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Meeting Member Needs in Coworking Spaces: Interventions and Systems Science Principles

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Abstract

Introduction-One aftereffect of the COVID-19 pandemic is a renewed interest in alternatives to the traditional work office. An emerging work arrangement is the coworking space, which combines the structure and community of the office with the freedom and independence of freelance work. No study has evaluated whether Booster Breaks (brief work breaks that include health-promoting activities such as meditation, rhythmic breathing, and lightphysical activity) and work sprints (public accountability among colleagues regarding short-term work goals) can enhance the coworking experience.

Method-A literature search identified five critical needs of thecoworking experience: community, collaboration, amenities, location, and cost.Booster Breaks and work sprints wereanalyzed from the perspective of these five needs.

Results-Booster Breaks and work sprints contributed favorably to community, collaboration, and amenities in coworking spaces and promoted social interaction. Improving the needs of coworking space participants has implications for health, wellbeing, job satisfaction, and personal fulfillment.

Conclusions-Combining Booster Breaks and work sprints can increase work productivity and improve employee health and wellbeing in coworking spaces. Future research is recommended to document the effectiveness and outcomes of Booster Breaks and work sprints to advance the evolving autonomous community of coworking spaces. Hybrid arrangements are the future of office work.

Keywords: coworking space;Booster Breaks; public health; workplace; employee health; work/life integration.

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1. Introduction

1.1 Different Work Environments: Advantages and Disadvantages

Before the COVID-19 pandemic, various work environments beyond the traditional office setting were beginning to emerge, such as home offices and coworking spaces. One consequence of thepandemic has been an increased interest in such alternatives to the traditional work office setting. Each of these work environments has inherentadvantages and disadvantages.

A primaryadvantage of the traditional work office is that it promotes human connection and interaction. Creativity emanates from spontaneous interactions among employees in hallways, cafeterias, and coffee areas:Any high-density gatherings, such as meetings, happy hours, or even incidental meetups at the

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water cooler, can result in serendipitous ideas that improve products and procedures oradvance the organization's mission.

Enhanced productivity is anotheradvantage associated with the traditional office, given that the manager or supervisor is on handto monitor progress and encourage, manage, and coach employees. Moreover, in-person office meetings mitigate many of the disadvantages ofonline (virtual) video meetings. which do not capture the spontaneity and spirit of in-person office meetings, regardless of the platform used (e.g., Zoom, WebEx, Microsoft Teams, etc.). Because virtualmeetings are remote, attendees are likely to feel disconnected and disengaged; spontaneity is rare.In fact, employees are now reporting so-called"Zoom fatigue."

The traditional office also has disadvantages. The lack of flexibility because of fixed work hours (Servaty et al. 2018) undermines the integration of workand family-life responsibilities. Frequent colleague interruptions in a traditional office setting can interfere with concentration and work progress—especially when office spaces are arranged in what are pejoratively referred to as "cubicle farms" (Rosalsky & Smith, 2021). In addition, the commute to and from the office incurs costs in terms of time and money.

With respect to the home office, advantages includeavailability for family responsibilities, no commuting or transportation costs, no distractions from coworkers, time saved from commuting, and no dress code.Other advantages are autonomy and flexibility in schedules and work pace (Garrett et al. 2017). The disadvantages of the home office includeprofessional and social isolation (i.e., feeling lonely), challenges toself-motivation, and lack of recognition and support(Bueno et al. 2018; Fuzi, 2015; Garrett et al. 2017; Gerdenitsch et al. 2016; Lashani & Zacher, 2021; Robelski et al. 2019; Waters-Lynch & Potts, 2017; Weijs-Perrée et al. 2019).

In the home office, the boundaries between one's workand private life can become blurred or even dissolve, impairing the separation between the two domains (Robelski et al. 2019; Spinuzzi, 2012; Weijs-Perrée et al. 2019). Being effective and successful in a home office setting requires consistent discipline, strong motivation, and organization skills so that bad habits do not develop in the absence of a work community (Robelski et al. 2019). An oft-reported consequence of working from home is that, because "work" is constantly present, work hours and workloadtend to increase (Robelski et al. 2019). In case studies, oneindividual noted that when working at home, he would have to take conference calls in his parked car because henever knew when his dogswere going to start barking (Spinuzzi, 2012). In another example, a womanrealized at noon that she was still in her pajamas and found herself being distracted by domestic chores such as washing dishes and doing laundry (Spinuzzi, 2012). In other instances, people who work at home becomedepressed because they have no conversations with anyone all day long.

Given the challenges and disadvantages of traditional work and home offices, alternatives referred to as "third places" or the "third wave of virtual work" have emerged; these include coffee shops, libraries, hotels, and coworking spaces (Lashani & Zacher, 2021). This "third wave" promotes colocation, wherein tasks can be performed anywhere and anytime(Gandini, 2015), thereby improving work–life integrationwhile maintaining asense of autonomy(Robelski et al. 2019). Of all these "third places," coworking spaces offer the greatest potential fora social network, a collaborative environment, and dependable and predictable working conditions, compared with coffee shops, libraries, hotels, orinternet cafes (Berbegal-Mirabent, 2021).

1.2 Coworking Spaces: Definition and Description

The original intent of the coworking space was to combine the structure and community of an office job with the freedom and independence of freelance work (Kojo & Nenonen, 2017). Coworking spaces are designed to offer collaboration and community in equipped workspaces on a rental basis (Robelski et al., 2019). Coworking involves "...a diverse group of people who don't necessarily work for the same company or on the same project, working alongside each other, sharing the working space and resources ..." (DeGuzman & Tang, 2011, p. 22). Coworking spaces "are particularly designed to encourage collaboration, creativity, idea sharing, networking, socializing..." (Fuzi, 2015, p. 462).

The necessary and sufficient conditions forcoworking spaces were enumerated by Orel & Bennis (2021; p. 289): "(1)Coworking spaces must be work-purposed environments....; (2) Some degree of support

for social interaction among coworkers is integral to the coworking concept...; (3)Some degree of interinstitutional social interaction is also integral to the coworking concept...".

