

Stress or strain? Job insecurity, job strain, and the health of contractual university teachers

by
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Job insecurity is well-documented throughout the North American labour market, affecting even highly educated workers (Kalleberg, 2011; Lane, 2011; Sharone, 2014). Its health effects are less often studied and are sometimes confused with those of job strain. My mixed methods study focused on the health challenges posed by job insecurity for a convenience sample of 32 contractual university teachers at “A Regional University” (ARU) in Canada (Cohen, 2013). Twenty-seven participants related job insecurity and job strain to their health and coping strategies in semi-structured interviews. This paper elaborates on when and how the health outcomes of job insecurity and job strain intersected. For 23 of the 27 interviewees, the stress of job insecurity had a greater negative impact on emotional health than did any other aspect of contractual teaching. Curiously, job strain was an issue for only eleven. Many participants embraced higher task demand, an aspect of job strain, in a bid to cope with job insecurity.

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Several misconceptions surround what is variously called “sessional”, “adjunct”, or “lecturer” teaching work. Contractual university teachers are often referred to as “part-timers”, even when hired on full-time temporary contracts. Those who are repeatedly hired every year with the same university are often considered “job secure”, despite their changing types of contract and alternate periods of unemployment. Those who confuse job strain with job insecurity assume that contractual university teachers are overwhelmed their work. In reply, I offer insights from a mixed methods study of a small sample of highly educated contractual university teachers at “A Regional University” (ARU) in Canada. The focus of this paper is on whether job insecurity and job strain have the same or independent health outcomes for this group. And do their high levels of education offset any negative health effects of job insecurity or job strain?

The terms *job insecurity* and *job strain* are not interchangeable. In this study, *job insecurity* incorporates both the concrete condition of being hired on temporary, fixed-term contracts according to employers’ needs *and* perceptions of precariousness with continual threats of job loss, powerlessness, and having “no ongoing presumption of permanency or long-term tenure” (Louie et al., 2006, 466; Greenhalgh and Rosenblatt, 2010; Glavin, 2015).

Unlike job insecurity, *job strain* occurs in all jobs at some point and is not always problematic for health. As defined by Karasek and Theorell (1990), *job strain* results from a combination of high task demand, low control over the types and pace of job tasks (e.g. monotonous, repetitious), and low support in the workplace. This is not the same as the health

effects of *strain* used by some to refer to the exhaustion or stress resulting from job insecurity (de Cuyper, Witte, Vander Elst & Handaja, 2010; Glavin, 2015).

A brief literature review of the health effects of job strain and job insecurity

Temporary jobs are proportionately increasing throughout the labour forces of North America, Europe, and other economically developed countries (Greenhalgh and Rosenblatt, 2010; Kalleberg, 2011; Wagenaar, Kompier, Houtman, van den Bossche, & Taris, 2012). In Canadian and American universities, where tenure-track positions represent an epitome of job security, the estimated proportion of job insecure contractual teaching positions has risen from 30% in the 1990s to more than 50% by 2010 (Slaughter and Rhoades, 2004; Turk, 2008). Most of the literature during that period was based on quantitative research, with some narrative studies detailing the conditions and impact of job insecurity for tenure and academic freedom (Canadian Association of University Teachers (CAUT), 2004-2010; Donoghue, 2008; Rajagopal, 2002). Fewer studies took the perspectives of contractual university teachers themselves or looked at the health repercussions of their job insecurity.

Before the 2000s, occupational health (OH) research on temporary jobs concentrated on job strain among low status, low income and/or less educated workers. Usually quantitative, OH studies in Australia, Canada, the US and Europe measured job strain or ergonomic pressures rather than the psychosocial aspects of job insecurity. In these earlier studies, the health effects of job strain included physical disorders of the digestive, coronary and circulatory, immunological, and musculo-skeletal systems, long with attendant repetitive stress injuries, fatigue, backaches, and muscular pains (Strazdins, D'Souza, Lim, Broom and Rodgers, 2004;

Quinlan, Mayhew & Boyle, 2001; Kalleberg, 2011). When job strain was defined solely using Karasek and Theorell's model, job insecurity was frequently left out of the equation altogether.

Job strain occurs at least occasionally in most jobs, usually as demand peaks. Secure workers cope through personal adjustments and research finds that professional workers' control or creativity or ability to problem-solve in their work might mediate the health effects of job strain more than would lowering workplace demands (Dressel and Langreiter, 2008; Mirowski & Ross, 2007). Even among secure workers, however, job strain is associated with higher absenteeism, lower levels of mental and physical health, and higher rates of depression and stress (Duxbury and Higgins, 2009).

