

Some effects of teenagers' part-time employment: the quantity and quality of work make the difference

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Summary

We investigated the associations of the quantity and quality of part-time employment with the school performance (amount of class cutting, homework, and average grades) and personal functioning (self-esteem and time use) of high-school students. Two hypotheses were tested: (a) working long hours would be associated with detrimental effects, but (b) the quality of employment would moderate these effects, such that employment quantity would be associated with detrimental effects only for low quality jobs. Data from 563 high school students ($n = 233$ in part-time employment) provided support for the hypotheses. Conceptual, practical and policy ramifications of these findings are considered.

Introduction

The simultaneous pursuit of high school studies and part-time employment has become increasingly prevalent. Approximately half of teenage full-time students in North America are also employed part-time (Krahn, 1991; Steinberg and Dornbusch, 1991), and 80 per cent of graduating students have spent some of their high school career as part-time employees (Steinberg and Dornbusch, 1991). Moreover, approximately 25 per cent of older teenagers employed part-time work for more than 20 hours per week (Steinberg and Dornbusch, 1991; Sunter, 1992). Thus, concurrent high school studies and part-time employment is now the modal pattern, and its possible negative effects are receiving increasing attention.

One concern is that employment outside of school detracts from students' studies and personal lives (Greenberger and Steinberg, 1986). Consistent with this suggestion, considerable research has been conducted by Greenberger and Steinberg and their colleagues during the last decade. Their approach has focused primarily on detrimental consequences of teenage part-time employ-

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ment. In general, labor force participation by high school students, especially more than 20 hours of part-time work per week, is linked to poorer school performance, increased drug and alcohol use, decreased family contacts, and cynical attitudes toward work (e.g. Greenberger and Steinberg, 1986). Their most recent research (Steinberg and Dornbusch, 1991; Steinberg, Fegley and Dornbusch, 1993) showed that 20 hours of work per week again served as the breakpoint, after which part-time employment exerted detrimental effects on school performance and personal functioning. This led Steinberg and Dornbusch (1991) to recommend that policy-makers, parents and teachers monitor the number of hours teenagers work per week.

We argue, however, that limiting our focus to the quantity of part-time employment provides both a negative and truncated perspective of the nature and consequences of teenagers' part-time employment. Essentially, this approach casts employment in the role of the villain, inasmuch as only the costs and none of the benefits of part-time employment are emphasized. Indeed, even the most obvious benefit of increased employment quantity, increased personal income, has acquired a negative connotation in that only a small minority of teenagers report spending their earnings on living expenses or saving for future education (Greenberger and Steinberg, 1986). Focusing solely on employment quantity also implies that work is an homogenous experience for all employed teenagers.

In sharp contrast, the conceptual and empirical literature on organizational behavior suggests that subjective experiences of work are critical in understanding work's consequences. Assessing subjective experiences enables us to view the wide ranging positive and negative consequences of part-time employment. Certainly, job design theories emphasize the experience of work (e.g. Hackman and Oldham, 1980; Warr, 1987), and subjective employment experiences exert meaningful effects on productivity and psychological well-being (O'Brien and Feather, 1990; Wall, Corbett, Martin, Clegg and Jackson, 1990; Winefield, Winefield, Tiggemann and Goldney, 1991), adult development (Mortimer, Lorence and Kumka, 1986) and family and personal functioning (Barling, 1990). We explicitly used such theories and data derived from studies of adults to generate hypotheses about adolescents' part-time employment.

With specific reference to teenagers' part-time employment, Mortimer and her colleagues showed that when teenagers see their jobs as providing skills that will be useful to them in the future, their part-time employment can be beneficial (Mortimer, Finch, Ryu and Shanahan, 1991). Also, parents are generally in favor of their teenagers taking on part-time jobs, and Mortimer *et al.* (1991) found no support for the hypothesis that teenagers' part-time employment detracts from close relationships (Mortimer and Shanahan, 1991).