For example, traditional individual-purposed coworking spaces could accommodatefreelancers, remote workers, and other location-independent professionals working alongside each other in an open office environment—in contrast to working from coffee shops, libraries, hotel lobbies, orinternet cafes. The implication is that colleagues from the same industry with established relationships who areworking together outside of a traditional office do not meet the necessary and sufficient conditions of the coworking space concept. In that type of arrangement, the out-of-office environment is an extension or variant of the traditional office.

Coworking spaces provide an environment in which members can craft meaningful social experiences that correspond with their personal needs (Garrett et al. 2017). Therefore, coworking spaces are advantageous in terms of independence (Bueno et al. 2018; Lashani & Zacher, 2021),autonomy,and flexibility(Bouncken & Reuschl, 2018). Other advantages are economic efficiency (e.g., low rental prices, flexible rental contracts, short-term leases), sustainability (e.g., sharing of facilities and equipent)(Kojo & Nenonen, 2017; Seo et al. 2017), escape from the competition of traditional workplaces(Vidaillet & Bousalham, 2020), and a spatial boundary or separation between work and home to improve work–life integration(Blagoev et al. 2019; Bouncken & Reuschl, 2018; Kojo & Nenonen, 2017).Similarly, coworking spaces provide a sense of community, discipline, productivity, and routine(Blagoev et al. 2019). Surveys have found that the most attractive features of coworking spaces were social interaction (84%), random interaction and opportunities (82%), and sharing information and knowledge (77%); disadvantages includedunanticipated noise, lack of privacy, difficulty concentrating, and lack of interaction(Fuzi 2015; Robelski et al. 2019).

1.3 Interventions

Empirical literature and research experience suggest that two interventions—Booster Breaks and work sprints—can improve the coworking space experience. These interventions are described below, followed by extensive discussion of how well they relate to the needs of coworking space participants.

1.3.1 Description of Booster Breaks

Health-promoting work breaks are defined as "organized, routine work breaks intended to improve physical and psychological health, enhance job satisfaction, and sustain or increase work productivity" (Taylor, 2005, p. 462);referred to as Booster Breaks,these brief respitescaninclude meditation, rhythmic breathing, and physical activity (Taylor 2005, 2011). Booster Breaks were first designed for the traditional work office, with more than 16 peer-reviewed publications having analyzed physical-activity Booster Breaks in a variety of settings (Taylor et al. 2016, 2021).

Booster Breaks aretakenduring the typical 15-minute workday break and require no exercise equipment or change of clothes. The physical activity routine consists of a 1–2-minute warm-up session, a 10–12-minute physical activity session, and a 1–2-minute cooldown session. The movements are of light-to-moderate intensity and include a 1-minute period of deep breathing and relaxation as a transition back to the workday. Because Booster Breaks are designed for the typical 15-minute work break and done while wearingwork clothes, no movements are conducted while lying on the floor (Taylor 2005, 2011; Taylor et al. 2016, 2021).

1.3.2 Description of Work Sprints

Work sprints are an approach to improve productivity by publicly declaring to coworkers one'swork goals for a designated time period (e.g., 2hours, 4hours, etc.). Each person describes specific work objectives and goals to the group; the goals can be writing plans, research goals, number of phone calls, reading documents, or a specific number of consultations. After the designated time, each person publicly reports progress or lack thereof related to their work sprint goals. In addition, the reporting session is an optimal time for people to ask questions, receive feedback, and connect with colleagues. Work sprints can be implemented in both in-person and virtual meetings.

1.4 Research Question

The purpose of this study was to investigate the coworking-space literature to characterize the potential impact of Booster Breaks and work sprints in meeting member needs in coworking spaces. No study has presented interventions that would enhance community and collaboration in coworking spaces. Booster Breaks and work sprints werechosen as potential interventions based ontheir potential to enhance the coworking experience, given existingempirical literature and relevant research experience with these protocols. This study wasdesigned to fill a major gap in the coworking space literature.

2. Methods

2.1 Literature Review of Coworking Spaces

A literature search was conducted to identify recommendations and strategies for improving the experience of coworking space participants and to assess critical aspectsof the coworking space experience. To be included in the study, the publication had to be written in English and to focus on coworking spaces;"coworking space" must have appeared in the title or abstract. All abstracts were read to identifyany coworking space interventions.Strategies for identifying relevant publications included electronic database searches (Medline, PubMed, Scopus)and a review of the reference lists inreview articles and seminal publications in the field.

The search strategy yielded 88 records. Of these, 76 were derived from the database searches and 12 were identified through the review of pertinent reference lists; five were duplicates. Ultimately, 29 publications met the inclusion criteria andwere included in the study. The description results of the search strategy, including search terms, data bases, identified records, and retrieved publications, are presented in Table 1 and Figure 1.

Database	Search Term	Retrieved Articles	Selected Articles	Duplicate Articles	Final Number of Articles Included in Paper
PubMed	Coworking space	40	10	4	6
Scopus	Coworking space	31	8	1	7
Medline	Coworking space	5	4	Duplicates excluded in other databases (n=4)	4
Other sources	Coworking space	12	12	0	12
Records screened		88 (5 duplicates) =83			
Records excluded		51			
Full text articles excluded with reasons		3			
Total number of articles included in publication					29

Table 1: Coworking Article Literature Search Process

Figure 1. Coworking Space PRISMA Flow Diagram of Literature Search



The literature search revealed that the concept of coworking spaces has a long history. The historical antecedents of coworking spaces first appeared in the 15th century with bottegas (workshops) inFlorence, Italy,

wherein master craftsmen supported and mentored younger, talented peers. Bottegas were fully equipped shared workshops designed to foster dialogue among skilled workers, expand networks, and solidify a holistic approach to creativitythat promoted the convergence of art and science (Gandini 2015; Merkel 2015; Orel et al., 2022).

The contemporary coworking space movement began in the early 2000s (Weijs-Perrée et al. 2019):In 2002, coworking spaces were reported in Vienna, Austria, when Schraubenfabrik, a community center for entrepreneurs, was opened (Orel et al. 2022).In 2005, Spiral Muse, one of the earliest modern coworking spaces, opened in a San Francisco–based collective house (Gandini 2015; Merkel 2015; Orel et al. 2022). The use of these spaces increased considerably in the 2010s, with an estimated 3.1 million users worldwide by2022 and 5million expected by 2024 (Statista, 2022; Lescarret et al., 2022). This growth has been referred to as abooming phenomenon incoworking spaces (Lashani & Zacher, 2021) that has generated both scientific (peer-reviewed) literatureand non-scientific reports (e.g., blog posts) that attempt to address what coworkingis, where it happens, the characteristics of coworking spaces, the people who work there, reasons for working there, and how and when a sense of a community emerges in these spaces.

