

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/343350947>

Earning Less than is Just: The Contemporary Worker's Experience of Equity and Need Principles

Preprint · July 2020

DOI: 10.13140/RG.2.2.16798.15685

CITATIONS

0

READS

104

3 authors:



Atsushi Narisada

Saint Mary's University

8 PUBLICATIONS 35 CITATIONS

SEE PROFILE



Philip Badawy

University of Toronto

9 PUBLICATIONS 6 CITATIONS

SEE PROFILE



Scott Schieman

University of Toronto

126 PUBLICATIONS 4,919 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



The Canadian Work, Stress, and Health Study (CAN-WSH) [View project](#)



Religion, Control, and Well-Being [View project](#)

CURRENTLY UNDER REVIEW

**Earning Less than is Just:
The Contemporary Worker's Experience of Equity and Need Principles**

ATSUSHI NARISADA
Saint Mary's University

PHILIP J. BADAWY
University of Toronto

SCOTT SCHIEMAN
University of Toronto

Direct correspondence to Atsushi Narisada (atsushi.narisada@smu.ca), Department of Sociology, Saint Mary's University, 923 Robie Street, Halifax NS, B3H 3C3 Canada. Funding from the University of Toronto Tri-Council Bridge Funding supports this research (Scott Schieman, PI).

**Earning Less than is Just:
The Contemporary Worker's Experience of Equity and Need Principles**

ABSTRACT

People value being paid appropriately for their work—but national surveys indicate that many working adults report a discrepancy between what they actually earn and what they think they should justly earn. This evidence provides an impetus for examining how individuals come to perceive their earnings as unjust. The present study elaborates on two key distributive justice principles—equity and need—that guide people's ideas about their just reward. We ask: How do contemporary workers experience and understand the nature of work effort and need? We employ a mixed methods research design to answer this question. First, analysis of focus group interviews among workers in Toronto, Ontario (N = 22) generates two novel hypotheses about the factors that shape workers' expectation for greater rewards: “Downloaded” and “sideloaded” extra work that induce feelings of overwork, and rising cost of living and the associated financial strain. Second, drawing upon focus group narratives, we operationalize these concepts and test our hypotheses with a 2019 nationally representative sample of Canadian workers (N = 2,111). The results demonstrate that extra work, rising cost of living, and financial strain are each associated with a higher just reward. Furthermore, extra work and financial strain interact synergistically to shape even greater reward expectations. We situate these findings within a broader discussion of the nature of effort and need among contemporary workers and its implications on justice perceptions.

KEY WORDS: distributive justice, equity, need, mixed methods

Earning Less than is Just: The Contemporary Worker's Experience of Equity and Need Principles

People value being paid appropriately for their work—but many working adults report a discrepancy between what they earn and what they think is fair. As Jasso (1978, p.1399) observed decades ago: “We live in a world that rarely realizes congruence between actual earnings and just earnings.” Recent population-based studies show that 52 percent of Canadian workers report being paid less than just (2017 Canadian Work, Stress, and Health Study), and similar statistics have been documented in the United States and beyond (2012 International Social Survey Programme). This perception of underreward has serious consequences for employee health and well-being (for a review see Robbins, Ford, & Tetrick, 2012). This includes mental health outcomes such as depressive symptoms (Tepper, 2001), but also extends to physical health symptoms (Schunck et al., 2015), and even poor cardiovascular health (Falk et al., 2018). These findings underscore the importance of understanding the processes that shape the sense of underreward. More specifically, it encourages researchers to continue examining a key question in distributive justice: What do people think is just?

Our objective is to provide an elaboration on the nature of *work-related contributions* and *needs* that shape workers' sense of their just reward—that is, what individuals think they should justly earn. By expanding the scope of what constitutes contributions and need for contemporary workers, we can better understand how individuals come to perceive their earnings as unjust. We address this objective by employing a mixed methods design that consists of a qualitative analysis of focus groups and a follow-up quantitative analysis of a national survey of workers. We adopt this approach to discover previously underexplored determinants of the just reward, generate testable hypotheses, and evaluate those hypotheses with a random sample that allows generality of patterns to the broader population. In this endeavor, we respond to recent

recommendations in the sociological justice literature for greater integration of insights from qualitative research with those from surveys and experiments (Kittel, 2020). We report and interpret evidence from three focus group interviews of 22 workers from the Greater Toronto Area in Ontario, Canada. These interviews suggest that three main factors—“downloaded” and “sideloaded” extra work, rising costs of living, and financial strain—elevate workers’ just reward and contribute to a sense of being underrewarded. We then operationalize these concepts and test our hypotheses using data from a nationally representative sample of 2,111 workers known as the 2019 *Canadian Quality of Work and Economic Life Study* (C-QWELS).

BACKGROUND

The Equity Principle and Work-Related Contributions

Individuals perceive a sense of justice when the amount of reward received corresponds to the amount regarded as just based on distributive justice principles (Hegtvedt, 2018). Using terminology from Jasso’s distributive justice theory, an observer compares the *actual reward* (reward received) to the *just reward* (reward regarded as just) to produce a *justice evaluation*, an evaluation of whether the recipient has been rewarded fairly, and if not, the severity of underreward or overreward (for a recent review, see Jasso, Törnblom, & Sabbagh, 2016). As the just reward serves as the basis by which the actual reward is evaluated, the specification of factors that shape the just reward is central to understanding how individuals perceive underreward. Scholars have identified three main distributive justice principles that guide decisions about the just reward: The *equality principle* dictates that all recipients should earn the same amount of reward, the *equity principle* dictates that reward should be distributed based on

recipients' inputs, and the *needs principle* dictates that reward should be distributed based on recipients' needs (e.g. Deutsch, 1975).

Which principles guide evaluations about the fairness of earnings? Factorial survey research has examined this question using vignette designs, where observers are presented with descriptions of fictitious persons and are tasked with either providing justice evaluations of the actual earnings or the amount of just earnings (Alves & Rossi, 1978; Auspurg, Hinz, & Sauer, 2017; Gatskova, 2013; Hermkens & Boerman, 1989; Jasso & Rossi, 1977; Shamon & Dülmer, 2014; for a review, see Liebig, Sauer & Friedhof, 2015). Studies consistently show that observers do not regard equality of earnings as fair. Rather, equity and need principles underlie observers' evaluations, with the former being particularly salient. With regards to the equity principle, observers tend to evaluate vignettes with greater inputs—most importantly, occupational prestige and educational attainment—as more underrewarded and deserving a higher just reward (e.g. Alves & Rossi, 1978; Hermkens & Boerman, 1989; Shamon & Dülmer, 2014). However, the types of inputs assessed tend to focus on individual *attributes* like occupational prestige (Cook & Yamagishi, 1983), while inputs that are readily conceived as *work-related contributions* have been limited to general indicators of “effort” or “job performance” without specification on what these factors resemble. For example, work effort may represent time spent at work, the intensity at which one works, and so on—but the meaning of effort is obscured when vignettes are presented as simply signaling actors' low versus high effort. In sum, factorial survey studies demonstrate the existence of a normative structure that guides judgments about the fairness of earnings, and the equity principle appears to be central; however, the specific nature of work-related contributions assessed in these designs have been somewhat restricted.¹

¹ We acknowledge that vignettes with a large number of dimensions can present challenges for observers who are tasked with rating them and this can create methodological issues (Auspurg & Hinz, 2015). It is