With respect to the consequences of teenagers' part-time employment, therefore, we suggest that ignoring the quality of employment and only directing attention to the quantity of work performed (especially by policy-makers) may be premature. The aim of the present study is to investigate the associations of both the quantity and quality of work performed by teenagers with school performance and personal functioning. We pose two hypotheses. The first focuses on employment quantity because there is considerable variation in the amount of teenagers' part-time employment. Steinberg and Dornbusch (1991) showed that the number of hours worked per week by high school students was associated with school performance and personal functioning. Specifically, negative effects result from part-time employment for those high school students who engage in more than 20 hours of work per week. However, there are several problems with this approach. First, there is no theoretical basis for predicting that the cut-point should occur at 20 hours. Second, even if this cut-point could be theoretically justified, this should result in a curvilinear relationship between work quantity and the outcome of interest, yet this has not been investigated. Third, categorizing data is generally discouraged from a statistical perspective (Maxwell and Delaney, 1993). Accordingly, we retain these data in their

continuous form to assess both the linear and curvilinear associations of employment quantity and school performance and personal functioning. We hypothesize that the number of hours worked will be negatively and linearly associated with school performance and personal functioning.

At this stage we turn our attention away from the quantity to the quality of teenagers' part-time employment. The second hypothesis is that any negative associations with employment quantity will be moderated by the quality of the job. More specifically, we suggest that any negative associations with employment quantity will emerge for low quality but not for high quality employment. In effect, our suggestion is that high quality employment buffers the potentially negative aspects of teenage employment. This hypothesis draws indirect support from recent findings on school leavers showing that those with high quality jobs manifest less depressive affect, greater life satisfaction and perceptions of personal control (O'Brien and Feather, 1990; Shanahan, Finch, Mortimer and Ryu, 1991; Winefield *et al.*, 1991) than school leavers who became unemployed or entered low quality jobs.

To reflect diverse aspects of high school students' employment quality, we conceptualize and operationalize intrinsic (role clarity, autonomy and skill variety), and one extrinsic (interrole conflict) aspects of employment quality. With respect to intrinsic job characteristics, role clarity, autonomy and skill variety would indicate a high quality job. For extrinsic characteristics, low levels of conflict between work and school roles would reflect a high quality employment experience. These four job characteristics are conceptually and empirically important and central to teenagers' jobs. First, teenagers' work is frequently portrayed as lacking in role clarity, autonomy, and skill variety (Garson, 1985), and teenagers employed part-time may well experience considerable time-based conflict between schoolwork and job demands (Shanahan *et al.*, 1991; Sunter, 1992). Second, these four characteristics are a central part of job design theories (Hackman and Oldham, 1980; Sauter, Murphy and Hurrell, 1990; Warr, 1987), and are associated with occupational mental health (Sauter *et al.*, 1990). Role ambiguity is a central role stressor, and meta-analyses demonstrate its negative effects on a variety of personal and organizational outcomes (Fisher and Gitelson, 1983; Jackson and Schuler, 1985). Enhancing autonomy and control has been shown in quasi-experimental studies to increase occupational mental health and productivity (Wall *et al.*, 1990); repetitive, boring jobs predict job dissatisfaction and poor occupational mental health (Cox, 1985; O'Brien and Feather, 1990). Lastly, interrole conflict is negatively associated with personal and family consequences (Barling, 1990; Stern, Stone, Hopkins and MacMillan, 1990; MacEwen and Barling, 1991) and work performance (Barling and MacEwen, 1991).

As indicated previously, we focus on the associations of the quantity and quality of teenagers' part-time employment with their school performance and well-being. We focus on three aspects of school performance that Steinberg and Dornbusch (1991) investigated, namely the amount of homework completed, the extent of classes cut, and average grade over all courses completed in the most recent semester. We also assess the relationship of the quantity and quality of employment on two aspects of teenagers' personal functioning, namely self-esteem and time structuring. Self-esteem is central to adolescents in general (Steitz and Owen, 1992), and the poor employment conditions that many adolescents experience could affect self-esteem and in turn depression (Shanahan *et al.*, 1991). Second, one of the primary latent benefits of employment is that it provides structure to one's life (Jahoda, 1982). Time structuring, the degree to which students organize their daily activities in a planned and purposeful manner, predicts students' grades (Britton and Tesser, 1991; Sandys-Wunsch and Barling, 1993) and depression (Feather, 1990).

