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RESEARCH PAPER

Association of dual-earner parents' perceptions of time-stress with leisure participation: an analysis of gender and social context

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With a population-based sample of dual-earner parents (951 women and 1059 men), we examined the association of paid work hours and perceived time-stress with two forms of leisure participation and the ways gender may shape the social context of that participation. We expected that although work hours and timestress would be associated with a lower likelihood of leisure participation, the typically gendered nature of childcare would mean women would be unlikely to reduce time spent with children, but men would. The two forms of leisure, watching TV and walking or jogging, were selected based on the nature and frequency of participation in these activities and the opportunity to do so in a variety of social contexts, namely alone, with another adult or with a child present. In bivariate and multivariate analyses, results showed greater paid work hours were associated with a lower likelihood of leisure participation, but the association of time-stress with likelihood of leisure participation was less consistent. Although women had higher levels of perceived time-stress than men and also more instances of reduced leisure participation (e.g., less TV watching than men), time-stress did not reduce likelihood of leisure with children, and there was also no gender difference in this association. The present study highlights the potential of using social context data from national surveys to gain further insight on how perceptions of time-stress relate to leisure.

Keywords: dual-earner families; time-stress; leisure participation

Introduction

Leisure participation makes an important contribution to psychological well-being and physical health (Caldwell, 2005; Trost, Owen, Bauman, Sallis, & Brown, 2002; Warburton, Nicol, & Bredin, 2006). Time spent on paid work has increased since the 1990s in most Western nations including the USA, UK, Australia and Canada (Gershuny, 2011). At the same time, leisure time has increased only slightly in Canada and the USA, with no notable change in the UK at the aggregate level. When examined from a social role perspective, the distribution of leisure time in these countries has grown increasingly wide for those who parent (Stalker, 2011a). For working-age adults with children, increasing employment demands over the past several decades coupled with family time commitments have intensified perceptions of time-stress and created barriers to leisure participation (Abele & Volmer, 2011; Tézli & Gauthier, 2009). There is substantial evidence that the challenges of managing work and family demands are greater for women than men (Harrington,

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Dawson, & Bolla, 1992) with consequences for women's leisure constraints (Hilbrecht, Shaw, Johnson, & Andrey, 2008), especially when children are younger (Stalker, 2011a). In addition, women's involvement in family leisure is sometimes experienced as more work-like than personal leisure (Shaw, 2008). It is not surprising that perceptions of role balance are higher among mothers who feel they have adequate leisure time alone without children (Marks, Huston, Johnson, & MacDermid, 2001). Drawing on population-based Canadian data, we examine the impact of perceptions of time-stress on leisure participation for parents in dualearner households. We further examine potential gender differences in the association of time-stress with leisure participation and whether or not time-stress is associated with sacrifices of certain social contexts of leisure, namely, leisure alone, leisure with other adults or leisure with children.

Potential benefits of leisure participation

Leisure participation can have a beneficial impact on mental and physical health (Caldwell, 2005; Warburton et al., 2006) and having time to recover or "unwind" after a demanding work day is important for well-being (Meijman & Mulder, 1998). Low-effort activities (e.g., watching television) as well as more active forms of leisure can contribute to positive mood and relaxation before going to sleep (Sonnentag, 2001). Although some research findings suggest television viewing interferes with other, more active forms of leisure and may take a toll on well-being (Robinson & Godbey, 1997), in analyses of daily diary data, working parents reported watching television as their most enjoyable activity of the previous work day, and television watching was associated with lower levels of perceived stress and time pressure (Hilbrecht, 2009). Michelson's (2011) analyses of the same data indicated that approximately two-thirds of the most enjoyable activities reported by Canadian adults occurred in the company of others. The analyses also highlighted the particular contribution of family and friends to enjoyable experiences. Diversionary, pleasurable experiences known as casual leisure (Stebbins, 1997) have immediate consequences for relaxation and undoing feelings of stress (Hutchinson & Klieber, 2005). However, parents' participation in these activities may be decreased or sacrificed when faced with multiple commitments, time constraints and the responsibilities associated with family life (Trost et al., 2002).