Contributions may encompass dimensions of effort, ability, and performance (see Törnblom & Kazemi, 2012). Following Adams' (1963) emphasis on effort as a key input, dimensions of effort appear prominently in prior conceptualizations of work-related contributions. Studies that assess fairness perceptions of workers' own earnings find that those with longer contractual working hours and overtime hours report higher levels of underreward (Liebig, Sauer, & Schupp, 2012; Sauer & May, 2017; Valet, 2018). While work hours represents an important aspect of effort, work effort can be conceptualized more broadly as exposure to *work demands* that necessitate high investment in the work role. This is particularly evident in occupational stress frameworks such as the Effort-Reward Imbalance (ERI) Model, which stipulates that "failed reciprocity" in employer-employee relationships marked by high effort-low reward conditions undermine employee health (Siegrist, 1996; for a review, see van Vegchel, de Jonge, Bosma & Schaufeli, 2004). In this model, effort is measured across six dimensions: physical load, time pressure, overtime hours, work interruptions, responsibility, and increased demands over time (Siegrist et al., 2004). The ERI model does not measure justice perceptions, as the imbalance between effort and reward is assumed to directly affect health. However, the ERI model's conceptualization of effort is clearly aligned with the notion of inputs in distributive justice. Beyond studies in the ERI tradition, applications of the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2017) to perceived inequity also suggest similar conceptualizations of work effort. For example, Hu, Schaufeli, and Taris (2013) demonstrate that job demands—which comprise a broad set of demands like interpersonal conflict in addition to workload—harm employee well-being, partly through the perception of under-benefit in the employer-employee relationship. Taken together, these ideas and empirical findings indicate that the

therefore understandable that factorial survey studies have focused on these general indicators of work contributions.

elements of work effort that are relevant to justice perceptions include work hours, but also exposure to work demands.

These perspectives have been applied and extended in recent population-based research that directly assess the fairness perceptions of earnings. For example, Sauer and May (2017) report higher just earnings among workers exposed to poor social relationships at work, a form of demand in the conceptual frame of the JD-R model. Another study finds that work pressure is associated with higher just earnings—in part because work pressure increases blurred boundaries between work and family roles and greater work-family conflict (Narisada, 2020). In the present study, we build upon this research by extending the conceptualization of work effort among contemporary workers, asking: How do workers make sense of their efforts and how are they related to their expectations of rewards? As we demonstrate below, the themes discovered from the focus group interviews shed light on previously underexplored forms and processes of work effort that elevate workers' reward expectations and contribute to their sense of underreward.

The Need Principle and Financial Circumstances

In contrast to the equity principle, the need principle dictates that outcomes should be distributed based on recipients' needs (Deutsch, 1975). In early experiments on the need principle, two hypothetical persons were described as having completed a joint task with equal inputs but varying in financial need. Subjects tended to allocate a larger portion of the reward to the person with greater need—indicating that need is a standard that guides decisions about what people should justly receive (Lamm & Schwinger 1980, 1983). Likewise, factorial surveys show that people use the need principle to evaluate fairness in the distributions of earnings: All else being equal, observers tend to rate actors in vignettes who are married or have children as more

underrewarded and deserving higher earnings (Alves & Rossi, 1978; Gatskova, 2014; Jasso & Rossi, 1977; Shamon & Dülmer, 2014). These characteristics that represent greater need, however, are less strongly associated with justice evaluations or just earnings compared to dimensions like occupational prestige or education (e.g. Hermkens & Boerman, 1989; Shamon & Dülmer, 2014). Thus, there appears to be a consensus that the need principle is given less weight than the equity principle in guiding fairness evaluations of earnings (Liebig, Sauer, & Friedhoff, 2015). Supporting these observations, cross-national (non-factorial) surveys on justice attitudes indicate that while the majority of individuals support income distributions based on effort and performance (e.g. how “hard” and how “well” people work), there is less support for distributions based on need (e.g. “what is needed to support a family” and the presence of children) (Evans, Kelley, & Peoples, 2010; see also Aalberg, 2003).

The aforementioned studies demonstrate that people do consider need as a standard in evaluating how earnings should be distributed, although it appears to be less salient than the equity principle. However, to our knowledge the ways that need considerations shape evaluations of workers’ own earnings remains relatively underexamined. One question that emerges from the findings in factorial survey research is whether need can be assessed in more direct ways. It can be argued that marital and parental statuses—as depicted in the vignettes—are *proxies* of need. That is, the relevance of these factors is interpreted as supporting the operation of the need principle—presumably because married individuals and those with children are likely to have greater financial need. We therefore extend previous research with a more direct examination of financial circumstances and assess how these are related to fairness evaluations of one’s own earnings. This consideration is important in light of Kittel’s (2020:103) conceptualization of need-based justice, which entails “the idea that all members of a society are entitled to the

consumption of a certain basket of goods, or put otherwise, a certain standard of living.” We seek to assess that standard of living and the sense of need surrounding it by advancing understanding about the nature and relevance of need in workers’ accounts of unjust earnings.

METHODOLOGICAL OVERVIEW

The present study employs a mixed methods research design by drawing on focus group interviews among Toronto residents and survey data from a national sample of Canadian workers. Our motivation for employing two sources of data is complementarity, whereby the results from one method is used to elaborate, enhance, and interpret the results from another method (Greene, Caracelli, & Graham, 1989; Small, 2011). We base our approach on Morgan’s (2014) sequential-priorities model, which consist of four general mixed methods research designs that differ on the principles of sequencing and prioritizing. The present study falls into the category of a principal qualitative project with a quantitative follow-up (QUAL → quant). We analyzed our focus group data to identify themes deductively based on our research questions and inductively through interview responses to generate testable hypotheses about the factors that shape expectations for greater rewards. We then operationalize the concepts identified in the focus groups with survey items and test our hypotheses deductively using a random sample of workers. The quantitative component follow-up extends a standalone qualitative project by permitting researchers to assess whether the experiences among a specific group of individuals can be generalized beyond this context to the broader population (Morgan, 2014). We first discuss the findings from the focus group and the hypotheses that they generate. This is followed by the discussion of the findings from the quantitative analysis.

FOCUS GROUP INTERVIEWS OF TORONTO WORKERS

Data

We conducted three focus group interviews between July and September of 2018 with the objective of discovering the nature of working conditions that contribute to perceptions of underreward. Focus groups are appropriate for examining the ways people make sense of their own experiences and how these thoughts are clarified through interaction in a group discussion (Krueger & Casey, 2014). All participants had previously taken part in the 2017 Canadian Work, Stress, and Health survey (CANWSH), a national telephone survey of Canadian workers. From this dataset, we recruited 22 participants residing in the Greater Toronto Area who reported being underrewarded on at least one of three survey questions on distributive justice (reported in Appendix Table 1). Each focus group consisted of 6-9 participants, with each interview lasting for 90 minutes. While this sample is not meant to be representative of the broader population of workers, our participants were diverse with respect to demographic characteristics. We report the profiles of the participants in Appendix Table 2.

To facilitate group interviews, the CANWSH survey questions on distributive justice were used as a guide to foster discussion and engagement among the participants. After the completion of the interviews, each participant received an incentive of \$70. We audio recorded the interviews and transcribed them verbatim. We used NVIVO to assist our analysis of data. Nodes were used to code the transcripts, which were organized into node hierarchies that represent particular themes. After coding the transcripts separately, the authors of the study met to discuss emerging themes and interpretations of participants' responses and exchanges. All names that appear in the findings are pseudonyms.

Findings

Our analysis of the focus group data reveals two key themes that shape higher just reward, and in turn, evaluations of underreward. The first pertains to work-related effort: Extra work that has been “downloaded” and “sideloaded” from superiors and colleagues which contributes to feelings of being overwhelmed. The second pertains to the elements of need: Rising cost of living and the induced financial strain. In addition to these themes, a sub-theme emerged regarding combinations of contributions and need. We discuss each of these below.

Extra Work I: Downloaded Work. The first theme pertains to the ways in which employees are required to complete extra or additional work—work that is perceived to extend beyond the parameters of the job description. One form of extra work emerges when additional responsibilities and accountabilities are “downloaded” to subordinates from those in more senior positions or with greater job authority. When the moderator asked focus group participants to reflect on their responses to the first distributive justice item (DJ1 in Appendix Table 1), Chris, a male disability-support worker explained:

Chris: I just find that the workload has increased over the years.

