

APPENDIX: Between Human and System Agency: Coping with Negative Incidents for Continued Effective Use of Wearables

A1. Effective IS Use vs. Related Concepts

Concept	References	Definition
Effective use	Burton-Jones & Grange (2013) Liang et al. (2015) Burton-Jones & Volkoff (2017) Campbell & Roberts (2019) Candi & Beltagui (2019) Torres & Sidorova (2019) Bao et al. (2020) Beaudry et al. (2020) Hornyak et al. (2020) Lauterbach et al. (2020) Savoli et al. (2020) Abouzahra & Ghasemaghaei (2021) Yang et al. (2021) Trieu et al. (2022)	<ul style="list-style-type: none"> Using the system in ways which allow for achieving the goals for using the system A generative mechanism which helps actualize affordances that are in line with the goals Occurs on three dimensions, depending on the respective context Can be improved through learning and adaptation actions Enhances productivity
Enhanced use	Bagayogo et al. (2014)	Expanding the use of IS in the post-adoption phase toward new feature sets and/or tasks
Extended use	Peng et al. (2018)	Post-adoptive use behavior
	Raymond et al. (2020)	<ul style="list-style-type: none"> Quality of use Extent to which system features are utilized Enhances performance
Meaningful use	Blumenthal & Tavenner (2010) Lin et al. (2019)	<ul style="list-style-type: none"> Specific to electronic health record usage; concept stems from US-Health Information Technology for Economic and Clinical Health Act Intensity of use at the point of care Usage of advanced applications Goal: achieving significant improvements in healthcare
Explorative and exploitative use	Sun et al. (2019)	<ul style="list-style-type: none"> Exploitative use: frequency and duration of system use (i.e., feature-level) Explorative use: modifications to system usage behaviors (e.g., trying, substituting, combining, repurposing features) Both complement each other to increase task performance
Innovative use	Tams et al. (2020)	Finding new ways of applying existing IS to a task
	Rahrovani & Pinsonneault (2020)	<ul style="list-style-type: none"> Innovative IT use: changing the IS and the work process to support goals Innovating with IT: using IT to develop new goals and outcomes

A2. Studies of Effective IS Use

Reference	Perspective		Topic	Context	Level of analysis	Users	Outcome variables	Main findings
	Variance	Process						
Abouzahra & Ghasemaghaei (2021)		X	Affordances, Outcomes	Personal health technology (i.e., wearables)	Individual	Senior users of wearable devices	Activity outcomes from wearable use: activity improvement, planning, and monitoring	Affordance network: Affordances of wearables and motivating factors necessary to achieve activity outcomes
Bagayogo et al. (2014)		X	Enhanced use, post-adoptive	General IT (personal and occupational)	Individual	Students and faculty members	<ul style="list-style-type: none"> • Forms of enhanced use • Attributes of enhanced use • IT and task characteristics 	<ul style="list-style-type: none"> • Theory of “enhanced use” as a process of inception of an idea, execution of that idea, and adaptation. • Process is influenced by task characteristics, IT-related knowledge types, and IT types
Bao et al. (2020)		X	Affordances and outcomes of effective health portal use; Impact of patient-provider engagement on patient health outcomes	Two-sided health portals (patient and healthcare provider)	Individual	Patients with congestive heart failure; healthcare providers	<ul style="list-style-type: none"> • Immediate outcomes: Medication and visit adherence • Final (health) outcome: number of inpatient visits, readmission rate, ER visits, length of stay 	<ul style="list-style-type: none"> • Three affordances actualized through effective use of health portals: (1) entering and accessing patient data, (2) interpersonal continuity of care, and (3) service convenience. • Actualizing these affordances together with the intensity and frequency of interaction of patients with the portal decreases the likelihood of inpatient visits.

Burton-Jones & Grange (2013)		X	Evolution of effective use and performance	Generalized IS	individual	Individual users of IS	Nature of effective use and users' actions to improve effective use and performance	<ul style="list-style-type: none"> • Theory of effective use grounded in representation theory • Dimensions: (1) transparent interaction, (2) representational fidelity, (3) informed action • Drivers: (1) learning actions, (2) adaptation actions
Burton-Jones & Volkoff (2017)		X	Multi-level interaction of uses and affordances to obtain complex outcomes from effective use in the context of healthcare	Electronic health records	Individual, organizational, systemic	Organizational users of electronic health records at multiple levels	Dimensions of effective use, affordance network	<ul style="list-style-type: none"> • Users on multiple levels engage in effective use of electronic health records across the dimensions (1) accuracy, (2) consistency, and (3) representation-in-action • Effective use helps actualize salient affordances that enable immediate concrete outcomes which add up to complex organizational outcomes that can be achieved
Campbell & Roberts (2019)	X		Effect of effective use on job performance	Analytic decision support system	Individual	Executives	Job performance	<ul style="list-style-type: none"> • Relationship between informed action and job performance supported • Relationship between representational fidelity and job performance not supported
Candi & Beltagui (2019)	X		Effect of effective use of 3D printing on innovation performance and business impact	3D printing	Organizational	Manufacturing company	<ul style="list-style-type: none"> • Innovation performance • Business impact of 3D printing 	<ul style="list-style-type: none"> • Use of 3D printing increases innovation performance and business impact • The relationship between the use of 3D printing and innovation performance is stronger when technological turbulence is high than when it is low

Hornyak et al. 2020	X		Effect of pre-implementation expectations toward an IS on post-implementation effective IS use, satisfaction, and performance	Enterprise system for personal productivity	Individual	Employees at manufacturing company	<ul style="list-style-type: none"> • User satisfaction • Job effectiveness 	<ul style="list-style-type: none"> • Effective use mediates the relationship between pre-implementation performance expectancy and post-implementation user satisfaction • I.e., employees who expect performance gains from a new system are more likely to engage in effective use
Lauterbach et al. (2020)		X	Mechanisms which give rise to varying levels of effective use of newly implemented systems in different organizational units	Integrated software solution for core banking system and surrounding system	Organizational	Employees in three different business units	Learning effective use	<ul style="list-style-type: none"> • Two conflicting mechanisms which shape implementation of new IS: (1) Learning effective use, (2) exerting complexity • Users engage in learning actions which make them familiar with system, task, and the co-dependency of both • System-task co-dependency is conceptualized as a structure which emerges from the relationship between the task and the system • The exerting complexity mechanism arises from the entities and properties of the system-enabled task which influences the cognitive demands that task-doers experience as complexity • Complexity has a counteracting effect on learning effective use