Time-stress

Work demands and family responsibilities require time. For employed parents, the potential competition between work and family time commitments leads to perceptions of time-stress (Tézli & Gauthier, 2009), which is most pronounced among younger parents (Brown, Cerin, & Warner-Smith, 2009). Dual-earner couples tend to experience more stress, work-family conflict and perceptions of overload than single-earner couples (Abele & Volmer, 2011). In addition, those with a higher level of education and income report less leisure time, a reversal of earlier historical trends where leisure was associated with these social advantages (Gershuny, 2011), although they are more likely to participate in a greater diversity of leisure activities (Stalker, 2011b). The competition between work and family time is greater for women than men in heterosexual couples with children. To be specific,

over the last 40 years in Canada, there has been an increase in labour force participation of women with children (Statistics Canada, 2006) without a substantial change in the gendered division of labour in the home or any reduction in time spent with children (Beaujot & Anderson, 2007; Zuzanek, 2000). Gender specialisation remains evident in childcare, with fathers participating most often in interactive, talk-based, playful activities while mothers retain greater responsibility for the physical, routine and more work-like aspects of caregiving (Hilbrecht, 2009). As a result, women feel more rushed than men and perceptions of feeling rushed have increased over time for women more than for men (Mattingly & Sayer, 2006).

Gendered patterns of leisure

Although leisure participation may provide relief from time-stress and help dualearner parents regain a sense of role balance (Marks et al., 2001), some forms of leisure may be more of an obligation than a context for relaxation and stress relief, especially for women. For example, family leisure is often seen by parents as an important obligation and may take precedence over personal leisure (Shaw, 2008). Shaw (2008) also finds that among heterosexual dual-parent families, the work involved in family leisure tends to fall disproportionately to women. Caregiving in general, and care for children in particular, has been noted as a key difference in how leisure is shaped for women, with women's lives more likely than men's to be dominated by an "ethic of care" (Gilligan, 1982; Henderson & Allen, 1991). Although the roots of gender differences in caregiving may lie in biological factors such as the role of oxytocin in breastfeeding and caregiving behaviour (Bell, 2001), the expression of biological factors is shaped and added to by social norms and attitudes (Eagly & Wood, 1991). To be specific, although genes and hormones may have a role in some processes related to childbearing and infant caregiving, social norms and attitudes are formed that perpetuate and reify the gendered nature of these behaviours over time (Eagly & Wood, 1991). Furthermore, time-diary research has shown that the nature of parental involvement is, to some extent, a function of attitudes (McBride & Rane, 1997). Among heterosexual parents, compared with men, women tend to spend more time with children overall and more time alone with children (Bittman & Wajcman, 2000; Craig, 2006; Mattingly & Bianchi, 2003; Shaw, 2001). Lack of time, having multiple responsibilities and difficulty securing childcare, are cited by women as the key constraints to having time for leisure (Harrington et al., 2008; Shaw, 1994). As such, it is important to be sensitive to the relational context of leisure activities.

Family leisure activities are highly valued by many parents (Shaw & Dawson, 2001), but the association of family leisure with satisfaction with family life is complex. Some research indicates a positive relationship between family leisure and parents' satisfaction with family life (Zabriskie & McCormick, 2003), although other research suggests that this is not the case, especially for women (Freysinger, 1994). In Shaw's (1992) study of family time, fathers were more likely than mothers to view family time as leisure, and significantly less often viewed family time as work or a combination of work and leisure. Fathers also reported family leisure participation as enjoyable, relaxing and freely chosen more often than mothers. For some fathers, meanings and experiences of leisure are closely related to time with children because

of the emphasis on playful behaviours (Such, 2006). Sport, in particular, is a popular form of leisure where fathers can enhance and strengthen relationships with children (Harrington, 2006). Because of differences in role expectations, parents' quality of leisure can be experienced differently depending on whether leisure activities occur alone or in the presence of children, partners or other adults (Harrington, 2001). Women may experience less freedom of choice in leisure activities, since their leisure is more often contaminated by concurrent childcare or household responsibilities (Mattingly & Bianchi, 2003). Additionally, Sullivan (1997) reports that women's leisure time is more fragmented than men's because of a greater number of interruptions owing to other activities such as childcare. This has implications for time pressure since fragmented leisure is associated with reduced quality of leisure experiences and higher levels of time pressure (Zuzanek, 2004).