In European and British studies of all university teachers, stress and burn-out are associated with high demands at work (Bilge, 2006; Dressel and Langreiter, 2008; Taris, Schreurs, Van Iersel-Van Silfout, 2001; University and College Union, 2012). Professors' occupational prestige and educational levels do little to eliminate job strain. When looking at Dutch university teachers, Taris et al. (2001) found more emotional exhaustion, withdrawal behaviours and health complaints among those with high job demands and job strain than among those without job strain. For these full-time university professors with tenure and academic freedom, job strain is a more pressing issue than job insecurity. Relatively few studies have examined job strain from the perspective of job insecure contractual university teachers.

How do the health effects of job strain and job insecurity compare? Job insecurity is a qualitatively different experience than job strain and research among European, British, Canadian, and American workers shows independent health effects. Job insecurity is associated with symptoms of *chronic* mental stress (e.g. depression, mood disorders), emotional problems

(e.g. anxiety, poor sense of mastery and lower self-esteem), and physical effects (e.g. coronary problems) (Burgard, Brand and House, 2009; Strazdins, et al., 2004; Lewchuk, de Wolff, King, & Polanyi, 2006; Scott-Marshall, 2010). In their analysis of a Dutch cohort study of almost 10,000 workers, Wagenaar et al. (2012) found that poorer health and deteriorating attitudes towards work accompanied changing contracts with the same employer, such as from permanent to temporary positions.

Job insecurity affects the health of secure and permanent colleagues as well. In a workplace culture of uncertainty and growing job insecurity, generalized stress and the perception of persistent job insecurity is associated with poorer self-rated health, disassociation, and depression among all workers in British and American studies by Burgard, et al. (2009), de Cuyper et al. (2010), Ferrie, Shipley, Stansfeld and Marmot (2002), and Greenhalgh and Rosenblatt (2010). Likewise, increases in the proportion of part-time and contractually hired teachers was associated with rising pessimism and declining job satisfaction and workplace morale in the European surveys of academic professionals by Cavalli and Moscati (2010). Cavalli and Moscati argue that the consequent erosion of tenure creates greater anxieties among both tenured-stream and tenured faculty.

Perception is important. Analysing data from a national panel of American workers, Glavin (2015) found that age and prolonged exposure to the threat of job loss were significantly associated with negative health effects. The younger workers exhibited less anger and stress and better self-rated health than middle aged and older workers, but the difference between the latter two was not significant. Glavin proposes a few reasons for this, including that middle aged and older workers are more likely to have prolonged exposure to job insecurity which then translates into chronic strain. Middle aged workers usually have more dependents than their older or

younger counterparts; they may be more vulnerable to job insecurity. Glavin speculates that job insecurity is now normalized among younger workers, with a lower negative effect on health. He also raises the possibility that older workers retire earlier when health issues come up, skewing the results for that cohort.

Higher education is a positive social determinant of health in Canada and the US, delaying the onset and slowing the progression of chronic illnesses and functional limitations (Raphael, 2010). However, knowledge workers displayed heightened perceptions of job insecurity and risk in American, British and European studies by Sharone (2014), Lane (2011), the University and College Union U.K. (2012), and Taris, et al. (2001). Having invested so much in their own education, perceptions of being comparatively under-rewarded were linked to higher levels of emotional exhaustion, cynicism and health complaints among Taris, et al.'s (2001) Dutch university workers.

Presenteeism is another complication of health among job insecure workers who feel they must work through illness and refrain from complaining about chronic illnesses (Herd, Goesling and House, 2007; Heponiemi, et al., 2010). Anecdotally, contractual university teachers frequently engage in presenteeism. In their autoethnographies, Gadbois' (2002) and Parsons (2006) describe their worries over losing future contracts if they called in sick. Ontario university workers on short-term research and administrative contracts in Lewchuk's et al (2006) survey felt they could do little to alleviate their sleep disorders, unhealthy eating, weight gain, deterioration, and cumulative nervousness. Instead, they had to exert considerable efforts to stay employed. As workplace health becomes more individualized, even highly educated workers hide the stresses of job insecurity and other work conditions (Bourdieu, 1998; Pugh, 2015; Sennett, 1998).

Researchers are now taking greater pains to distinguish between the independent health effects of job strain and job insecurity and how the two sometimes intersect. For example, in research on female health professionals across the U.S., Slopen et al. (2012) found that those with high job strain were 38% more likely to have a cardiovascular disease (CVD) incident. Job insecurity did not predict CVD incidents but it was associated with the related risk factors of “smoking, physical inactivity, hypertension, diabetes, hypercholesterolemia, and BMI in bivariate analysis” (Slopen et al., 2012, p. 7). Quinlan, et al. (2001), Strazdins, et al. (2004) and Statistics Canada (2007) found that the combination of job strain and job insecurity heightened the probability of mental and physical health problems, anxiety, and low self-reported health.