Liang et al. (2015)	X		Relationship between system exploration, effective use, and job performance	Enterprise resource planning system	Individual	Employees from different functional areas	<ul style="list-style-type: none"> • “Extended use” • Job performance 	<ul style="list-style-type: none"> • High job autonomy leads employees to more strongly engage in exploration of a complex system which helps achieve extended use • Job autonomy and task variety are antecedents to system exploration • Innovation climate strengthens (1) the impact of job autonomy on exploration and (2) the impact of system exploration on extended use
Lin et al. (2019)	X		Quality impact of using electronic health records	Electronic health records	Organizational	Hospitals	<ul style="list-style-type: none"> • Meaningful use • Quality of care 	<ul style="list-style-type: none"> • Positive quality effects associated with achievement of meaningful use-related goals, but no quality effect from EHR adoption alone • The quality effect of meaningful use attainment varied by hospital size and rurality: MU1 effect was greater in small, rural hospitals; MU2 effect significant only in rural hospitals
Peng et al. (2018)	X		Influence of personal, environmental, and technological antecedent factors on extended use of organizational IS	Enterprise resource planning system	Individual	Employees using the ERP system	Extended use	<ul style="list-style-type: none"> • Three critical factors: System self-efficacy, leader-member exchange, and system modularity, which can directly impact, and interact with each other to influence extended use • System modularity, as an infrastructure-level factor, has a critical influence because it provides employees with room for appropriating the system

Rahrovani & Pinsonneault (2020)	(X)	X	Motivational antecedents, innovative IT use behaviors, and outcomes	Organizational IS	Individual	Employees (non-specified)	<ul style="list-style-type: none"> • Innovative behaviors (innovating with IT; innovative IT use) • Outcomes (deliverables; delivery method) 	<ul style="list-style-type: none"> • Support for two types of innovative IT use behaviors: (1) innovative IT use (i.e., changing the technology and the work process to better support one's existing work goals) and (2) innovating with IT (i.e., using IT to develop new work-related goals and outcomes) • Different motivational antecedents: (1) innovative IT use: Intrinsic motivation and internalized extrinsic motivation; (2) innovating with IT: Social motivation and internalized extrinsic motivation
Raymond et al. (2020)	X		Extended use and benefits of laboratory information exchange systems by specialist physicians in hospitals	Laboratory information exchange system	Individual , organizational	Specialist physicians	Benefits for laboratory medicine	<ul style="list-style-type: none"> • Overall benefits from using laboratory information exchange system vary considerably for individual physicians • Despite a wide range of features being available to physicians, most only used a very limited feature set • The organizational context is important in determining the extent of the use of different IT systems for consulting laboratory results; Specifically, hospital size, status, and location determined kind and combination of systems in use

Savoli et al. (2020)	(X)	X	Relationship between disease self-management system users' attributional style and their cognitive, emotional, and behavioral reactions and self-management performance	IT-based self-management system for chronic diseases	Individual	Asthma patients who use the self-management system	<ul style="list-style-type: none"> • Patient reactions to the system • Self-management performance 	<ul style="list-style-type: none"> • Three central self-management styles associated with different views of the system and levels of effective use: <ul style="list-style-type: none"> • (1) Autonomous patients: perceive the system as an imposer; ineffective to moderately effective use; • (2) Engaged patients perceive the system as a facilitator; highly effective use; • (3) Reliant patients perceive the system as a protector; ineffective use.
Sun et al. (2019)	X		Impact of exploitative and explorative system use practices on task performance	MS Office; movie software	Individual	Experienced and inexperienced users (student samples)	Task performance (i.e., management control, task productivity, task innovation)	<ul style="list-style-type: none"> • Coexistence and complementarity of: (1) exploitative system use (i.e., routine use of a system and features), and (2) explorative system use as a user's search for new features and/or new ways of using system features • Explorative use may decrease task productivity in the short term but exerts long-term overall performance benefits through management control and task innovation.
Tams et al. (2020)	X		Impact of human values on innovative (post-adoptive) use	Enterprise knowledge sharing system	Individual	Professional users of enterprise knowledge sharing systems	<ul style="list-style-type: none"> • Frequency of use (i.e., contributing knowledge) • Innovating through use of the system 	<ul style="list-style-type: none"> • Human values impact users' trying to innovate using knowledge sharing systems • Supported values are related to self-transcendence (i.e., benevolence) and openness to change (i.e., self-direction)

Torres & Sidorova (2019)	X		Information-quality-as-effective-use construct as mediator in the relationship between system and data quality and organizational benefits	Business intelligence and analytics applications	Organizational	<ul style="list-style-type: none"> • Information producers (modelers and data analysts) • Information consumers (organizational decision makers) 	<ul style="list-style-type: none"> • Information-quality-as-effective-use: (1) actionability, (2) representational fidelity, (3) transparent interaction • Performance benefits 	<ul style="list-style-type: none"> • Duality between information quality and effective use in the contexts of BI&A information systems: information-quality-as-effective-use construct as a mediator between the quality dimensions of IS success and organizational outcomes • Significant relationships between data quality and all three elements of information-quality-as-effective-use
Trieu et al. (2022)		X	Drivers of effective use in the context of business intelligence (BI) systems	BI system	Individual	Decision makers who use a BI system	Variation in effective use of BI systems	<ul style="list-style-type: none"> • Antecedents: BI system quality, data integration (requires data cleaning), evidence-based management culture • Support for links between dimensions in context-specific setting • Specification of learning constructs and their impact on dimensions: learning the system, learning fidelity, learning to leverage representations; effects are direct, no support for interaction
Yang et al. (2021)	X		Antecedents of effective use and interaction and contingencies between antecedent factors	Hospital IS	Individual	Medical staff in Chinese hospitals	Effective use of hospital information system	<ul style="list-style-type: none"> • Four determinants of effective use of hospital IS: self-efficacy, management support, information quality, and system quality • Management support can influence effective use directly and indirectly through personal and technological factors • Effects of self-efficacy and information quality on effective use of hospital IS vary by gender

A3. Key Studies in the IS Coping Literature

Reference	Process step			Variables studied	Outcomes	System and study setting	Primary contribution
	Appraisal	Ways of coping	Coping outcome				
Beaudry & Pinsonneault (2005)	X	X		Primary and secondary appraisal of an IT incident	Adaptation strategies and outcomes	Account management system, organizational setting (banks)	Adaptation strategies if IT event is appraised (A) as opportunity: (1) benefits maximizing (2) benefits satisficing; vs. (B) as threat: (3) disturbance handling (4) self-preservation
Liang & Xue (2009)	X	X		Threat and coping appraisals of malicious IT	Problem-focused vs. emotion-focused coping	Malicious IT	Threat appraisal: Susceptibility, severity Coping appraisal: Effectiveness, cost, self-efficacy Users select problem-focused strategies if threat can be avoided by applying safeguarding measures. Users select emotion-focused strategies if threat cannot be fully avoided by applying safeguarding measures.
Beaudry & Pinsonneault (2010)	X	X		Emotional appraisal: challenge, achievement, loss, deterrence	Coping, IT use (adoption)	Account management system, organizational setting (banks)	Emotions in the anticipation of implementation are important antecedents of IT adoption Direct link to IT use: happiness Indirect link to IT use: excitement, anger, anxiety Coping behaviors task adaptation, seeking instrumental support, distancing link emotions and IT use
D'Arcy et al. (2014)	X	X		Stress from IT security regulations	Information security policy violations as a form of emotion-focused coping	Workplace IS, individual	Stress from IT security relations leads users to morally disengage and thus resort to emotion-focused coping behaviors, (1) positive reconstrual of conduct (2) obscuring or distorting responsibility and consequences (3) devaluing the target, which makes them more susceptible to engage in security violations.
Stein et al. (2015)	X	X	(X)	Uniform and mixed emotions	Adaptation strategies and	Faculty productivity system,	IT stimuli evoke either uniform or mixed emotions that lead to the selection of pure resp. impure adaptation strategies (see Beaudry &

