



THE FUTURE OF WORKPLACE WELL-BEING:

Combining Gamification Principles with Health Technology for Enhanced Employee Engagement

MAY 2024



Table of Contents

Executive Summary	1
Combining Gamification Principles With Health Technology For Better Engagement	2
The State Of Employee Engagement In 2024	3
Why Technology Alone Isn't Enough To Guarantee Wellness: Harnessing The Science Of Behavior Change	6
What Is Gamification?	8
What Are Gamification Elements?	9
Categorizing Player Types For Even Greater Personalization	10
A Tale Of Two Rewards: Gamification Vs Financial Incentives	12
Benefits Of Gamification In Wellness	14
Gamification In Action: A Workplace Wellness Case Study	15
Key Takeaways And Recommendations	17





Executive Summary

This white paper asks the question: **what's the best behavior change incentive strategy that compliments the latest health tech to drive employee engagement in your wellness program?** Employee engagement has reached an eleven-year low, so employers need to use every tool in their arsenal to engage employees and inspire them to lead healthier lives.

While workplace engagement is a complex problem to solve, it's clear that employee wellness initiatives are not just a piece of the puzzle but an integral, indispensable part of the solution. Yet employee wellness programs routinely struggle with low participation rates, even though financial incentives are frequently used, and wellness technologies like watches, heart rate monitors, and pedometers are exceedingly popular.

Currently, wellness programs have a wide variety of programs, tools, and strategies to choose from, but many lack a coherent, proven motivational strategy to tie them together and drive results.

This paper provides an overview of how a behavior change strategy that has been used with great success across other industries can **drive program participation, improve individual health and wellness, and increase employee engagement in your organization.** It also includes four peer-reviewed research studies that demonstrate the effectiveness of this strategy in employee wellness and offer specific tips and tricks for implementing it.

Today, there are more digital platforms, wearables, and wellness programming options available than ever before. Employers need a proven motivational tool that integrates them all fully to produce a seamless and enjoyable wellness experience—one that leads to high employee participation and improved employee engagement.



Combining Gamification Principles with Health Technology for Better Engagement

Fostering employee engagement is among the most important items on many executives' to-do lists, but creating and managing an effective wellness program is challenging. In an era of endless tech solutions, apps, and devices, it's easy to lose sight of what matters most in promoting whole-person well-being at work.



Gamification refers to the application of gaming principles to non-game settings, and it's been used in healthcare, fitness, marketing, and sales since the early 2000s.

True wellness requires much more than a lunchtime yoga class or the occasional resilience module. It demands robust organizational structures, institutional policies, and a healthy workplace culture. In addition to these workplace wellness cornerstones, flexible, personalized, and evidence-based employee wellness programs can significantly help employees improve their mental and physical health. For optimal effectiveness, these programs must integrate the latest health and fitness tech and be guided by motivational incentive structures that promote maximum participation.

Below, we'll introduce opportunities in employee wellness that gamification creates to increase employee participation and overall engagement. We'll also share how you can integrate established gaming elements into your existing wellness programs (and, in some cases, how you likely already have).

Many of today's technologies have honed what we've long known about human motivation and leveraged that to successfully foster long-term engagement in various contexts. Why can't we do the same with employee wellness? Gamification is an inexpensive and effective way to inject novelty and fun into tedious tasks and increase intrinsic motivation. This behavior modification strategy has wide-ranging positive impacts on employee engagement and helps individuals build healthy behaviors.



The State of Employee Engagement in 2024

High levels of employee engagement result in employees who are deeply involved, committed, and passionate about their work. Understandably, increasing employee engagement has become one of many companies' largest focuses and the primary reason employee wellness programs have exploded in popularity across many industries.

The pandemic, challenging economic factors, and an ever-changing employment market have all contributed to the dire state of employee engagement. Engagement for [US employees is only 33%](#) – an eleven-year low – and employee participation in wellness programs is also low, even when incentives are offered.

According to [Gartner's 2021 EVP Benchmarking Survey](#), **although 87% of employees surveyed had access to wellness offerings, only 23% used them.**

Research Study

Wellness programs are also one of the best ways for employers to show their dedication to the health and success of their employees. That perception is crucial.