In this paper, the health effects of job strain and job insecurity in participants’ narratives are considered separately and then in terms of where they intersect. Overall, participants found it easier to cope with the job strain of contractual university teaching than with its job insecurity.

Methods and Sample

The research for this mixed methods study began immediately after it was approved by my university’s Interdisciplinary Committee on Ethics in Human Research. Thirty-two respondents either volunteered in response to an advertised request or were snowball sampled.

The study proceeded in two stages in a four month academic semester. For the first stage, each of the 32 respondents met with me (the sole interviewer) for about a half hour. By their choice, most initial meetings were in respondents’ campus offices. After assurances of privacy and confidentiality according to the guidelines of the Social Sciences and Humanities Research Council of Canada (2009), participants signed a consent form for the first stage of the study and answered a brief demographic survey. They then completed the first *SF-12v.2® Health Survey* (Quality Metric, 2007) which gives a quantitative comparison of each respondent’s health to the

age- and gender-adjusted norms of the 1998 US population. It also generates group reports. Designed for clinical use by doctors to gauge patient health, the *SF-12v.2® Health Survey* is useful in studying small non-representative samples.

These initial meetings helped set the parameters of the group and provided participants with a reference point for the second stage of the research later in the term. During these first meetings, respondents and I compared experiences and exchanged institutional information on working contractually. I acknowledged my own participation as interviewer and data analyst and self-identified as a contractual teacher. Those who worried about a victim-oriented interpretation of their interview narratives were directed to a brief autoethnographic paper on how my personal choice of working contractually was embedded in the contradictory discourses surrounding work and family for women. Respondents were assured that they were free to refuse questions and withdraw from the study at any time, as guaranteed in both consent forms.

Those respondents who agreed to go on to the second stage of the study signed a second consent form and completed a task diary. The task diaries provided both quantifiable and written qualitative data. A second task diary and another *SF-12v.2® Health Survey* were administered near the end of semester to record any changes in participants' health or daily activities. An open-ended, semi-structured interview concluded the research near the end of the semester.

By the end of the fieldwork semesters, 32 respondents had completed the first stage of the research and 24 completed all of the second stage. Four more responded to parts of the second stage and only four did not complete any of the second stage. The data collection concluded with 32 initial meetings, 32 demographic surveys, 32 first stage and 28 second stage *SF-12v.2®*

Health Surveys, 25 mid-semester and 13 end-of-semester task diaries, and 27 end-of-semester semi-structured interviews with participants.

The final 32 respondents comprise a *convenience sample* who self-selected and volunteered to participate in the study. Convenience sampling has constituent biases that can affect recruitment positively or negatively and in this study, recruitment may have been discouraged by perceptions of risk. Nevertheless, 32 of approximately 440 per course and per term contractual university teachers at ARU did participate in some or all of the research. I am confident that they did *not* over-report the negative health effects of their job insecurity for two reasons. The first is that several participants carefully monitored themselves for any over-exaggeration, claiming that “the same can be said of any job” (Sarah), even while relating specific health issues to the insecurity of contractual university teaching. The second reason was due to the results of respondents’ *SF-12v.2*® *Health Surveys*. They were generally higher on physical health when compared to US 1998 population norms on age and gender, as predicted by the health determinants literature on education (Raphael, 2010). They were much lower on mental health, corroborating the negative health effects of job insecurity even for the highly educated.

The sample described

Job insecurity framed the experience of contractual university teaching at ARU for all of the 32 participants in this study, though in varying degrees. Eighteen were on *per-term* contracts and 14 were hired *per-course*. Twenty-five of these 33 regularly switched between per term and per course teaching as contracts became available. Per-term teachers at ARU had an eight or twelve month contract to teach three or four courses in each four month semester. In contrast, the teaching load for tenure track and tenured faculty was five courses per year. With an eight month

contract, per-term contractual university teachers were temporary members of the same faculty association as tenured and tenure track faculty. They could only receive health benefits and contribute to a pension plan for the duration of their contracts and their seniority rights were limited. Many drew Employment Insurance (EI) or switched to per-course teaching in the intervening third semester.

All of the 14 per-course contractual university teachers taught one or two courses over a four month semester, at markedly lower pay. They did not qualify for health benefits or pension contributions. All applied to teach courses in the following semester. Per-course respondents were not represented by a union or association at the time of this study. They had no formal seniority rights.

To participate in this study, respondents had to rely on contractual teaching as their primary source of income, a key element of job insecurity. No other employers within commuting distance were hiring university teachers at the time. The sources of job insecurity described by participants included: the process of contractual hiring and continual reapplication; a lack of collegiality and contractual university teachers' marginalization in the academic hierarchy; social comparison and income inequality; and not being able to engage in the long-term financial planning that can have a stabilizing effect on health (Schellenberg & Ostrovsky, 2008).