The 29 peer-reviewed publications identified for the current study include four case studies, nine qualitative studies, ten quantitative studies, one qualitative and quantitative study, and five literature reviews and conceptual analyses. Table 2 presents these 29 publications by article type, author, and research area.

Type of Study	Author & Year	Research Area
Case Studies		
	Fuzi 2015	Coworking spaces for promoting entrepreneurship
	Waters-Lynch &Potts 2017	Social economy of coworking spaces
	Spinuzzi 2012	Coworking as an emergent collaborative activity
	Spinuzzi et al. 2019	Typologies to better understand coworking
Qualitative Studies		
	Servaty et al. 2018	Working conditions
	Garrett et al. 2017	Co-constructing a sense of community
	Gerdenitsch et al. 2016	Social support
	Vidaillet &Bousalham 2020	Theory of coworking spaces
	Blagoev et al. 2019	Coworking spaces as organizational phenomena
	Orel et al. 2022	Imperative for community building
	Chevtaeva 2021	Attraction for digital nomad tourists
	Rådmanet al. 2023	Search of member needs in coworking spaces
	Ivaldi et al. 2022	Is 'co' in coworking a short for contradictions?
Quantitative Studies		
	Bueno et al. 2018	How coworking influences productivity
	Lashani &Zacher 2021	Person-environment fit
	Robelski et al. 2019	Coworking space compared to home office
	Weijs-Perrée et al. 2019	Specific preferences of coworking space users
	Seo et al. 2017	Hosts and users' perspectives
	Lescarret et al. 2022	Negative aspects of working from home predict
		intention for coworking spaces
	Rese et al. 2022	Social networks in coworking spaces and creativity
	David et al. 2023	Effects of receiving help in coworking spaces
	Jackson et al. 2022	Work-integrated learning in co-working spaces
	Berdicchia et al. 2023	Key to happiness in collaborative workplaces
Qualitative and Quantitative Study		
	Brown 2017	Coworking and the mediation of creativity
Literature Reviews or		
Conceptual Analysis		

Table 2: Coworking Space Peer-Reviewed Literature by Article Type, Author, and Research Area

Gandini 2015	Rise of coworking spaces
Berbegal-Mirabent 2021	Coworking's place in a post-pandemic society
Bouncken & Reuschl 2018	Coworking spaces, networking, and
	entrepreneurship
Gazetov 2018	Support for youth (start-up) entrepreneurship
	through the development of coworking spaces
Orel & Bennis 2021	Taxonomy of contemporary coworking spaces

These studies describe various characteristics, features, and dynamics of the coworking space experience. The more recent of these coworking space studies focus ontopics ranging from the effects of social networks on individual creativity, the experience of staying in coworking spaces during travels, negative aspects of teleworking from home, motivating working in coworking spaces, benefiting from receiving help and assistance, entrepreneurial mindsets and opportunities for collaboration, networking, and formal training, significant psychological and behavioral dynamics, taxonomy of contemporary coworking spaces, and understanding members' basic needs in coworking spaces(Orel et al., 2022; Lescarret et al., 2022; Rese et al., 2022; Brown, 2017; Chevtaeva, 2021; David et al., 2023; Jackson et al., 2022; Berdicchia et al., 2022; Rådman et al., 2023; Gazetov, 2018; Orel & Bennis, 2021; Ivaldi et al., 2022).

2.2 The Knowledge Gap

Even though the coworking space is recognized as an emerging work environment and has grown exponentially and worldwide (Merkel, 2015), gaps in the scientific literature and insufficiently explored aspects of the coworking experience (Garrett et al., 2017; Gerdenitsch et al., 2016; Lashani & Zacher, 2021; Robelski et al., 2019; Weijs-Perrée et al., 2017; Seo et al., 2017) suggest that the coworking space literature and research are limited and are scant in many areas (Seo et al., 2017; Weijs-Perrée et al., 2017). For example, none of the 29 publicationsidentified for this study reported or described interventions to promote interaction, community, and belonging in coworking spaces, despite consensus among researchers about the importance of these factors in coworking spaces (Servaty et al., 2018; Garrett et al., 2017; Blagoev et al., 2019; Spinuzzi et al., 2019). The following quote from Julie Brown (2017, p. 121)expresses this need for interventions that promote engagement in coworking spaces:

...growing evidence that the physical colocation of workers alone is insufficient for generating enhanced interactions among coworkers; that spontaneous knowledge sharing does not "just happen" and Olma's (2012) "serendipity machine" is a myth. ... provision of particular (tailored) engagement activities, have significant implications for the types of interactions and exchanges that develop among coworkers and between coworkers...

Indeed, the existing literature indicates that a quarter of the turnover or dropout rate in coworking spaces is due to lack of interaction with others (cited as the main problem) (Lashani & Zacher, 2021). Moreover, various authors have concluded that the existing literature (both peer-reviewed and non-peer-reviewed) is primarily descriptive in nature (e.g., describing social interactions and other dynamics) and does not present strategies for enhancing the coworking experience (Gerdenitsch et al., 2016; Robelski et al., 2019).

Thoughtful strategies, recommendations, and protocols are needed to promote social interaction (i.e., to rectify and remedy a major deficiency of the coworking space experience) (Lashani & Zacher, 2021). Because of the conspicuous absence of literature related to the important topic of improving the coworking space experience (Seo et al., 2017), more research is needed to document strategies and protocols that enhance the coworking space experience. Addressing this gap in the knowledge base couldfacilitate positive experiences forboth current participants and future generations of coworking space members, minimize member departures (which disrupt the cohesiveness and sense of community within the group), sustain the coworking phenomenon, and promote profitability for coworking space owners while retaining the business model's viability.

2.3 Five Critical Facets or Needs

Motives for working in a coworking spaces include creativity, networking, social interaction, and knowledge enrichment, given that members will be associating with coworkers from different professions (Robelski et al., 2019).Consequently, any coworking space arrangementmust consider five critical facets, dimensions, or needs: community, collaboration, amenities, location, and cost (Lashani & Zacher, 2021).

