

## Newcomers' stress and its effects on well-being during an IT organization's socialization process

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### Abstract

*Previous research in other fields has shown an increasing interest in understanding newcomers' stress and its impact on professionals' well-being. However, we still have a limited understanding of newcomers' stress and its emotional, behavioral, and psychological effects in the information technology organization (IT) and information system (IS) development contexts. Moreover, the newcomers' socialization process into IT work or/ and organizations remains unexplored in the IS field. We conducted a qualitative and longitudinal case study (pre-COVID-19) that helped us understand newcomers' stress from IS project work, and how its consequences emerge during their socialization process. We provided information in response to the call for more understanding of newcomers' stress elements in the IT organization and IS project context. It is important to understand different stress elements and their consequences because these elements impact individuals' attitudes, behaviors, job performance, and health among other things.*

### 1. Introduction

Previous research in the field of career development [e.g., 26]) has emphasized that career paths tend to be less linear currently—that is, individuals are, for example, increasingly mobile. Moreover, many newcomers constantly enter organizations [8, 26], so improving current understanding of newcomers' adaptation from various perspectives is essential [8]. Earlier studies in other fields have acknowledged the significant potential stress of entering a new workplace [2, 8] and distinguished this period as very critical [26]. Individuals entering a new workplace may even need to undergo an identity change—that is, altering their perceptions of themselves [cf. 14, 15]. Ellis et al. [8] noted that previous research has overlooked the socialization process from a stress perspective, as well as its effects on newcomers' well-being. Despite the

planning and anticipation of tasks and/ or roles, such things may trigger sensemaking and result in ambiguity and uncertainty for participants [cf. 15]. Moreover, Ellis et al. [8] emphasized that newcomers undergo various processes, such as information gathering and sensemaking, in order to estimate how they fit into their organizational environment and which behaviors and attitudes may be expected from them. Seeking information about organizations, work environments, and an employee's own role has been found to reduce uncertainty and serve as a proactive socialization strategy [e.g., 26].

Furthermore, different proactive behaviors (e.g., learning and social integration) have positively affected newcomers' socialization outcomes [22]. However, although specific coping strategies (e.g., proactive coping) have been found to help newcomers cope with future stressors [26], foreseeing events that are, for example, related to an employee's role and various tasks is almost impossible. Moreover, a remarkable gap has been demonstrated between the short-term stressors and long-term outcomes of newcomers' stress processes [8]. Understanding organizations' different stressors, as well as the connections between stressors and outcomes, is essential since work-related stress was estimated over a decade ago to cost US organizations over \$300 billion in US dollars per year [8]. However, the costs of newcomer turnover remain unknown [e.g., 8]. Moreover, researchers in the field of information systems (ISs) have a limited understanding of newcomers' socialization process at information technology (IT) organizations or in IS projects, as well as newcomers' socialization process from a stress perspective. These kinds of studies are of high importance as there are various types of IT and IS organizations, which all have their own unique cultures.

To fill these research gaps, we conducted a qualitative, longitudinal case study with interviews, adopting an interpretive approach [13]. We explored IT newcomers' socialization process at an IT organization (an in-house company) and their experiences during this process. The data collection

for this longitudinal study was conducted before COVID-19. The data collection started already in 2017, thus COVID-19 was not in a crucial role for these newcomers. The following questions guided this study: What kind of stress factors do newcomers face throughout their socialization process? And how do stress factors affect newcomers' well-being over time?

This study contributes to the existing literature theoretically, methodologically, and practically. First, it describes IT newcomers' stressors during their socialization process and its consequences over time (from 2017 to 2020). Second, we theoretically and practically establish newcomers' socialization and stress appraisal processes over time in the IT context. Third, we provide an understanding of how newcomers' specific stress factors (structural, relational, and personal resources) during this socialization process influence newcomers' well-being.

In the next section, we introduce our theoretical background. Then, the remaining sections present our research case, research method, findings, and discussion.

## 2. Theoretical background

In this section, we present background information on the nature of the IT professionals' work, and we describe some key aspects of well-being and health among IT professionals. We also discuss newcomers' socialization process from a stress perspective.

### 2.1. IT professionals' work

Singh and Junnarkar [25] have reported that about 1 billion people worked in the IT field globally but that this number was insufficient. Naturally, this lack of competent experts has elicited challenges since it may cause even more difficulty in finding experts with sufficient knowledge and know-how to work on demanding IT projects. Recent studies [e.g., 9] have also outlined why IT professionals must constantly update their foundational body of knowledge in order to maintain their ability to work in the field.