Thus, this study examines the relationships between teenagers' part-time employment and

their school performance and personal functioning, and extends previous research by focusing on both the quantity and quality of teenagers' employment.

Method

Subjects

All students in grades 10, 11 and 12 in one predominantly white, urban Canadian high school ($N = 700$) were approached in class with the permission of the school principal and school board. Due to absences, scheduled 'spare' class periods and students who declined to participate, 553 complete questionnaires were returned (80 per cent response rate). Of these students, 233 (42 per cent) were currently employed on a part-time basis. The average age of the total sample was 15.96 years ($S.D. = 1.03$; 256 females, 296 males, one unreported); 49 per cent were in grade 10, 26 per cent in grade 11 and 25 per cent in grade 12. Students' employed part-time were older ($M = 16.15$ years, $S.D. = 1.00$) than their nonemployed counterparts ($M = 15.83$, $S.D. = 1.03$; $t(551) = 3.76$, $p < 0.01$). Based on students' reports of their parents occupational status there were no significant differences in family socio-economic status between the two groups.

Questionnaires

Employment-related variables

Slight modifications were made to the job-related scales to ensure their appropriateness for part-time jobs. Role ambiguity (clarity) was measured with Rizzo, House and Lirtzman's (1970) 6-item scale. Item 2 ('Clear, planned goals exist for my part-time job') was deleted, because it detracted from the internal consistency of the total scale. Autonomy was measured with the three items from Hackman and Oldham's (1980) Job Characteristics Survey; and we used Hackman and Oldham's (1980) three-item Skill Variety scale. Lastly, we modified Kopelman, Greenhaus and Connelly's (1983) 8-item interrole conflict questionnaire to reflect time-based conflict between school studies and part-time employment (e.g. 'My job takes up time I'd like to spend on school work', 'On the job I have so much work to do that it takes away from my school interests').

School performance

Class cutting, time spent on homework and grades were all measured with the appropriate subscales from Steinberg and Dornbusch's (1991) School Performance and Engagement questionnaire. Class cutting was assessed across four primary academic subjects. For each, students were asked to rate how often they had taken unexcused absences on a five-point Likert scale, ranging from 'Almost every day' to 'Never cut'. They were also asked to indicate the amount of time put into homework each week for the same four subjects. Again, a five-point Likert item scale was used, ranging from 'None' to 'About two or three hours'. Lastly, students indicated their most recent semester's grades (as a percentage) for each of the four academic subjects. Although this is a self-report measure, self-reported grades and actual grades correlate substantially ($r = 0.98$, $n = 24$) when students report their grades and do not know that their reports will be checked against an external criterion (Sandys-Wunsch and Barling, 1993). Similarly, based on a sample of 1146, Dornbusch, Ritter, Leidermund, Roberts and Fraleigh (1987) reported a substantial correlation ($r = 0.76$) between self-reported and actual grade point average.

Personal functioning

Self-esteem was measured with Rosenberg's (1965) 10-item global self-esteem scale. Time structuring was measured with Britton and Tesser's (1991) Short Range Planning subscale. We specifically chose this subscale because it assesses the extent to which students plan each day.

Results

Intercorrelations and internal consistency coefficients for all study variables are presented in Table 1. All scales demonstrated satisfactory internal consistency (all alphas > 0.65). With respect to our first hypotheses, hours of work was associated with both class cutting ($r = 0.31$) and grades ($r = -0.17$). Seven of the 21 correlations between measures of employment quality and school performance or personal functioning also attained statistical significance ($p < 0.05$).