Community involves social belonging, affiliation, social support, social interaction, sharing of ideas, resources, and experiences, learning from each other, and celebrating each other's successes (Weijs-Perrée et al., 2017). In other words, coworking spaces are not just places to "work alone together" (Robelski et al., 2019; Spinuzzi, 2012).Spinuzzi found that "For these people to work alone together took considerable coordination and communication. They had to work at being good neighbors ...They had to work at being good partners...Like neighbors, these coworkers may be entirely unconnected in their work lives but committed to sharing and improving a communal space" (Spinuzzi, 2012, p. 17).Like community, *collaboration* includes working with others, actively exchanging knowledge, social learning, networking, social exchanges, and enjoying the company of others in a different environment(Lashani & Zacher, 2021; Waters-Lynch & Potts, 2017).Shared *amenities*could include Wi-Fi, computers, desks, conference rooms, gardens, and cafeterias;planned activities and events aimed at establishing social community and a productive work atmospherealso can be considered amenities and might include talks, workshops, parties, game nights, and joint breakfasts (Lashani & Zacher, 2021; Blagoev et al., 2019).*Location* means distance from home, transportation connections, city center, and other specific facilities. *Costs* are the prices of coworking space memberships (Lashani & Zacher, 2021).

Studies of the motivations for participating in a coworking space support the importance of the community and social aspects of this kind of work arrangement. Several studies have reported that the main motivations for participating in coworker spaces include social interaction with others and the social environment (Weijs-Perrée et al., 2017). For example, a social and enjoyable atmosphere (70%), good office infrastructure (56%), and vibrant community (50%) were primary reasons for joining a coworking space (Fuzi, 2015). In other studies, the main reasons for working in coworking spaceswere the abilityto engage in social interactions (83%)(Gerdenitsch et al., 2016)and the community aspects (Servaty et al., 2018). In a case study, the authors reported that "community is actually the first and most important thing" about the coworking space (Garrett et al., 2017). In a participant observation study, Blagoev et al. (2019, p. 904) found that"When asked upfront, people always mentioned the community as the number one reason for becoming members."

3. Results

3.1 Evidence for Booster Breaks

The characteristics and findings of Booster Break research studies are presented in Table 3. The research designs ranged from a single-site randomized controlled trial to a cluster-randomized controlled trial with four worksites; the settings ranged from laboratory research with university students to large workplaces with many employees (law firms, hospitals, universities, and city and county governments); the sample sizes ranged from 14 to 175; and the duration of Booster Break interventions ranged from a 3-day night shift to 6months to 1 year.

The outcomes of the Booster Break interventions include improved cardiometabolic values (e.g., weight loss, decrease in body mass index)(Taylor et al. 2010, 2016), reduced stress (Largo-Wight et al., 2017; Taylor et al., 2013, 2014), increased work productivity (Lombard & Goebel, 2009; Davy et al., 2011), increased physical activity (Taylor et al., 2016), and lessedentary behavior (Taylor et al., 2016).

Name of Study	Study Objectives	Research Design	Workplace Setting	Sample Size	Duration of Intervention	Type of Intervention	Primary Results and Conclusions
Impact of Booster Breaks and computer prompts on physical activity and sedentary behavior among desk-based workers: a cluster- randomized controlled trial	Assess the impact on sedentary behavior and physical activity of 2interventions, Booster Breaks and computer prompts, compared with a control group	Cluster-randomized controlled trial	4worksites: a large county Department of Education, a law firm, a large city health department, and a large urban hospital	175	6months	Booster Break and computer- prompt interventions	Those who participated consistently in the Booster Break intervention achieved significant and positive changes related to physical activity, sedentary behavior, and body mass index Weekend sedentary behavior decreased for computer- prompt and Booster Break participants (both <i>P</i> <0.001) but did not change significantly for usual-break participants (<i>P</i> =0.61). For detailed results related to computer-prompt and usual- break conditions, refer to publication
A systematic evaluation of six different physical activity routines: a strategic science approach	Develop and evaluate 6different types of 15-minute physical activity routines designed for the workplace 15-minute work break	Within-subject repeated-measures design Participants completed 6different physical activity routines and rated each session immediately after completing the routine 12 dimensions were	Eligibility criteria: 18–69 years of age and employed full time Participants were from a variety of industries and professions	94	Not applicable; participants experienced each routine once	6 routines: aerobic dance, ballet, Booster Break, circuit training, muscle strengthening, and yoga	Only the Booster Break intervention was rated favorably on all 12dimensions

Table 3: Research Characteristics and Results of Booster Break Research Publications

Name of Study	Study Objectives	Research Design	Workplace Setting	Sample Size	Duration of Intervention	Type of Intervention	Primary Results and Conclusions
		evaluated on a Likert- type scale ranging from 1 (lowest) to 5 (highest): appropriateness of work attire, benefit, challenge, complexity, confidence, physical effort, embarrassment, enjoyment, fatigue, flexibility, likability, and sweat(perspiration)					
The Booster Break program: description and feasibility test of a worksite physical activity daily practice	Report the fidelity, attendance, feasibility, and sustainability of the Booster Break intervention and explore its potential impact	Longitudinal cohort study	A small business that provides legal and court reporting services to lawyers	14	6months	Booster Break	During the 6-month period, 117 sessions were conducted; average monthly attendance ranged from 76%–86% Participants significantly improved high-density lipoprotein cholesterol (<i>P</i> =0.04) and lost an average of 14 pounds
Effectiveness and feasibility of a 10- minute employee stress intervention: outdoor Booster Break	Test the feasibility and efficacy of a daily outdoor work break (outdoor Booster Break) compared witha daily indoor break	Single site randomized controlled trial	University office staff	37	4weeks	Outdoor Booster Breakcompared with an indoor work break control group	Taking a work break appeared to have stress-reducing benefits, but the outdoor Booster Break reduced stress significantly more than an indoor break
Booster Breaks in the workplace:	Evaluate the acceptance of	Randomized	5worksites	35	2worksites completed a 1-	Booster Break	3 themes for benefits and 2 themes for barriers were

