in social interactions, and *desirable*, covering the autotelic dimension of playfulness where playful situations are sought out for the enjoyment of the activity itself.

2.3 Playfulness in the Scrum Framework

A promising context for exploring playfulness in software development is the Scrum framework. Notable for its introspective nature, the Sprint Retrospective in particular presents an opportunity for teams to address challenges, such as creative burnout [24]. Activity-based retrospectives have demonstrated equal engagement, improved communication, increased team morale, and new perspectives [8,17]. Studies also show that they increase creativity and overall effectiveness in counteracting monotony and inefficiency [23]. Additionally, gamified retrospectives can promote collaborative learning and process improvements [15]. At the same time, these alternatives do not necessarily equate to effective retrospectives and must balance engagement with purpose [17], and may only be suitable as a supplemental activity [15]. These studies highlight the potential of playful activities in Sprint Retrospectives, such as enhanced collaboration, creativity, and participation.

However, it is important to distinguish playfulness from gamification of retrospectives. While both promote engagement and share elements of fun [8,17,15], they differ in motivation. Gamification is driven by external incentives, which may be experienced as superficial by reducing well-being to measurable outcomes, thereby failing to address the core issue [7]. Playfulness, in contrast, is intrinsically motivated and reflects openness and curiosity [3]. It shapes how we approach work and relationships [21,22], which allows for exploration and connection without external pressure. Building on this research, we shift the focus toward fostering playful spaces, where teams can discuss work challenges

openly, encourage acknowledgment, and deepen understanding to enhance team well-being. In particular, this study explores the integration of playful interaction design in Sprint Retrospectives and how it can be utilized in the context of mitigating team-level creative burnout.

3 Research Approach

To investigate how playful interaction design can mitigate creative burnout, we applied Design Science Research [20] with a pragmatist aim of constructive knowledge that is useful in action [9]. This approach enabled us to investigate the effect of playfulness by embodying it in a design artifact, developed over six iterative phases. Our process is illustrated in Figure 1.

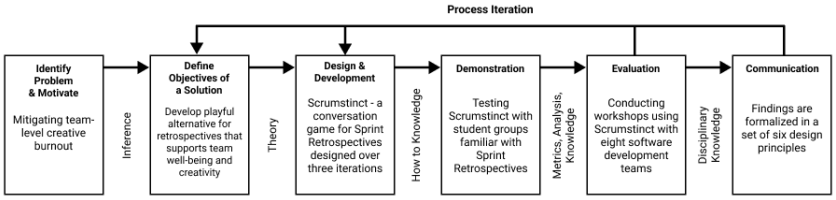

Fig. 1: Our process according to the Design Science Research model

Building on related research in Section 2, we integrated playfulness into Sprint Retrospectives through the development of the design artifact 'Scrumstinct', created over three iterations and demonstrated to student groups to validate and refine the artifact. We then evaluated Scrumstinct by conducting workshops with eight professional SDTs, formalizing insights into a set of DPs that inform how to design for playful retrospectives targeted towards improving team well-being. The participating teams were recruited through mail, career fairs, and in-person inquiries. The teams ranged from 3 to 12 members, 4 months to 4 years of team tenure, 0 to 20 held retrospectives, and members were between 24 to 65 years old. Each team, presented in Table 1, is assigned pseudonyms based on their area of expertise in the industry.

We conducted a 90-120 minute workshop with each team, which was audio- and video-recorded. The procedure included a study introduction, a preliminary focus group interview, playing Scrumstinct, and a debriefing focus group interview. Grounded in our conceptualization of playfulness as *fun*, *exciting*, and *desirable*, and creative burnout as a *stagnation*, *exhaustion*, and *rigidity*, these dimensions guided our evaluation. This enabled us to qualitatively assess how playfulness mitigated creative burnout through team experiences before and after playing Scrumstinct.

Team	Team size	Team Tenure (years)	Retrospectives held (avg.)	Age range	Additional notes
BarrelCo	4	3.5	1	26 - 32	Bi-weekly retrospectives. Recent team addition 1 month ago.
Tramark	3	2.5	2	28 - 30	Bi-monthly retrospectives. Recent team addition 7 months ago.
FrontPress	6	3	10	24 - 60	Bi-weekly retrospectives. Recent team addition 5 months ago.
UtilyTech	6	2	0	38 - 63	The team has just started to work according to the Scrum framework. Recent team addition 4 months ago.
EduCloud	3	3	20	32 - 38	Retrospectives every 3 weeks. Sometimes skipped due to the absence of team members.
CodeBank	5	1.5	20	31 - 50	Team had 3-5 years of collaborative experience from another company, but have been a team at CodeBank for 1.5 years, having bi-weekly retrospectives.
PayCraft	7	4	2	27 - 51	Bi-weekly retrospectives. Recent team addition 1 month ago.
SocialTech	12	3.5	7	28 - 65	Team had 3-4 years of collaborative experience, averaged to 3.5. Has bi-annual 'team days' allocated for discussing work processes, similar to a retrospective.