Participants discussed the health implications of their job insecurity throughout the semi-structured interviews. I categorized their narratives by *level of job insecurity* based on nine indicators linked to contractual status. These included direct references to their (1) job insecurity and (2) the uncertainty of future contracts. Other indicators consisted of having (3) little to no

departmental support, (4) ambiguous roles within their departments, and (5) negative workplace interactions. Participants variously described (6) feelings of having little control, (7) difficulty in planning for the future, (8) financial problems, and (9) having no future plans for changing their work. Eight participants were categorized as *low on insecurity* because they had three or fewer of these indications. With four to six indicators, nine participants were *medium on insecurity*. The 15 with seven to nine indicators were *high on insecurity*. Stephanie was one of these 15:

Tremendous stress. Tremendous stress. From wondering where your next pay cheque is coming from and whether or not you're working next semester, to making your deadlines, getting through the exams, wondering about my own [PhD] work and when I'm going to get that submitted? So it all makes a really big impact. *I think my health is a lot worse now than what it was before I started teaching* [emphasis mine] (Stephanie).

Overall, participants scored much lower on mental health and slightly higher on physical health than their comparison groups in the *SF-12v.2® Health Survey*. The sample's mental component summary (MCS) average of 42.11 and physical component summary (PCS) average of 54.48 were measured against a standardized 1998 *SF-12v.2® Health Survey* US population norm set near 50. The quantitative findings from this convenience sample cannot be used in inferential statistics, but they help describe the sample and inform participants' narrative data, the focus of the remainder of this paper.

The health effects of contractual teaching

Of the 27 participants who completed the semi-structured interviews, 26 directly related the job insecurity of contractual work to emotional and physical health disorders. Participants were given the same definitions of job insecurity and job strain as used by the researcher and

asked to analyze their own health experiences. They identified both emotional and physical aspects of health as important to their daily functioning, comfort and life balance.

Health encompasses more than just what's going on in the physical body. [It] is more than the absence of an illness, it's also emotional, mental, spiritual ... an invigorating feeling, or a happy feeling. There are many days when I don't have a headache, I haven't stubbed my toe, I'm not really in any pain, but I just feel like crap! And part of that is emotional because the end of the semester is coming and then what? Will I have a job? So ... in order for health to be more than just the aches and pains and high blood pressure or whatever, you need that ... [feeling of] life security to be happier (Gerry).

Participants carefully distinguished between the health conditions they did or did not associate with job insecurity, beginning with their physical health.

Challenges to physical health

None of my health issues are related to my teaching situation. Compared to people working 9 to 5, I've got good health. I can take off in the middle of the day, go running. Most people can't. And lots of people have jobs that hurt their health far more than mine. I mean the job itself, *separate from being contractual* [emphasis mine], is about as healthy a job as any (Bob).

Like Bob, almost half (13 of 27) of the interviewees in this sample did not associate any physical health problems with contractual teaching. They described their teaching work as "relatively healthy" (Renee).

Slightly more than half (14) of the interviewees related one or more physical health issues to the work of preparing for classes, grading examinations and assignments, and extended periods of sitting at computers. Most conceded that the same applies to tenured faculty, but four specifically attributed their carpal tunnel syndrome, sciatic nerve damage, and eye strain to the

extra computer work they associated with contractual teaching. None had an official ergonomic assessment of their work station, though several worked with the “ancient” (Bruce) computer equipment commonly allocated to contractual university teachers. Only a few sought out this information for themselves.

Student-teacher contact exposes both to flus, colds, viruses and bacterial infections. Five participants speculated that contractuels “may suffer more than [full-time] faculty” (Frances) because of last minute contracts and larger class sizes. They felt more exposed because they had more daily and “front-line” (Della) interactions with students.

[laughs] My health is very different now than it was at the beginning of the term, that’s for sure! Over the past 2 weeks I’ve been on antibiotic for a sinus infection, a-gain! Which always comes up at midterm exam time and then again for finals. ... I think it’s because all the students are sick, so they pass in papers that are just balls of infection. It’s hard to escape. Plus the physical strain of having to grade so many papers. I’ve had very little sleep in the past 3 weeks. It all impacts your physical well-being (Stephanie).

The sedentary work of academics indirectly affects physical health as well. Four participants linked weight gain to sitting at a desk and working at home. With constant access to food, they tended to “stress eat” (Teresa). Two others attributed their weight loss and six related sleep disturbances to the stress of contractual work. Another six felt that they needed more exercise. Working contractually affected the level of physical activity they could schedule.