Time-stress as a leisure constraint

Although much research has been conducted examining the impact of work and family demands on time-stress (Tézli & Gauthier, 2009), the way work and family demands differ by gender (Beaujot & Anderson, 2007) and how these demands constrain leisure participation (Shaw, 1994), less work has been devoted to examining how perceived time-stress might shape the degree of leisure participation and the social context of that participation. With population-based Canadian data, we examined the association of perceived time-stress among dual-earner, heterosexual parents using two of the most common types of leisure activity – watching TV and walking or jogging. These particular leisure activities were chosen to reflect the most common leisure experiences of the largest possible number of participants. As "core" leisure activities (Kelly & Godbey, 1992), whether or not these activities are engaged in and with whom may be an effective indicator of how time-stress may influence leisure experiences of a specific demographic group, in this case, dual-earner parents. We expected that greater perceived time-stress would be associated with less participation in these activities overall. We also examined the association of timestress with the likelihood of engaging in leisure alone, with other adults, or with children. Since family leisure is seen as a priority for parents (Shaw, 2008), we expected that greater perceived time-stress would be associated with a lower likelihood of engaging in all other contexts except leisure with children. In addition, given the gendered patterns described previously, we also expected that the social context of leisure would differ by gender. To be specific, at greater levels of perceived time-stress, we expected women would be more likely than men to give up leisure spent alone and leisure with adults but not leisure spent with children.

Method

Participants

Data were drawn from Statistics Canada's 2005 General Social Survey (GSS) Cycle 19 (Béchard & Marchand, 2006). The GSS is an annually conducted omnibus survey used to gather information about social trends and changes. Every six to seven years a time-use module is included to better understand the nature of daily life for Canadian adults.

One individual aged 15 years and over in each sampled household is asked to complete the survey, which includes a time diary for the previous 24-hour period. Respondents provide detailed information on what activities they undertook, for how long and where and with whom the activities took place. The survey also asks questions about perceptions of time-pressure and stress, along with other socioeconomic and demographic factors. Statistics Canada releases two GSS files. The summary file concentrates on the total duration of activities and daily allocation of time to main activity categories. The episode file provides detailed, sequential diary information for each participant's daily activities that allows us to assess the qualitative context in which they occurred in real life (Michelson, 2005). For the present study, both summary and episode files were analysed.

We focused on participation in (vs. no participation in) the selected leisure activities rather than participation frequency, for two reasons. First, each activity episode provides information about social context not often captured in frequency of participation surveys, and which may be relevant to perceptions of time-stress. Second, although participation surveys are a good means of capturing information about structured activities that occur at regular intervals, they are less effective in capturing participation in informal pastimes owing, in part, to issues of recall (Roberts, 2006). Time diaries, where participants reconstruct their day using the full spectrum of activities, are more useful in detailing unstructured leisure activities and in revealing trade-offs in time-use for different life spheres such as employment, caregiving, sleep and leisure (Zuzanek, 2006).

Procedure

Participants in the GSS were recruited during 2005 from 27 geographic strata using random digit dialing and the elimination of non-working banks. Data were collected through a computer-assisted telephone interview (CATI) from one randomly recruited individual in each selected household (Béchard & Marchand, 2006).

Of the 19,957 individuals who completed the survey, we focused on the experiences of working-age adults in dual-earner families with children, yielding a sub-sample of n = 2010 (951 women and 1059 men). Participants indicated that they were either married or cohabitating, between 20 and 64 years of age, had at least ONE co-resident child and both they and their partner worked for pay on either a full- or part-time basis. Owing to limitations of Statistics Canada's public use microfile data, only heterosexual parents were included in the sub-sample.

Measures

Demographic characteristics

Age was assessed with a grouped age variable which for the current analyses included five groups (1 = 15-24 years; 2 = 25-34 years; 3 = 35-44 years; 4 = 45-54 years; 5 = 55-64 years). Gender was coded for the current analyses as female = 1 and male = 0. Education was coded for the present analyses as attainment of one of five levels (1 = no schooling or some elementary/secondary; 2 = high-school diploma; 3 = some university/college; 4 = college diploma; 5 = bachelor's degree/graduate school). Respondent's work hours represented the number of hours the participant

estimated typically working for pay in a week. Regular work hours represented those who had a regular, predictable, daytime schedule or shift (1 = regular work hours; 0 = weekend, evening, compressed, split, casual or irregular work hours). Children represents the number of the respondent's children of any age living in the home. Household income was not included in the analyses owing to the large amount of missing data for this variable (i.e., over 14%).