Moderator: The workload?

Chris: Yeah, the workload. You know, more accountability measures have been downloaded from senior positions, another position above you has been downloaded below. And yet, you know, you don't see that increase [in pay] per se. I can say we are fortunate in a way that we are protected by a unionized environment, in some sense. But, it doesn't stop certain policies, you know, changing and interrupting your work flow, flow each time.

Chris then elaborated on what he means by “accountability measures”:

Chris: We are required to teach and give personal services to individuals that need support. But we are also required to document individual progress and all that. And documentation changes over time, so you know, that personal one-on-one teaching is being taken away into a documentation process. So your workflow

that you are used to gets interrupted by a new policy, a new kind of documentation, etcetera.

Moderator: So [...] the reason why you reported that you feel underpaid is what? Related to...?

Chris: Yeah, related to the additional work.

Chris identifies the additional work—the downloaded accountability measures—as a source of his evaluation of underreward. New policies implemented by management generate new burdens associated with additional documentation that, in turn, interrupts his workflow. This downloaded work detracts from his ability to engage in the primary aspects of his job—the activities related to one-on-one teaching of individuals with disabilities. The equity principle predicts that this kind of extra work represents a type of contribution that *should* translate into higher rewards; however, as Chris lamented, there is no commensurate increase in his pay—and this shapes his expressed evaluation of underreward.

The concerns raised by Chris resonated with other focus group participants, who subsequently shared their experiences with this theme, adding elaborations to the origin and nature of downloaded work:

Madeline: It's like what [Chris] mentioned too...It's like the more heads of the departments they get rid of, the more it comes down to you. So, we used to have people that do this, so now we want you to look after that, and continue what you're doing. It gets to be more and more and more, so we'll have less people, and then everybody is just a number basically working away trying to keep their head above water.

Candace: And then, they don't want to give you the job title name, because they don't want to pay you, so they just make you do the job and you don't have the job title...The same job as the supervisor or somebody getting more money, and then they're not paying you for that.

Jack: I was just going to agree with [Madeline] on that [...] I get multiple extra responsibilities, basically: "We don't need more people. We need you to do more."

These responses indicate the ways in which downloaded work can emerge. When senior positions are dissolved, the responsibilities of those positions are transferred to remaining workers. This extra work must be completed on top of their regular responsibilities, shaping the sense of being overworked and overwhelmed. These narratives on extra work and the accompanying role-strain intersect with Pearlin's (1983; 1989) idea of *role restructuring* whereby workers recognize an expansion in their usual work-related responsibilities, which can result in "the violation of expectations" (Pearlin, 1989:246). These violated expectations about one's scope of work responsibilities could lead workers to re-evaluate their pay. Furthermore, Candace's experience suggests elements of exploitation and devaluation, as she does not receive an increase in status or pay that should be associated with taking on more responsibilities and conducting the same tasks as higher-paid supervisors. In distributive justice terms, we can surmise that organizational restructuring increases exposure to downloaded work, which elevate workers' just reward—but, actual earnings and other perceived benefits like higher status are fixed. This discrepancy shapes the evaluation of underreward.

Extra Work II: Sideloaded Work. Extra work did not solely emerge from higher-ups—some participants reported work that was "sideloaded" from their coworkers or peers in their work groups. In contrast to the top-down nature of downloaded work, sideloaded work represents a lateral movement of extra work demands. First, sideloaded work can emerge when those who are especially skilled in their jobs have to attend to mistakes or difficulties incurred by their colleagues. As Rosa, a female beautician, explained:

Rosa: I felt like my skills, they recognized that they were higher than some of the coworkers so they would make me fix some issues, or clients were unsatisfied, so they would give them to me so I can fix it [...] And they also don't pay you more for having to fix other people's problems [...] Because I can do it, so they give it to me. That's why I guess it feels unfair.

Fixing coworkers' problems is extra work that should be associated with greater pay—but Rosa's pay did not reflect her contributions, shaping her sense of underreward. While her skills may signal higher status relative to her other colleagues, Rosa's experience suggests a potential cost of being perceived as more competent than coworkers: This can be a source for receiving sideloaded work that may not come with commensurate increases in pay.

Sideloaded work also emerges from other means. The respondents identified employee turnover as another source of sideloaded work, as demonstrated in the following exchange:

Jack: [Referring to his employer] So they're trying to get the people who will take the absolute minimum, because they have no experience, and work tons and tons of hours, because they want the experience, and get treated like, well, a cog in the machine. And so the turnover rate is very high. Not necessarily because they don't necessarily like some of the stuff they're doing, but it's because it's, well...

Candace: It's going nowhere.

Jack: Going nowhere.

Emma: Yeah, the turnover is huge.

Candace: They stay in, they get the experience [Jack: That's right]. Like, one time in the lab, there's lot of students that came out of university and they know that they should be making more money [...] and once they gain 6 months experience, they were gone. And about 6 people they hired during that time, and everyone just left.

Jack: And then if you're one of the people that's still there, then you have to do all the other people's work until they maybe hire some other people to replace them.

This exchange suggests that employee turnover creates extra work that is sideloaded to workers who remain. Employees may leave the organization in part due to the demands of work in combination with feeling devalued, and this turnover leads to more demands on the remaining employees. In turn, this shapes their own perceptions of underreward, and as prior research demonstrates, this may lead to their turnover intentions and enacted turnover (George & Wallio,

2017; Geurts, Schaufeli, & Rutte, 1999). Thus, while employee turnover is often examined as an *outcome* of perceived injustice, these responses suggest another possibility: The turnover behavior of other employees can be a potential *antecedent* of justice perceptions through the creation of sideloaded work for those workers who remain on the job.

Collectively, these interview responses generate novel hypotheses that can be assessed in a broader sample of workers. First, extra work that is downloaded or sideloaded should be associated with higher reward expectations. Second, this relationship is in part due to the ways that extra work increases the intensity of work and contributes to the sense of being overworked and overwhelmed. Based on these themes, we test the following:

Hypothesis 1: Higher levels of extra work should be associated with higher expectations of rewards.

Hypothesis 1A: Higher levels of job pressure should partly explain the relationship between extra work and higher expectation of rewards.

Rising Cost of Living and Financial Strain. Beyond the equity principle and extra work, the interviews also revealed a theme regarding rising costs of living and induced financial strain. The focus group participants directly noted an expectation of correspondence between the costs of living and earnings. For instance:

Karan: [...] the point of reference for me is the cost of living, like it keeps changing. Like for example, say the mortgage rate goes up couple of years later. I would feel terribly underpaid because I can't meet my expenses.

In another exchange, when the moderator asked participants to reflect on factors that contribute to feeling paid “less than just” (DJ2 in Appendix Table 1) the following discussion unfolded:

Jack: So, would you include in here the "Toronto bubble" in terms of some salaries and things being higher than in other areas... as affecting people's pay grade for skill? Because I'll just put it... I haven't worked in Toronto for more than a year, but it's costing me more, it's costing everything more to work in Toronto, but there is no equivalent change there.

Moderator: In the pay?

Jack: In the pay.

Moderator: So, by the "Toronto bubble," what do you mean by that?

Jack: Well the people tend to... there's usually higher wages because there's higher costs. I don't know if that's the case every...anymore.

Madeline: Not anymore. Back in the day, but not anymore.