Table 1: Overview of participating teams and their characteristics

The data were analyzed through the six dimensions in two phases: 1) collective coding of pre-interviews to capture team opinions, and 2) thematic analysis to systematically interpret and cluster recurring patterns [6]. The codes were synthesized into themes representing the teams' overall experiences, determining their baseline levels of playfulness and creative burnout. The same process was applied to post-interviews, supplemented by video reviews of the tonality of their statements, non-verbal cues, and team interactions, which produced themes that reflected Scrumstinct's impact.

4 Findings

This study led to the development of Scrumstinct, a design artifact that facilitates a playful approach to Sprint Retrospectives, see Figure 2, aimed to enable reflections on sprint events through creative interpretations of artifacts. An overview of the teams playing Scrumstinct is shown in Figure 3. This section presents the findings of conducting workshops with SDTs using Scrumstinct, organized around the themes that emerged from the thematic analysis, leading to a set of DPs. The overview of the results can be viewed in the Tables 2 & 3, which sum up the change induced by Scrumstinct. In the following sections, participants are given aliases with the same initials as their team's pseudonym.

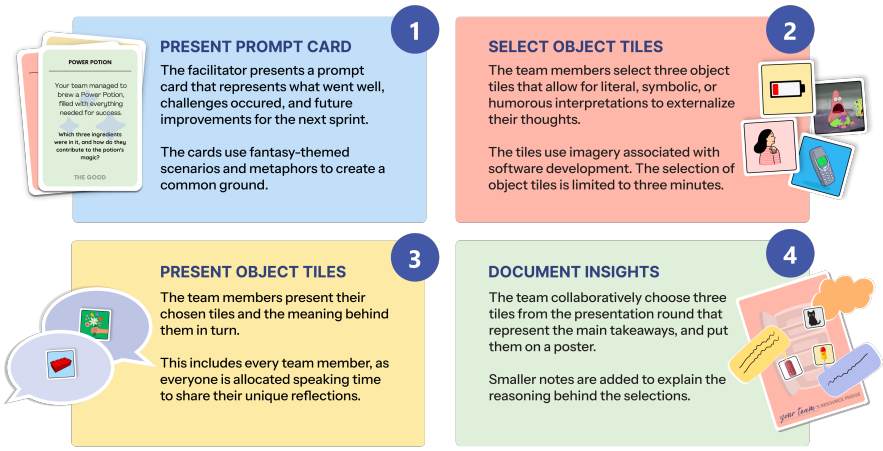

Fig. 2: The four phases in Scrumstinct

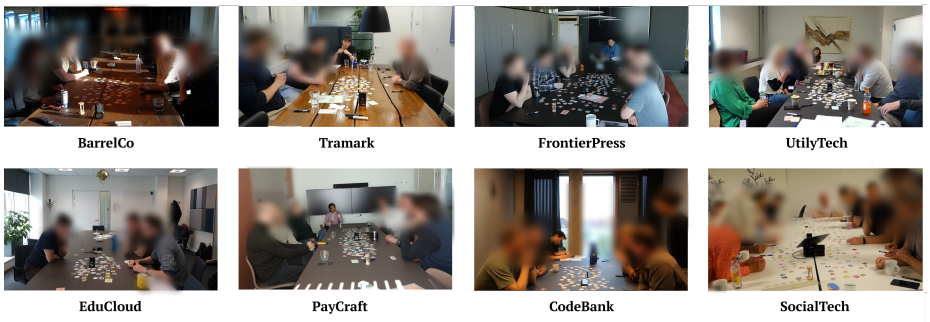

Fig. 3: The teams playing Scrumstinct during the workshop

4.1 Playfulness: Experiencing Fun

6 out of 8 teams reported an increase in the *fun* dimension. Previously characterized as boring, PayCraft's retrospective took on an uninhibited yet positive tone, evident in playful banter, and at BarrelCo where they mocked each other's tile choices. These interactions illustrate how Scrumstinct created a light atmosphere, bringing fun into the retrospective. In particular, humor was used to convey concerns, as observed at CodeBank: *"Lastly, in situations like these, we must accept that it can be a bit of a circus [points to the tile of a clown]."* Instead of labeling their process as poorly managed, the metaphor of a circus softly delivered the message, easing reception. Humor thus enabled them to raise critique while staying positive.