Part of the problem for me is that I never feel like there’s a stable sense of routine. I’m always worrying and scrambling about this, that and the other thing, to ensure that there will be another semester of work. That’s taken away from even just scheduling physical activity. I was always a runner, a skier, a skater ... but the more I got into this kind of work, the less I did those things. ... And then *when you’re feeling worn out for other reasons* [emphasis mine], it’s harder to get physically active. I guess that sounds like a bit of an excuse (Jon).

None of the respondents had ever officially registered physical health incidents or emotional health problems in a workplace report.

Challenges to emotional health

Emotional health was far more problematic for these contractual university teachers. Respondents scored poorly on mental health in the *SF-12v.2® Health Survey* as individuals and as a group. The sample average of 42.11 was far lower than the US 1998 norm set near 50. The most remarkable result in the *SF-12v.2® Health Surveys* was on the [work] “role emotional” (RE) where 75% of the sample scored below the norm. When cross-tabulated, 11 of the 15 *high on job insecurity* participants (73%) were individually more than 10 points below the comparative norms for mental health, compared with two of eight (25%) *low on job insecurity* participants. Similarly, 73% of the *high on job insecurity* self-reported to be in poor health in the interviews. Only six among the 32 respondents scored at or above the comparative mental health norms in their *SF-12v.2® Health Survey* scores. These results suggest that job insecurity has negative effects for emotional health depending on its level of intensity.

The qualitative interviews paint a richer picture. Naomi, for example, found her “role emotional” as a contractual teacher extremely difficult at particular points in her career.

I do think my health has been affected by working as a contractual ... in the early years there were three or four years when it seemed like I could never get rid of the anxiety, the racing heart thing. I guess it was before I started getting term contracts and I was still on per-course. ... I was really very anxious all the time, almost having panic attacks. Because of teaching, trying to please students, to please the department, trying not to say anything that would get me in any trouble, keeping under the radar, and so on. That really took its toll in terms of my mental, my *emotional* health [italics mine].

All but four of the 27 interviewees associated difficult emotional health symptoms with contractual teaching: Ten noted anxiety, four had symptoms of depression, 18 felt out of control, eight were overwhelmed by workload, eight experienced occasional panic attacks, and 21 felt frustrated in their workplace interactions because of their contractual status and job insecurity. Only two respondents cited pre-existing problems with anxiety and depression and stated that these worsened with the stress of contractual work. Naomi (above) was not one of these two.

Interviewees felt the pressures to always be available and accept any contract, which negatively affected their emotional health. Jon verbalized the apprehension felt by those who could not take time off teaching to improve emotional health because in doing so, they would lose whatever implicit rights to work they had so carefully built up:

There's never been a semester that I haven't wanted to [teach], but if I did take time off to recuperate ... there's always the issue of what happens to your courses? We're not in an institutionalized position, really. We get reassurances—"oh, we value your work, we wouldn't screw you." But two semesters later, when there's new people around or new financial situations...[it can all go out the window?] Yeah. And what was said before doesn't mean anything because we have no official rights in the matter. It's all there but never all in focus at one time. All those tensions that we gripe and worry about are still there (Jon).

Several participants described how the emotional stresses of job insecurity exacerbated physical symptoms, including sleep disorders, weight changes, exhaustion, elevated cholesterol and/or blood pressure levels, digestive problems, and muscle pain or tension.

Oh yeah, like a few times I'd get up in the morning and I'd be brushing my teeth –I'm not sure how this is going to translate on the tape. I never throw up and I didn't throw up then. But I'd be brushing my teeth and I'd feel like... [nauseous?] yeah. I'd urge, or retch, like I'm going to be sick but I'm not sick. So I went to the doctor saying 'I think there's something wrong with me.' ... and she asked 'well, what's going on in your life?' It was the stress. That was [later in the semester] when I found out my contract would not

be renewed. They promised it and [then withdrew the contract]. I was just feeling physically and emotionally rotten about how that all went down (Sylvie).

Emotional health worsened for participants like Sylvie and Sophie (next) as they neared the end of their contracts.

I've been crying a lot and I don't normally cry. I'm usually pretty solid, I don't let too many things bother me to the point where I'm not able to function properly. But the past couple of weeks with the lack of sleep, the physical strain of knowing what I have to do and under those time constraints, along with all that business over whether or not I will get a contract next term or next year. It just beats you down all the way around (Sophie).

Sophie was one of the 11 (of 27) interviewees who reported *job strain* as well as job insecurity. Which, then, had the greater impact on emotional health?

Health effects of job strain in contractual teaching

In this research *job strain* is defined by Karasek and Theorell's (1990) model which combines high task demand, low control over the pace and types of job tasks, and low support in the workplace. At the outset of the study, participants estimated the amount of time spent on teaching work and the level of preparation required for each course in the demographic surveys. These estimates were later compared to the data from their task diaries. Notably, many participants found it difficult to remember and then find the time to hourly record their activities throughout the day. They certainly had high task demand, but did not always interpret this as job strain.