				from IT stimulus event	corresponding patterns of IT use	organizational setting (universities)	Pinsonneault, 2005). They give rise to 5 conforming vs. non-conforming IT use patterns: (1) being a good citizen (2) gaming the system (3) opting out (4) exercising discretion (5) personalizing
Ortiz de Guinea (2016)	X	X		Discrepant IT events	Engagement vs disengagement coping	General IT usage	Discrepant IT events cause negative emotions and users adopt an engagement coping strategy. If the discrepant IT event is not resolved: <ul style="list-style-type: none"> • Users will adjust their engagement coping if they have the resources to deal with the event • Users will resort to disengagement coping if they do not have the resources to deal with the event
Wang et al. (2017)		(X)	X	Phishing threat antecedents	Coping adaptiveness; behavioral consequences	General phishing	Coping adaptiveness introduced as a construct differentiating between adaptive and maladaptive coping responses to phishing threats; driven by perceived threat, perceived detection efficacy, and phishing anxiety. Reliance on: <ul style="list-style-type: none"> • Task-focused coping increases coping adaptiveness • Emotion-focused coping decreases coping adaptiveness • Avoidance coping decreases coping adaptiveness Coping adaptiveness positively impacts phishing detection effort and detection accuracy.
Bhattacharjee et al. (2018)	X	X		Primary and secondary appraisal	User responses to IT use mandate and changes over time	Hospital IS, mandatory use by physicians	Taxonomy of four classes of emotional and behavioral user responses to IT based on primary and secondary appraisal: <ol style="list-style-type: none"> (1) engaged (2) compliant (3) reluctant (4) deviant; Reappraisal and migration between classes of user responses over time
Yin et al. (2018)		X		Information/interruption overload, coping	Job satisfaction	Mobile workplace technologies	Information processing timeliness and job control assistant support reduce the negative effect of information/interruption overload on job satisfaction and directly increase job satisfaction.
Chen et al. (2019)	X	X	X	Primary and secondary appraisals, coping strategies	Discontinuance behavior	Mobile shopping apps	If users perceive the notifications as rewarding, they are more likely to select disturbance handling strategies which reduce the threat to continuance behaviors.

							If users perceive the notifications as intrusive, they are more likely to select self-preservation strategies which threaten continuance behaviors.
Liang et al. (2019)		X		Perceived threat, perceived avoidability of IT security threats	Selection of problem- vs. two kinds of emotion-focused coping strategies	Personal IT, different settings	Two categories of emotion-focused coping: (1) Inward emotion-focused coping (i.e., internal to the self and unobservable to others to stop emotions before they are generated); especially when users think they are not in control of the situation; tends to discourage problem-focused coping (2) Outward emotion-focused coping (i.e., observable to others; direct adjustment of emotional responses or outcome of the emotion-generating process); tends to encourage problem-focused coping
Pirkkalainen et al. (2019)		X	X	Reactive, proactive, combined coping strategies	IT-enabled productivity	Generalized workplace IT and applications	IT-enabled productivity is increased when proactive coping strategies (i.e., positive reinterpretation) are applied in isolation or in combination with reactive coping strategies. If reactive coping behaviors (i.e., distress venting, distancing from IT) are applied in isolation, IT-enabled productivity is negatively affected. The effects of reactive coping behaviors on IT-enabled productivity are moderated by proactive coping behaviors.
Qahri-Saremi & Turel (2020)		X	X	Personality (neuroticism), ambivalence toward post-adoptive IS use	Flexible vs inflexible coping responses	Social media	Ambivalence toward post-adoptive IS use is positively associated with: <ul style="list-style-type: none"> • Disengagement-oriented coping (associated with IS discontinuance) • Denial of ambivalence (associated with IS continuance) • Indecision (associated with shifting between using and avoiding the IS) • Compromise (associated with shifting between using and avoiding and innovative adaptation of the IS) High levels of neuroticism increase the likelihood of disengagement-oriented coping, denial of ambivalence, indecision, and decreases the likelihood of compromise.
Salo et al. (2020)	X	X	X	(Re-) appraisals, coping strategies, routes, sequences	Effectiveness re negative incident	Mobile apps, private IS	(Re-)appraisal factors (i.e., personal relevance, momentary emotional load, confidence for overcoming the IT incident) determine choice of coping strategies (i.e., problem- vs. emotion-focused).

							Sequential aspect: coping in rounds of reappraisals, so users follow different routes and sequences, which affects the effectiveness to reach closure.
Tarafdar, Maier et al. (2020)		X		Distraction as coping	Social media addiction	Social media	Pathway 1: Distracting oneself by using social media to cope with social media stressors is associated with social media addiction. Pathway 2: Distracting oneself by engaging in activities outside of social media to cope with social media stressors is not associated with social media addiction. The choice of either of the two pathways depends on social media habits: Strong social media habits are associated with pathway 1, weak social media habits with pathway 2.
Tarafdar, Pirkkalainen et al. (2020)		X		Coping behaviors to reduce technostress	IT-enabled productivity	Organizational IT	Three categories of coping behaviors: <ul style="list-style-type: none"> • Reduce IT-related distress; venting decreases IT-enabled productivity while distancing does not change IT-enabled productivity • Develop IT capacity; increases IT-enabled productivity • Develop IT use demarcations; increases IT-enabled productivity
Constantiou (2022)	X	X		Satisfactory vs. unsatisfactory self-tracking results	User engagement; response tactics to unsatisfactory results	Activity tracking applications, private IS	4 stages of user engagement: review, react, reflect, respond Response tactics to unsatisfactory results: (1) dismissal (2) procrastination (3) selective attention (4) intentional neglect
Islam et al. (2022)		X	(X)	Emotional support seeking on social media	Social media exhaustion, reduced use intentions	Social media	Emotional support seeking on social media to cope with COVID-19 obsession leads to social media exhaustion and intentions to reduce social media use.
Salo et al. (2022)		X	(X)	Affordance actualization and faithful use schemes	(Technostress formation and) technostress mitigation process, strategies, and potential barriers	Private IS	(How technostress arises from affordance actualization along faithful use schemes) Process steps in technostress mitigation, incl. reconsideration, reinterpretation, and replacement of use schemes. Identified mitigation strategies: (1) modifying IT use (2) switching to alternative IT (3) taking a temporary break (4) quitting use permanently