According to Gallup, employees who felt their employer cared about their wellbeing were:

- 69% less likely to actively search for a new job
- 71% less likely to report experiencing a lot of burnout
- 5x more likely to strongly advocate for their company as a place to work and to strongly agree they trust the leadership of their organization
- 3x more likely to be engaged at work
- 36% more likely to be thriving in their overall lives



AT A GLANCE

WORKPLACE WELLNESS & EMPLOYEE ENGAGEMENT

52% of all US companies have a formal wellness program

9 out of **10** companies offered at least one wellness benefit as of 2019

7 out of **10** executives agree that robust employee engagement is crucial to business success

Only **1/3** of employees felt engaged at work in 2023

8 out of **10** employees feel at risk for burnout

Low employee engagement costs the global economy **\$8.8 trillion**



While competitive salaries, humane leave policies, and healthy work cultures are the bedrock of employee engagement, wellness programs play a pivotal role in improving each individual's health and wellness, ultimately improving their engagement at work.

For example, one study published in the [Journal of Occupational Health Psychology](#) found that employees who reported higher levels of well-being were more engaged at work, had improved job performance, and missed fewer days due to illness.

We know that our daily behaviors play a significant role in our overall health, and employee wellness programs provide multiple opportunities and incentives to learn about and improve one's health behaviors. Because of these mounting challenges to individual health and employee engagement, modern companies must implement all available tools to foster healthy work environments and encourage employees to actively participate in their health.

Employers should also utilize whatever tools the individual is already using, along with best practices in the wellness industry, to improve their health habits and increase their wellness and engagement at work. Only then can we bring both organizational and individual resources all together into a seamless experience.

In addition to well-established strategies such as digital wellness platforms powered by biometric data, health risk assessments, and health coaching, consumers regularly use many new technologies, such as health wearables and fitness apps. **So, how can these technologies they're already using help improve employee wellness?**



The answer combines the latest health tech integrated with the wellness programs and initiatives you already employ with motivational behavior change strategies that promote long-term engagement through novelty and play.



By leveraging these evidence-based behavioral change tools and combining them with your employees' technology, you can increase wellness program participation and ultimately improve overall employee engagement.

Highlights

- Despite companies understanding the crucial importance of employee engagement, most employees still struggle to feel engaged at work.
- Employees are more engaged at companies that prioritize health and well-being.
- Wellness programs offer a unique opportunity to showcase your organizational culture and commitment to total wellness for your employees.
- The success of your wellness program hinges on employee participation.



THE CURRENT WELLNESS PROGRAM TOOLKIT

Employee wellness programs offer numerous benefits to employees and employers, and they've greatly evolved. What began as a few limited, in-person offerings has grown into comprehensive and fully customizable wellness solutions encompassing many initiatives and offerings in one place.

Employees can take advantage of health screenings, resources, and additional support their employers offer to improve their mental and physical health and enjoy incentives and rewards. Employers also enjoy significant tangible business benefits, including employees who take [fewer sick days](#), incur [lower healthcare costs](#), report [higher satisfaction](#), and enjoy longer tenures.

In addition to these expected benefits and programs that are usually delivered through a digital wellness platform, employees already use a wide variety of health and wellness technologies and applications in their personal lives, from Fitbits and Apple Watches to an endless array of apps offering workouts, nutrition advice, mindfulness, and more. Employers should also leverage that interest to amplify the results of an existing wellness program.



Why Technology Alone Isn't Enough to Guarantee Wellness: Harnessing the Science of Behavior Change

Despite the massive rise in popularity of wearable health tech and fitness apps, [research](#) has shown that access to these platforms, apps, and wearables alone is not enough to drive long-term behavior change. New health technology abounds, and more solutions appear on the market every day, but that [doesn't necessarily mean the employees using them will be healthier](#).

People are complex, and behavioral psychology has entire branches of study dedicated to unraveling the mysteries of behavior change and motivation. Humans often act against their self-interest for a variety of reasons. Many factors are at play, and it's crucial to note that employee wellness initiatives must supplement institutional policies that create a healthy work environment, as work serves as a critical [social determinant of health](#) for us all.