Name of Study	Study Objectives	Research Design	Workplace Setting	Sample Size	Duration of Intervention	Type of Intervention	Primary Results and Conclusions
participants' perspectives on health-promoting work breaks	aBooster Break program	controlled trial Responses to 2 open- ended questions about the acceptance and feasibility of Booster Breaks were obtained from a survey administered after the intervention			year intervention, and 3worksites completed a 6- month intervention	intervention	 identified: benefit themes were (i) reduced stress and promoted enjoyment, (ii) increased health awareness and facilitated behavior change, and (iii) enhanced workplace social interaction; barrier themes were the need for (iv) greater variety in Booster Break routines and (v) greater management support This study provides empirical support for the acceptance and feasibility of Booster Breaks during the workday; emphasizing benefits and minimizing barriers are strategies that can be used to implement Booster Breaks in other workplaces
Evaluation of Booster Breaks in the workplace	Elicit information regarding benefits of and barriers to participation in a Booster Break intervention	Randomized controlled trial Story path method of inquiry to collect data on past, present, and future during extensive face-to-face interviews	5worksites	28	6months to 1 year	Booster Break intervention	Top benefit themes were experiencing positive feelings, improved health, and sense of team camaraderie Top barrier themes were time constraints/interruption of workflow, lack of interest, and absence of organizational support
The effects of Booster Breaks	Investigate alternative rest break	Matched samples of 3groups:a control day	Laboratory study with a	36 (18 men, 18	3-day habituation	Booster Break	Booster Break interventions had positive effects on

Name of Study	Study Objectives	Research Design	Workplace Setting	Sample Size	Duration of Intervention	Type of Intervention	Primary Results and Conclusions
during a sedentary night shift on physiological, psychomotor, psycho- physiological, and cognitive performance over a 3-night shift habituation phase	schedules incorporating Booster Breaks to enhance performance and subjective mood, while eliminating operator discomfort for sedentary cognitive tasks	shift, a control night shift, and an experimental night shift group that participated in Booster Breaks All 3 groups were controlled for gender, chronotype, and number of years at university to ensure an even distribution across the 3 different conditions All were exposed to the same working & environmental conditions and the same battery of tests	student population aged18–26 years	women)	shift cycle within a laboratory		subjective ratings and reaction- time performance and decreased the burden placed on the cardiac system because of increased sympathetic tone during the night shift, while resulting in similar responses to those of day shift workers
A comparison between nap and Booster Break interventions to cope with fatigue during night shift work	Compare the effects of the nap and Booster Break interventions to those of a control night-shift condition	Non-repeat design of 3 conditions: control, napping, and BoosterBreak Participants were equally distributed among the 3 groups according to chronotype and sex 3 times each night, participants were	Laboratory setting at a university	36 students (18 menand 18 women)a ged 18– 26 years	3-day night- shifthabituatio n phase	Booster Break and 1-hour flexible nap	Nap and Booster Break participants had significantly higher heart rates than controls; tympanic temperature changes were similar for all conditions Nap and Booster Break participants had general improvements in response time measures compared with controls

Name of Study	Study Objectives	Research Design	Workplace Setting	Sample Size	Duration of Intervention	Type of Intervention	Primary Results and Conclusions
		exposed to a 20- mintest battery comprising response and reaction time assessments, subjective sleepiness ratings, beading performance, and tympanic temperature monitoring; heart rate measures also were recorded					Napping reduced subjective sleepiness throughout and improved reaction times Both interventions resulted in significantly higher performance relative to the standard regimen

In addition to the results described above, the Booster Break concept, intervention, and program have been studied in various populations and settings as well as from different perspectives. For example, Booster Breaks have been recommended for hospital staff nurses to cope with the high stress of bedside nursing positions, foster a sense of relaxation, refresh the nurse before returning to work, and provide brief opportunities for education (e.g., best practices on lifting and turning patients) (Witkoski & Dickson, 2010). Researchers have found statistically significant stress reduction in nature-sound Booster Breaks, suggesting that nature contact and nature-sound Booster Breaks are a promising area of research with important practical implications (Largo-Wight et al., 2016). Booster Break intervention programs have been recommended for mitigating the adverse consequences of prolonged occupational sitting, within the context of a risk-reduction strategy for cardiovascular disease (Taylor, 2011). Additionally, the Booster Break program was the primary intervention used in developing and implementing a logic model to manage, cope with, and reduce occupational stress (Taylor et al., 2020).

Researchers seeking ways to achieve and sustain high attendance rates during Booster Break programs have analyzed the intervention from the perspective of behavioral economic frameworks (e.g., conditional payments, deposit contracts, regret lotteries, and point systems) (Taylor & Page, 2017). In addition, a Booster Break Ripple Effects Model was developed to illustrate the ongoing effects of implementing Booster Breaks consistently over time(Figure 2). The proximal outcomes include promoting health, fun, and organizational morale, increasing energy, and managing stress; the distal outcomes include increasing productivity, reducing health care costs, and promoting a positive organizational image (Taylor, 2011).

Figure 2. Booster Breaks Ripple Effects Model



Figure 2. Booster Breaks Ripple Effects Model

Finally, Booster Breaks can be implemented in the workplace as a part of a company's written policiesaimed at changing workplace culture to support physical activity (Ablah et al., 2019). In a comprehensive overview of opportunities for employers to support physical activity through policy, aBooster Breaks policy was recommended to ensure that employees are given at least one 10–15-minute movement break every workday(Ablah et al., 2019).

In an evaluation study, Booster Breaks were compared to five other physical activity routines designed for the 15-minute work break (Taylor et al., 2021). This study was a within-subject repeated-measures design wherein 91 participants completed six different physical activity routines:aerobic dance, ballet, Booster Breaks, circuit training, muscle strengthening, and yoga. Participantsrated each session immediately after completing the routine. Ratings were based on 12 different dimensions: appropriateness of work attire, benefit, challenge, complexity, confidence, physical effort, embarrassment, enjoyment, fatigue, flexibility, likability, and sweat (perspiration). Ratings were made on a 5-point Likert-type scale, where "1" represented the lowest level, "3" was moderate, and "5" represented the highest level (Taylor et al., 2021). In an analysis comparing the six routines on all 12dimensions, the Booster Break was the only routine rated favorably on all dimensions (Taylor et al., 2021).