Jack's statement that "there's usually higher wages because there's higher costs" invokes the need principle, which stipulates that rewards should be distributed according to what people need—or at least their perception of it. Jack recognizes that there are higher costs associated with living in an urban area like Toronto compared to other less-urban areas, and that wages should reflect these costs. Madeline's response suggests that wages aligned more closely with costs of living in the past—but that this is not the case today. Higher costs should correspond with higher earnings, so we probed on what these costs entail. The participants elaborated:

Emma: [...] Go right to Barrie, look at rent [Madeline: Yup!], I was looking at Aurora rents the other day [Akhil: Yeah, that's right], and they're like \$1,600.

Moderator: So your sense is that, that underlying dynamic makes these questions about pay even maybe more...

Madeline: Yes! Cost of living has just nothing to do with what you're getting paid.

Akhil: I'm trying to catch up about 40 years with the inflation [some laugh]. I can't. When I moved to Canada, gas was 40 cents a liter. Today, it's \$1.30.

Emma: Jobs aren't getting a 2% raise every year. It's not being factored in. It's not.

Madeline: It's not even a question where we work. Nobody even gets one anymore. And I thought "really"?

Jack: Like I haven't gotten a raise, and my commute distance has doubled.
[*Emma:* Gas!]. So gas and everything has gone up [*Emma:* Insurance!]. I'm making less just because I'm paying more in gas [*Madeline:* Yeah., *Chris:* Yeah, it's the same].

Rising costs associated with rent, inflation, and commuting means that higher earnings are necessary to meet basic needs. Rising costs of living—and the associated financial strain—contribute to a greater expectation of rewards. While it was unclear from the responses whether participants expected their *employers* to be responsible for allocating rewards based on these needs, it is clear that individuals do desire an adequate degree of correspondence between their earnings and the rising costs of living. These narratives contribute to the following hypotheses:

Hypothesis 2: The perception that the costs of living have increased should be associated with a higher expectation of rewards.

Hypothesis 2A: Financial strain should partly explain the relationship between cost of living and higher expectation of rewards.

The combination of contributions and needs. Some focus group participants interwove experiences about contributions and need, which suggest that elements of work contributions and need may combine to shape reward expectations. For example, Katie, a contract faculty member identified a large pay gap between herself and tenured faculty and described how her work demands spill over beyond the boundaries of the classroom and the scope of compensation:

Katie: They would like me to go to meetings if I'm available and things like that. I don't get paid for that kind of stuff. It's in the theatre department, so they don't say you must spend your evenings seeing these shows, but because they are my students so I feel obliged to see them. I don't get paid for that. So, I do a ton of outside work, I mean outside the hours that I spend in the classroom.

Katie then describes a conversation between two women that she overheard on a subway coming to the focus group:

Katie: “Why did you decide to go into law?” This is interesting, and she said: “Well, I started off, I went back and got my Masters. I started to teach in continuing education [at a university]. You know, a lot of teachers I was working with were just saying ‘We make no money. We can’t even afford to buy a car.’” So she said “So I decided to write my LSATs.” And then I mean [laughs], she’s never looked back. But it was interesting for me to eavesdrop on that because I thought you were *absolutely* right there. You can’t even afford to buy a car. You know, I work, I’m up at [a university] 4 days a week. I’m not teaching all day, but when I’m not, I’m juggling other jobs and I’m also taking a ton of work home that I don’t get paid for and, you know, it goes on.

Katie’s response suggests that concerns about extra work, overload, and financial need shape greater reward expectations. She engages in additional work that is not compensated; at the same time, she evokes the need principle as “affording a car”—this represents a standard of living she feels entitled to (Kittel, 2020). Katie’s narrative suggests two possibilities: One is that elements of contributions and need have *independent* effects on reward expectations. Another is that these factors also *interact* to shape even greater expectation of rewards. That is, concerns about need may exacerbate the felt injustice associated with work contributions. With these ideas in mind, we test the following:

Hypothesis 3: The effects of extra work and job pressure on reward expectations should be stronger among those who perceive higher cost of living and financial strain.

The focus group generated rich narratives and testable themes about the sources of perceived underreward. We now turn to the quantitative component of this study where we assess whether these detected patterns generalize to the broader Canadian working population.

NATIONAL SURVEY OF CANADIAN WORKERS

Sample

We test our hypotheses with data from the 2019 Canadian Quality of Work and Economic Life Study (C-QWELS), a nationally representative survey of Canadian workers. Respondents are members of the Angus Reid Forum, an online panel of about 65,000 respondents built and managed by Angus Reid Inc (www.angusreid.org). A random sample of 2,524 workers was selected from this panel and were asked to participate in the survey (42% response rate).² The survey includes questions about work effort and need that we constructed based on the responses from the focus group interviews. The results were weighted by age, gender, education, and region based on distributions of the 2016 Canadian Census data to ensure representativeness. We excluded business owners and self-employed workers from our analysis as these workers have more latitude in setting their own earnings compared to those who work for an employer (e.g. Schunck et al., 2015). Missing values were addressed using multiple imputation with 100 replications. The final analytical sample consists of 2,111 workers.

Measures

Justice evaluation. We use the following item to measure workers' justice evaluation of earnings: "When you think about the pay you get for your job, do you feel your pay is unfairly

² The Angus Reid Forum contains enough people in each major demographic group to draw randomized samples that represent the population as a whole. To ensure that participants represents the public in terms of demographics and attitudes, surveys are based upon representative samples from each panel that are randomized and statistically weighted according to the most current demographic and regional voting data available. In the case of C-QWELS, sample selection started with creating a balanced sample matrix of the Canadian population. A randomized sample of Angus Reid Forum members are then selected to match this matrix to ensure a representative sample. Subsequent to this step, final sample data is analyzed and weighted to a series of variables (age, gender, region, 2015 Federal Election voting behavior) to ensure balanced representativeness of all working Canadians.

low, unfairly high, or is it a fair amount?” We coded this measure so that higher values indicate more underreward: -5 (Unfairly high) to +5 (Unfairly low) with 0 indicating “a fair amount.” A similar item has been assessed in a national survey of German workers and reported in recently published research (Sauer & May, 2017; Schneider & Valet, 2017). The mean justice evaluation is .866 (SD = 2.059). Thus, on average, respondents reported to be slightly underrewarded—consistent with other recent data from workers in Canada (Narisada, 2020) and Germany (Sauer & May, 2017; Valet, 2018).

Extra work. Based on the responses from focus group participants, we constructed three items to measure extra work that is downloaded or sideloaded: “I am expected to do things that go beyond my job description or duties,” “Sometimes it feels like responsibilities are downloaded from those in more senior positions,” and “I have to do extra work because of the lack of effort or mistakes from others.” The response choices are coded as (1) “strongly disagree,” (2) “somewhat disagree,” (3) “somewhat agree,” and (4) “strongly agree.” We averaged the items to create the extra work index (alpha = .63).

Job pressure. We use the following items that refer to the last three months: “How often did you feel overwhelmed by how much you had to do at work,” “How often did you have to work on too many tasks at the same time,” and “How often did the demands of your job exceed the time you have to do the work?” The response choices are coded as: (1) “never,” (2) “rarely,” (3) “sometimes,” (4) “often,” and (5) “very often.” We averaged the items to create a job pressure index (alpha = .88).

Cost of living. We use the following item to assess the subjective evaluation of cost of living: “How has your experience of the cost of living changed during the past few years?” The

response choices are coded as: (1) “gotten much better,” (2) “gotten somewhat better,” (3) “stayed the same,” (4) “gotten somewhat worse,” and (5) gotten much worse.”

Financial strain. We use the following three items to assess financial strain. The first two items ask: “How often in the past year did you not have enough money to buy clothes or other things that your household needed?” and “How often in the past year did you have trouble paying the bills?” The response choices are coded as (1) “never,” (2) “rarely,” (3) “sometimes,” (4) “often” and (5) “very often.” The third item asks: “How do your finances usually work out by the end of the month?” The response choices are coded as (1) “a lot of money left over,” (2) “a little money left over,” (3) “just enough to make ends meet,” (4) “barely enough to get by,” and (5) “not enough to make ends meet.” We averaged the items to create a financial strain index ($\alpha = .85$).