No amount of walking challenges or yoga classes will offset poor leadership, a lack of psychological safety, or a toxic work environment; first and foremost, each company must work to build a robust culture of support and growth. However, when it comes to changing our health behaviors, there is a great deal that wellness programs *can* do.



One of the biggest challenges facing wellness program initiatives is fostering employee participation, which many struggle to sustain. Multiple behavioral factors work against us when we attempt to make lifestyle changes, including the **Present Bias (the tendency to prioritize immediate gratification over long-term benefits)** and the **Default Bias (the tendency to maintain the status quo and remain inert in our current habits)**.



With those ingrained biases in mind, how can companies incorporate wearables, apps, and other health technologies to improve employee health and well-being if merely owning them isn't enough?

The truth is that data accumulation without strategy does little to create long-term behavior change or improve health outcomes. Once the novelty wears off, those notifications join the chorus of digital noise we all consume (and mostly ignore) throughout the day.

That's because, [according to experts](#), these health technologies are excellent facilitators of behavior change, not instigators of it. In other words, while health tech like watches and apps can be very helpful during your health journey, they are rarely the reason you start it and maintain healthy habits for life.

So, what drives us to make healthy lifestyle changes, if not tech alone? And how can your employee wellness program leverage all the tools in its wellness toolkit to increase participation and employee engagement?

The key is motivation—and not all motivation is created equal. There is a difference between intrinsic and extrinsic motivators. While both extrinsic and intrinsic motivators are important and helpful in shaping behavior, intrinsic motivators are superior at creating lasting change because they form a more complex and deeper-rooted relationship to the behavior in question.

Intrinsic motivation is about the process of change or learning itself and harnessing it is the crucial missing link we need when we're trying to build healthier habits over time. Johnson et al. perfectly summarized this question in their study, *Gamification for Health and Wellbeing: A Systematic Review of the Literature*:

“In our modern world, health and well-being strongly depend on the individual's health behaviors. Motivation is a major factor in health behavior change, and intrinsically motivated behavior change is desirable as it is both sustained and directly contributes to well-being. This raises the immediate question: what kind of interventions are best positioned to intrinsically motivate health behavior change?”





WHAT IS GAMIFICATION?

Gamification refers to the behavioral modification strategy of applying the principles of a game to non-game settings. The phrase was coined by Nick Pelling, a computer programmer and inventor, in 2003, and gamification has been employed with great success by many industries since.

It has already been used in fields like education, marketing, retail, and fitness, and it's seamlessly integrated into many commonly used technologies. You've likely already gamified your health behaviors in some way and not even realized it.

Gamification is a motivational tool with intrinsic and extrinsic motivators built in and could be the key to unlocking the potential of all your traditional wellness program tools. By combining your core wellness offerings and integrated health tech your employees are already using, you can weave game elements into the employee experience to add novelty and personalization to improve participation and engagement.

Hitting your daily step goal, closing your movement rings, and winning a prize for participating in an employee wellness challenge are all examples of gamification, and they are [highly effective](#) in helping people improve their daily health habits.

Gamification creates novelty through play, socialization, and constant engagement, which drives motivation and adherence. This can be highly effective when building new, healthy habits. It also has a distinct advantage over other incentive structures, like financial incentives, in a few ways.

Research Study

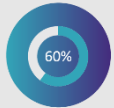
Journal of Biomedical Informatics
A Systematic Review of Gamification in E-Health

- Researchers looked at 46 studies examining the applications and benefits of gamification in various health contexts
- The most common gamification elements utilized were rewards such as points, achievement badges, and leaderboards, as well as challenges, competitions, and leveraging social networks
- Physical activity and chronic disease management were the most frequently investigated health domains in the gamification body of research



What are Gamification Elements?

One of the many benefits of gamification is the endless ways game elements can be incorporated into wellness programming. Common game elements used in health and well-being applications include:



Process-Based Gamification Tactics

Process-based gamification tactics are the lifeblood of the toolkit and involve turning participation in the wellness program and, by extension, their health habits into a fun, interactive, and engaging experience. In this way, gamification creates intrinsic motivation around the habit of participating in various wellness initiatives.