Teams that reported no change did not experience this, exemplified at Tramark in Tim's unbothered response to the time running out, underscoring the team's disinterest in the activity. EduCloud also showcased lackluster and disinterested responses to the concerns raised, creating a somber atmosphere. These

Team	Fun	Exciting	Desirable
BarrelCo	Serious → Lighthearted	Predictable → Surprising	Unenthusiastic → Keen
Tramark	Bland	Lackluster	Unenthusiastic ← Keen
FrontPress	Efficient → Entertaining	Straightforward→ Anticipatory	Dutiful → Enthusiastic
UtilyTech	Serious → Interesting	Lackluster	Unenthusiastic
EduCloud	Bland	Anticipatory	Indifferent
CodeBank	Serious → Entertaining	Unpredictable → Anticipatory	Enthusiastic → Engaging
PayCraft	Boring → Uninhibited	Predictable → Surprising	For the outcome → Keen
SocialTech	Casual → Entertaining	Predictable → Unexpected	Indifferent → Engaging

Table Description: A positive effect is illustrated by (→). A negative effect is illustrated by (←). No effect is a standalone word.

Table 2: Effects of Scrumstinct on the three dimensions of playfulness

exchanges suggest that playful artifacts can create a joking, lighthearted, and relaxed atmosphere, allowing the teams to discuss the topics in a distanced yet constructive manner, leading to DP1: **Playful artifacts prompt humorous interpretations of serious concerns in the Scrum team.**

4.2 Playfulness: Feeling Excited

5 out of 8 teams reported an increase in the *excitement* dimension. BarrelCo and SocialTech linked this to the surprising format. As BarrelCo noted: *"I have to think about it instead, and express it in a different way [...] What was the reason behind them?"*, highlighting how Scrumstinct unexpectedly encouraged thoughtful reflection. Similarly, FrontPress highlighted the element of anticipation during the tile presentation rounds:

> *"I thought it was fun to see which tiles the others chose. Sometimes, it's 'Yep, I knew you'd pick that one', and sometimes 'Why on earth did you pick that?' I was really looking forward to finding out why. I found that very entertaining."*

These interpretations introduced ambiguity, which made team members interested in understanding each other's perspectives. Excitement also emerged around the topics from the interpretations, as stated by PayCraft: *"I think Palmer's hamster wheel over there, it surprised me a bit that you felt like that"*, challenging existing assumptions and encouraging team members to think beyond the obvious. Contrary, UtilyTech showed no shift in excitement: *"Well, we know each other really well, we're colleagues. So I wouldn't say I'm surprised by it"*, demonstrating that outcomes are predictable when recurring topics emerge. However,

EduCloud, who did not report a change, remarked that even though the topics themselves might be predictable, the use of visual artifacts obscured their understanding, resulting in an element of surprise. These findings suggest that when outcomes are unpredictable, teams tend to become more curious and excited, leading to the creation of DP2: **Playful activities with unpredictable outcomes afford excitement about the Sprint Retrospective.**

4.3 Playfulness: Desire to Play

5 out of 8 teams experienced an increase in the *desirable* dimension. From describing their retrospectives with indifference, the teams displayed high levels of engagement when playing Scrumstinct, evident at SocialTech during the tile selection phase:

> Susan: [is already standing up, scanning the tiles]
> Seth, Samuel, Sarah: [stand and lean over the table to inspect the tiles]
> Simon, Silas, Shawn: [stand up to get a better look at the tiles]
> Shawn: [points at a tile across the table, while talking to Silas]

PayCraft, FrontPress, and CodeBank also walked around in search of tiles. Active engagement was further reflected in sustained involvement after they had picked tiles, such as reevaluating choices or helping others select theirs. These interactions, including eye contact and active listening, signaled strong engagement. Other teams displayed playful competitiveness, such as PayCraft, where Peter leaped over the table to grab a tile, reflecting playful engagement by layering lighthearted competition onto the activity. In contrast, the three teams reporting no change exhibited signs of disinterest, such as EduCloud shifting their attention elsewhere, or UtilyTech checking their phones, indicating a lack of desire to engage. Teams that enjoyed the activity also emphasized the importance of doing it in moderation, as reflected by CodeBank: *"If we did this every time we did Scrum Retrospectives, I think we would burn out at some point."*. Despite this notion, Scrumstinct's playful qualities drew the majority of the teams in through in-the-moment engagement and away from the sentiment of having to endure a retrospective, leading to DP3: **Playful activities that invite voluntary engagement make a Sprint Retrospective desirable.**