Stein et al. (2022)		(X)	X	Coping, adaptation	Ineffectiveness of online communities	Online community for software architects	<p>Coping behaviors can exacerbate existing ineffectiveness in the online community</p> <ul style="list-style-type: none"> • Turning to external channels aggravates blank spots • Compromising to respond to individual pressures hinders knowledge sharing and acquisition • Conciliating (i.e., doing what one has been doing) as absence of coping behaviors that address collective ineffectiveness
Sykes & Aljafari (2022)		X	(X)	Friendship ties as coping	Job strain from post-implementation e-healthcare system use	E-healthcare system use	<p>Friendship ties among different stakeholders is a conduit for coping; homophily and proximity play a central role in how friendship ties affect post-implementation job strain.</p> <ul style="list-style-type: none"> • Friendship ties with similar others help reduce post-implementation job strain • Friendship ties with dissimilar others does not affect post-implementation job strain for doctors but increases post-implementation job strain for paraprofessionals due to role-related factors
Yazdanmehr et al. (2023)	X	X		Security-related stress	Inward and outward emotion-focused coping and problem-focused coping; information security policy violation intent	Organizational information security policy	<p>Security-related stress can trigger emotion- and problem-focused coping responses. Low self-efficacy and organizational support increases the likelihood to select emotion-focused coping. Problem-focused coping decreases the intent to violate information security policies whereas inward and outward emotion-focused coping increases it.</p>
Zhu et al. (2023)	X	X		Challenge vs hindrance technostressors	Proactive vs reactive coping, job burnout	Accounting information systems	<p>Challenge stressors are associated with proactive coping response and reduce the likelihood of job burnout whereas hindrance stressors are associated with reactive coping response and increase the likelihood of job burnout.</p>
Feng et al. (2024)		(X)	X	Pre- and post-implementation intervention practices	Attitudes, deep usage, job outcomes	Mandatory and voluntary usage contexts	<p>Pre-implementation interventions to enhance coping:</p> <ul style="list-style-type: none"> • Training (esp. mandatory context) • User participation (esp. voluntary context) <p>Post-implementation interventions to enhance coping:</p> <ul style="list-style-type: none"> • Feedback handling (esp. mandatory context) • Change fairness (esp. voluntary context)

Chen & Lemmer (2025)		X	(X)	Novelty, disruption, and criticality of a stressful event	Seeking supportive resources on social media	Social media	<p>Four types of supportive resources on social media: emotional, appraisal, informational, instrumental</p> <ul style="list-style-type: none"> • Event novelty: seeking informational support • Event disruption: seeking all four types of support • Event criticality: seeking emotional and informational support. • Only emotion-focused resources (emotional and appraisal support) significantly affect coping effectiveness.
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A4. Table of Interviewees

Alias	Age	Gender	Use (months)	Wearable Brand	Category	Occupation
INT1	55	M	13 - 24	Garmin	Sports watch	Teacher
INT2	62	M	6 - 12	Fitbit	Activity tracker	Architect
INT3	60	F	6 - 12	Fitbit	Activity tracker	Nurse
INT4	43	M	> 24	Garmin	Sports watch	Auditor
INT5	33	F	> 24	Polar, Garmin	Sports watch	Executive assistant
INT6	55	F	> 24	Garmin	Sports watch	Fiduciary
INT7	30	M	13 - 24	Garmin	Sports watch	Medical doctor
INT8	30	F	13 - 24	Jawbone	Activity tracker	Business analyst
INT9	53	F	13 - 24	Garmin	Sports watch	Project manager
INT10	26	M	13 - 24	Apple	Smart watch	Product manager
INT11	24	F	6 - 12	Fitbit	Activity tracker	Student
INT12	22	M	6 - 12	Samsung	Smart watch	Student
INT13	47	M	13 - 24	Apple	Smart watch	Project manager
INT14	22	F	13 - 24	Apple	Smart watch	Student
INT15	43	F	13 - 24	Garmin	Sports watch	Marketing manager
INT16	25	F	> 24	Fitbit	Activity tracker	Student
INT17	42	F	13 - 24	Fitbit, Garmin	Activity tracker	Executive assistant
INT18	40	M	> 24	Garmin	Activity tracker	CEO
INT19	20	F	> 24	Fitbit, Garmin	Activity tracker	Student
INT20	21	M	> 24	Apple, Garmin	Smart watch, Sports watch	Student
INT21	26	F	> 24	Fitbit	Activity tracker	Student
INT22	54	F	> 24	Apple, Garmin, TomTom, Fitbit	Activity tracker, Smart watch	Administrative employee
INT23	52	F	> 24	Garmin	Sports watch	Nurse
INT24	39	F	6 - 12	Fitbit	Activity tracker	IT sales manager
INT25	28	F	> 24	Garmin, Whoop	Activity tracker, Smart watch	Student
INT26	33	M	> 24	Apple	Smart watch	Entrepreneur
INT27	30	M	13 - 24	Fitbit	Activity tracker	Self-employed
INT28	29	F	> 24	Apple, Fitbit	Activity tracker, Smart watch	Consultant
INT29	53	M	6 - 12	Fitbit	Activity tracker	Asset manager
INT30	53	M	> 24	Suunto	Sports watch	CEO
INT31	36	M	> 24	Apple, Fitbit	Activity tracker, Smart watch	Entrepreneur