To more fully investigate the first hypothesis concerning the quantity of employment, school performance and personal functioning were regressed onto the linear and curvilinear (quadratic) components of hours worked. The curvilinear component was computed through the use of a power term in the multiple regression analyses. Following Aiken and West's (1991) recommendations, employment quantity was standardized before computing the quadratic term. In each analysis, age was covaried in the first step, (a) because of its significant association with hours worked, interrole conflict, class cutting and grades (see Table 1), and (b) because the number of respondents was not evenly distributed across the three grade levels. (Age was chosen as the covariate because it showed greater variability than grade level).

The results of these analyses (see Table 2) showed that hours worked per week was associated linearly only with the amount of class cutting ($\beta = 0.44$, $p < 0.01$), and none of the curvilinear relationships between amount of part-time work and any of the five criteria were significant. In further analyses, therefore, we only focused on the linear effects of employment quantity.

To assess the effects of the quantity and quality of employment, we computed a series of regression analyses. In all these analyses, the five outcomes were regressed separately on employment quantity (hours worked), the specific indicator of employment quality (skill variety, autonomy, role clarity or interrole conflict), and the interaction between employment quantity and quality. As in the previous analyses, age was covaried on the first step of each regression because of its significant association with predictors. Following the procedure recommended by Aiken and West (1991), all predictors were standardized prior to computing the interaction terms and conducting the regressions. In the regression analyses, the interaction between employment quantity and quality is of primary importance. Where a significant interaction does not emerge, the employment quality main effect is of interest. (Employment quantity will not be reconsidered).

Results of these analyses are presented in Table 3. The interaction of skill variety and employment quantity significantly predicted self esteem. The prediction of homework and self esteem by the interaction term approached but did not attain statistical significance ($p < 0.07$ and $p < 0.09$ respectively). The interaction of autonomy and quantity of employment also predicted self-esteem. The interaction between role clarity and hours of employment made a significant contribution to the prediction of four of the five criteria; *viz.*, homework, class cutting, time use and self esteem. Finally, the interaction of interrole conflict and employment quantity did not predict any of the five criteria. While none of the interaction effects were significant, interrole conflict exerted significant main effects on class cutting ($\beta = 0.22$) and self esteem ($\beta = -0.31$).

To examine the specific form of the interactions, we followed Aiken and West's (1991) procedure for calculating the simple slopes for high, average and low levels of employment quality.

Table 1. Intercorrelations of study variables ($n = 233$)

	Alpha	1	2	3	4	5	6	7	8	9	10
1. Age	—										
2. Hours worked	0.67	43									
3. Role clarity	0.71	-01	08								
4. Autonomy	0.73	08	23								
5. Skill variety	0.84	29	11	47							
6. Interrole conflict	0.92	28	-24	-09	13						
7. Class cutting	0.84	09	-22	-08	07	07					
8. Homework	0.84	-14	12	-05	09	04	-31				
9. Grade	0.88	03	36	15	03	-08	-44	30			
10. Self esteem	0.81	06	-01	16	02	-26	-18	14	26		
11. Time use	Mean	16.15	11.71	14.03	10.90	14.41	1.72	3.15	74.55	39.98	23.98
	S.D.	1.00	4.80	4.68	4.85	5.52	0.90	1.08	10.98	6.74	8.97

$r = 0.14, p < 0.05.$

Table 2. Beta-coefficients from the multiple regression analyses assessing the linear and curvilinear associations of employment quantity with school performance and personal functioning

	Homework	Class cutting	Grades	Time use	Self esteem
Age	0.09	0.17*	-0.14	0.10	-0.04
Hours					
Linear	-0.06	0.29†	-0.15	-0.10	0.01
Curvilinear	0.01	-0.11	0.08	0.07	0.02
R ²	0.01	0.13†	0.05*	0.01	0.00

* $p < 0.05$; † $p < 0.01$.