Time-stress was assessed with a measure developed by Tézli and Gauthier (2009) that combines six items related to perceived time-stress assessed in the GSS. These questions included: "How often to you feel rushed?" (1 = every day; 6 = never); "Do you feel the days are just too short to do all the things you want?" (1 = yes; 0 = no); "At the end of the day, do you feel that you have not accomplished what you set out to do?" (1 = yes; 0 = no); "Do you feel constantly under stress trying to accomplish more than you can handle?" (1 = yes; 0 = no); "How stressful are most of your days?" (1 = not stressful at all; 5 = extremely stressful); "Do you often feel under stress when you don't have enough time?" (1 = yes; 0 = no). Since these items were on different scales, responses to each question were standardised and the mean of all items was calculated, yielding a measure with higher values representing greater perceived time-stress ($\alpha = 0.71$).

Leisure activities were chosen based on the frequency of parents' participation in commonly pursued activities. Watching TV was selected for analysis because it has been identified previously as the most frequently reported leisure activity of Canadian adults (Shields & Tremblay, 2008). Watching TV/DVDs included both regularly scheduled and pre-recorded programmes as well as DVDs and videos. Almost three-quarters of the sample (71.44%) participated in this activity. Given the association of physical activity with mental and physical well-being, we also wanted to include a physically active leisure pursuit. We examined participation in all categories of physical activity identified by Statistics Canada as "active leisure" in the GSS, as well as other activities such as gardening/yard work, which may be construed as leisure. Table 1 indicates the percentage of the sub-sample reporting activity in each active leisure category on the diary day. Just over one-fifth of the parents (22.58%) were physically active during leisure time. Walking/hiking/jogging was the most frequently reported form of active leisure with a participation rate of 8.67%. Compared with many other leisure pursuits, walking is a low-cost, unstructured activity with few barriers to participation (Siegel, Brackbill, & Heath, 1995), which lends further support to its inclusion for further analysis. For the sake of brevity, we refer to this activity as walking/jogging.

Social context of leisure participation was assessed using the GSS episode file to determine the probability that at least one other person was present during the leisure activity. A maximum score of 1.00 for "degree social" meant that others were always present during this activity, whereas a lower score indicated lower probability others were present (Table 1). For example, golf and rowing, both with a score of 1.00, were always pursued in the company of others, while gardening and yard work were much more solitary with others present only 0.19 of the time. Watching TV/DVDs was more social than walking/jogging, with scores of 0.65 and 0.57, respectively.

Since time-stress may affect the relational context of leisure, we created three separate categories of social contact. The first included all leisure activity episodes that took place alone. The second category included leisure episodes in the company

Table 1. Rates of participation and social nature of leisure activities.

	Sample					
	Dual-eari	ner parents	Total sample			
Leisure activity	% Participate	Degree social*	% Participate	Degree social		
Watching TV/DVDs	71.44	0.65	73.71	0.49		
Walking/hiking/jogging	8.67	0.57	11.30	0.45		
Fitness/yoga	5.56	0.22	6.52	0.28		
Swimming/watersports	2.53	0.87	2.02	0.68		
Football/baseball	1.36	0.95	1.44	0.97		
Bicycling	0.81	0.63	1.02	0.40		
Skiing/ice skating	0.75	0.99	0.59	0.85		
Golf/mini-golf	0.53	1.00	0.78	0.88		
Gardening/yard work	0.49	0.19	1.32	0.41		
Fishing	0.47	0.71	0.33	0.63		
Bowling/playing pool	0.40	0.77	0.50	0.89		
Judo/boxing	0.23	0.66	0.18	0.70		
Motor boating	0.23	0.58	0.21	0.75		
Horseback riding	0.20	1.00	0.08	0.70		
Racquet sports	0.19	0.98	0.32	0.94		
Camping	0.11	0.52	0.10	0.81		
Rowing/canoeing	0.05	1.00	0.11	0.62		

Note: *"Degree social" refers to the probability that an activity is engaged in with at least one other person.

of at least one other adult (and no children present). The third category was leisure with at least one child present (may or may not include other adults).

Analysis plan

Analyses began with the calculation of means and standard deviations for continuous variables and frequencies for dichotomous variables. To test basic associations of gender with all study variables, *t*-tests were conducted to compare mean differences between women and men for continuous variables and chi-square analyses to compare frequencies between women and men.