For coworking space members and owners, Booster Breaks can provide a group activity that promotes beneficial physical stimulation and social interaction for participantsduring the traditional 15minute work break while offering an alternative to drinking coffee, smoking cigarettes, and/or consuming unhealthy snacks (Taylor, 2005, 2011; Taylor & Pepkin, 2010; Taylor et al., 2016, 2021). Booster Break movements specifically target areas of the body most adversely affected by sitting; therefore, physical-activity Booster Breaks are especially recommended to enhance the coworking space experience. Certified Booster Break trainers can conduct the sessions, or a Booster Break DVD can be used to guide each movement. In coworking spaces, groups can range from 5–15 participants, depending on the available space, as the routines require participants to be at least one arm's length apart (given COVID-19 concerns, recommendations may include being more than one arm's length apart). In summary, Booster Breaks are a shared experience thatcan be a routine part of the daily work rhythm incoworking spaces.

3.1.1 Booster Breaks Logic Model

The Booster Breaks Logic Model (Taylor et al., 2010) (Figure 3) is a graphic and visual representation of the objectives for Booster Break experiences. The behavioral sciences theoretical underpinnings of Booster Breaks are the Social Ecological Model and Social Cognitive Theory (Taylor et al., 2010, 2016). The selected theoretical constructs and psychosocial correlates are based on comprehensive reviews of the literature identifying the most crucial factors related to physical activity (Choi et al., 2017; Bauman et al., 2012; Eynon et al., 2019). Booster Break experiences are designed to positively influence the correlates, constructs, and mediators of self-efficacy, enjoyment, benefits, barriers, and social support. Previous experiences with physical activity can affect participants' receptiveness, readiness, and willingness to participate in Booster Break sessions.

Figure 3. Booster Breaks Logic Model

Legend: Abbreviations: BMI, body mass index; HDL, high-density lipoprotein; LDL, low-density lipoprotein.



For aBooster Break policy to be successful in a coworking space, a supportive organizational culture and appropriate resources are essential(Taylor et al., 2018).

A designated open space should be identified and made available for all sessions. Coworking space owners should encourage participation and offer incentives for regular participation, such as recognition inlistservsand/or newsletters as well as prizes from raffle drawings.

Participating in Booster Break sessions confersseveral potential outcomes and benefits, includingimprovement in skill-based fitness (e.g., coordination), physiology (e.g., blood pressure), body composition (e.g., waist circumference), and metabolic fitness (e.g., lipid profiles) (Figure 3). Distal outcomes and benefits includeimprovements in quality of life—for example, bettercoping with stress and improved energy.

Psychosocial factors are both antecedents and consequences. The Booster Breaks Logic Model focuses on behavior. More evidence is needed to confirm whether attending Booster Break sessions will result in greater physical activity outside the workplace (e.g., greater recreational physical activity), and whether, given the emphasis on health, Booster Break sessions will encourage participants to reduce sedentary behaviors beyond the work setting.

3.1.2 Evaluating Booster Breaks: A Sample Survey

The Booster Breaks Survey includes questions related to barriers, facilitators, and outcomes. Administering the survey at strategic times can provide important feedback fordocumentingspecific outcomes and benefits of Booster Break experiences.

- 1) Estimate your attendance at Booster Break sessions (please circle appropriate response):
- a. >90% of the time
- b. 76% to 90% of the time
- c. 50% to 75% of the time
- d. <50% of the time
- 2) What qualities and conditions are important for enabling participants to attend Booster Break sessions on a regular basis?
- a. Predictability of work responsibilities
- i. Definitely yes
- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- b. Management support
- i. Definitely yes
- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- c. Coworker support
- i. Definitely yes
- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- d. Discipline
- i. Definitely yes
- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- e. Motivation
- i. Definitely yes
- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- f. Enjoyment
- i. Definitely yes
- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- g. Commitment to health
- i. Definitely yes
- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- h. Wellness work culture
- i. Definitely yes
- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- i. Choice in activity
- i. Definitely yes

- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- 3) During the Booster Breaks, do you:
- a. Have fun?
- i. Definitely yes
- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- b. Reduce stress?
- i. Definitely yes
- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- c. Feel energized?
- i. Definitely yes
- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- d. Improve your health?
- i. Definitely yes
- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- e. Receive coworker support?
- i. Definitely yes
- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- f. Socialize with coworkers?
- i. Definitely yes
- ii. Somewhat yes
- iii. Maybe
- iv. Somewhat no
- v. Definitely no
- 4) How motivating are your Booster Break facilitators? (If no Booster Break facilitator, skip questions 4 & 5)
- a. Definitely motivating
- b. Somewhat motivating
- c. Neither motivating or not motivating
- d. Somewhat not motivating
- e. Definitely not motivating
- 5) Overall, how effective is your Booster Break facilitator?
- a. Definitely effective
- b. Somewhat effective
- c. Neither effective or ineffective
- d. Somewhat ineffective
- e. Definitely ineffective
- 6) Please describe how the Booster Break experience has influenced your life (e.g., stress, energy, coworker relationships, physical activity, eating habits, satisfaction with life, quality of life, etc.).

3.2 Evidence for Work Sprints

Individuals seek to improve productivity when they decide to be part of a coworking space (Bueno et al. 2018). Work sprints are a formal strategy and protocol for accelerating and amplifying productivity, collaboration, accountability, and motivation. Within the context of a work sprint, *collaboration* is learning about the work products and responsibilities of other coworking colleagues as well as providing an opportunity to network. *Accountability* is explicitly stating what was accomplished during the designated time and whethergoals were met. *Motivation* is intent, dedication, and drive to accomplish the goals explicitly stated to coworkers.

The concept and spirit of work sprints have been adapted in many contexts. For example, major universities have summer writing challenges that adopt work sprints. The challenges involve each individual committing to writing every day for at least 30 minutes. At the beginning of the writing time, each person logins to an online community, starts the timer, completes the writing session, and then posts progress at the end of the 30 minutes. Afterwards, time is allotted to support other writers in the group by commenting on their progress and potential areas forimprovement.

Work sprintbenefitsare exemplified in the following quotation: "...the coworkers referred to how being surrounded by 'a lot of people' helped them to work 'faster' themselves (first order/emic level)—something that we interpreted as a form of co-disciplining working through benchmarking (second order/etic level)"(Blagoev, 2019, p. 901).