Changes to a profession's body of knowledge affect organizational practices—that is, they challenge and question existing practices, and they may require professionals to adjust to these changing practices quickly. Experts' potential need to constantly update their know-how may be stressful in the long run, too [9]. Certain job characteristics have been shown to potentially cause severe emotional stress among IT employees, and depending on stress levels, different coping strategies are needed or—in worst-case

scenarios—IT professionals may experience burnout [e.g., 18]. Also, Bhattacharya and Basu [5] have argued that although every job involves particular stressors, IT jobs differ from traditional jobs, which are more secure in that they are less competitive in terms of expertise, do not require a constant adaptation to the latest market trends, and produce less visible work outside their professional realm (e.g., coding). Bhattacharya and Basu [5] also argued that although IT jobs commonly offer higher salaries, IT experts' mental health is strained by the profession's accelerated pace of technological change, increased demands, and tight resource constraints. Effects on well-being have been noted to potentially cause more frequent burnout among IT professionals [18].

### 2.2. IT professionals' well-being

*Well-being* is a multidimensional concept for which various definitions and interpretations abound. A recent study [7] broke the concept down into various types, including *emotional*, *physical*, *social*, and *societal*. *Workplace well-being* has been considered not only in terms of employees' interests but also their values and purpose—for example, to gain meaning and professional enrichment [25]. Earlier research [11, 23] has also outlined employees' experiences of stress—for example, due to conflicts between their job demands and their amount of control over meeting these demands. Stress, in turn, may seriously affect employees' health and damage their productivity and work quality [9].

Singh and Junnarkar [25] have discussed different theoretical constructs of *well-being* (such as *job or career satisfaction and commitment*), as well as their links to various job-related factors (such as *self-efficacy*, *work motivation*, *quality of work-life*, and *work-home balance*). For example, they found that employee engagement influences employee turnover and absenteeism. However, poor engagement [4] has not often been mentioned as a significant factor leading to burnout. Indeed, some previous studies [e.g., 6] have shown how highly conscientious workers suffer from burnout since they usually are assigned and accept work tasks beyond their official duties. Pawlowski et al. [18] also noted that, in order to achieve a deeper understanding of why and how burnout occurs in the IT profession, researchers must focus closely on all relevant aspects of the relationships between work and strain; these relationships are not necessarily occupation-specific and may occur across many occupations. For example, the relationship between role stressors (role ambiguity and role conflict) and burnout [12] is more likely to occur in any occupational field [18]. Some earlier

research on stress and burnout has developed different models that explain the antecedents, symptoms, and consequences of work–strain relationships [e.g., 9, 18]. Stress and burnout are predicated on the subjective meanings that individuals attribute to their work experiences; however, these meanings may vary because they are shaped by the environments in which people interact [16, 18]. Thus, because contexts differ, they may elicit very different challenges and outcomes. Pawlowski et al. [18] identified three outcomes of burnout: (1) declining job performance, (2) leaving a job or profession, and (3) reduced physical well-being.

### **2.3. Newcomers’ socialization from a stress perspective**

Previous studies in other fields have already highlighted the importance of recognizing the possible stress factors that newcomers experience while entering an organization [8, 21]. Studies on organizational socialization have focused on different perspectives, such as organizational learning and long-term socialization outcomes (which include job satisfaction, organizational commitment, job performance, intentions to remain, and turnover) [21]. Entering a new and unfamiliar organization may be very stressful because this process may include uncertainty regarding, for example, a newcomer’s own role and performance, and reality may not align with newcomers’ own anticipations of their work [21]. Furthermore, new jobs have been shown to challenge individuals in terms of task mastery and forming relationships with other employees. The socialization experience may also involve anxieties and stress regarding a newcomer’s own performance [17].

Previous studies have shown that the current understandings and knowledge of stress’s role in the socialization process is limited [2, 8]. Moreover, few studies have tried to explore stress in the socialization process and the longer-term outcomes of this process [8]. Only a few studies have focused on short-term experiences and their longer-term impact. Of course, this research gap is significant in the current socialization literature because work-related stress has been argued to affect physical and psychological health and job attitudes, reducing performance and increasing turnover [8]. However, Ellis et al. [8] highlighted some research that has used the stress literature (e.g., role ambiguity and burnout) to explain short-term experiences. They studied how organizational inputs and employee-driven inputs (e.g., newcomers’ proactive behaviors) can positively affect newcomers’ experiences, building and acquiring different resources [8]. Ellis et al. [8, e.g., p.