Next, a series of logistic regression analyses were conducted to examine the association of TV watching and the social context of TV watching (i.e., alone, with an adult, with any children) with demographic variables, gender, paid work hours and perceived time-stress in the first set of models and then with the addition of two interactions in the second set of models. To be specific, to examine potential gender differences in the impact of time-stress and paid work hours on leisure participation, we constructed two interaction terms, perceived time-stress by gender and paid work hours by gender. A similar set of models was constructed with any walking/jogging as the first criterion variable examined, followed by walking/jogging social context (i.e., alone, with an adult, with any children) as the additional criterion variables tested. Demographics, gender, work hours and perceived time-stress were the focal variables in the first set of models, followed by the addition of the two interaction terms

described above in the second set of models. In all analyses cases, survey weights were applied (Béchard & Marchand, 2006).

Results

Descriptive statistics for all study variables are presented in Table 2. Women tended to be somewhat younger than men, reported fewer hours of paid work and experienced higher levels of perceived time-stress. There were no significant differences between women and men in terms of level of education or number of children. Women and men also did not differ in their likelihood of having a regular, weekday work schedule.

Compared with men, women were less likely to watch any TV, less likely to watch TV alone, less likely to watch TV with an adult, but no different in the likelihood of watching TV with any children. Women were more likely than men to do any walking/jogging, not significantly different than men in the likelihood of walking/ jogging alone, but more likely to walk/jog with an adult and more likely to walk with any children.

Logistic regression results

In keeping with the results from the chi-square analyses, women were less likely than men to report watching TV, as were parents with a higher level of education and those with longer hours of paid work (Table 3, Model 1, "Any participation").

Table 2. Means, standard deviations and frequencies for study variables by gender and for all participants.

	Women $(n = 951)$		Men $(n = 1059)$		Total $(n = 2010)$	
Variable	Mean / %*	SD	Mean / %*	SD	Mean / %*	SD
Demographics						
Age	3.18^{a}	0.82	3.37^{b}	0.86	3.28	0.85
Education	3.68	1.22	3.60	1.31	3.64	1.27
Respondent's work hours	35.96 ^a	12.57	45.86 ^b	11.39	41.41	12.94
Regular work hours	74.91	_	74.98	_	74.95	_
Children	1.86	0.77	1.85	0.78	1.86	0.78
Time-stress	0.15^{b}	0.59	-0.06^{a}	0.63	0.05	0.62
Leisure participation						
Any TV/DVD watching	68.33 ^c	_	74.23 ^d	_	71.44	_
Alone	13.84 ^c	_	17.16 ^d	_	15.59	_
With adults	33.02^{c}	_	37.65 ^d	_	35.46	_
With children	21.45	_	19.40	_	20.37	_
Any walking/jogging	10.14 ^d	_	7.35°	_	8.67	_
Alone	3.50	_	3.70	_	3.61	_
With adults	3.80^{d}	_	2.13°	_	2.93	_
With children	2.81 ^d	-	1.52 ^c	-	2.13	_

Note: t-tests were conducted to compare means for women and men; a < b, p < 0.05. Chi-square analyses were conducted to compare frequencies for women and men; c < d, p < 0.05.

^{*}Value represents a mean when accompanied by a value for SD; value represents a percent when not accompanied by SD.

Table 3. Logistic regression coefficients for associations of any TV watching and social context of TV watching with demographics, time-stress and the gender by time-stress interaction.

		Social context			
	Any participation	Alone	Adult	Children	
	Coefficient	Coefficient	Coefficient	Coefficient	
Model 1					
Constant	1.78***	-1.85**	-1.24***	0.64	
Demographics					
Age	0.05	0.07	0.37***	-0.55***	
Gender (female $= 1$, male $= 0$)	-0.38**	-0.30*	-0.17	0.01	
Education	-0.11**	-0.02	-0.05	-0.05	
Respondent's work hours	-0.01**	-0.01	0.01	-0.01*	
Regular work schedule	0.14	0.09	0.10	-0.01	
Number of children	-0.02	0.13	-0.20**	0.17*	
Time-stress	-0.26**	-0.11	-0.05	-0.16	
Model 2					
Time-stress × Gender	0.06	0.27	-0.01	-0.22	
Work hours × Gender	-0.01	0.01	-0.01	-0.01	

Notes: *p < 0.05; **p < 0.01; ***p < 0.001.