Control variables. We control for social and economic statuses and working arrangements as these may be associated with dimensions of effort, need, and the justice evaluation. *Education* is coded (1) some elementary or high school, (2) high school graduate, (3) some college/trade school, (4) graduate from college/trade school, (5) some university, (6) university undergraduate degree, and (7) university graduate degree. Personal income is measured as personal income before tax in 2018. We use the natural log of personal income in our analyses. *Occupation* is coded (1) higher administrative, (2) professional and technical, (3) clerical, (4) sales, (5) service, (6) skilled worker, (7) semi-skilled worker, (8) unskilled worker, and (9) other. *Work hours per week* is coded (1) fewer than 30 hours, (2) 30 to 39 hours, (3) 40 to 49 hours, and (4) 50 + hours. *Work contract* is coded (0) full-time and (1) part-time. *Work sector* is coded (1) for-profit, (2) government, and (3) non-profit. Demographic controls include *gender* (0= men, 1=women, 2=prefer not to identify), *visible minority status* (0 = not a visible minority,

1 = visible minority), *marital status* (0 = not married, 1 = married), *number of children* under 18 living at home, *age* (in years), and *region of residence*. Table 1 reports the weighted descriptive statistics for all study variables.

Plan of Analysis

We test our hypotheses in Table 2 using OLS regression techniques. First, we examine how dimensions of contributions are associated with the justice evaluation. Model 1 tests Hypothesis 1 by examining the relationship between extra work and the justice evaluation, net of personal income and other controls. Model 2 tests Hypothesis 1A by adding job pressure. Second, we assess how dimensions of need are associated with the justice evaluation. Model 3 tests Hypothesis 2 by adding cost of living, and model 4 tests Hypothesis 2A by adding financial strain. Comparing models 2, 3, and 4 allows us to evaluate the independent contributions of work demands, perceived cost of living, and financial strain. Subsequent models test Hypothesis 3 by including the following interaction terms: Extra work \times Cost of living, Extra work \times Financial strain, Job pressure \times Cost of living, and Job Pressure \times Financial strain.

It is important to note that our analysis examines the effects of extra work, cost of living, and financial strain on the *justice evaluation*—net of personal income. Distributive justice theory assumes that the comparison between the just reward and the actual reward produces the justice evaluation. Given this formulation, Jasso and colleagues (2016, p.208) argue: “For given Actual Reward, the question whether a Rewardee characteristic is associated with the Justice Evaluation is equivalent to the question whether that Rewardee characteristic is associated with the Just Reward.” For example, if we observe a positive association between extra work and the justice evaluation in the underreward direction—net of personal income—this indicates that extra work

is linked to a higher just reward. This logic guides our decision to regress the justice evaluation on our focal predictors while statistically controlling for personal income.

Results

In Table 2, model 1 indicates that extra work is associated positively with the justice evaluation in the underreward direction ($b = .511, p < .001$).³ Model 2 indicates that job pressure is also positively associated with justice evaluation in the underreward direction ($b = .299, p < .001$). The inclusion of job pressure reduces the coefficient for extra work by 42 percent, although it is still statistically significant ($b = .298, p < .001$). This suggests that extra work is associated with greater underreward, in part because extra work is associated with greater job pressure. However, both have independent associations with the justice evaluation.

Shifting to dimensions of need, Model 3 indicates that the perceived rising cost of living is associated with the justice evaluation in the underreward direction ($b = .284, p < .001$). In model 4 financial strain is also positively associated with the justice evaluation in the underreward direction ($b = .215, p < .001$). The inclusion of financial strain reduces the coefficient for cost of living by 21 percent, although it remains statistically significant ($b = .225, p < .001$). This shows that cost of living and financial strain each have mostly independent associations with the justice evaluation. Moreover, because these models control for personal income, these patterns indicate that higher levels of extra work, job pressure, cost of living, and

³ Some patterns among the control variables are noteworthy. First, we observe that occupying lower occupational classes are associated with the justice evaluation in the underreward direction. This is consistent with prior findings on occupational prestige and the justice evaluation (eg. Alves & Rossi, 1978). Compared to employment in the private sector, employment in the government sector is associated with the justice evaluation in the overreward direction. Finally, compared to men, women are more likely to perceive underreward. This difference, however, is explained once we adjust for job pressure (see model 2).

financial strain are positively associated with workers' just reward. Collectively, the results support Hypotheses 1–2A.

In our analyses of interaction effects, model 5 indicates a significant interaction effect between extra work and financial strain ($b = .128, p < .05$). For ease of interpretation, Figure 1 displays the relationship between extra work and the justice evaluation across levels of financial strain. Higher levels of extra work are associated with more underreward—but this relationship is stronger among those who perceive a higher level of financial strain. Separate analyses (not shown), indicate that the three other interaction terms are not statistically significant: Extra work \times Cost of living ($b = .104, p = .068$), Job pressure \times Cost of living ($b = .006, p = .902$), and Job Pressure \times Financial strain ($b = .053, p = .211$). Collectively, these results provide partial support for Hypothesis 3.

DISCUSSION

A central question in distributive justice is: What do people think is just? It is important to document the answers to this question, especially given the consequences of perceived underreward for employee health and well-being (Colquitt et al., 2001; Robbins, Ford & Tetrick, 2012). Using a mixed methods research design, our study provides one answer to this question by elaborating on the forms of work-related contributions and need that shape contemporary workers' sense of their just reward. Our focus group participants shared stories about “downloaded” and “sideloaded” extra work, rising costs of living, and financial strain that elevated their expectations for greater rewards and contributed to their sense of being underrewarded. We then operationalized these themes and examined whether the patterns may be generalized to the broader population of Canadian workers. These results demonstrated that

each of these factors are independently associated with the just reward, and in some instances interact to shape even greater reward expectations. We discuss our main contributions below.

The equity principle is a central distributive justice rule that shapes expectations for greater rewards—and “effort” is a key input that shapes individuals’ reward expectations (Adams, 1963). Researchers have measured effort in various ways to examine its association with evaluations about fair earnings. Factorial survey studies have operationalized effort with general measures of effort at work, while studies of reflexive justice evaluations have commonly operationalized effort in terms of working hours. Inspired by research on occupational stress that conceptualize work effort broadly as exposure to work demands (Siegrist et al., 2004), we set out to examine how workers made sense of their work effort and how they were related to their expectations of rewards. Our focus groups highlight the role of extra work and the associated feelings of being overwhelmed as factors that elevate reward expectations. First, extra work can be *downloaded* from those who hold higher positions of authority. Such work can emerge from organizational restructuring: When senior positions are dissolved, extra work is downloaded to workers below. The nature of downloaded work also entails the type of documentation work that takes away from one’s principal and perhaps more gratifying work. Second, extra work can also be *sideloaded* from coworkers or others who occupy similar levels in the organizational hierarchy. Sideloaded work can emerge when one must take on extra work to correct for colleagues’ mistakes or cover for those who are less skilled. One unexpected way in which sideloaded work occurs is through employee turnover. The reduced number of workers lead to more extra work—and completing the work of multiple people can lead to greater reward expectations. Taken together, our interviews document the forms of “extra work” as a work-related input and how this shapes the just reward. Given that the participants’ narratives

intersected with feelings of devaluation and exploitation—and the implications for workers’ sense of self—we encourage future research to examine whether workers’ self-esteem and subjective social status may explain the link between extra work and elevated reward expectations.