208] also created “a model of socialization through the lens of the newcomer stress appraisal process,” which explains how both organizational and individual tactics are related to various demands (e.g., uncertainty regarding relationships, tasks, personal abilities, and expectations), and different resources (e.g., personal, relational, and structural). Moreover, they revealed a link, for example, between perceived stress and engagement, causing various (proximal and distal) outcomes [8]. These proximal outcomes include different resources while the distal outcomes are related to employees’ well-being, health, attitudes, behaviors, performance, et cetera [8].

## **3. Methodology**

The current research is part of a project that has been following the development of a new customer relationship management (CRM) system for several public-sector organizations in Northern Europe. Three organizations chose to collaboratively develop a custom solution, for example, due to organizations’ budgetary constraints. Some other user organizations joined the project later as customers of the new system. Several user organizations started to pilot the system since the fall of 2019. The project’s interpretive [e.g., 13] stance has allowed us to gain deep insights and reflect on the meanings that individuals assigned, for example, to changes to the IS project. In the following subsection, we overview the IS project’s timeline, data collection, and analysis.

### **3.1. Project timeline**

The current study’s project can be divided into two phases: the interorganizational collaboration phase (2013–2016) and the in-house company phase (2016 onward). The project’s original plan aimed to finish the system’s development by the beginning of 2016. Additionally, an in-house company was to be established to continue selling, maintaining, and upgrading the new system. The project was not ready in 2016, but the in-house company (Company A) was established, nonetheless. This decision caused, for example, major organizational restructuring and relocation.

The project continued as in-house company work in 2016. The individual project members, previously employees of Alpha and Beta (public-sector organizations), all became employees of Company A (a private-sector organization). Alpha, Beta, and Gamma became Company A’s first clients, later joined by other organizations. These client organizations are also shareholders in Company A. Practically, this structural change involved the earlier

groups' dissolution. Some project group members became Company A employees while most of the other members had left the project because of its restructuring. A CEO was hired externally to run Company A. The new employees needed to completely create almost all necessary components (e.g., an organizational structure and teams). The in-house company still outsourced most of its software development; however, Company A had to employ many new IT professionals.

### 3.2. Data collection and analysis

Our longitudinal case study has, so far, spanned eight years (2013–2020), including yearly interviews with participants. For the current paper's purposes, we relied on 22 interviews conducted over four years with eight different newcomers (Table 1). These newcomers joined the in-house company in 2017–2020. Before they joined, the new CEO—together with members of the new in-house company—had decided to establish three teams: the customer service (CS) team, development team (DT), and user interface (UI) team. Newcomers joined the three teams. Each team initially had its own manager. The CS team was supervised by Anton, the UI team was supervised by Tim, and DT was supervised by Chloe. Some newcomers' roles changed over the years, and many changes to these teams and personnel occurred, too. Since this paper focuses on the project's in-house and pre-COVID-19 phases, we decided to focus on newcomers who joined progressively after a very critical project phase, starting as experts in the new IT company from 2017 until 2020. As a result, we have drawn on almost 25 hours of recorded conversations with eight interviewees (in total, 1,476 minutes; on average, 67 minutes per interview; Table 1).

Newcomer and team	Interview year and length in minutes			
	2017	2018	2019	2020
Ava (CS)	74	115	59	112
Tracy (UI)	30	54	82	77
Joanne (DT)	34	38	55	57
Laura (DT)		61	77	73
Mary (CS)		30	44	
Selena (UI)			70	54
Natalie (DT)			84	113
Alice (CS)				83

**Table 1: Data collection overview.**

All interviews were recorded and fully transcribed. We began our data analysis by inductively coding the

longitudinal interview data. Because *well-being* and *stress* emerged as important topics during newcomers' socialization process, the interviewees' descriptions and perceptions related to stress and well-being were analyzed, as well as their reactions to these perceptions and these reactions' motivations. We did not seek to apply any specific theoretical framework. During the first phase of the interviews, we noticed that different stress factors (such as role ambiguity, role conflict etc.) were prominent among newcomers and that some of these factors clearly restricted project activities, eliciting many negative consequences. Many newcomers had started to feel very stressed and experienced burnout symptoms.

We present our findings on newcomers' socialization process and different stressors between 2017 and 2020 in the following section. The format for referencing citations of the study's participants (e.g., (Selena, 2019) indicates that it is a statement from Selena collected in 2019. Our findings highlight structural, personal, and relational resources. Our findings offer many insights into different resources, how they cause stress, and what kinds of consequences they entail among newcomers; however, we do not report all of our findings in detail because the topic is very sensitive.