The greater parents' perceived time-stress, the less likely they were to watch any TV. In terms of social context, women were less likely than men to watch TV alone, but no other factors were associated with watching TV alone. The older the participants, the more likely they were to watch TV with another adult (Table 3, Model 1, "Adult") and the more children participants had, the less likely they were to watch TV with an adult, without children present.

The inverse pattern was found for likelihood of watching TV with any children, such that those who were older were less likely to be watching TV with any children, those who had more hours of paid work were less likely to watch TV with any children and the more children participants had, the more likely they were to watch TV with any children (Table 3, Model 1, "Children"). It is worth noting that greater time-stress was significantly associated only with a general tendency to be less likely to watch TV and did not have any bearing on the specific social contexts. None of the time-stress by gender or work hours by gender interactions were statistically significant, suggesting that the nature of the impact of time-stress on the various forms of TV watching we examined did not differ significantly between women and men (Table 3, Model 2 for "Any participation," "Alone," "Adult" and "Children").

For the analyses of walking/jogging and social context of walking/jogging, the higher participants' level of education, the more likely they were to report any walking/jogging (Table 3, Model 1, "Any participation"). No other variables were significantly associated with likelihood of reporting any walking/jogging. Those with a higher level of education were also more likely to report walking alone (Table 4, Model 1, "Alone"). Participants who were older, female or had higher levels of education were all more likely to report walking/jogging with another adult (Table 4, Model 1, "Adult"). Finally, the older participants were and the more hours of paid

Table 4. Logistic regression coefficients for associations of any walking/jogging and social context of walking/jogging with demographics, time-stress and the gender by time-stress interaction.

		Social context			
	Any participation	Alone	Adult	Children	
	Coefficient	Coefficient	Coefficient	Coefficient	
Model 1					
Constant	-3.45***	-4.86***	-7.24***	-1.25	
Demographics					
Age	0.05	0.12	0.51**	-0.71**	
Gender (female $= 1$, male $= 0$)	0.34	0.02	0.80**	0.15	
Education	0.29***	0.33**	0.28*	0.19	
Respondent's work hours	-0.01	0.00	0.00	-0.03*	
Regular work schedule	0.29	0.24	0.63	0.06	
Number of children	-0.16	-0.15	-0.12	-0.09	
Time-stress	-0.26	-0.30	-0.39	0.07	
Model 2					
Time-stress × Gender	0.04	-0.28	0.02	0.60	
Work hours × Gender	-0.02	-0.03	-0.03	0.02	

Notes: p < 0.05; p < 0.01; p < 0.01; p < 0.001.

work they had, the less likely they were to go walking/jogging with any children (Table 4, Model 1, "Children"). Although there were several negative associations between time-stress and walking/jogging variables, none of those associations was statistically significant. Also, none of the time-stress by gender or work hours by gender interactions were statistically significant, suggesting that there were no significant differences between women and men in terms of the impact of time-stress or work hours on their walking/jogging participation and the social context of those activities.

Discussion

Drawing on population-based data, we examined the association of dual-earner parents' perceptions of time-stress with the degree of participation in two common activities, TV watching and walking/jogging. We also examined the social context of participation in those activities, with the expectation that regardless of potential constraints of hours of paid work or perceived time-stress, women would maintain leisure with children, but men's likelihood of leisure with children might decrease. The results suggested limited support for the idea that greater perceived time-stress is associated with lower levels of common forms of leisure participation. To be specific, time-stress was only associated with a lower likelihood of "any TV watching," but was not significantly associated with "any walking/jogging" or any social context of walking/jogging. Further, although women were less likely than men to report watching any TV or watching TV alone, they did not differ from men in terms of TV watching with adults or children. Furthermore, none of the time-stress by gender interactions were significant, suggesting that women and men do not differ significantly from each other in how time-stress or quantity of paid work hours may shape or constrain the social context of their TV watching or walking/jogging.