INT32	53	M	13 - 24	Apple, Fitbit	Activity tracker, Smart watch	Key account manager
INT33	19	M	> 24	Apple, Garmin	Sports watch, Smart watch	Student
INT34	25	M	> 24	Garmin	Sports watch	Student
INT35	24	F	6 - 12	Fitbit	Smart watch	Nurse
INT36	24	F	> 24	Garmin	Activity tracker	Student
INT37	23	M	6 - 12	Garmin	Sports watch	Journalist
INT38	52	F	6 - 12	Huawei	Smart watch	Theologist
INT39	24	F	13 - 24	Fitbit	Activity tracker	Student
INT40	21	M	6 - 12	Apple	Smart watch	Student
INT41	63	F	> 24	Withings	Activity tracker	HR employee
INT42	27	F	> 24	Fitbit	Activity tracker	Student
INT43	26	F	6 - 12	Garmin	Sports watch	Bank employee
INT44	24	F	> 24	Fitbit	Activity tracker	Office manager
INT45	26	F	> 24	Fitbit	Activity tracker	Business student
INT46	39	F	> 24	Fitbit	Activity tracker	Bank employee
INT47	23	M	13 - 24	Apple	Smart watch	Student
INT48	26	M	13 - 24	Polar	Sports watch	Lawyer
INT49	33	M	> 24	Apple	Smart watch	Bank employee
INT50	55	M	6 - 12	Fitbit	Smart watch	Entrepreneur
INT51	39	M	> 24	Garmin	Sports watch	CEO
INT52	33	M	13 - 24	Apple	Smart watch	Marketing executive
INT53	43	M	> 24	Fitbit	Activity tracker	CEO
INT54	25	F	6 - 12	Fitbit	Smart watch	Medical doctor
INT55	25	F	6 - 12	Apple	Smart watch	student
INT56	26	F	> 24	Fitbit	Activity tracker	education coordinator
INT57	28	M	> 24	Garmin	Sports watch	Student
INT58	70	M	> 24	Garmin	Sports watch	Retired
INT59	43	M	> 24	Garmin	Sports watch	Sales manager
INT60	36	M	13 - 24	Garmin	Sports watch	Project manager
INT61	67	M	> 24	Fitbit	Activity tracker	Retired
INT62	33	M	13 - 24	Apple	Smart watch	Sales manager

A5. Wearable Device Categories

Category	In sample	Ex. brand and model series	Features and functionalities						
			Daily activity	Sports tracking	Heart rate	Advanced sports analytics	Sleep tracking	Nutrition tracking	Navigation
<i>Activity tracker</i>	27	Fitbit (Alta, Charge, Flex, Inspire, Ionic, One); Jawbone Up; Withings; Garmin (Vivoactive, Vivosmart)	Steps/ flights climbed; Goals, reminders, challenges	Active minutes, pre-defined sports modes	Wrist-based, (zones)	--	Phases, duration, quality	Calorie consumption, intake, micro- and macro-nutrients, weight-loss	(GPS if connected to mobile phone)
<i>Sports watch</i>	20	Garmin (Fenix, Forerunner, Venu), Suunto (div. models), Polar V models	(Steps)	Fully customizable	Wrist-based, extensions	Blood oxygen, HRV, productivity, fatigue, etc.	(Phases, duration, quality)	Calorie consumption	GPS, altitude navigation
<i>Smart watch</i>	21	Apple watch (div. series), Fitbit Versa, Samsung Galaxy watch (div. series), Huawei watch (div. series)	Steps/ flights climbed; Goals, reminders, challenges	Pre-defined sports modes; Third-party apps	Wrist-based	Third-party apps	Phases, duration, quality	Third-party apps	GPS

A6. Theoretical Redescription of Empirical Narratives into Coping Sequences

	Theoretical coping sequence		
	Negative incident	Emotional state	Ways of coping
	A specific situation which is encountered by an individual surrounded by a context (Lazarus, 1993). In this study, I only considered situations specifically related (more closely or more loosely) to wearable use.	Users' emotional states invoked by the negative incident. The assessment of the incident as negative is subjective and coded as such when the users experience negative emotional states during and right after the encounter (and is in this similar to Larzarus and Folkman (1987)'s notions of short-run outcomes and immediate effects of the encounter)	An individual's way(s) of dealing with the encounter (Folkman & Lazarus, 1988). Includes behavioral and cognitive ways of coping.
Interviewee 54	"On the place on my wrist where I had it, my hair and skin were abraded and that obstructed me too much, especially when I was wearing it to sleep."	"Wearing the watch all the time started to get annoying."	"At first, I decided only to wear it during the day but then later, I started putting it in my chest pocket when I was at work, meaning I didn't wear it on my wrist anymore. I just cut off both ends of the wrist band and then I put the watch itself in my chest pocket and continued counting my steps."
Interviewee 23	"My training schedule which I use to improve my performance tells me at which heart rate I should train. And if that's off by 30 beats, that's too much."	"You know, 5 beats doesn't do much but 30 beats— When I'm using a roasting thermometer that is 15 degrees Celsius off, I can't get it medium rare either. If I train according to heart rate, it only makes sense if it is accurate."	"I have to find an alternative for my training. I use a chest belt to train endurance."
Interviewee 22	"All of these batteries that just die on me—I'm running around with chargers, power banks, and they're heavy."	"It restricts me."	"I don't like charging devices constantly and it's not good for the device to overload it. But I just charge it over night now and of course I don't get up in the middle of the night to unplug it. I am just trusting that it doesn't happen."

A7. Ways of Coping List of Codes

Way of coping	Exemplary quotations
<i>Active coping (Carver et al., 1989)</i>	
Engaging in requested behavior	<p>“It [step goal] pushes me very much. And at the same time, it annoys me. If it annoys me once, I will let that slide but if it happens twice, I will start getting nervous and the third time it really starts pissing me off. If I don’t reach the goal 3 days in a row, I start feeling agitated and I feel the need to overcompensate. Then, I would go for a 20 kilometer run although that's actually quite bad for the body if I overexert myself and it will drain me afterwards. It’s just that I'm very very competitive, only with myself.” Interviewee 51</p> <p>“[Health insurance company, <i>anonymized</i>] organized a challenge. They said in February you would have to make 20% more steps than in January. And that put a lot of pressure on me. Because I'm just like, if I participate in a challenge, then I have the urge to complete it. It’s in my head. And I will just do it no matter what. So, for that reason, I really ended up going running a lot more just because I knew I had to have more steps than last month. But then February is even shorter than January, so I really had to exert myself. Even more so, because I had been extremely active in January, so hitting even more steps was twice as hard.” Interviewee 49</p>
Changing use-related behaviors	<p>“So, yeah, I would categorize myself as a rather independent user of this watch. Though, when I know we’re going for a walk, I would 99% of the time go back or when I’m downstairs I would go back upstairs to get the watch.” Interviewee 3</p> <p>“I found out that you can always manually add [an unrecorded training] in the app. I am very dogged, that’s an important point about me. So, if I don’t have the watch with me, I’d go to this website, Plot-a-route which allows me to enter points I passed. And then it will estimate the distance and meters in altitude for me. After the training, I would go on Plot-a-route, track my workout, and get a rough estimate which I can transfer [to the wearable app]. So I still have it recorded and that’s a good alternative if once I don’t have the watch with me, this way, I still feel satisfied about having it recorded.” Interviewee 37</p>
Adapting system structure	<p>“In my opinion, these devices are actually too complicated. And now with the Garmin which has so many options, like changing the dial and stuff permanently and you get a new display every time. There were some dials I had to remove again because I could not figure out what exactly it was these graphics were supposed to be representing. If I use something like that, I want to know what it is exactly and what it is good for, otherwise it’s not of interest me. Maybe I'm just a little too old for them [wearables], most people find them self-explanatory. So, it’s probably just me. You know there’s a lot of stuff [features] inside that I probably don’t know of but that could be interesting to me but I have to say this is just a huge crap, I am not willing to do that because it is too complicated for me.” Interviewee 58</p> <p>“I would call myself phone-addicted, that is, I’m on my phone too much. I am not very disciplined when it comes to that. And I am trying to decide myself what I am going to look at and what not, so my phone is on silent most of the time, it does not ring when I get a message. And very often, I will ignore messages for hours or days. If I don’t want to text back, I don’t, no matter who it is. And with this watch—oh my god, I don’t know—it is so disturbing, it forces me even more to get my phone out and look at it when it vibrates on my arm. It’s just automatic that I have a look at it and want to know what is going on. So, I informed myself on how to deactivate them, you know that it is not connected to my phone anymore. It was simple, not too complicated, and after that I had my peace.” Interviewee 35</p>