## 4. Findings

This section presents our findings (structural, personal, and relational resources) on newcomers' socialization process and different resources' impacts on IT professionals' health.

### 4.1. Structural resources: Role demands, clarity, duties, and responsibilities

Several newcomers mentioned that the managers who had hired them did not expect them to have previous experience of IT or IS projects or work. For example, Selena explained in 2019, "I have experienced that this is a birthday gift to me from the universe! . . . I had seen a workplace announcement from here, and there was that coding skill is seen as an advantage. I cannot code at all. . . . It was my birthday then, when I received an email that have you noticed that the deadline for the applications is tomorrow. And during that evening, I wrote the application very fast, and I think it took only two weeks that my contract was signed. I am grateful because I don't have experience from this field" (Selena, 2019).

Most of the interviewed newcomers had joined the project without a clear understanding of the project's future or their ultimate responsibilities and roles in the company. However, each newcomer seemed to have

begun their jobs highly motivated despite their job descriptions' lacking coherence or clarity initially: "Last year's interview was like everything is nice and now I've really seen the development targets and what doesn't work" (Tracy, 2018).

Tracy joined the project during the spring, along with Ava, Joanne, Laura, and Mary. Tracy's job tasks and role as an expert were mostly on the UI side, but they were unclear: "When I got hired here, they probably didn't expect me to become so self-imposed, but then again, they assumed I would because they didn't give me any tasks" (Tracy, 2018). Moreover, Tracy worked closely with Rob, but their work experience differed significantly in that Rob was a senior developer to Tracy, and Tracy found her work partner's status as a developer challenging because his tasks were also her responsibility despite his much greater experience.

The interviewees also mentioned that one challenge in their work was that reporting seemed to be "a practical joke" in the organization because of its lack of documentation. Who had done what or made certain decisions was generally unknown: "A negative aspect could be that things that were done a year ago can't be remembered by anyone because it's hard to track what was being discussed and why did we end up in this conclusion. They've never really been reported that well, which is the problem. . . . Reporting is still lacking" (Joanne, 2017).

Multiple interviewed newcomers highlighted how their job descriptions and roles had transformed over time, increasing their work-related stress. For example, Tracy stated that her job description had included creating and maintaining a style, but to her surprise, her work responsibilities exceeded her expectations: "It was a bit sticky in the beginning. . . . I didn't really know what my role was. . . . The tasks varied from each other quite a lot. One minute it was like that, 'Do this now,' and then do a bit of coding, which I'm not good at. . . . I wasn't hired to do it, but the boundaries are quite indeterminate regarding the tasks" (Tracy, 2018). Many other newcomers highlighted the same issues with unclear roles and tasks: "Anyone did not tell me that my work role/tasks include tasks relating to user interface tasks [e.g., translations]; they were just given to me, probably because everyone avoids those tasks" (Natalie, 2019). Moreover, unclear expectations relating to roles and tasks caused stress despite a lack of feedback: "I guess that anyone is not putting a pressure, but when I am listening to discussions, and when you know that something should be done for the next version, you know indirectly that we are in a hurry" (Selena, 2019).

Furthermore, some newcomers highlighted that, due to unclear aims and duties, their work was very

stressful at times: "I am wondering and hesitating if I am doing things right. . . . It is stressful and a bit pressing" (Alice, 2020). Another challenge resulted from some newcomers' knowing that others had been under intense pressure and had even faced burnout because of the project: "I knew that some members are absolutely very burdened. . . . One person had a burnout just a while before I joined the team" (Natalie, 2019).

#### **4.2. Personal resources: Know-how and self-efficacy**

An additional challenge in the interviewed newcomers' duties was that most of these experts had no previous experience with software development projects, causing difficulties in their initial understanding of their roles: "Oh, my gosh, how lost I was with everything in the beginning because I couldn't even understand what people were talking about" (Ava, 2017).

Some newcomers also claimed to have, for example, never heard of agile software development before. The interviewed newcomers noted that they had learned easier work elements quickly but taken more time to comprehend more difficult elements, such as software developers' technical language: "Some parts that I'll never understand when we're speaking of coding language, it does bother and stress me because I can't get involved in all conversations because I'll fall behind if we start to talk with specific terminology" (Joanne, 2017). Multiple newcomers also agreed that expressing expertise during meetings was challenging because understanding the topics under discussion was itself difficult. Due to the lack of a common language, collaboration—for example, with software developers—was very stressful for experts. Joanne highlighted how the feedback she had received on tickets being poorly written made her feel unwell: "They are written from my perspective often. . . and then comes the tester to state that 'this is shit—I can't understand anything about these tickets'" (Joanne, 2019).