In addition to their work in class, teaching requires time to research and prepare lectures and discussions, meet students during office hours, and grade, grade, grade throughout the

semester. The actual workload for each individual varies according to class size, the number and type of evaluations done, the volume of new materials introduced in the syllabus, and the teacher's experience with that course. Class sizes for this sample ranged from 15 to 300 students, depending on the department and level of the course. Grading for the larger classes could actually amount to less than for the smaller if the larger classes only tested via multiple choice exams and had few writing assignments needing comment. Twelve participants taught both large classes and smaller, advanced courses with several written assignments to grade. The other 20 taught only the larger first and second year courses. Nevertheless, several of these 20 included writing assignments as "good teaching" strategies and evidence of the high quality of their teaching, often in response to their job insecurity. This created a sense of *self-made security* but it also increased task demand and potentially job strain.

Teaching time further depends on the number of courses in the contract and other work obligations. In the semester they were interviewed, seven of the 32 respondents taught only one course, seven taught two, 15 taught three courses, and three respondents taught four or more. Respondents typically put in one 6.5 to 8 hour day a week for each course they taught. Their average teaching workload was 24.2 hours per week, median 22 hours. The majority found their workload reasonable. Only three participants had seriously miscalculated their estimates of workload in the demographic surveys when these were later compared to their task diaries results. They forgot to count the six or more hours a week spent checking email and planning the next teaching day and were surprised when this hidden work was systematically recorded in the task diaries. All but two participants completed their task diaries on a "typical teaching day" which did not capture the grading overload that occurs at peak periods of the semester.

When asked, 11 interviewees (six per-term and five per-course contractual university teachers) said they were *job strained*. Five located this job strain in their lack of control over course decisions or in the division of teaching labour when co-teaching with full-time faculty.

Well, there's definitely job strain. I'm multi-tasking all the time ... just squeezing it all in. ... the course co-ordinator does very little of the actual grading or teaching work. And I'm finding that the changes I suggest don't always get done because they have to be passed on to somebody else [for approval], so there's certainly a lack of control there (Chrissy).

Six (of 11) *job strained* interviewees were overwhelmed by the task demands of preparing new courses, teaching larger classes, and combining teaching with other activities. Course preparation constitutes a significant source of high task demand. Fifteen participants were teaching relatively new (to them) courses at the time of the interviews. Many pointed out that the preparation required to teach a course the first time is far more time consuming than revising for second and subsequent deliveries of that course.

Job strain was surprisingly high actually. It was two courses that I had taught before, but I was far more comfortable with one because [it's more in my area of research]. And I knew about it in July. I didn't know that I had a TA [teaching assistant] until the end of September, so I didn't feel like I had control, but I still felt fairly well prepared for [it]. I found out I had the other course about three weeks before arriving here so I was just behind the eight ball the whole time. Yeah, I didn't really enjoy teaching that course, I found it quite stressful. I have a background in it but that's going back away, [so] I was refreshing for lectures all the time, which is not the case if you teach a course two or three times. And then doing additional reading to make sure that I've got my theories right. ... my expertise didn't span all those. So, yeah, I found strain quite tough. It was only two courses per-course, but it ended up being a lot more work than I [expected]. It was too much in that [both] were fairly large classes and [one was] a course I hadn't taught before. That caused quite a bit of stress (Damien).

Class size is important here. Six *job strained* interviewees did not initially anticipate the magnitude of the workload in their first year courses and found this particularly stressful.

[Researcher: Are your teaching days defined by job strain?]

Absolutely! ...low control is definitely guiding everything I do here. And it all has to do with teaching. And I don't know but for whatever reason, I seem to have a higher course load all the time, in terms of numbers. I know that it doesn't make a big difference (to in-class time) but if you have 3 first year courses with over 80 students in each ... So, as I said on the task diary, I get off at one and go home and usually the whole afternoon and evening are spent on grading. I haven't gone out with my husband in about a month. You know? And this weekend again I have about 150 papers to do for Monday. ...Everything in my life is strained ... and I feel that I have very little control over my work. In and of itself, my work is out of control (Stephanie).

When combined with studying or moonlighting off campus, the high task demand of contractual teaching felt like a further "lack of control". Six per-course respondents in this study worked at least 10 hours or more a week in outside jobs such as crafts and arts work, data entry, baking, retail work, and bartending. Four of these six were single and unable to rely on a partner's income. Juggling two or more low-paying jobs added to their stress and strain.