Examples:

- Levels
- Immediate success feedback
- Continuous progress feedback
- Goal-setting
- User choice in goals and activities



Rewards & Achievements

Rewards in gamified systems function just like any other reward, providing extrinsic motivation to complete a discrete task. In this way, gamification can seamlessly integrate existing financial incentives to produce even higher levels of employee participation in a desired program or activity.

Examples

- Points
- Achievement badges
- Leaderboards
- Prizes





Social Elements

Social game elements are the most popular and the easiest to implement in your corporate wellness program because most games and challenges are social by nature. Social elements such as teams, partners, and competitions provide extrinsic motivation, while accountability and support elements can increase intrinsic motivation by increasing a sense of control and placing focus on internal growth throughout the wellness journey.

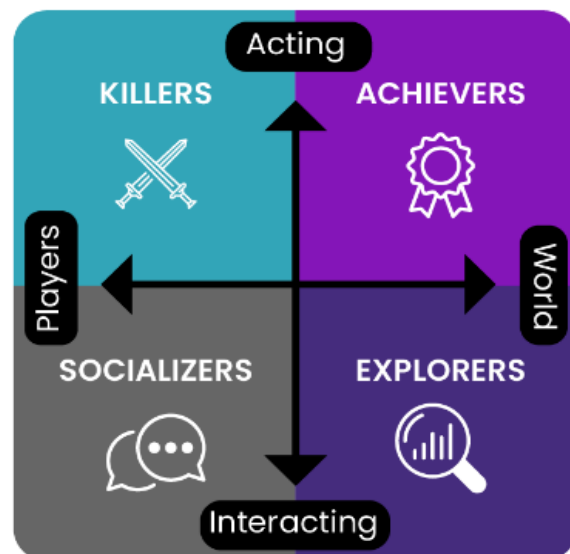
Examples

- Support & accountability
- Teams
- Partners
- Competitions

Categorizing Player Types for Even Greater Personalization

We know that providing the most tailored, personalized wellness experience leads to higher participation, and the same is true for gamified outcomes. In the same way that many companies require their employees to take personality tests such as the DISC type or assessments to gauge their leadership, conflict, or working styles, there is a test to determine how each of us likes to approach games, called the [Bartle Taxonomy of Player Types](#).

Designed by artificial intelligence professor and researcher Richard Bartle, this test categorizes four distinct player types. By educating employees on their player type and incorporating game elements that are best for each category when possible, you can further personalize the wellness program experience and increase the likelihood of each employee enjoying the process and sticking with it.





THE KILLERS

Less than 1% of all gamers are Killers. Like Achievers, they play to win, thrive on accruing points, and topping the leaderboard. But unlike Achievers, Killers also enjoy watching other people lose.



THE ACHIEVERS

Achievers thrive on collecting points, climbing leaderboards, and visualizing their progress. 10% of people are Achievers, and they respond best to gamified and financial rewards.



THE SOCIALIZERS

The vast majority of game players – almost 80% – are Socializers. Socializers enjoy the sense of community and interacting with other players.



THE EXPLORERS

10% of people are Explorers, and they enjoy the game process rather than getting awards or points. They love unlocking mysteries and stumbling upon surprises.



While assessing each employee's gamer persona can be fun, individual assessment is not necessary to successfully apply gamification principles. Instead, simply understanding that there are **different types of gameplay** and that **around 90% of people enjoy socializing and achieving activities the most** will help guide your game element choices.



A Tale of Two Rewards: Gamification vs Financial Incentives

There is ample evidence that despite the knowledge of the importance of making healthy lifestyle decisions such as exercising regularly, not smoking, and eating a nutritious diet, many people still don't make those choices.