Selena also mentioned the same communication issues. For example, when technical terminology was used, challenges arose from not knowing the terminology well enough. Personal development did not always elicit adequate satisfaction, and whether a newcomer's own expertise was developing in the right direction was unclear: "The communication with them [software developers] is difficult. . . . It's hard to understand what they're talking about because I don't have a technical background. The days where I contemplate whether I'm enough for this job are not rare even though I've been doing this for a year and a half" (Selena, 2019). Alice (2020) also emphasized

that she lacked experience and wondered initially whether she was the right person for her position. However, she comforted herself that other people had decided to hire her: “Well, I did not decide who is going to start in this position. . . . I have not studied this field, and this is a very first workplace in the private sector for me. . . . A huge number of things I have needed and need to learn” (Alice, 2020).

Transformations to newcomers’ job descriptions and roles were heavily influenced by their lack of a professional identity in the software field or their lacking previous work experience in software development projects: “All of this coding stuff is so foreign to me. So, when we had the review every two weeks, and when the guys always show what they’ve done during the previous sprint, it was funny to me to realize that something so small—like placing a tiny button somewhere—was already a lot of work, which made me realize how new I am to this. And it made me realize how much work and time a system like this requires” (Ava, 2017).

However, multiple newcomers experienced that their grasp of technical terminology had grown over time, and although a plethora of experts felt that their initial enthusiasm had weakened as the project and their work experience developed, they still tried to view their work positively as challenging and developing their expertise: “In the beginning, I felt myself to be really dumb and worthless, and I felt like I couldn’t give anything back for the company. . . . So, I was a bit in despair in the beginning because I couldn’t really understand anything, and everyone was always too busy to stop and help me go through the things” (Ava, 2017). Although their job descriptions, role uncertainty, and lack of a common language had caused challenges for almost every expert interviewed, some of these newcomers thought that these aspects had resolved over time—for example, through learning the system’s content and terminology.

### **4.3. Relational resources: Teamwork, feelings of appreciation, and coworkers’ integrity**

Many of the interviewed newcomers felt that their exclusion, though not always intentional, had caused stress and further muddled their own job descriptions, roles, and work. Multiple newcomers had joined projects during busy periods, resulting in employees lacking sufficient time to acquaint themselves with each other. Moreover, some newcomers had interpreted others’ behavior as unwelcoming: “There were just few people who welcomed me, probably because they were not glad that I started here. They would have liked to have someone else here” (Natalie, 2019).

Mary had very similar experiences after joining the company—that is, she did not feel welcome. When Mary arrived, multiple newcomers had already joined the company. Two of these newcomers (Joanne and Laura) even knew Mary from their previous workplace. However, Ava was upset about how Joanne and Laura had talked about Mary before Ava even knew what kind of person Mary was: “The rude way they [Joanne and Laura] talked about her was really upsetting. . . . It created this prejudice toward her. . . . Before Mary came, I guess I was a little afraid about what could happen to my job, which was also all over the place” (Ava, 2018). However, Ava soon realized that she regarded Mary as a remarkable colleague: “It didn’t take long for me to realize. . . that she is a really good person, and it’s beneficial for me to have an actual work pair” (Ava, 2018). Mary sensed that she was not fully welcome at the company. At some point, Ava had admitted to Mary that she had noticed this unwelcoming aspect of others’ behavior.

Another situation of exclusion occurred during Joanne’s planning of a workshop with another expert (Wendy). Even though they (Joanne and Wendy) had expressed that Ava and Mary would be good additions to the workshop, they did not provide precise information when Ava asked them what to expect from Ava and Mary’s involvement. Joanne and Wendy responded that they had no specific information that Ava and Mary should know. However, the workshop was ultimately very challenging for Ava and Mary: “The day ended up being a catastrophe because we didn’t know what the process was like at all or what we had planned. . . . We were so lost with the material. . . . We were terrified with Mary that now we were going to be put in groups and we would have to know things we don’t know anything about. . . . Plus, what if the clients felt that, ‘What are these two doing here? Because they don’t know anything?’” (Ava, 2018). At this point, Ava was mostly irritated that Joanne, as another newcomer, had caused this confusion because when Joanne had joined the project—at the same time as Ava—they had discussed feeling excluded in multiple situations: “What upset me the most was that the other person was Joanne because Joanne started at the same time as me, and we had talked about how all the older experts are always behind closed doors. . . . In the beginning, they didn’t take Joanne in for any of the planning. Then, Joanne started doing the exact same thing; she left me and Mary out” (Ava, 2018). Ava persistently hid her frustration and stress and tried to conceal her negativity from Mary despite their shared confusion about their duties and responsibilities. Ava tried to acclimate and mentor Mary as much as possible.