When I woke up I could feel my heart [racing], before even taking my pulse. This is the first thing in the morning, like I never had five coffees or anything. I was just a little shaky, feeling a little bit down and thinking I've got all these papers from these ADD kids to look at, you know what I mean? And I haven't really had time to prepare for [my other job tonight]. I mean I can get through it, but I like to be perfect (Phillip).

Contractual teaching wreaked havoc with the time and energy that the 12 graduate students in the sample could devote to their studies and their health. Damien, for example, strove to

[Find a workable balance] before the dissertation comes to a complete halt. You can't sacrifice everything for a job that is not permanent ... Where the stress [of job insecurity] really manifests itself, though, is not ... in the teaching but in that it detracts from my other work. Because I know that, as far as my C.V. and my career goes, these two courses

aren't going to matter [at all]. My dissertation, publication, research proposals, conference networking and grants are, and I'm not doing those things.

In contrast to *job strained* interviewees, the 16 *without job strain* found the work of contractual teaching flexible and manageable. They did not teach any less than those with *job strain*; in fact, two thirds *without job strain* taught on term contracts with three or more courses whereas almost half of the *job strained* participants taught only one or two per-course contracts.

Joanne explained this anomaly:

The irony, of course, is that when I'm teaching one course, I put way more energy into it. I take it much more seriously because I can. When I'm teaching a full plate, I don't have the energy to put into each one of those individual courses, right? So yeah, as a contractual, I've learnt a lot about the importance of scheduling.

Most *without job strain* developed strategies for dealing with fluctuating workload through the cycle of the semester. Contractual university teaching can afford some control over task scheduling depending on departmental policies, teaching and research workloads, and teaching experience. This control can offset perceptions of high task demand. For example, seven participants *without job strain* appreciated the routinization of first year courses or the formal collaboration on teaching within some departments. They pointed out that established teaching standards and sharing tasks like constructing common exams helped lower task demand. More importantly, they felt they were treated collegially and that any workplace tensions were a result of inadequate communication rather than their status as contractuales. Control further offset task demand for four of the six participants who had dependents younger than 12 years of age. They dovetailed their teaching with family and other roles, to alleviate the strain: "It's one of the reasons why I'm here and not anywhere else" (Barbara).

Many participants controlled job strain by carefully scheduling their time through the cycle of the semester. Nevertheless, six of the 16 interviewees *without job strain* still found the demand in the last half of the semester exhausting because of grading. Jon was perhaps more candid than others in describing how he coped.

Yeah. You can't do it over a long period of time. I dread those spots in the term when I know I have 80 term papers to mark. To be honest this summer, I've eliminated it, for my xxxx course. I've always had them do a major paper but I've decided that one way to take some of the stress off is to give them something else [that was quicker to grade but] that might actually be useful [in developing students' skills].

All 16 interviewees *without job strain* self-identified as a "good teacher" and 12 maintained they had full or near total control over the content and methods of their teaching work.

I don't have "lack of control".

[Researcher: So you feel that you do have control in your work?]

Oh absolutely. I mean if I didn't, I wouldn't take the job. Working on contract, you get an offer, you set your hours, you can work from home, in theory. But you can't in practice. You [still] have to come in and see the students [laughs] (Bob).

Intersection of Job Strain and Job Insecurity for Health

When directly asked if their daily activities were more affected by job strain or by the overall insecurity of working as a contractual, participants' answers were well considered, nuanced and complex. More than anything else related to their work, they identified job insecurity as having the greatest negative impact on their emotional health. The end of semester and the termination of teaching contracts generated stress for everyone. Contractuals do not get paid between contracts and the hiatus can last from three weeks to whole semesters or even

years. For many, this downtime is marred by financial stress and worry over getting the next contract. One participant dreaded the upcoming Christmas season for this reason.

Job insecurity, however, did intersect with job strain in unexpected ways. Several participants described how they coped with job insecurity by intensifying their teaching practice and tasks.

Yeah, there's definitely a high demand. But there's a bit of control over that. I know that I give out more assignments in the first and second year courses than do most of my colleagues. ...But, having taught a lot, my feeling is that the students ... need a few assignments and quizzes to keep them on track and I'm willing to do that. And I know it takes a lot of time, I spend a lot of time grading.

And students don't like it at first. But I tell them as I go along, "this isn't happening in your other classes, is it? And see how well you're doing in this class because you know you're going to have a quiz, or ...an assignment, so you are always prepping, you know you're doing better."... I could just give them a midterm and a final and that's it. But what kind of a teacher is that? Does that really help the students? No. That's why I do [a lot of] grading, but I do have control over it (Gerry).

For participants like Gerry, high task demand indicated that they were working hard and doing a good job. Their understanding of what "good teaching" entails and their tenuous contractual hire compelled them to "go above and beyond" and assign extra written work to help struggling students. This added to their grading load but it also helped them feel in control and tempered their perception of job strain. Eighteen of the 27 interviewees volunteered for extra-curricular university committee work in a similar bid to do a good job.