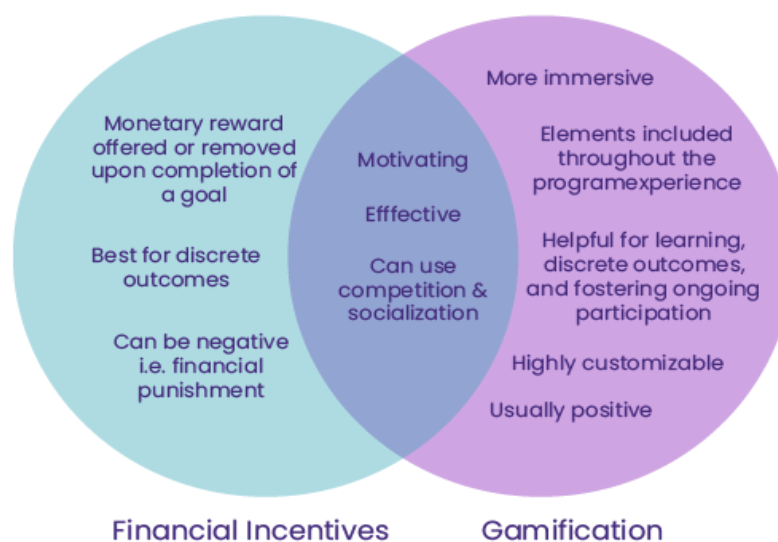
For decades, scientists have studied the role of financial incentives in motivating employees to prioritize their health. Financial incentives have proven to be an effective extrinsic motivator and have been found to be [1.5 to 2.5 times more effective](#) for promoting healthy behaviors than programs without such incentives.

Extrinsic motivators are motivating forces that exist outside of ourselves, such as a raise or a prize, and can be highly effective in increasing short-term behavior modification.

Financial incentives, such as a payout for completing a health risk assessment, are tangible, discrete rewards that provide external motivation to complete that task.

Financial incentives can also be rooted in loss aversion, where employees must participate in a particular behavior to avoid losing something. This type of financial incentive structure is controversial, and critics point out that it could disproportionately harm [disabled and older employees](#) who need wellness support the most.

Wellness Program Behavioral Engagement Tools





Many of the best digital wellness platforms on the market have gamified elements built in—as well as optional health tech integrations available, such as Fitbit or Apple Health — gamification also offers a much more **cost-effective way to motivate employees and continually improve wellness.**

Therefore, financial incentives are best when paired with discrete, time-sensitive outcomes associated with process goals or specific outcome measures. For example, you could offer each employee \$75 for completing a biometric screening or a \$25 monthly cash prize for averaging 8,000 daily steps.

Conversely, gamification is a broad umbrella term that describes numerous game elements and strategies that can be implemented to increase extrinsic motivation, intrinsic motivation, or both.

Including game elements in non-game settings makes a tedious or difficult process more engaging, rewarding, and fun. Because of its broad applicability throughout the entire digital wellness platform and wellness program experience, it's a more useful tool that can increase participation in numerous ways.

Crucially, since many of the best digital wellness platforms on the market have gamified elements built in—as well as optional health tech integrations available, such as Fitbit or Apple Health—gamification also offers a much more cost-effective way to motivate employees and continually improve wellness.

Research Study

Internet Interventions

Gamification for Health and Wellbeing: A Systematic Review

According to a systematic review that evaluated 19 studies examining the application of gamification for health and wellbeing, the researchers identified seven potential advantages of gamification in health, including:

1. Supporting intrinsic motivation
2. Broad accessibility through popular mobile technology
3. Broad audience appeal
4. Broad applicability across health and wellbeing risks and factors
5. Cost-effective thanks to the ability to integrate with existing technology
6. Everyday life fit (reorganizing activity instead of adding additional demands)
7. Direct wellbeing support



Benefits of Gamification in Wellness



1. MAKES TEDIOUS TASKS MORE FUN

The inclusion of gamified elements has been shown across many industries to add fun and novelty to behavior change.



2. EASY INTEGRATION

Because most employee wellness programs are delivered electronically, incorporating gamified elements such as prizes, challenges, feedback, goal setting, and user choice is easier than ever. In addition, many popular health technologies and apps that employees already use feature gamification, so it's a process your employees are familiar with, and its elements are easily incorporated into digital wellness platforms.



3. INCREASED PERSONALIZATION

Due to its many different elements, gamification offers numerous options and ways to supplement your existing wellness programming that further personalizes the employee wellness experience.



4. COST EFFECTIVE MOTIVATION

Gamification principles can be woven into digital wellness platforms and further improved by additional integrations with wearable health tech that employees already use. Thus, gamification is a powerful behavior modification motivator, with intrinsic and extrinsic elements at a lower price point and a greater return on investment.