Table 3. Beta coefficients from the multiple regression analyses assessing the association of employment quantity and quality with school performance and personal functioning

	Home work	Class cutting	Grades	Time use	Self esteem
Skill variety					
Age	0.10	0.18*	-0.14†	0.10	-0.03
R ² change	0.00	0.08*	0.04*	0.01	0.00
Hours	-0.09	0.25†	-0.13	-0.13	-0.03
Skill	0.09	0.01	0.05	0.31*	0.02
R ² change	0.01	0.04*	0.01	0.09*	0.00
Hours × skill	0.12	-0.09	0.08	0.11	0.16†
R ² change	0.01	0.01	0.01	0.01	0.02†
Autonomy					
Age	0.09	0.18*	-0.15†	0.09	-0.04
R ² change	0.00	0.08*	0.04*	0.00	0.00
Hours	-0.05	0.22*	-0.10	-0.04	0.02
Autonomy	0.05	-0.05	0.08	0.15†	0.14†
R ² change	0.00	0.04*	0.01	0.02	0.02
Hours × autonomy	0.08	-0.10	0.10	0.07	0.19*
R ² change	0.01	0.00	0.01	0.00	0.04*
Role clarity					
Age	0.10	0.17*	-0.15†	0.10	-0.03
R ² change	0.00	0.08*	0.04*	0.01	0.00
Hours	-0.05	0.22*	-0.09	-0.04	0.03
Clarity	0.11	-0.18*	0.11	0.20*	0.35*
R ² change	0.02	0.07*	0.02	0.04*	0.13*
Hours × clarity	-0.16†	0.14†	0.06	0.14†	-0.17*
R ² change	0.03†	0.02†	0.00	0.02†	0.03†
Interrole conflict					
Age	0.08	0.16†	-0.15†	0.08	-0.00
R ² change	0.00	0.08*	0.04*	0.00	0.00
Hours	-0.07	0.18*	-0.12	-0.12	0.11
Interrole conflict	0.04	0.22*	-0.00	0.11	-0.31*
R ² change	0.00	0.07*	0.00	0.01	0.08
Hours ×					
Interrole conflict	0.02	-0.08	0.05	0.07	0.04
R ² change	0.00	0.00	0.00	0.00	0.00

* $p < 0.01$; † $p < 0.05$.

All predictors were centered about their respective means by standardization. The centre of the distribution was then manipulated by subtracting and adding 1 to the standardized predictor (e.g. adding or subtracting one standard deviation to the distribution; Aiken and West, 1991). Thus, the effects for a 'high' level of the predictor results from subtracting one standard deviation from the distribution thereby moving the centre of the distribution to a point one standard deviation higher. Conversely, a 'low' level of the predictor may be calculated by adding one standard deviation thereby moving the centre of the distribution one standard deviation lower than in the original distribution. Average values of employment quality were taken directly from the analyses reported in Table 3.

Of the eight interactions¹ considered (see Table 4), five conformed to our hypotheses. Thus, hours of employment was negatively related to both homework and time use when skill variety was low but not when skill variety was average or high. Hours of work was negatively related to both homework and time use, and positively related to class cutting, when role clarity was low. The three interactions predicting self esteem varied in their form. Thus, employment quantity was not significantly associated with self esteem at any of the three levels of skill variety. Hours of work was negatively associated with self esteem when autonomy was low, but positively associated when autonomy was high. Finally, employment quantity was positively associated with self esteem when role clarity was high.

Table 4. Simple slopes (betas) for the effect of employment quantity on outcomes at high, low, and average values of employment quality*

	Homework	Class cutting	Time use	Self esteem
Skill variety				
Low skill use	-0.21†		-0.24†	-0.16
Average skill use	-0.09		-0.13	-0.03
High skill use	-0.01		-0.06	0.10
Autonomy				
Low autonomy				-0.16†
Average autonomy				0.02
High autonomy				0.17†
Role clarity				
Low clarity	-0.18†	0.32†	-0.17†	-0.12
Average clarity	-0.05	0.22†	-0.04	0.03
High clarity	0.09	0.09	0.07	0.18†

* Only slopes from significant interactions are displayed.

† $p < 0.05$, one-tailed.