Moreover, Natalie—who felt unwelcome—also felt stressed and frustrated: “I have experienced stress, have been burdened and frustrated, because anyone doesn’t ask my opinion on things. And even though I say it, they are not listening to anyone, doesn’t comment back. They just don’t care” (Natalie, 2020).

When we explained structural resources above (see Section 4.1), we noted that Tracy was stressed due not only to her own role but also the role of the software developer, Rob, with whom she was working. However, initially, despite their challenges, Tracy and Rob became friends. But this friendship deteriorated due to the challenges of their collaboration. This deterioration significantly affected Tracy and Rob’s work together: “It’s definitely caused me a lot of stress and burdens, so it’s hard at times to be friendly” (Tracy, 2019). Tracy provided some feedback to Rob about the conflict, hoping this feedback would improve their tension. She later discussed this issue with her boss and hoped to see changes, but she was concerned because she felt these conversations were only a formality and were not taken as seriously as she had wished: “I’ve been worried about it since the beginning, that when I bring a problem forth, nothing is done about it. The first conversation. . . left me feeling that, ‘Okay, we only discussed it. Nobody wants to do anything about it.’ And now, after this meeting, I felt like people are okay without doing anything here, that people don’t want to change anything” (Tracy, 2019). Tracy also felt that, because these serious problems were not resolved, they heavily affected her work performance. She also worried that despite multiple conversations, collaborative tasks were solely her responsibility: “No one seems to care. . . . I’ve been this power that drives this user interface work forward all the time, so maybe that’s why no one’s really noticed that Rob doesn’t do anything” (Tracy, 2019). As these problems escalated, Tracy addressed the issue again with her team leader. Through this conversation, Tracy discovered that Rob had explained that he feared his work was insufficient for Tracy, who suspected that Rob was dishonest. Tracy felt that these unresolved problems between her and Rob had become overwhelming, causing stress and increasingly affecting her work performance. Her and Rob’s team also had grown, and she was working with a new expert, Selena, who also lacked previous experience in the field. Tracy could not hide her dissatisfaction and frustration, and her overwhelmed feelings led her to give Selena “bad” feedback: “I just told Selena that this work is shit. . . . Some colleague nearby had heard and went to tell my boss. . . . I was ridiculous. Yes, I can admit that. But it required that [saying “badly” aloud] so that I could be taken seriously” (Tracy, 2019). These problems were

discussed with the boss (Tim) who was present, and the core problem was determined by him to be that no employees knew what their colleagues expected from each other through shared job tasks. Tracy also disliked that although she had long tried to resolve these problems, they were only addressed once they had escalated. She was also upset because she learned that her colleagues had understood and gossiped about her situation, yet her concerns were belittled and avoided. Teamwork-related issues were also evident among the development team. Joanne felt that despite doing a significant amount of work, her expertise was never sufficient. She highlighted, for example, that she had constantly received critical feedback: “I listened to more shouting this week. . . . I’ve been out of my comfort zone for the entire spring, and these tasks have been so rough. I was also promised some assistance, which I haven’t received. . . . I’m so exhausted” (Joanne, 2019).

Ava also emphasized how a boss reacts to job tasks is crucial. She had worked as Anton’s subordinate for a while, and she had been affected by Anton’s approaches to tasks. For example, she explained that Anton sometimes reacted to things too late. She provided an example by explaining that a client’s representatives from another city had planned to visit Company A, and Anton had only told Ava and Mary about the visit a day before their arrival, noting that he needed two experts present for the meeting. Ava and Mary had agreed to participate despite not knowing the meeting’s purpose. When the meeting was about to begin, Anton sent word that he could not be present: “And then, when we sat by the table the next day, having no idea what will happen in the meeting with Mary, Anton suddenly informed that he has other work to do and that he’s going to leave to do that work. Then I looked at Mary, who was sitting beside me at the table, and she was terrified that we’re being left alone and unprepared here” (Ava, 2018). However, Ava did not immediately provide feedback to Anton despite feeling very stressed about the situation. She faced such situations repeatedly, with Anton failing to attend meetings and canceling meetings on very short notice. Eventually, Ava was unable to remain silent about her thoughts on this behavior: “Then I let it be heard. . . . Anton was absent from that one meeting completely again. I heard it from some product owner that I’m going to be the one hosting the meeting, and I was, like, ‘What the fuck?’ Anton wasn’t even here. . . . So, I went raging to Chloe. She got to hear the complaints designated to Anton. I did have a proper rage. . . . I was so done with the issues” (Ava, 2018). Anton was removed from his position as Ava and Mary’s boss. However, Ava was very stressed because her role remained unclear. She addressed this concern at a

company meeting hosted by an external trainer: “We were talking in groups about what’s good and what’s bad. . . and then I had a moment. . . . I was so frustrated and stressed about my own job and all the action with no progress.” (Ava, 2018). Some managers (e.g., Chloe) became worried about this feedback and approached Ava to ask whether she was okay, but although the issue was discussed, no concrete changes were made.