4.4 Creative Burnout: Experiencing Stagnation

5 out of 8 teams reported a reduction in the *stagnation* dimension of creative burnout. Before playing Scrumstinct, teams often defaulted to the same approach, indicating signs of being creatively stagnant. Yet, the teams demonstrated the ability to engage creatively with the tiles to form meaningful reflections and discussions, as seen in UtilyTech:

> Ulrich: *"I like the one-way sign [tile], that we have a collective goal and everyone's focus is in the same direction."*
> Ulysses: *"I don't like that one, because if you drive down a one-way street, how do you go back if you've gone too far?*

Team	Stagnation	Exhaustion	Ridigity
BarrelCo	Repetitive → Thought-evoking	Tiring → Relieved	Habitual → Eye-opening
Tramark	Hindered ← Sufficient	Neutral	Habitual → Option aware
FrontPress	Incurious → Inspiring	Bottled-up → Relieved	Habitual → Eye-opening
UtilyTech	Stuck	Draining → Cathartic	Conventional → Open-minded
EduCloud	Supports divergent thinking	Rebooting	Experimental
CodeBank	Dabbling → Inspiring	Unresolved → Resolved	Conventional → Open-minded
PayCraft	Unsuccessful → Inspiring	Tiring → Outlet	Habitual → Open-minded
SocialTech	Repetitive → Thought-evoking	Draining	Habitual → Open-minded

Table Description: A positive effect is illustrated by (→). A negative effect is illustrated by (←). No effect is a standalone word.

Table 3: Effects of Scrumstinct on the three dimensions of creative burnout

These interpretations reframed process challenges and showcased creative thinking. Similar reflections emerged across the teams, highlighting Scrumstinct's ability to prompt new ways of thinking, as PayCraft noted: *"I'm especially thinking about how doing it [retrospectives] in a different way might lead to different thoughts, than if we did it the same way we usually do."* The playful artifacts also fostered creativity by encouraging teams to challenge conventional thought patterns, as BarrelCo initially stated: *"I try to think out of the box, but my mind is very square"*, to later acknowledging: *"I think it has sparked a lot of thoughts."*

On the other hand, the artifacts became a hindrance for Tramark, who had difficulties interpreting them creatively or applying them literally, which impeded their retrospective, as they felt limited by having to relate to the artifacts. Creative interpretation of artifacts thus supported divergent thinking for most teams, stimulating associative and metaphorical reasoning to reframe challenges from new perspectives, informing DP4: **Playful artifacts that prompt reframing of a team's problems and solutions counter stagnation in the Sprint Retrospective.**

4.5 Creative Burnout: Feeling Exhausted

5 out of 8 teams reported a reduction in the *exhaustion* dimension. From describing their retrospectives as tiring, the teams commonly experienced moments of openness. At BarrelCo, Scrumstinct opened up for a conversation about fear of judgment:

> *"Sometimes I catch myself, when I send a PR [pull request], I'm scared that it's not good enough [...] I've started to close my Outlook when the comments roll in, so I don't get caught in it. I feel like it's becoming a*

> *negative thing for me that I have to put something out there to be judged. I have to remember that it's never anything personal, but it's only because we wanna improve together."*

Despite the topics being emotionally heavy, the playful activity created a light, supportive setting, as they ended with acknowledgment and offers to help, as seen at CodeBank: *"I feel like things are moving incredibly fast for you [. . .] I wonder whether it might suddenly become too much, whether you would collapse, or if we could help."* Scrumstinct thereby enabled the teams to open up and receive support, which provided mental relief and resolved unaddressed tensions. Subsequently, Scrumstinct became an outlet for expressing frustrations, exemplified at FrontPress, where they admitted feeling close to burnt out due to unclear task directions. UtilyTech also aired frustrations regarding their work culture of back-to-back unproductive meetings, which provided relief in itself by releasing bottled-up emotions. Conversely, the three teams that reported no change kept a surface-level tone. Their reflections suggest they did not need emotional relief, indicating that team exhaustion was not a part of their current experience. These unguarded moments highlight how the playful activity served as an entry point to openness, releasing frustrations, and easing emotional tensions that drive exhaustion. Thus, playfulness enabled the teams to provide social support for one another, forming DP5: **Playful activities relieve mental exhaustion during the Sprint Retrospective.**