3.3 Booster Breaks andWork Sprints for Meeting Member Needs in Coworking Spaces

Research in traditional work environments documents that Booster Breaks improve coworker camaraderie, enhance coworker collaboration, reduce mid-morning or mid-afternoon slumps (also referred to as energy dips), increase physical activity, reduce sedentary behavior, and provide a welcomed break during the workdayto support and encourage colleagues (Davy et al., 2011; Largo-Wight et al., 2017;

Lombard & Goebel, 2009; Taylor, 2005, 2011; Taylor et al., 2013, 2014, 2016, 2021).Further, anecdotal evidence from virtual meetups with medical editors, writers, and other professionals indicates that work sprints have been successful in improving work productivity, social networking, collegiality, and collaboration.These same benefits from Booster Breaks and work sprints can also accrue for members of coworking spaces.

Booster Breaks and work sprints can be implemented by coworking space owners to enhance community and collaboration. When such support is lacking, members of coworking spaces can, on their own, initiate Booster Break and work sprint programs (Blagoev et al., 2019).

Booster Breaks and work sprints have the potential to meet three of the five critical coworking space needs (community, collaboration, and amenities (i.e., activities or events organized by coworking space owners).Specifically, community is established by having a shared routine, and the consistency of shared routines facilitates social bonding(Garrett et al., 2017). Booster Breaks and work sprints can be a shared routine for coworking space usersto promote collective solidarity and a communal experience. Furthermore, these programs and protocolscan be considered amenities because of their potential added value to the coworking space experience. The remainingtwo coworking space needs relate to location and costs, which are beyond the intent, reach, purpose, and scope of Booster Breaks and work sprints.

In another analysis (Seo et al., 2017), it was emphasized that a favorable working environment is the keystone to success inany organization. By using an analytic hierarchy process method, these researchers presented a comparative analysis of both users and hosts of coworking spaces. Priorities of both groups were distinguished. Despitesome differences in perspective, when these different perspectives were integrated and synthesized, the analysis showed that relationship facilitation, service diversity, and price plan were identified as key factors from both the hosts' and users' perspectives. Relationship facilitation was defined as activities that encourage members to form relationships and natural collaborations (Seo et al., 2017).

Combining and integrating Booster Breaks and work sprints can establish the structure of a typical day in a coworking space. The day begins with greetings and introductions of any new members. Then, work sprints can be presented byeveryone to indicate the work goals for the day. During the day, instead of coffee breaks, unhealthy snack breaks, or smoke breaks, Booster Breaks can redirect the typical 15-minute break to promote health, encourage support, and enhance camaraderie. At the end of the workday, each participant reports work progress and areas for improvements related to goals introduced at the beginning of the day. The combination of these two protocols promotes accountability, social interaction, employee health, and connection with coworkers. Booster Breaks and work sprints can accelerate the dynamics and processes related to collaboration and community to enhance the coworking space experiences of participants.

4. Discussion

4.1 Application of Systems Science Principles and Framework

The coworking space is recognized as a complex social environment, and integrated components comprise the entire system—namely, the community of individuals, a set of social interactions, interpersonal relationships, and programs that are interdependent and interact to form a coworking culture. Therefore, the application of systems science principles and approaches isrelevant and appropriate to inform and guide the initiation, adoption, implementation, and maintenance of Booster Breaks and work sprints for coworking spaces. Systems science is defined as a "perspective that conceptualizes a system of interrelated component parts that work together as a coherent whole" (Pronk & Narayan, 2016, p. 123). Systems science assesses the holistic nature of all parts working together and deemphasizes a focus on individual components in isolation(Pronk & Narayan, 2016). A holistic approach (i.e., a systems science perspective) is needed to account for the importance of the work environment, workers' experiences, and workers' interactions with the work environment during specific moments in time (Pronk & Narayan, 2016).

Each coworking space implementation strategy may be unique and undoubtedly will vary from one location to the next. For example, some coworking space owners may introduce Booster Breaks and work sprints simultaneously.

Others may decide to try Booster Breaks first and then work sprints, or vice versa. According to the systems science framework and given the variations among the interrelated components of the coworking space, regular feedback and consistent monitoring of the innovations are essential. Extensive formative work, including individual interviews, focus groups, open facilitated dialogue sessions, Nominal Group Technique (combination of qualitative and quantitative research) and surveys, can be helpful in this context, given that formative research seeksto identify facilitators and barriers to implementation and to revise faulty assumptions.

The introduction of Booster Breaks and work sprints should be a systematic, conscientious, and serious initiative—in other words, not implemented casually or as an afterthought, and not without proper preparation. Unintended consequences need tobe anticipated, monitored, and mitigated. Resources and additional staff should be made available to ensure the success of the interventions.Begin with a 2-week or 3-month trial period, after which a comprehensive assessment is warranted. With documented success after 6 months or 1year, Booster Breaks and work sprints can become integral elements of the coworking space culture.

In summary, the advantages of an explicit focus on systems science principles can result in coworker space participants flourishing and demonstrating greater productivity with Booster Breaks and work sprints as shared routines enhancing community, collaboration, and culture.

4.2 Marketing

Marketing is a strategy to improve one's competitive position or advantage. Competition for members is increasing as more coworking spaces becomeavailable(Lashani & Zacher, 2021).Finding a niche in the market by specializing in certain professions or offering free coworking days hasbeen recommended. Another strategy for coworking space owners is to design appealing rooms and facilities to improve members' satisfaction(Robelskiet al., 2019).Within a broad marketing strategy, the degree to which community is offered provides a distinct advantage for coworking space owners(Lashani & Zacher, 2021).

In the literature, coworking space owners have been referred to as entrepreneurs, hosts, managers, space proprietors, coworkingspaceproviders, and operators of coworking spaces. Irrespective of the nomenclature, for those who aspire to be innovators, implementing Booster Breaks and work sprints to enhance community and collaboration can be beneficial and rewarding in terms of increasing and retaining memberships and establishing a niche in the market.Promoting the unique features of these amenities can provide a marketing advantage in a competitive environment. It has been recommended that the owners or managers of coworking spaces take the lead in facilitating engaging, informal social interactions and mobilizing support (Gerdenitsch et al., 2016; Vidaillet & Bousalham, 2020).Notwithstanding,regular users of a coworking space also can initiate and implement Booster Breaks and work sprintson their own or recommend that their coworking space owners do so.