#### **4.4. Resources and their impact on newcomers’ health**

Unclear roles, inexperience, and teamwork challenges (e.g., exclusion and unequal workloads) elicited significant amounts of stress for many interviewed newcomers, affecting experts’ well-being. However, the pivotal driver of experts’ stress was ultimately a lack of manager consideration or support despite numerous attempts to seek managers’ help. For example, Tracy (see Section 4.3) thought that because she was not listened to and did not receive any help from her boss, she had had to turn to an occupational health doctor for help. Tracy discussed her issues with an occupational health psychologist and was surprised to learn that occupational health care personnel could intervene on her behalf if changes were not made. Sadly, Tracy felt that professionals in the healthcare field were the first people who took her worries and stress seriously. Her physical well-being had been tested, too, revealing that her stress level was high: “The psychologist was the first person to actually think that this has a really bad impact on me. . . . I felt for the first time that someone understands me, and it was the first step for me to notice that I’ve actually been in a terrible stress state. . . . They were worried about me not getting to recover and my pulse being really high” (Tracy, 2019). Tracy had to take sick leave because of the stressful situation at work. Later, healthcare professionals (a doctor and a psychologist) and Tracy’s manager, Tim, discussed the situation. According to Tracy, Tim “turned” the situation “around” such that Tracy herself was blamed. She was upset about this treatment and felt that nothing had been done to resolve the actual problems she was enduring. Moreover, both Ava and Joanne became so exhausted by challenging work situations that they both took sick leaves: “The situation got to the point where I was on overdrive, and I couldn’t sleep” (Ava, 2019). Ava (2019) explained how the doctor had warned her that she might need a very long time to recover. She felt that the whole past year had been very lonely and stressful: “If I think about last year, it’s heavily remembered by being alone and being tired”.

Laura experienced stress over the years, too, but her situation became particularly stressful in 2020, when she started substituting for Joanne at the beginning of June. She talked to her manager and asked what they should do in their team because Joanne’s sick leave seemed likely to be long. According to Laura, her manager said that no other options were available, which was why Laura was assumed to continue Joanne’s work while Joanne was away. June 2020 was, ultimately, extremely stressful and busy for Laura because she started as a product owner (substituting for Joanne) and tried to fulfill her own duties as well. She raised her concerns with this arrangement and discussed them with her boss, emphasizing that doing two people’s work simultaneously was too much for her. According to Laura (2020), her managers responded, “You just have to skip your own tasks now.” However, Laura expressed her concern that this proposed solution would be very stressful because no one would be fulfilling her own duties while she did Joanne’s work. Laura did both Joanne’s work and her own work in August before Joanne returned. But in September 2020, when Joanne returned, she no longer performed the same tasks that she had performed before her leave.

Laura discussed these issues with her boss again and admitted that she was very tired and this situation was simply too much for her. Laura went on sick leave, too, and although this decision was not fully unexpected, some other newcomers expressed that they suffered from headaches and tiredness, commenting, “I have never had such headaches earlier than I had in July...” (Natalie, 2020), and, “I have been forced to think that what is enough, especially during this fall, and how much I have to bear” (Selena, 2020). Some newcomers worried that the sick leave may not resolve employees’ problems and wondered whether they needed to change jobs. Turnovers also occurred; for example, Mary and Tracy left the company.