4.6 Creative Burnout: Experiencing Rigidity

7 out of 8 teams reported a reduction in the *rigidity* dimension. FrontPress pointed to a lack of facilitation: *"The fact that we don't have a Scrum Master as such to facilitate these things, and that it's up to us to handle it ourselves, also makes it a bit easier to fall back into the familiar format"*, illustrating how rigidity often stems from habit or limited support. The teams that experienced the most impact reported the experience as eye-opening, showing high levels of reflection upon their retrospectives afterwards, as articulated by FrontPress:

> *"[...] It's actually quite interesting, this idea that it should be more fun. It's never really something we've talked about, is it? How can we make things more fun? [...] In our everyday work life, all the fun happens outside the regular meetings."*

While fun was often compartmentalized from work, they acknowledged that integrating playful activities could enhance the quality of their retrospectives. It further helped the teams reflect on their usual approaches to retrospectives, with many acknowledging they had become stuck in routine. EduCloud reported no substantial change, as they had already experimented with various retrospective formats and did not experience a greater positive effect. The teams' experiences of engaging with Scrumstinct thereby contributed to reflections on their rigid approaches, encouraging them to reconsider how playfulness might disrupt the inertia of routine, leading to DP6: **Playful activities that deviate from routine practices challenge rigidity in the Sprint Retrospective.**

5 Discussion

This design science research study shows how integrating playful interaction design into Sprint Retrospectives can help mitigate creative burnout. Previous research on retrospective activities emphasizes process improvement, efficacy, and engagement [8,23,15,17], but overlooks teams' playfulness. Our contribution comprises six DPs that guide the creation of playful activities for mitigating team-level creative burnout. Scrumstinct represents a concrete manifestation of the DPs, demonstrating how playfulness can be integrated into software development practice. In the following, we discuss how the three DPs for designing playfulness and the three DPs for using it to alleviate creative burnout relate to existing research.

5.1 Designing for Playfulness

Playfulness can emerge in SDTs' engagement with Scrumstinct across three dimensions: *fun, excitement*, and *desire*, as viewed in Table 4.

No.	Design Principle	Scrumstinct Implementation	Related Research
DP1	Playful artifacts prompt humorous interpretations of serious concerns in the Scrum team.	Humorous imagery in object tiles for surfacing team concerns in a Sprint Retrospective.	Playful reframing of situations and managing tension [3,22].
DP2	Playful activities with unpredictable outcomes afford excitement about the Sprint Retrospective.	Turn-based presentations of interpretations using ambiguous imagery.	Spontaneity, unexpectedness, and the social dimension of playfulness [3,22].
DP3	Playful activities that invite voluntary engagement make a Sprint Retrospective desirable.	Structural limitations that introduce light competition.	Balancing playfulness, competition, and purpose [17,15] and the autotelic nature of playfulness [27,14].

Table 4: Design principles for playfulness

Using humorous artifacts to ease discussions of serious concerns (DP1), we demonstrate that humor can be deliberately integrated as a meaningful workplace practice. Consistent with research defining playfulness as the ability to reframe situations for entertainment [3], our findings extend this view, demonstrating that reframing through humor also facilitates constructive dialogue, alleviating potential tensions in workplace settings [22]. Designing for *fun* may thereby involve artifacts that legitimize and invite humor to address serious concerns that affect well-being [22].

Playfulness moreover affords *excitement* through anticipation (DP2), evident in the team interactions during Scrumstinct. This corroborates spontaneity and

unexpectedness as key qualities of playfulness [3]. Although design cannot guarantee specific interactions to unfold, playful frameworks can support anticipation, for instance, through information disclosure in tile presentation rounds and ambiguous artifacts. Designing for playfulness thus extends beyond concrete artifacts to overarching structures that balance structure with openness, allowing playful surprises to emerge [22].

Our findings also revealed how teams extended their participation beyond the given instructions for Scrumstinct (DP3), demonstrating high levels of desirability. We propose two avenues for designing for *desire*: (1) by grounding playfulness in meaningful work to create a "sense of stakes", motivating the team's active participation [17], and (2) by incorporating playfulness into how work is approached, such as layering light, playful competition onto existing work practices, motivating the team's participation because the work itself is intrinsically enjoyable [15]. Thus, we demonstrate that routine tasks can elicit desire through the way work is performed, rather than from their underlying purpose [27,14].