In addition to the equity principle, prior research indicates that the need principle also guides people’s ideas about what individuals should earn (Deutsch, 1975). Prior research using vignettes have documented the relevance of marital and parental statuses in shaping observers’ evaluations of what people should earn. We sought to extend this research by directly assessing how workers’ financial circumstances shape evaluations of their own earnings. Our focus group respondents invoked the need principle in discussing their source of perceived underreward. The perception that their earnings have not kept up with increases in the cost of living—and the associated financial strain—contribute to their greater just reward and a sense of underreward. Need-based justice entails the idea that individuals are entitled to a certain standard of living (Kittel, 2020). Our focus group participants suggest that this standard of living entails costs associated with housing, inflation, and commuting—and noted that their earnings should reflect increases in these costs. Prior research suggests that need considerations are unlikely to be salient in the work context where relationships tend to be impersonal and the situational goal emphasizes productivity (Deutsch, 1975; Leventhal, Karuza, & Fry, 1980). While we did not find evidence that workers hold their employers responsible for distributing earnings based on need, it is clear that need considerations do play a role in elevating workers’ just reward and shaping workers’ sense of underreward.

Though these focus groups generated themes that elaborate on the equity and need principles, these results are limited to a specific group of workers in Toronto. We therefore tested

hypotheses generated from the focus groups by operationalizing the key themes and examined how they are associated with the just reward in a national sample of Canadian workers. Overall, the quantitative results demonstrate that the themes identified in the focus groups generalize to the broader population of working Canadians: Higher levels of extra work, rising cost of living, and financial strain are each associated with greater reward expectations. Our results also indicate *processes* of work effort and need that were suggested in the focus group narratives. For instance, extra work is associated with a higher just reward, in part, because extra work increases feelings of being overworked and overwhelmed. Likewise, the evaluation that the cost of living has gotten worse over the years is associated with a higher just reward, partly because rising cost of living is associated with financial strain.

The quantitative results also reveal that elements of work effort and need can also interact to shape the just reward. Specifically, we found that higher levels of extra work are associated with higher reward expectations—but more strongly for those who report higher financial strain. The particular combination of engaging in uncompensated extra work while being financially strained may implicate a sense of devaluation and injustice that shapes even greater reward expectations. According to the justice judgment model, an individual's judgment of how much of an outcome he or she deserves is an *additive* function of deserved outcomes based on each distributive justice rule (Leventhal, 1980). Our findings suggest that under some circumstances the judgments of deservingness may be a *multiplicative* function of distributive justice principles: The amount of reward deserved based on the equity rule may depend on need considerations.

Practical Implications: What can employers do?

We wish to close by reflecting on the practical implications. Organizations should care about their employees' perceptions of underreward. This is evidenced not only by research that documents the effects of underreward on employee health, but also by studies that demonstrate its association with behavioral outcomes that concern organizations like absenteeism (De Boer, Bakker, Syroit, & Schaufeli, 2002) and turnover (D'Ambrosio, Clark, & Barazetta, 2018). A straightforward implication of our study is that employers may be able to mitigate employee perceptions of underreward by being cognizant of downloaded and sideloaded work and compensating employees for this extra work. Nevertheless, it may not always be feasible to increase monetary rewards for employees. In these circumstances, non-monetary rewards may foster a feeling of recognition that may alleviate concerns about underreward. Our focus group participants provided insights into the ways that these alternative rewards may compensate for the lack of perceived underreward:

Karan: So people most often feel underpaid because they are not being valued in the workplace. Underpaid is not just about money, not in my mind. It's also about the respect you get, also about the value you get at the workplace. It's also about the recognition you get in the workplace. So, the concept of total rewards in my work, it's not just money. It's a whole combination of everything you get at the workplace. So when you miss one of those components, even if you're getting paid enough in terms of dollars, you still feel underpaid.

Jane: That's like the compensation thing. You can get paid in a health plan, or you can get paid with your company buying you a car, or you can get paid with your gas being paid because you're self-employed. There are various ways to be compensated [*Karan:* Yeah]. That aren't cash.

Karan: Also the recognition. You feel...don't you value being recognized for a good job done? Somebody giving you a \$100 bill and you being recognized in front of others? Which one would you take? I would take the recognition probably...

Susan: I would take the money [laughter].

Steve: Depending on what time of year it is [laughter].

Karan: I mean like, I'm not saying you know all occasions in all situations, but...

Susan: It's important to be valued.

Steve: Every now and then it's always nice to get that pat on the back.

Monetary rewards may be the most desirable form of recognition; however, non-monetary forms of recognition may alleviate feelings of underreward. These include benefits as Jane noted—but as Karan emphasized, it can also include more *interpersonal* forms of recognition such as feeling appreciated for a job well done and an occasional expression of approval. This narrative aligns with recent research showing that those who perceived their supervisors were fair and supportive were more likely to report lower just earnings, which suggests that “recognition and high-quality relationships compensate for lower monetary rewards” (Sauer & May, 2017, p. 52). Thus, in situations where increases in monetary rewards are not feasible, employers may still be able to mitigate feelings of underreward among its employees and avoid its potential downstream consequences by cultivating interpersonal forms of recognition for their employees.

To conclude, our study sought to elaborate on the forms of work-related contributions and need that shape the just reward among contemporary workers. Our findings reveal that “downloaded” and “sideloaded” extra work shape greater expectation of rewards partly through feelings of overwork, and rising cost of living and the associated financial strain also shape greater reward expectations. Furthermore, extra work and financial strain interact synergistically to shape even greater reward expectations. These discoveries are important because they expand scope of what constitutes work effort and need, demonstrate the processes of work effort and need, and the ways in which effort and need considerations can combine to shape reward

expectations. Documenting the antecedents of the just reward is critical in understanding the processes that determine individuals' perceptions of underreward, which has a variety of negative consequences for employees and organizations. Moving forward, we encourage researchers to continue integrating literatures on distributive justice, occupational health, and stress processes as well as insights from both qualitative and quantitative approaches to document the conditions that determine workers' sense of what they should earn.

REFERENCES

- Aalberg, T. 2003. *Achieving justice: Comparative public opinion on income distribution*. Leiden: Brill.
- Adams, J. S. (1963). Toward an understanding of inequity. *Journal of Abnormal and Social Psychology*, 67(5), 422-436.
- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (ed.), *Advances in Experimental Social Psychology* (Vol. 2, pp. 267–99). New York, NY: Academic Press.
- Alves, W. M., & Rossi, P. H. (1978). Who should get what? Fairness judgments of the distribution of earnings. *American Journal of Sociology*, 84(3), 541-546.
- Auspurg, K., Hinz, T. (2015). *Factorial survey experiments*. Thousand Oaks, CA: Sage.
- Auspurg, K., Hinz, T. & Sauer, C. (2017). Why should women get less? Evidence on the gender pay gap from multifactorial survey experiments. *American Sociological Review*, 82(1), 179–210.
- Bakker, A. B., & Demerouti, E. (2017). Job-demands resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285.
- Clay-Warner, J., Reynolds, J., & Roman, P. (2005). Organizational justice and job satisfaction: A test of three competing models. *Social Justice Research*, 18(4), 391–409.
- Cook, K. S., & Yamagishi, T. (1983). Social determinants of equity judgments. In D. M. Messick and K. S. Cook (eds.), *Equity theory: Psychological and sociological perspectives* (pp. 95–126). New York, NY: Praeger Scientific Press.
- Colquitt, A. J., Conlon, D. E., Wesson, M. J., Porter, C. O. L. H., & Ng, K. Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology*, 86(3), 425–445.
- De Boer, E. M., Bakker, A. B., Syroit, J. E., & Schaufeli, W. B. (2002). Unfairness at work as a predictor of absenteeism. *Journal of Organizational Behavior*, 23, 181–197.
- Deutsch, M. (1975). Equity, equality, and need: What determines which value will be used as the basis of distributive justice? *Journal of Social Issues*, 31(3), 137–49.
- D'Ambrosio, C., Clark, A. E., & Barazetta, M. (2018). Unfairness at work: Well-being and quits." *Labour Economics*, 51, 307–16.
- Evans, M. D. R., Kelley, J., & Peoples, C. D. (2010). Justifications of inequality: The normative basis of pay differentials in 31 nations. *Social Science Quarterly*, 91(5): 1405–1431.