## **5. Discussion**

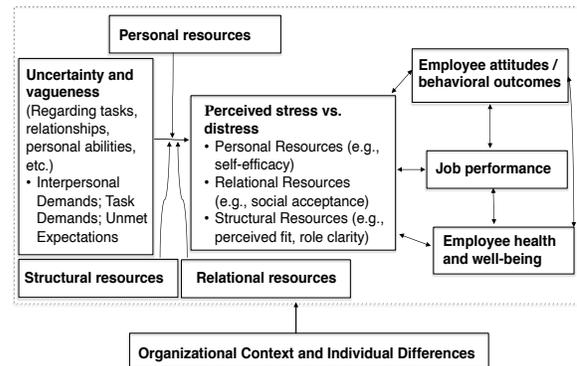
This qualitative case study [13] aimed to investigate newcomers’ stress and its consequences on well-being during the socialization process at an IT organization. This research responds to calls for a better understanding of newcomers’ socialization phase [e.g., 8] and its connection to both short- and long-term outcomes. Some previous research in the IS context [e.g., 3, 19, 20, 24] has investigated IT professionals’ stress and well-being, emphasizing various potential stress factors. Studies have also outlined the different consequences of IT professionals’ stress. However, the literature has a limited understanding of newcomers’ short- and long-

term stress factors and their consequences on performance, health, and other aspects of the IS field.

The interviewees in this study were newcomers in two ways: the field (IS development) and the organization (a private-sector IT organization) were both new to these employees. Thus, this study contributes to the understanding of newcomers' socialization process not only at IT organizations but also in the broader IS field. To our knowledge, this study is among the first studies that have aimed to investigate the socialization process and its longitudinal impacts on well-being and stress in the IS field. This study demonstrates that investigating newcomers' socialization process is extremely important since professionals' identities during these changes are not static. Newcomers' identities are also strongly influenced by newcomers' self-perceptions, know-how and self-efficacy, and perception and treatment by other organization members. Moreover, despite initial planning and eagerness to start these new roles, such changes may generate ambiguity and uncertainty among newcomers [cf. 15]. Our findings show that uncertainty and vagueness vis-à-vis relationships, tasks, and personal abilities—as well as structural resources (role clarity, including duties and responsibilities), personal resources (e.g., know-how and self-efficacy), and relational resources—can affect stress among newcomers [cf. 8].

This study also shows how structural and personal resources strongly affect relational resources—that is, planning and execution, as well as meeting newcomers' specific expectations. One of the biggest structural issues revealed as a “stumbling block” in many ways was newcomers' initially unclear roles. This ambiguity constituted a major very risk to newcomers' well-being, obliging newcomers to create their own roles as their very first work experience at an IT organization. Moreover, newcomers' exclusion and “abandonment” by managers seemed among the most serious factors that created stressful and harmful situations in this study—for example, lacking an opportunity to attend planning meetings, which are important for upcoming tasks with user organizations. This abandonment affected employees' attitudes and behavioral outcomes, job performance, and well-being and health. This study also exposes that, sadly, some problems were addressed only when newcomers' well-being had already been jeopardized—that is, after newcomers had had to endure not only emotional harm (unable to be their “normal” or “true” selves) but also physical harm (e.g., sleeping problems and high pulses). This study also shows that the sooner an intervention occurs to resolve such harm, the better its outcome; if workplace problems are allowed to escalate, they seem almost impossible to “repair.”

Figure 1 summarizes our findings on this socialization process through newcomers' perceived stress.



**Figure 1. Framework of the socialization process through newcomers' perceived stress [cf. 8].**

Our findings offer many new insights into relational resources (e.g., managers and their behavior's crucial roles), how they also cause stress, and what kinds of consequences they have among newcomers. Our findings also show how work stress inflicted consequences on newcomers' attitudes, behavior, job performance, and—even seriously—health. Various scholars [e.g., 9, 18] have shown that IT development's demands—including the work's ever-changing nature—are among the key factors that can cause burnout symptoms among IT professionals. This study reveals that this process may constitute a very vulnerable time for newcomers, and other employees—especially managers—should account for this difficulty. From a practical perspective, we have shown that leaders must treat their subordinates very carefully in new situations because the consequences of such situations may be serious. Moreover, factors such as denying the problems that newcomers raise, downplaying newcomers' achievements, and making newcomers' work more difficult drastically harm newcomers' well-being. Such factors may distress and humiliate these valuable employees while compromising their dignity [cf. 1].

## 6. Conclusion

This qualitative and longitudinal case study (pre-COVID-19) helped us understand newcomers' stress from IS project work, and how its consequences emerge during their socialization process. However, this study has some limitations. This company was a single organization, so it is difficult to show the impact (or lack of impact) on newcomers in a more mature IT

organization and contrast those factors that might mitigate better newcomer socialization - e.g., well-thought-out job descriptions and written roles descriptions, more internal documentation, a standardized "on-boarding" process developed by human resource specialist or organizational development specialists. Moreover, future research could include conducting the same interviews with newcomers in multiple organizations of different maturity levels, and how newcomers who started during/ after the pandemic faced their work in the same organization.

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