5.2 Playfulness Against Creative Burnout

To explore the implications of playfulness, we examined its relationship to creative burnout approached through its three dimensions: *stagnation, exhaustion*, and *rigidity*, as presented in Table 5.

No.	Design Principle	Scrumstinct Implementation	Related Research
DP4	Playful artifacts that prompt reframing of a team's problems and solutions counter stagnation in the Sprint Retrospective.	Inspiring imagery on object tiles for reframing work-related problems and solutions.	Playfulness to induce new perspectives [8,23], creativity [21], and problem-solving [25].
DP5	Playful activities relieve mental exhaustion during the Sprint Retrospective.	Humorous design artifacts and turn-based structure allow a sense of lightness and a feeling of being heard.	Playfulness for increasing well-being [22,27,4] and cultivating relationships [21].
DP6	Playful activities that deviate from routine practices challenge rigidity in the Sprint Retrospective.	Metaphorical prompts, ambiguous tiles, and turn-based structure that position well-being as a key outcome.	Challenging monotony [23,19] and alternative retrospective practices [8,15,17].

Table 5: Design principles for mitigating creative burnout with playfulness

In addition to prompting humor, playful artifacts encouraged creativity and new perspectives regarding *stagnation* (DP4), corroborating prior research [21,25,8]. As stagnation often involves low ideation [11,25,5], playfulness mitigated it by enabling creative ways of engaging with problems, such as encouraging new perspectives or restructuring conventional thinking [23].

In the dimension of *exhaustion*, the playful activity provided mental relief (DP5). Playfulness recharged mental resources by creating a safe context for sharing challenges and concerns. It further enabled social support, extending its role beyond tension alleviation [22]. Teams became action-oriented by sharing their mental resources and collectively addressing problems to manage the issues that drain SDTs, affirming playfulness as a means to cultivate team relationships and improve overall team well-being [21,4,27].

Playfulness also challenged routine approaches, regarding *rigidity* (DP6). While routine is not inherently problematic, it can be when habitual work patterns lead to stagnation and exhaustion. On the contrary, playfulness introduced novelty and variation, providing relief from routine [23]. Yet, some teams were still hesitant about playful activities, reflecting an ingrained culture that favors familiar practices and discourages deviation from established approaches [19]. For instance, the Scrum framework itself focuses on prescribed outcomes, emphasizing productivity, efficiency, and process improvements [24]. While these outcomes are relevant and key to a functioning SDT, softer effects, such as engagement, creativity, and social support [8,15,17], are equally important and crucial for addressing creative burnout. We thus argue that promoting outcomes, exemplified by Scrumstinct, can enhance well-being in SDTs, and that further efforts guided by the proposed DPs may help demonstrate its value and support adoption in SDTs.

5.3 Limitations and Future Research

It is important to acknowledge the limitations of our study. Each team participated in a single retrospective, limiting the ability to observe changes over time. Although it provided a brief inspection of how playful interaction design may reduce creative burnout, it does not capture the potential long-term effects of sustained implementation. A longitudinal study, involving repeated retrospectives with the same teams, could uncover richer insights. In particular, how the ongoing integration of playfulness might shape team culture and engagement, alleviate tension, and possibly mitigate creative burnout. Future researchers could provide a more nuanced understanding of these dynamics. Another prospect is to broaden the conceptualization of playfulness and creative burnout beyond the dimensions in this study. As our current lenses only capture parts of two complex constructs, widening the scope could surface novel nuances and yield comprehensive insights on the effects of introducing playful interaction design against creative burnout in SDTs.

6 Conclusion

This paper examines how playful interaction design can mitigate creative burnout in software development teams. Following the Design Science Research methodology, we iteratively developed and evaluated 'Scrumstinct', a design artifact for Sprint Retrospectives. Workshops with eight software development teams

demonstrated how playfulness, understood as *fun, excitement* and *desire*, fostered social support, emergence of new perspectives, and a sense of mental relief. This alleviated creative burnout, understood as *stagnation, exhaustion*, and *rigidity*, in a majority of the eight teams in our study. Our contributions to the existing research on well-being in software development are: (1) three design principles on how to introduce playfulness in Sprint Retrospectives, (2) three design principles on how playfulness can mitigate creative burnout, and (3) Scrumstinct as a concrete embodiment of these six design principles.

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