5. INCREASED ENGAGEMENT

Gamification successfully injects fun and play into tasks that may be tedious or unenjoyable. In doing so, it increases employee participation in wellness programming, which translates to overall employee engagement at work over time.

In short, the research on gamification in employee wellness demonstrates that it is a viable tool for increasing employee participation, improving clinical health outcomes, and boosting engagement overall.



Gamification in Action: A Workplace Wellness Case Study

The Sustainability of a Workplace Wellness Program That Incorporates Gamification Principles: Participant Engagement and Health Benefits After Two Years

One of the main criticisms of any reward-based motivational tool is that highly studied options, such as financial incentives, have primarily shown efficacy in producing short-term behavior changes. And since the cost of such programs is often significant, researchers and executives alike are still searching for motivational tools that create longer-term behavior change and wellness for life.

One research team sought to answer this question by measuring a gamified wellness program's participant engagement and health benefits over two years. What they found was exciting.

STUDY BACKGROUND

Merck Canada Inc. had limited options for increasing engagement in its wellness program. Significant financial incentives were not in the budget, and on-site traditional social networking was not possible, as 50% of employees worked remotely or in different offices. Because of these limitations, Merck needed a tech-forward and enjoyable digital wellness program that was engaging enough to maintain employee participation.

STUDY DESIGN

- 775 permanent employees at a national company located in Canada were eligible to participate in a free wellness program.
- These employees participated in a web-based platform that was available on computers, tablets, and smartphones.
- The wellness program consisted of health assessments, biometric screenings, educational modules, and behavior change programs that employed gamification techniques such as goal setting, leaderboards, badges, challenges, and social influence.
- Health assessments and associated educational modules addressed heart health, diabetes, sleep, stress, exercise, nutrition, weight loss, smoking cessation, alcohol use, and depression).



All employees received a free pedometer during the first year and manually entered their daily step goals into the platform. In the second year, the program was updated to sync Fitbit data automatically.

STUDY RESULTS

- Participation rates for the health screenings were 78% (baseline), 54% (year 1), and 56% (year 2), respectively.
- After two years, there were significant clinical improvements in blood pressure, cholesterol, hemoglobin A1C, average weekly physical activity, perceived stress score, insomnia index, and general fatigue.
- The most significant benefits of the program occurred among the employees at highest risk.

WELLNESS PROGRAM FEATURES THAT MADE THE DIFFERENCE

This study, published in 2019, is one of the first to provide detailed results from a gamified wellness program over a long period of time. The researchers concluded that gamification elements are an effective alternative to financial incentives, as they lead to high employee participation and contribute to improved clinical outcomes.

It's important to note that the company in the study heavily marketed its wellness program and received significant support from its leadership. The company had a well-staffed wellness department and also recruited employee champions who encouraged and recruited their coworkers to participate. While it's impossible to calculate the exact impact these unique program features had on the study's results, it's clear that these are essential elements to a wellness program's success.





Key Takeaways and Recommendations

Based on the available evidence, it's clear that **gamification is an effective and powerful motivational strategy that wellness programs can use to increase participation and drive employee engagement.** In employee wellness, this means integrating all evidence-based and engaging technologies such as platforms, biometric data, wellness trackers, wearables, and other tech and increasing employee engagement by applying gamification tools to your wellness programming.

1. In addition to traditional wellness program basics, such as health risk assessments (HRA), biometric screenings, and health coaching, you should create wellness programs that utilize levels, badges, and leaderboards and offer multiple media formats to provide a personalized wellness experience that creates constant engagement and participation.
2. Combine gamification elements with financial incentives to drive maximum engagement in crucial initiatives.
3. Prioritize the inclusion of reward, achievement, and social game elements, as those are the ones 90% of people enjoy most.
4. Offer groups, competitions, and challenges to inject a socialization element, increasing engagement and decreasing friction.
5. In addition to traditional incentive structures, run challenges, teams, and competitions based on habit formation and execution instead of outcomes to leverage socialization and avoid negative feelings that hinder participation.
6. Use a digital wellness platform that includes wearable and fitness app integration to easily track and reward health behaviors such as step goals, modules completed, challenges participated in, and more with positive incentives, celebrations, swag, and recognition.