Overall, participants' lack of control over their access to their contractual work, their job insecurity, had more of an impact on emotional health than did high task demand. Dealing with high task demand seemed relatively manageable when compared to dealing with job insecurity.

Discussion

This paper offers a qualitative perspective on how the health effects of job insecurity and job strain are independent but also interrelated in unexpected ways for highly educated contractual university teachers.

Job insecurity had a significant impact on the mental health levels & stress of 23 of the 27 interviewees, corroborating much of the findings in the literature reviewed at the beginning of this paper. Fourteen participants suffered additional repercussions on their physical health, but as with Slopen et al.'s (2012) respondents, these were linked to risk factors rather than acute incidents. As in Wagenaar et al.'s (2012) study, frequent changes in contractual status exacerbated health problems for more than half of the 25 who regularly switched between contracts.

During the semi-structured interviews, both per-course and per-term participants maintained that job insecurity had a greater impact on their health than did job strain. This was supported by the *SF-12v2™ Health Survey* results in which the 11 self-identified *job strained* interviewees had only slightly lower mental health scores than those *without job strain*.

All participants in this study were highly educated with some variation in the levels of graduate and post-graduate degrees. Few differences appeared in the cross-tabulations of participants' *SF-12v2™ Health Survey* results with education, or with household income and marital status. However, in the narratives, six participants associated their higher education with greater anxiety, measuring the stresses of precarious employment against their years of investment in education, as found by Taris et al. (2001) and others. They still had substantial student debt and were extremely stressed about finances.

A few anomalies appear when comparing the results of this study against Glavin's (2015) quantitative study representing a wide cross section of American workers. At the risk of mismatching quantitative and qualitative data, I found that age had a different implication for the relative health outcomes of job insecurity in this research. Glavin's (2015) youngest workers were the least stressed while the younger workers in this study had the worst comparable mental health outcomes of the sample. A possible explanation is linked to educational investment and expectations when preparing for the academic job market. More research is needed to explore how the health effects of job insecurity differ by age and cohort expectations. We need to question the common assumption that younger workers are inured to the health effects of chronic job insecurity, even if it is now a normalized part of their labour market experience.

In contrast to younger and older contractual university teachers, the 11 middle aged workers in this study had the lowest physical health scores, partially illustrating Glavin's (2015) quantitative findings. The oldest workers in this research, however, had better relative mental and physical health. Aside from the small sample size of this study, one caveat was that two of the four older teachers here enjoyed secondary incomes from pensions accrued in previous jobs. Contractual teaching was still their primary source of income but their pension supplements placed them well above the national average income at the time. The other two older workers were preparing for retirement with tenured spouses. As Glavin speculates, older workers in such circumstances might not have been as worried about the effects of job insecurity for their retirement. This is not likely to continue. As job insecurity increasingly defines the careers of currently middle aged and younger workers, its negative health effects will be exacerbated by a significant decline in pension benefits. Twelve participants in this study were worried about their

lack of pension coverage and expected to be less employable as they aged. This is another area where more research is needed.

Another anomaly with Glavin's (2015) findings occurred when length of service in this study appeared to reduce rather than heighten the negative health effects of job insecurity. In terms of job insecurity, four of the six respondents with less than two years of service were *high on job insecurity*, compared to only three of the ten who had been working as contractual university teachers for more than a decade. Altogether, nine of the 15 who were *high on job insecurity* had taught on contract for five years or less.

Length of service was also implicated for the six of eight participants who were *low on job insecurity*: they had service records of six or more years. When describing how they dealt with the negative health effects of job insecurity, they alluded to the *creativity* and *autonomy* of teaching and choosing this work over other alternatives. They regularly upgraded their teaching skills and volunteered for committee work without formal credit. These professional activities along with a strong sense of occupational identity as "good teachers" contributed to their sense of *self-made security* and having *social capital* in their workplaces. All of these qualities protect health according to Abbott (2009), Mirowski & Ross (2007) and Oksanen et al. (2008). Those contractual university teachers with longer service records also felt they were better organized throughout the semester and better able to deal with job strain than they had been earlier in their careers. Handling high task demand afforded a feeling of control and bolstered participants' self-identity as a "hard working" professional.

As helpful as these coping strategies were, participants had to develop them individually and alone. Job insecurity was an individualized risk and participants wanted it recognized as an

occupational and collective health issue. Little was offered by the university administration to ameliorate its health repercussions. The articulate and insightful responses of these contractually hired university teachers underline the need to continue exploring how job insecurity affects health differently for workers in different social and occupational locations, and how its adverse health effects can be alleviated.

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