Discussion

This study examined the association of employment quantity, employment quality, school performance and personal functioning among teenagers who were employed part-time. In doing so, two hypotheses were investigated. The first hypothesis was that the number of hours worked

¹ Because of the reduced power associated with testing interactions through moderated regression, we retained two effects that approached but did not reach statistical significance for further analysis; viz., skill variety \times hours predicting homework ($p < 0.07$) and skill variety \times hours predicting time use ($p < 0.09$).

per week would be negatively associated with school performance and personal functioning. Our findings provide partial support for this hypothesis. Like Steinberg and Dornbusch (1991), the quantity of work was positively associated with class cutting. However, unlike Steinberg and Dornbusch (1991), we found no link between employment quantity and the amount of homework completed. While we did initially note a negative correlation between grades and employment quantity, this effect was reduced in the regression analyses which controlled for age. We found no association between employment quantity and the two indices of personal functioning in contrast to Steinberg and Dornbusch (1991) who reported that self esteem was highest in students who were employed for less than 10 hours per week. We suggest that these differences may have emerged from procedural differences in that, unlike past research (a) we did not trichotomize employment quantity, and (b) did control statistically for the effects of age. We did, however, explicitly test for the curvilinear effect suggested by previous researchers and found no evidence to support the existence of such an effect. While it is always difficult to interpret null findings, we suggest that maintaining the continuous nature of employment quantity is the more defensible analytic procedure.

We argued that the quality of employment, and the way in which employment quality moderates the amount of part-time work, is more important than employment quantity alone in predicting school performance and personal functioning. The significant interactions between employment quantity and employment quality largely support this suggestion. For five of the eight interactions we considered, analysis of the form of the interactions suggests that employment quantity has negative associations with school performance and personal functioning when employment quality is low and negligible associations when employment quality is average or high. For two of the remaining interactions, analyses suggested that employment quality offered some benefit beyond a buffering effect. That is, employment quantity was positively associated with self esteem when autonomy and role clarity were high. Therefore, in contrast to earlier research that identified only negative outcomes of increased hours of work, our results suggest that both the quantity *and* the quality of teenage employment must be considered in assessing any such effects.

A different pattern of results was yielded for interrole conflict. While none of the employment quantity \times interrole conflict interactions were significant, interrole conflict exerted two main effects after controlling for age and hours worked. First, there was a significant relationship between time-based interrole conflict and class cutting, perhaps because teenagers employed on a part-time basis use class cutting as a strategy for coping with their excess role demands. Given that the number of hours that students are employed is not likely to decrease, what this suggests is that teenagers with excess role demands should have access to more constructive coping strategies, such as time management and study skills programmes. Second, interrole conflict was negatively associated with self esteem, possibly because the excess role demands increases the likelihood of failure experiences. Whatever the reasons, future research should investigate whether other forms of interrole conflict (e.g. sports versus schoolwork) exert similar effects, and the factors underlying such associations.

One noteworthy aspect of our findings is the relative sensitivity of the different outcome criteria: any effects on personal outcomes (e.g. self esteem) were greater than those on school-related criteria (e.g. grade performance, class cutting and homework). We can exclude the possibility that range restrictions account for these differential findings (see Table 1). A more plausible explanation is that there are greater external constraints on the school-related criteria. For example, students' IQ would be a powerful predictor of grade performance, and teachers' grading policies would also exert some effect. Similarly, the amount of time spent on homework would be influenced by the amount of homework set, students' competencies and schools' policies.

These external criteria would function to limit the amount of variance that might be accounted for by employment quality.

Several limitations of the current research must be noted. First, because of its cross-sectional nature, reverse causality and third variable effects are possible, and causal inferences are premature. For example, students with good grades may obtain higher quality jobs. Thus, as Winefield *et al.* (1991) note, longitudinal data are essential to make the causal interpretation that employment experiences influence school performance and personal functioning. Quasi-experimental studies would also be particularly useful.