- Falk, A., Kosse, F., Menrath, I., Verde, P. E., & Siegrist, J. (2018). Unfair pay and health. *Management Science*, 64(4), 1477–1488.
- Gatskova, K. (2013). Distributive justice attitudes in Ukraine: Need, desert, or social minimum?" *Communist and Post-Communist Studies*, 46, 227–41.
- George, J., & Wallio, S. (2017). Organizational justice and millennial turnover in public accounting. *Employee Relations*, 39(1), 112-126.
- Geurts, S. A., Schaufeli W.B., & Rutte, C. G. (1999). Absenteeism, turnover intention and inequity in the employment relationship. *Work & Stress*, 13, 253-267.
- Greene, J. C., Caracelli, V. J., & Graham. W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, 11(3), 255-274.
- Hegtvedt, K. A. (2018). Justice Frameworks. In P. J. Burke (Ed.), *Contemporary social psychological theories* (Vol. 2, pp. 54-80). Stanford, CA: Stanford University Press.
- Hermkens, P. L. J., & Boerman, F. A. (1989). Consensus with respect to the fairness of incomes: Differences between social groups. *Social Justice Research*, 3(3), 201–215.
- Hu, Q, Schaufeli, W. B., & Taris, T. W. (2013). Does equity mediate the effects of job demands and job resources on work outcomes? An extension of the job demands-resources model. *Career Development International*, 18(4), 357–76.
- ISSP Research Group. (2012). International social survey programme: Social inequality IV – ISSP 2009. [Data file]. Retrieved from <https://dbk.gesis.org/dbksearch/sdesc2.asp?no=5400>.
- Jasso, G. (1978). On the justice of earnings: A new specification of the justice evaluation function. *American Journal of Sociology*, 83(6), 1398-1419.
- Jasso, G., & Rossi, P. H. (1977). Distributive justice and earned income. *American Sociological Review*, 42, 639-651.
- Jasso, G., Törnblom, K. Y., & Sabbagh, C. (2016). Distributive justice. In C. Sabbagh and M. Schmitt (eds.), *Handbook of Social Justice Theory and Research* (pp. 201–18). New York, NY: Springer.
- Kittel, B. (2020). Need-based justice: A sociological perspective. In S. Traub and B. Kittel (eds.), *Need-Based Distributive Justice* (pp. 91–131). Cham, Switzerland: Springer.
- Kreuger, R. A., & Casey, M. A. (2014). *Focus groups: A practical guide for applied research* (5th edition). Thousand Oaks, CA: Sage.

- Lamm, H., & Schwinger, T. (1980). Norms concerning distributive justice: Are needs taken into consideration in allocation decisions? *Social Psychology Quarterly*, 43(4), 425-429.
- Lamm, H., & Schwinger, T. (1983). Need considerations in allocation decisions: Is it just? *The Journal of Social Psychology*, 119, 205-209.
- Leventhal, G. S. (1980). What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. J. Gergen, M. S. Greenberg, & R. H. Willis (Eds.), *Social exchange: Advances in theory and research* (pp.27-55). New York, NY: Plenum Press.
- Leventhal, G. S., Karuza, J. Jr., & Fry, W. R. (1980). Beyond fairness: A theory of allocation preferences. In G. Mikula (ed.), *Justice and social interaction* (pp. 167-218). New York: Springer-Verlag.
- Liebig, S., Sauer, C., & Friedhoff, S. (2015). Using factorial surveys to study justice perceptions: Five methodological problems of attitudinal justice research. *Social Justice Research*, 28, 415-34.
- Liebig, S., Sauer, C., & Schupp, J. (2012). The justice of earnings in dual-earner households. *Research in Social Stratification and Mobility*, 30, 219-232.
- Morgan, D. L. (2014). *Integrating qualitative and quantitative methods: A pragmatic approach*. London: Sage.
- Narisada, A. (2020). Job pressure, the work-family interface, and the sense of distributive injustice: An elaboration of work-related inputs among 21st century workers.” *Social Psychology Quarterly*, 83(2),107-128.
- Pearlin, L. I. (1983). Role strains and personal stress. In H. Kaplan (Ed.), *Psychosocial stress: Trends in theory and research* (pp. 3-32). New York: Academic Press.
- Pearlin, L. I. (1989). The sociological study of stress. *Journal of Health and Social Behavior*, 30 (3), 241-256.
- Robbins, J. M., Ford, M. T., & Tetrick, L. E. (2012). Perceived unfairness and employee health: A meta-analytic integration. *Journal of Applied Psychology*, 97(2), 235-272.
- Sauer, C., & May, M. J. (2017). Determinants of just earnings: The importance of comparisons with similar others and social relations with supervisors and coworkers in organizations. *Research in Social Stratification and Mobility*, 47, 45-54.
- Schneider, S. M., & Valet, P. (2017). Relative standards of distributive justice: How social comparison orientations moderate the link between relative earnings and justice perceptions. *Social Psychology Quarterly*, 80(3), 276-287.

- Schunck, R., Sauer, C., & Valet, P. (2015). Unfair pay and health: The effects of perceived injustice of earnings on physical health. *European Sociological Review*, *31*(6), 655–66.
- Shamon, H., & Dülmer, H. (2014). Raising the question of ‘who should get what?’ again: On the importance of ideal and existential standards. *Social Justice Research*, *27*, 340–68.
- Siegrist, J. (1996). Adverse health effects of high-effort/low-reward conditions. *Journal of Occupational Health Psychology*, *1*(1), 27–41.
- Siegrist, J., Starke, D., Chandola, T., Godin, I., Marmot, M., Niedhammer, I., & Peter, R. (2004). The measurement of effort-reward imbalance at work: European comparisons. *Social Science & Medicine*, *58*, 1483–1499.
- Small, M. L. (2011). How to conduct a mixed-methods study: Recent trends in a rapidly growing literature. *Annual Review of Sociology*, *37*(1): 57-86.
- Tepper, B. J. (2001). Health consequences of organizational injustice: Test of main and interactive effects. *Organizational Behavior and Human Decision Processes*, *86*(2), 197–215.
- Törnblom, K., & Kazemi, A. (2012). Advances in justice conflict conceptualization: A new integrative framework. In E. Kals & J. Maes (Eds.), *Justice and conflicts: Theoretical and empirical contributions* (pp. 21–51). Berlin: Springer.
- Valet, P. (2018). Social structure and the paradox of the contented female worker: How occupational gender segregation biases justice perceptions of wages. *Work and Occupations*, *45*(2), 168–193.
- van Vegchel, N., de Jonge, J., Bosma, H., & Schaufeli, W. (2005). Reviewing the effort-reward imbalance model: Drawing up the balance of 45 empirical studies. *Social Science & Medicine*, *60*(5), 1117–1131.