<p>Substituting with other devices and tools</p>	<p>“What came on top is, I think two years ago, they introduced [menstrual cycle tracking] for women, if they want to track their periods. I had to do everything manually, but I also started doing that just to see and because it’s nice if I don’t have to keep track in my head. But then last time it was so buggy and somehow deleted an entire month. Then I thought, great, now I have no idea anymore when I will get my period. So, I started entering it in a different app again because I just don’t find this one here reliable. I have the feeling the app has glitches quite frequently.” Interviewee 42</p> <p>“What just came to mind is that the screen is only on for a very short time, which can be annoying during sports. When I am doing cardio or some interval training, I want to do an exercise for 30 seconds and need to see how much time has passed. So I would check at 25 seconds and normally wait until I have completed 30 seconds but that doesn’t work because the timer will just disappear when the screen goes off. Then I would have to press it again so I can see it again. I don’t even know if it is possible to change that setting. I’ve never tried it. Um but I just always take my phone instead and set it so that the screen doesn’t turn off for like 10 minutes. So, I just always use the timer on my phone.” Interviewee 11</p>
<p><i>Planning (Carver et al., 1989)</i></p>	
<p>Setting up for long-term behavioral change</p>	<p>I gained 8 kilograms since last summer. So, there’s physical laws that keep me from performing at my usual when road biking. I can create and track segments [in the app] then virtually race against myself. Of course, the benchmark will be my personal record, so it’s pretty demotivating. After 300m I am already 10 seconds behind, and today I thought, damn! I have the option to hide this virtual racing mode [on the wearable] and of course, I hide it in the current phase. Just before I get to the top I look at it briefly and see, yeah great, I was 6 or 7 minutes slower. But at least I didn’t have to look at the whole climb. At first, it is demotivating, but then I just set a new goal for myself. The knowledge helps me: I then know exactly that I don’t even have to bother riding up a mountain pass. I will get there half-dead and half an hour later than usually. So, it helps me avoid being over-optimistic and then get overwhelmed. ... But overall, this has always motivated me in the long run. At the moment, it is like a mirror is held up to you and the first time you pick up the thing and see how badly you are actually doing, that sucks. I know exactly, by the end of July, I have to be 10 kilograms lighter and I also have to be faster. Otherwise, I don’t even need to go to Italy. But I know that this thing [wearable] will help me get there and I will definitely make it.” Interviewee 59</p> <p>“[The wearable] forces you to acknowledge that you missed your goal and you will neither accomplish it in the next month. It is like looking into a mirror that is brutally honest and always knows that I haven’t done enough. And that’s the worst part about it— not achieving my goals and knowing that I have only myself to blame because I was too lazy and that’s really frustrating. Bit at the same time it can serve as a motivation to take it more seriously next month. Because I want to achieve my goals, if only to get the stupid rewards from the watch.” Interviewee 26</p>
<p><i>Seeking social support (Carver et al., 1989)</i></p>	
<p>Reaching out to online/ offline communities for help; Receiving emotional support from</p>	<p>“When I went for a walk with my mother, I was asking her for fun what her pulse was. And it was much lower than mine. And that really surprised me, I started wondering if something was wrong with me. Like clearly something was off that it was more exhausting for me than for her, or is it because of the weight? Then, I asked a friend of mine, she uses the same Fitbit and she told me she made the same experience and then I had to say okay, problem solved.” Interviewee 16</p> <p>“There’s a ski mountaineering race scheduled soon but unfortunately, there is no mode for ski mountaineering in the app and also not on the watch. I was playing around with it to try to customize a sports mode. Of course, I can record the stats but I haven’t</p>

online/ offline communities	figured it out perfectly yet, the handling [of the watch] is rather complicated. You really need a lot of knowledge about the sport, about the metrics, about the data and what it can show you. So I was trying to find clues in internet forums.” Interviewee 15
<i>Acceptance (Carver et al., 1989)</i>	
Rationalizing	<p>“When I’d go running, I’d go running for 35 minutes because it was more fitting with what I would do for rugby and it was telling me that I had a vo2max that was quite high because since I was only doing short times, it was only measuring it on short activities. And now that I have started doing activities that are a little more stamina oriented, so 1-2 hours, my vo2max crashed and its just been telling me that this was useless and that I was detraining lately. That was a bit frustrating. That is always quite interesting when you go running or do your training and you look at your watch and are like how good was I today did I progress? And then it tells you nah you suck and you’re like alright nice thank you very much. ... I think in the beginning well the first impulse is acceptance. Because I think it shows you that these tools as well, that measure how fit you are, aren’t really accurate or are accurate only to a certain extent you know. ... And what I would try to do is, well since I had this training plan, I was like oh it’s going to make me better real fast so I’m just gonna follow the plan and it’ll work out fine.” Interviewee 57</p> <p>“Yes, I had that sometimes, that I felt guilt over not having enough steps. I still do occasionally. ... I usually try to find some sort of justification for myself as to why it's not so bad that I didn't take many steps. It's not like I stress out and think, oh no, oh my God, that's really terrible. Not at all. I mean, otherwise, I wouldn't keep wearing it, to be honest.” Interviewee 44</p>
Reinterpreting information	<p>“That’s why I told myself, screw it, you're running so much, it sounds a bit perfidious, but when you're so focused on this goal, you want to achieve it. I had to learn that a bit; at the beginning, I was preparing on my own, but when I was in the [running] group, it got better, because then I was also a bit less focused on getting better myself. Instead, being able to compare with everyone in the group, I came to realize that we just wanted to achieve this goal together. Whether you had a better or worse day yourself, it shifted less from this ego perspective to the collective, which was good for me in terms of the stress or pressure I imposed on myself with this device. That wouldn't have been possible if I hadn't had this heart rate or route.” Interviewee 34</p> <p>“One of the key moments was after running. Depending on which shift I work, I exercise at different times and I kind of know my times that suit me. And then once I went running after an early shift, and I felt like, ‘wow, that went surprisingly well, I felt great, and I thought I was really fast.’ Then I paused my watch, saw the time, and thought, what, did I somehow sleep along the way? Just completely incomparable to other values when I usually went in the morning or before the late shift before lunch. And yeah, that really pissed me off, and within a second I went from, ‘hey, I went running after an early shift, I feel great, the weather was nice,’ and all that, to, ‘oh my God, that's really bad.’ I compare my performance, and the fact that I felt bad afterwards made me reflect on it and I thought, ‘screw it, every time I go running is actually good.’ I think I was immediately annoyed with myself—I have no goals, I’m not training for a race or anything.” Interviewee 35</p>
<i>Focus on venting of emotions (Carver et al., 1989)</i>	
Doubting, disbelieving the wearable	<p>“I have this [body] energy-level indication on the watch, which shows the level of your battery. And I realized that when I’m not wearing the watch to sleep, the battery never charges back to 100%, by far not. I’m talking about my body energy battery. And whenever I’m wearing it at night, it goes back up to 100 and that just can’t be right. That’s a metric which I cannot trust.” Interviewee 43</p> <p>“With my father, I knew that he walks to the train and back and then he walks around the house a lot. But I still very strongly believe that his Fitbit is completely miscalibrated. Every time we go for a walk, he ends up with 2,000 more steps than I do, even</p>