The evidence is clear that combining gamification principles with other tested wellness technologies and incentives can increase the rate at which employees engage in healthy habits and improve employee wellness and workplace engagement.



About CoreHealth

CoreHealth by Carebook is a leading digital health technology company trusted by global companies to power their health and wellness programs. Our innovative wellness platform helps maximize health, engagement, and productivity for over 5 million employees worldwide.

Discover how CoreHealth can revolutionize your organization's wellness strategy! Contact us today to learn how we can help you design and deliver a tailored, configurable, and scalable digital wellness solution for your organization.

Ready to see what you've been missing?

Speak to one of our technology experts today!

[Book a Demo](#)



Citations

(2023). (rep.). *State of the Global Workplace 2023 Report*. Retrieved from <https://www.gallup.com/workplace/349484/state-of-the-global-workplace.aspx>.

Abelson, R. (2016, October 24). *AARP sues U.S. Over Rules for Wellness Programs*. The New York Times. <https://www.nytimes.com/2016/10/25/business/employee-wellness-programs-prompt-aarp-lawsuit.html>

Anderson, L. V. (2016, September 1). *Workplace Wellness programs are a total sham*. Slate Magazine. https://slate.com/technology/2016/09/workplace-wellness-programs-are-a-sham.html?pay=1711039577309&support_journalism=please

Are fitness trackers enough to keep you motivated and turn exercise into a habit?. UCLA Med School. (2023, June 23). <https://medschool.ucla.edu/news-article/are-fitness-trackers-enough-to-keep-you-motivated-and#:~:text=Q%3A%20Why%20is%20wearing%20a,changes%20in%20motivation%20and%20behaviors>.

Centers for Disease Control and Prevention. (2023). *Work as a key social determinant of health: The case for including work in all health data collections*. Centers for Disease Control and Prevention. <https://blogs.cdc.gov/niosh-science-blog/2023/02/16/sdoh/>

Fleming, W. J. (2024). Employee well-being outcomes from individual-level mental health interventions: Cross-sectional evidence from the United Kingdom. *Industrial Relations Journal*, 55(2), 162–182. <https://doi.org/10.1111/irj.12418>

Gallup. (2024, April 17). *Indicator: Employee engagement*. Employee Engagement . <https://www.gallup.com/394373/indicator-employee-engagement.aspx#ite-548156>

Gartner. (2021). *2021 EVP benchmarks: Design, updates, outcomes and challenges*. 2021 EVP Benchmarks: Design, Updates, Outcomes and Challenges. <https://www.gartner.com/en/documents/4002357>

Giles, E. L., Robalino, S., McColl, E., Sniehotta, F. F., & Adams, J. (2014). The effectiveness of financial incentives for Health Behaviour Change: Systematic review and meta-analysis. *PLoS ONE*, 9(3). <https://doi.org/10.1371/journal.pone.0090347>

Harter, J. (2023, September 19). *Percent who feel employer cares about their wellbeing plummets*. Percent Who Feel Employer Cares About Their Wellbeing Plummet. <https://www.gallup.com/workplace/390776/percent-feel-employer-cares-wellbeing-plummet.aspx>

Harvard Business Review. (2013). (rep.). *The Impact of Employee Engagement on Performance*.

HUB International Limited. (2017). (rep.). *Second Annual Benefits Barometer Study*. Retrieved 2024, from <https://www.hubinternational.com/media-center/press-releases/2017/07/hub-international-releases-findings-of-second-annual-benefits-barometer-study/>.

International Foundation of Employee Benefit Plans. (2022). (rep.). *Employee Benefits Survey: 2022 Results*. Retrieved 2024, from <https://www.ifebp.org/store/employee-benefits-survey/Pages/default.aspx>.