Table 1. Weighted Descriptive Statistics

	Mean or proportion	SD
Justice evaluation	.87	2.06
Extra work	2.57	.76
Pressure	3.24	1.07
Cost of living	3.73	1.05
Financial Strain	2.31	1.05
Personal income	63,625.22	41,052.01
Education	4.91	1.56
Work hours		
<30 hours/week	.16	
30-39 hours/week	.35	
40-49 hours/week	.39	
50 + hours/week	.11	
Full-time	.81	
Sector		
Private	.54	
Government	.36	
Non-profit	.11	
Occupation		
Higher admin	.08	
Professional	.35	
Clerical	.18	
Sales	.09	
Service	.11	
Skilled	.08	
Semi-Skilled	.06	
Unskilled/Farming	.06	
Gender		
Men	.51	
Women	.49	
Non-binary	.01	
Visible minority	.13	
Age	40.43	13.21
Married	.57	
Number of children at home	.59	.98
Region		
British Columbia	.13	
Alberta	.12	
Saskatchewan	.03	
Manitoba	.04	
Ontario	.38	
Quebec	.24	
Atlantic Canada	.07	

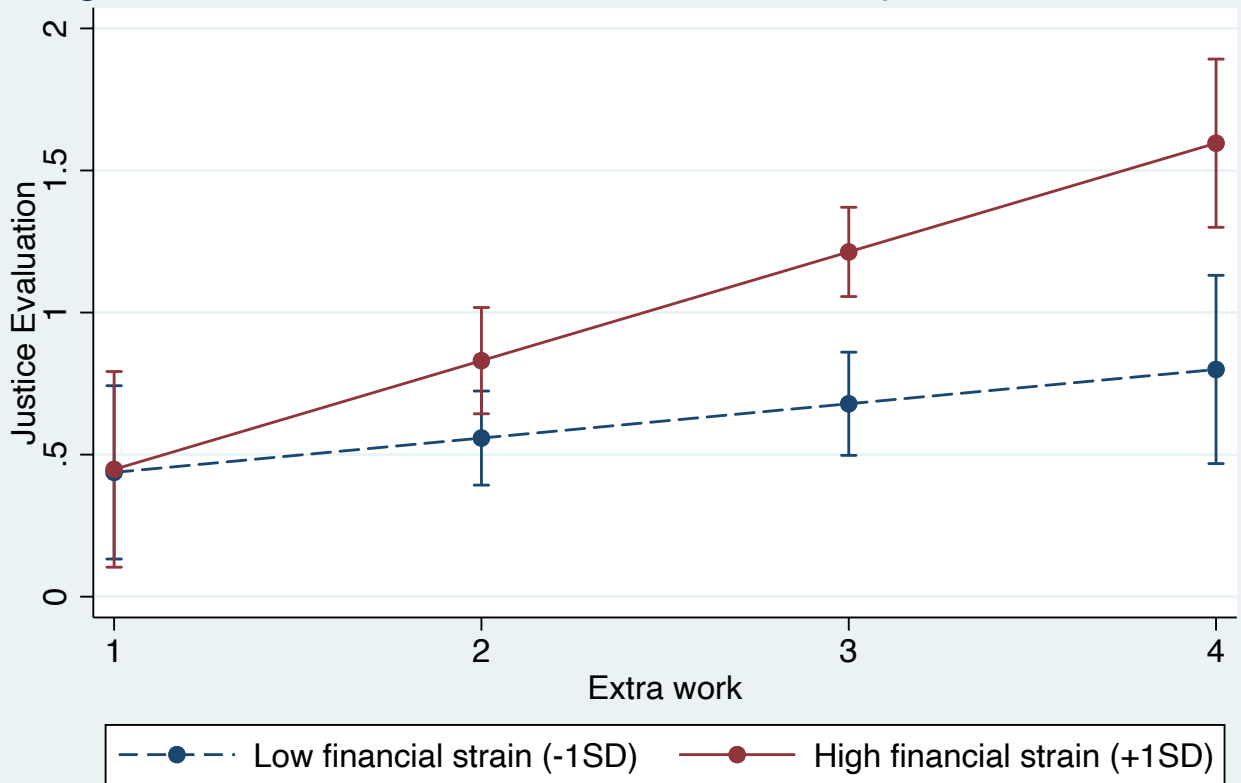
Table 2. Justice Evaluation Regressed on Elements of Effort and Need, Interactions, and Controls (N = 2,111)

	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Focal variables</i>					
Extra work	.511***	.298***	.263***	.255***	-.039
Job pressure		.299***	.255***	.217***	.214***
Cost of living			.284***	.225***	.221***
Financial strain				.215***	-.124
Extra work × Fin. strain					.128*
<i>Controls</i>					
Personal income (ln)	-.438***	-.439***	-.428***	-.359***	-.362***
Education	-.037	-.034	-.020	.001	-.002
Work hour					
< 30 hours ^a	-.388	-.287	-.262	-.246	-.243
30 – 39 hours ^a	-.046	-.005	-.015	-.038	-.042
50 + hours ^a	.056	-.036	-.042	-.057	-.051
Part time ^b	.189	.192	.150	.172	.184
Sector					
Government ^c	-.263*	-.265*	-.288**	-.289**	-.290**
Non-profit ^c	-.165	-.175	-.165	-.156	-.168
Occupation					
Professional ^d	.574**	.551**	.511**	.500**	.488**
Clerical ^d	.440*	.508*	.481*	.442*	.407*
Sales ^d	.646**	.691**	.630**	.585*	.551*
Service ^d	.726**	.822***	.783***	.716**	.705**
Skilled ^d	.531*	.652**	.563*	.547*	.506*
Semi-Skilled ^d	.655*	.796**	.726*	.705*	.680*
Unskilled/Farming ^d	.996***	1.086***	1.047***	1.016***	1.019***
Women ^e	.213*	.148	.150	.138	.140
Non-binary ^e	.244	.143	.082	.017	.023
Visible minority = 1	-.085	-.114	-.088	-.125	-.115
Age	.007	.008	.004	.004	.004
Married = 1	.095	.092	.087	.121	.127
Number of children	-.099	-.112*	-.128*	-.143**	-.146**
Region					
British Columbia ^f	.118	.108	.095	.136	.144
Alberta ^f	.044	.033	-.001	-.006	-.009
Saskatchewan ^f	-.232	-.200	-.276	-.316	-.335
Manitoba ^f	-.072	-.086	-.029	-.084	-.085
Quebec ^f	.095	.071	.173	.147	.149
Atlantic Canada ^f	.037	.038	.068	.058	.054
Constant	3.656	3.189	2.346	1.405	2.264

* $p < .05$, ** $p < .01$, *** $p < .001$

Note: Superscripts indicate the following comparisons: ^a 40 – 49 hours, ^b full-time, ^c private sector, ^d higher administrative, ^e men, ^f Ontario

Figure 1. Extra Work and Justice Evaluation by Financial Strain



Note: Predicted values based on Model 5, Table 2

APPENDIX

Appendix Table 1. Distributive justice items in the 2017 Canadian Work, Stress, and Health Study (CANWSH)

Distributive justice questions	Response choices
DJ1: “When you think about the pay you get for your work, do you feel you are . . .”	underpaid a lot; underpaid a little; paid about right; overpaid a little; overpaid a lot
DJ2: “Is your pay just? We are not asking how much you would like to earn—but what you feel is just given your skills and effort” ^a	much less than is just; a little less than is just; about just for me; a little more than is just; much more than is just
DJ3: “How fair is what you earn on your job in comparison to others doing the same type of work you do?” ^b	much less than you deserve; somewhat less than you deserve; about as much as you deserve; somewhat more than you deserve; much more than you deserve

^a This item is adapted from the Social Inequality module of the 2009 International Social Survey Programme (ISSP).

^b This item is adapted from the U.S General Social Survey.

Appendix Table 2. Demographics of Focus Group Participants (N = 22)

Gender	
Male	41%
Female	59%
Race/ethnicity	
White	59%
Non-white	41%
Age	
20-29	5%
30-39	14%
40-49	18%
50-59	41%
60-69	23%
Marital status	
Married	41%
Not married	59%
Education	
Less than a Bachelor's	36%
Bachelor's degree	27%
Graduate degree	36%
Personal income	
Less than \$20,000	5%
\$20,000 - \$39,999	23%
\$40,000 - \$59,999	9%
\$60,000 - \$79,999	36%
\$80,000 - \$99,999	18%
More than \$100,000	9%