	<p>though I have shorter legs, so it should actually be the other way around. I can tell more stories about this—the Fitbit constantly tells my father how healthy he is because he has the best cardiovascular stamina ever, simply because he naturally has an extremely low resting heart rate. I also have a relatively low resting heart rate, which means the Fitbit thinks my father has incredible heart muscles or whatever that make him perform like an athlete at rest. Anyone who knows my father knows that's absolutely not the case, and it almost pisses me off. I kind of persuaded him to get a Fitbit because I thought he should be more active, and I still believe he should move more. But the Fitbit keeps telling him that it's totally fine, so that completely beats the purpose. So, my father didn't motivate me at all; it just annoyed me." Interviewee 56</p>
Dismissing the wearable	<p>"I only know this 'hey, you should move again' and it stresses me. I find it sassy. Maybe I could deactivate it if I only knew how. So, every once in a while, it pops up and says get up, move. And then I always think 'are you crazy?'" Because, you know, the watch doesn't know if it has been on my desk all day or on my arm. I find that stupid. I don't need that, but that's what it does. It's like mom telling you to do this and that. And it has the exact same effect: none." Interviewee 38</p> <p>"Yeah, maybe [the wearable] says 'today wasn't good,' then I let it say that. So, I don't focus on it too much and dismiss it with the good feeling about having done something [physical activity]. Sometimes I do wonder, though, how accurate they are. Now I have a Garmin that measures on the wrist, right? And how accurate is it? How far off is it? It probably also depends on how tightly I wear it, or this or that. And so, I can't say I don't take it seriously, but it's not 100%. It's more of a rough guideline." Interviewee 5</p>
<i>Denial (Carver et al., 1989)</i>	
Downplaying the incident	<p>"Most of the time, I would look at [the daily step count] and first thing 'oh no shit, that's really not a lot.' Depending on how many steps I have. And then I would move on to think, if it is still okay to go out and walk a bit but most of the time, it's dark outside and I really don't want to, so I look for an excuse, saying to myself 'not today, but tomorrow you will have to move more.'" Interviewee 44</p> <p>"Then I just put it away for half a year because I was worried about Facebook and who knows who else can track [how many steps I made.] But I lost track of how active I was and I was gradually gaining weight, so I put it back on and just told myself that my data is very good, so if anything it would help me get a discount on my health insurance premium. In any case, I am using Facebook and WhatsApp, so I don't have to worry about data protection because they already know everything about me. That's why I have been using the watch again [after the break] for 1.5 years." Interviewee 53</p>
<i>Behavioral disengagement (Carver et al., 1989)</i>	
Using the wearable selectively (in a specific situation; of a specific feature set)	<p>"I used to get challenges from my brother-in-law, and I knew he only sent them when he was planning a run. That was fun, so I did the same. But after a while more and more people sent challenges, and it got too much. We had to stop because I didn't want it anymore. It was never my goal to move appointments just to keep up with a challenge. So I started declining them. Of course, everyone was like, 'ah, you don't want to? You don't have the guts?' And at some point I thought, 'no, I don't have to do this to myself. That's not what I bought this thing [wearable] for.'" Interviewee 8</p> <p>"Once, I caught myself going to Lucerne and forgetting the watch at home and when I wanted to go running, I thought 'shit, I don't have the watch' and I ended up not going because I wouldn't see anything [data]. Later, I tried training myself to be able to run without the watch every once in a while. Just to be a little less dependent on it." Interviewee 37</p>
Deactivating features	<p>"It annoys me when I'm at home doing something in the garden and not moving much, like gardening or writing something, then it keeps vibrating. Whenever I'm focused on something for a little longer, this notification keeps popping up. And even if I've</p>

	<p>already walked 10,000 or 14,000 steps in a day, the notification still comes up. And that annoys me. And that's why I turned it off." Interviewee 3</p> <p>"I've deactivated [hourly activity reminders] too because it was a nightmare. I mean I think it's great for people that are maybe between let's say 40s and 70s that don't move too much or work and you're sitting a lot then you need to get yourself moving a bit. But I think when you're young and you do sports it's more bothering than anything else. Because then it vibrates and it tells you, you need to move and you're like 'bro I'm working on this I can't, I'll move later.' At least for me it didn't do much." Interviewee 57</p>
Discontinuing use (temporary; permanent)	<p>"I have been wearing the watch for a long time, for sure 1.5 or 2 years and then I put it away for half a year. Why? Because of the data. The brand I am using right now, nobody really knows who owns them and where the data is going. The watches evolved, it's not just steps anymore, now they can also see your heart rate, your breathing patterns, your blood oxygen, sleeping behavior. These are all really intimate data. And that's when I took it off for half a year because I found it creepy. You don't know who is doing what, Facebook and who knows who else..." Interviewee 53</p> <p>"I realized this isn't what I wanted. Running used to give me a sense of freedom—the chance to be in nature, to break out and get away. But if I suddenly feel tied to this stupid watch, that doesn't work for me. That's a clear sign I need some distance. So I try to do every third or fourth training without the watch. And if I want to run but it isn't charged, I don't wait; I just go without it." Interviewee 37</p>
<i>Mental disengagement (Carver et al., 1989)</i>	
Ignoring data or feedback	<p>"There are days on which you're in better shape and days when you're in worse shape. At this point, I don't understand why anyone would do this [pressure] to themselves. That's why often, I actually resorted to taking off the watch when I did something. The other option is that I simply don't analyze [the data]; I neither check when I started [cycling] nor when I arrived." Interviewee 35</p> <p>"I usually go running early in the morning, and then I know that I can't run too fast. Well, I could, but then after 3 kilometers, I will run out of energy. And if I plan to go longer, for an hour or so, then I know that I can't go too fast. And then the watch stresses me out, you know? Because I feel like when I have the watch, I always want to improve. I always want more, and always faster. So, in the mornings, when I know I can't push it too hard, I take [the watch] with me, I turn it on, and then I just jog at a comfortable pace. But I do notice when I'm home that if I usually run at 170, maybe early in the morning, I only run at 150. But I just try to ignore that and not to let it stress me out." Interviewee 5</p>
<i>New ways of coping</i>	
Cheating and manipulating information	<p>"I get a notification every time it notices I've done a run, asking if I want to integrate the run [into Strava], and then I do it if it was a good run. You know, you have people following you, so it's also about how it looks. You have your feed where you post your runs and bike rides, and then all your friends can see it. It's basically like Facebook but for running, and you can tag others, see where you ran, and then other people can congratulate you, like, or comment. You can see, I only imported 3; I did 21 workouts in the last 30 days, and I'm not going to import them all. It's so embarrassing but I don't want bad runs to be seen by people; it kills me emotionally." Interviewee 55</p> <p>"What was really annoying was that the old watch didn't properly record strength training. It showed a pulse of 90 and then training for an hour would have a negative impact on my goal achievement because the pulse was too low. So I just started manipulating the workouts myself. Just to say I trained in a different pulse range." Interviewee 51</p>