The bivariate analyses clearly indicated that in dual-earner households with children, women experience higher levels of time-stress than men. This is consistent with previous research where women assume greater responsibility for unpaid domestic activities and childcare than men, whether employed or not (Beaujot & Anderson, 2007; Zuzanek, 2000). There were also significant gender differences in participation for each activity. Men were more likely than women to watch TV whereas the reverse was true of walking/jogging. Other research reports similar findings that men have a stronger preference for watching TV than women from adolescence throughout adulthood (Shields & Tremblay, 2008; Todd & Currie, 2004) and that women more often than men report walking as a leisure time activity (Siegel et al., 1995). In multivariate analysis, gender remained significant for TV viewing but it was not significant for walking/jogging except for walking/jogging with adults, which women were more likely to do than men. A higher level of education was associated with less TV viewing, consistent with other studies of screen time patterns of adults in Canada and the USA (Robinson & Godbey, 1997; Shields & Tremblay, 2008). Conversely, educational attainment was related to greater participation in walking/jogging, as seen in other research (Hurst, 2009; Ross & Mirowsky, 1999).

For the one instance where we found that greater time-stress was associated with lower overall likelihood of watching TV, in the same model greater paid work hours was also associated with lower likelihood of watching TV. This pattern has been identified in other studies (Hilbrecht, 2009; Zuzanek, 2004) but it is interesting to note that only paid work hours was associated with additional analyses of social context. To be specific, higher levels of paid work hours were associated with a lower likelihood of watching TV with any children and also a lower likelihood of walking/jogging with any children. One possible interpretation of this difference is that paid work hours represents a more objective constraint on time available for leisure participation than does perceived time-stress. Also, an alternate prediction for perceived time-stress could have been made; namely, that with greater perceived time-stress, people may watch more TV or take time to walk or hike to recover from the feeling of time-stress. Therefore, it is possible there is more complexity in responses to perceived time-stress but greater work hours present a more objective barrier to leisure participation.

For walking/jogging, feelings of time-stress neither decreased parents' participation nor did it seem to increase the need for this form of physically active leisure. Participation in walking/jogging was low compared with watching TV, which may have had some bearing on the lack of significant findings. Mothers were more likely than fathers to go for a walk or go jogging on their own. Parents with long work hours walked or hiked less often with children, but work hours made no difference to walking/jogging alone or with another adult. Contrary to our initial expectations, it may be that some parents protect this activity as a form of personal leisure whereas they are more likely to do other things with children when time is short. Both walking/jogging and TV viewing may be viewed as "core" leisure activities (Kelly & Godbey, 1992). It is because these activities are common, informal, regularly taken for granted and often so deeply ingrained in the rhythm of daily life that they may be relatively resistant to displacement by perceptions of time-stress.

It was anticipated that time-stress might be related to a decrease in women's leisure with other adults or on their own while leisure time with children was protected. However, none of the interactions of time-stress by gender were as significant, which could be because of the nature of the activities selected. Women may routinely experience home-based activities such as watching TV with children as an extension of caregiving activities. On the other hand, mothers were more likely than fathers to walk or jog with another adult, and older parents more often walked with other adults and not with children. The need to combine caregiving and leisure is usually reduced for older parents and they may have been able to place greater priority on time with other adults, even when experiencing heightened time-stress. However, since the predictions we tested with the interactions were based on gender role norms (Eagly & Wood, 1991), an alternate explanation is that differentiation or specialisation of gender roles may not be as strong among dual-earner heterosexual couples with children as other family forms (e.g., single-earner and especially male single-earner heterosexual couples) or that having both partners employed (vs. single-earner) reduces gender differences in terms of division of labour (Blair & Lichter, 1991).

There are several limitations to the previous analyses worth noting. The data follow a one-day period only and cannot adequately capture time-use trade-offs or fluctuations in time-stress over the course of a week. Since the data were crosssectional, no causal inference can be made. The analyses explored only two leisure activities. Although they represent fairly common and also different types of experiences, it is unclear how these patterns might relate to other forms of leisure.

In summary, with population-based data we found few significant associations of gender, perceived time-stress and hours of paid work with participation in leisure activities - namely watching TV or walking/jogging. Although we found that women tended to be less likely than men to watch TV at all or alone, our expected pattern that women would be more likely than men to keep time with children despite timestress, was not borne out. In conclusion, these fairly common activities may be more ingrained or normative than other forms of leisure and resistant to being sacrificed in the face of time-stress while gendered patterns of leisure with children may not be as strong among dual-earner couples as initially expected.

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