While we encourage the increased use of more rigorous methodologies, several threats to causal inference can be assessed based on our data. First, being based on cross-sectional, self-report data, it is possible that our results emerged as a function of systematic measurement error (e.g. response sets, mono-method bias). It is important to note in this regard that correlated measurement errors are only a rival hypothesis for first order effects; they are not a plausible threat to second order interactions. Based on Monte Carlo studies, Evans (1985) concluded that the effect of such correlated measurement error is to attenuate the effects of interactions by approximately 50 per cent. Accordingly, to the extent that our data are subject to such correlated measurement errors, our findings regarding the second hypothesis may actually be conservative estimates of the interactions.

Second, it is possible that self-selection plays an important role in teenage part-time employment (Steinberg *et al.*, 1993). For example, students with higher grades might plausibly be hired for higher quality jobs (or for jobs requiring more hours). There is little evidence for such self-selection in our data. While grades were correlated with employment quantity, the correlation was modest, negative ($r = -0.17$) and did not emerge in the regression analyses controlling for age. These observations are consistent with previous research linking employment quantity and grade point average suggesting that there is a modest, negative correlation which is unstable across studies (Greenberger and Steinberg, 1986). Moreover, there were no significant zero-order correlations between grades and any of our measures of employment quality; again, arguing against self-selection into high quality employment.

While autonomy, role clarity, skill variety and interrole conflict all contribute to the experience of work, they do not capture the full meaning of the quality of employment. For example, social interactions at work (Sauter *et al.*, 1990) and task significance, task identity, and feedback (Hackman and Oldman, 1980) also contribute to the psychological experience of employment and should be included when conceptualizing and operationalizing the quality of teenagers' part-time employment. Moreover, teenage part-time employment may also entail some unique aspects of employment quality (e.g. career relevance) that should be considered in operationalizing employment quality for this group.

While the findings concerning interrole conflict were interesting, future research should broaden its focus beyond time-based conflict and include value conflict and strain-based conflict (e.g. Greenhaus and Beutell, 1985). In isolating the predictors of students' personal functioning and school performance, future research might profitably focus on conflict engendered between teenagers' schoolwork and other extra-curricular activities (e.g. sports, leisure).

Given that the existing research on teenagers' part-time employment provides a basis for policy decisions advocating limits to employment quantity, it is important to recognize that our contradictory findings are based on relatively small effect sizes (interactions accounting for between 2 per cent and 4 per cent of the variance). In this regard, we believe that is important to note that moderated regression analyses in psychology typically result in interactions accounting for only small amounts of variance (Aiken and West, 1991). For example, in examining the job design literature, Champoux and Peters (1987) reported interactions typically accounting

for approximately 3 per cent of the variance. Thus, although Cohen and Cohen (1983) describe an effect size of 2 per cent of the variance as small, we suggest that a more liberal standard is required for assessing the results of moderated regression research.

In conclusion, we believe our results have important ramifications. Conceptually, previous research on the effects of job quality have been conducted primarily with adult subjects (Hackman and Oldham, 1980; Warr, 1987). Our findings show that the importance of employment quality extends to teenagers employed on a part-time basis. Practically, the findings suggest the importance of providing teenagers with jobs that have clearly defined and non-conflicting roles, and that provide opportunities for autonomy and skill variety. From a social perspective, while the clinical significance of these results remain unknown, poor school performance and personal functioning may well place adolescents at risk of developing more serious problems (e.g. Peterson, Compas, Brooks-Gunn, Stemmler, Ey and Grant, 1993). Thus, considering the joint roles of employment quantity and quality is of some importance.

Lastly, our findings question the extent to which policy initiatives designed to protect teenage students who are employed on a part-time basis should be grounded solely in employment quantity (Lantos, 1992; Steinberg and Dornbusch, 1991). Our results suggest strongly that such attempts would be both premature and misguided — premature because further information is required on other factors that interact with the quantity of employment to affect teenagers' school performance and personal functioning, and misguided because inappropriate policy initiatives would result from a focus on employment quantity that excluded employment quality. Instead, policy-makers must now turn their attention to ensuring that teenage students are also given the opportunity for experiencing high quality employment.

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