A8. Ways of Coping and Impact on Dimensions of Effective Use

Way of coping	Examples	Transparent interaction	Representational fidelity	Informed action
Engaging in requested behavior	<ul style="list-style-type: none"> • Doing the activity (steps, workout) • (Over-)Compensating for missed activity • Changing nutrition/drinking habits • Changing bedtime • Adjusting training intensity or duration • Following training/activity schedule • Changing activity habits 			Directly improved
Changing use-related behaviors	<ul style="list-style-type: none"> • Going back to get the device • Wearing the device in a different way • Checking battery • Double-checking if the wearable is on 	Directly improved		
	<ul style="list-style-type: none"> • Changing charging patterns • Recalibrating (e.g., GPS, altimeter) • Registering / editing sessions manually 		Directly improved	
Adapting system structure	<ul style="list-style-type: none"> • Adjusting privacy settings • Adjusting the interface • Using energy-saving mode • Using flight mode • Using do not disturb mode 	Directly improved		
	<ul style="list-style-type: none"> • Adjusting tracking settings (e.g., heart rate zones, automated tracking) 		Directly improved	
Substituting with other devices and tools	<ul style="list-style-type: none"> • Using a replacement device or tool • Listening to one's body • Delegating to personal trainer 	Directly impaired		
	<ul style="list-style-type: none"> • Using an extension to the wearable (e.g., chest belt) 		Directly impaired	
Setting up for long-term behavioral change	<ul style="list-style-type: none"> • Taking training back up • Tackling stretch goals • Changing nutrition/ drinking habits 			Directly improved
Reaching out to online/ offline communities for help; Receiving	<ul style="list-style-type: none"> • Learning from others' experiences 	No considerable impact		

emotional support from online/ offline communities	<ul style="list-style-type: none"> • Discussing with others • Finding empathy and comfort 			
Rationalizing	<ul style="list-style-type: none"> • Justifying behavior • Justifying missing progress • Mentally accounting for activity • Explaining and accepting shortcomings of the wearable 	No considerable impact		
Reinterpreting information	<ul style="list-style-type: none"> • Acknowledging complexity • Using different reference points (e.g., individual vs. collective comparison) • Removing expectations and pressure 	No considerable impact		
Doubting, disbelieving the wearable	<ul style="list-style-type: none"> • Not trusting the data • Questioning accuracy • Using data as a vague reference 	No considerable impact		
Dismissing the wearable	<ul style="list-style-type: none"> • Ridiculing the wearable/ accuracy • Not taking the data seriously 	No considerable impact		
Downplaying the incident	<ul style="list-style-type: none"> • Calming oneself • Mentally easing the impact • Refocusing on positive aspects 	No considerable impact		
Using the wearable selectively (in a specific situation; of a specific feature set)	<ul style="list-style-type: none"> • Restricting use to specific situations (e.g., competition, training unit) • Restricting use cases (e.g., everyday life, sports) • Discontinuing certain features (e.g., challenges) 	Directly impaired		
	<ul style="list-style-type: none"> • Not tracking every session 		Directly impaired	
Deactivating features	<ul style="list-style-type: none"> • Turning off activity reminders • Turning off status updates 	Directly impaired		
Discontinuing use (temporary; permanent)	<ul style="list-style-type: none"> • Abandoning the device • Wearing the device as an accessory or timepiece 	Directly impaired		
Ignoring data or feedback	<ul style="list-style-type: none"> • Not looking at the data • Ignoring the feedback • Not engaging in the activity 			Directly impaired
Cheating and manipulating information	<ul style="list-style-type: none"> • Selectively sharing information • Withholding information • Manipulating sessions manually • Wrongfully logging activities 		Directly impaired	

A9. The Role of Conditions in Directing Generative Mechanisms and Resulting Coping Pattern Adaptiveness

Generative mechanism	Coping pattern	Conditions				Coping pattern adaptiveness
		Agency alignment	Agency conflict	Structural barriers	No barriers	
Self-control	Unjustified poor performance feedback → Coping impairs transparent interaction		X	X [System barrier: Enhancing performance does not improve feedback]		Maladaptive
	Justified poor performance feedback → Coping improves informed action	X			X	Adaptive
Confirmation	Absence of reward → Coping improves informed action	X			X	Adaptive
	Absence of reward → Coping impairs transparent interaction/ representational fidelity/ informed action	X		X [User barrier: Unattainable reward]		Maladaptive
	Absence of reward because of inaccuracy → Coping improves representational fidelity	X			X	Adaptive
	Absence of reward because of inaccuracy → Coping has no considerable effect	X			X	Adaptive
Progress	Forced goals → Coping improves informed action		X		X	Over-effective*
	Forced goals constrained by user boundaries → Coping has no considerable effect	X			X	Adaptive
	Difficulty directing efforts because of inaccuracy → Coping impairs transparent interaction/ representational fidelity	X		X [System barrier: Inaccuracy cannot be improved]		Maladaptive
	Difficulty directing efforts because of inaccuracy → Coping has no considerable effect	X			X	Adaptive
Datafication	Inaccuracy → Coping improves transparent interaction/ representational fidelity	X			X	Adaptive
	Inaccuracy → Coping impairs transparent interaction	X		X [System barrier: Inaccuracy cannot be improved]		Maladaptive
	Forced goals → Coping impairs transparent interaction		X		X	Maladaptive

* Over-effective coping patterns improve informed actions (and thus overall effective use) but can exert negative consequences on users' physical and psychological well-being (e.g., overtraining, activity despite injury or sickness)