Johnson, D., Deterding, S., Kuhn, K.-A., Staneva, A., Stoyanov, S., & Hides, L. (2016a). Gamification for Health and Wellbeing: A systematic review of the literature. *Internet Interventions*, 6, 89–106. <https://doi.org/10.1016/j.invent.2016.10.002>

Kang, H. S., & Exworthy, M. (2022). Wearing the future—wearables to empower users to take greater responsibility for their health and care: Scoping review. *JMIR mHealth and uHealth*, 10(7). <https://doi.org/10.2196/35684>



Karen Pollitz and Matthew Rae. Published: Jun 09, 2020. (2020b, June 9). *Trends in workplace wellness programs and Evolving Federal Standards*. KFF. <https://www.kff.org/private-insurance/issue-brief/trends-in-workplace-wellness-programs-and-evolving-federal-standards/>

Kumar, J. M., Herger, M., & Dam, R. F. (2024, April 17). *Bartle's player types for Gamification*. The Interaction Design Foundation. <https://www.interaction-design.org/literature/article/bartle-s-player-types-for-gamification>

Lapierre, L. M., & Allen, T. D. (2006). Work-supportive family, family-supportive supervision, use of organizational benefits, and problem-focused coping: Implications for work-family conflict and employee well-being. *Journal of Occupational Health Psychology*, 11(2), 169–181. <https://doi.org/10.1037/1076-8998.11.2.169>

Lieberman, C. (2019). (publication). *Harvard Business Review*. *What Wellness Programs Don't Do for Workers*. Retrieved 2024, from <https://hbr.org/2019/08/what-wellness-programs-dont-do-for-workers>.

Lowensteyn, I., Berberian, V., Berger, C., Da Costa, D., Joseph, L., & Grover, S. A. (2019). The sustainability of a workplace wellness program that incorporates Gamification Principles: Participant engagement and health benefits after 2 years. *American Journal of Health Promotion*, 33(6), 850–858. <https://doi.org/10.1177/0890117118823165>

McCain, A. (2022, November 28). *22 Telling Employee Wellness Statistics [2023]: How many companies have wellness programs*. Zippia. <https://www.zippia.com/advice/employee-wellness-statistics/>

Mercer. (2024). (rep.). *Workforce 2.0: Unlocking Human Potential in a Machine-Augmented World*. Retrieved from <https://www.mercer.com/assets/global/en/shared-assets/local/attachments/pdf-2024-global-talent-trends-report-en.pdf>.

Mills, P. R., Kessler, R. C., Cooper, J., & Sullivan, S. (2007). Impact of a Health Promotion Program on employee health risks and work productivity. *American Journal of Health Promotion*, 22(1), 45–53. <https://doi.org/10.4278/0890-1171-22.1.45>

Minsberg, T. (2024, February 24). *Can fitness trackers really make you fitter?*. The New York Times. <https://www.nytimes.com/2024/02/24/well/move/fitness-watch-tracker-wearable-data.html>

Sardi, L., Idri, A., & Fernández-Alemán, J. L. (2017). A systematic review of gamification in e-health. *Journal of Biomedical Informatics*, 71, 31–48. <https://doi.org/10.1016/j.jbi.2017.05.011>

Spherical Insights. (2023). (rep.). *Global Corporate Wellness Market Size, Share, and COVID-19 Impact Analysis, By Services (Health Risk Assessment, Smoking Cessation, Fitness, Weight/Nutrition Management, Stress Management, Others), By Delivery Model (Onsite, Virtual), By End User (Small-sized Organizations, Medium-sized Organizations, Large Organizations), and By Region (North America, Europe, Asia-Pacific, Latin America, Middle East, and Africa), Analysis and Forecast 2022 – 2032*.

University, S. (2024, February 14). *8 Ways Gen Z will change the workforce*. Stanford Report. <https://news.stanford.edu/report/2024/02/14/8-things-expect-gen-z-coworker/>

Vankar, P. (2023, March 22). *Employers that offered select wellness programs U.S. 2020*. Statista. <https://www.statista.com/statistics/742846/employers-that-offered-wellness-programs-united-states/>

Zippia. (2023, June 28). *22 telling Employee Wellness Statistics [2023]: How many companies have wellness programs*. 22 TELLING EMPLOYEE WELLNESS STATISTICS [2023]: HOW MANY COMPANIES HAVE WELLNESS PROGRAMS. <https://www.zippia.com/advice/employee-wellness-statistics/>