4.3 Caveats

Not all kinds of work orprofessions are suitable or appropriate for coworking spaces. For example, onsite work is required for chefs, dentists, carpenters, surgeons, physical therapists, baristas, as well as for employees in construction, manufacturing, restaurant, hotel, and transportation professions. The coworking space as a place to

work is appropriate for what has been termed the "boundaryless workforce" or "digital nomads" (Rosalsky & Smith, 2021; Fuzi, 2015). Importantly, it has been reported that 50% of working Americans can work remotely (Rosalsky & Smith, 2021).

Subtypes of multi-tenant offices include, for example, "serviced offices (offering workspaces with a high service level), incubators (offering a high service level that could help start-up enterprises, mostly high-tech enterprises, to develop and become successful), [and] regular business centres (focusing on offering workspaces without any additional facilities or services) ..." (Weijs-Perrée et al., 2017,p. 534].Coworking spaces are distinct from these in that they offer important levels of service and a focus on creating a community (Weijs-Perrée et al., 2017). Coworking spaces are dynamic and low-cost workplaces where people from different business backgrounds can interact and share knowledge (Weijs-Perrée et al., 2017).

Because of the emphasis on creating communityinherent in coworking spaces, Booster Breaks and work sprints are mostappropriate and relevantforthoseenvironmentsrather than for other alternative work environments, such as multi-tenant offices, hotels, libraries, coffee shops, and internet cafes.

One of the objectives of this paper is to encourage interventions to promote collaboration and community in coworking spaces, because the literature is conspicuously absent in this area. As a result of the documented literature and relevant experiences, Booster Breaks and work sprints were the chosen interventions to analyze in this paper. Research is recommended to document the efficacy, effectiveness, and efficiency of Booster Breaks and work sprints in coworking spaces. Other types of interventions should be presented and evaluated, as well.

4.4 Future Directions

As noted by Berbegal-Mirabent (2021), coworking spaces are expected to burgeonin the post-pandemic society. For professions that allow for workingfrom home or using coworking spaces, a "fourth space" merits consideration. This "fourth space" is a hybrid model combining traditional work office, home office, and coworking spaces in various combinations and configurations. The motivations for the "fourth space" are employee preferences (better integration of family and work) and concerns about the environment. The "fourth space" hybrid model is more environmentally friendly in that it reduces commuting costs (e.g., gas and other carbon footprints related to transportation) and requires fewer or smaller offices (e.g., smallercarbon footprints related to heating, cooling, and space demands).

A much-publicized "Great Resignation" emerged duringand after the COVID-19 pandemic because some employers insisted that employees return to the traditional office. This expectation has created resentment and has resulted in employees leaving the company(Rosalsky & Smith, 2021). As an alternative to the traditional office, working from home and working in coworking spaces in various configurations may meet the needs and preferences of many employees. For example, 2 days of work in the traditional office, 2 days of work in the coworking space, and 1 day of work at home may be an optimal and acceptablework arrangement. This type of variety and option for a work week may facilitate employee retention in many professions.

The story and viability of the emergent "fourth space" is unfolding. It may not besuccessful, or it may become the promising and dominantparadigm for the future. Its fate may be determined by whether employee engagement, satisfaction, and productivity are diminished, maintained, or enhanced compared with traditional work offices. Given the range of choices, Booster Breaks and work sprints can be part of the "fourth space," because both traditional office environments and coworking spaces can employ these protocols—as can home office workers through regular virtual meetups.

5.Conclusion

The research question in this paper was: Based on the literature, what is the potential impact of Booster Breaks and work sprints to meet member needs in coworking spaces? The conclusion is that Booster Breaks and work sprints have the potential to improve the work experiences of coworking space participants. The active ingredient for a Booster Break is a group physical activity that promotes camaraderie, encouragement, support, and a shared routine. Work sprints promote interaction among coworker members, learning about each other's work, and introducing an accountability factor as well as a shared routine. By enhancing community and collaboration with amenities, coworking space owners and members can improve the work experience.

Of the five needs of coworking spaces (Lashani & Zacher, 2021), community, collaboration, and amenities may be the most malleable, adaptable, and modifiable. However, interventions for improving two of these needs—community and collaboration—have not been investigated, supporting the consensus among scholars and researchers in the field that the coworking-space literature is primarily descriptive and that targeted

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interventions are needed to increase social interaction and social support in coworking spaces (Gerdenitsch et al., 2016). This article is the first known initiative to present interventions for increasing collaboration and community in coworking spaces.

Simple colocation of members is not sufficient to facilitate interaction; instead, community facilitators and coworking space ownersshould stimulate interactions and encounters, provide networking opportunities, foster collaborations, and enable greater synergies among members with engagement activities(Fuzi, 2015). The astute coworking space owner will take the initiative to establish protocols such as Booster Breaks and work sprints, not onlyas a benefit for coworking space members, but also as a promotional "plus" for their coworking space—a win-win approach.

As noted earlier, Booster Breaks and work sprints can structure the coworking space day to enhance the coworking experience of participants. The day begins and ends with work sprints to facilitate accountability, productivity, and social connections. During the day,Booster Breaks mitigate mid-morning and mid-afternoon slumps, lethargy, and energy dips and improve employee health while promoting social interaction and facilitating camaraderie. Within the context of a group physical activity session,participants mutually encourage, motivate, and support each other(Taylor, 2011; Taylor et al., 2010, 2013; 2014, 2016).

Employee health and wellbeing are paramount. Alternative work arrangements beyond the traditional work office have reached a tipping point because of theCOVID-19 pandemic and public health imperatives. The coworking phenomenon is a "newmodel of work" in the context of a "collaborative and sharing" economy (Seo et al., 2017).Coworking space participants are empowered to work according to their own rhythms and create their own work environments (Berbegal-Mirabent, 2021).

Having practical information about modern work environments and the nature of work will be vital as technology and the work place itself evolve (Gerdenitsch et al., 2016). Future research is recommended to document the effectiveness and outcomes of Booster Breaks and work sprints to further advance the evolving and autonomous coworking space community.

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Ethical approval: The present research work does not contain any studies performed on animals or humanparticipants by any of the author(s).

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