“A STUDY TO INVESTIGATE IF JOB STRESS AND JOB SATISFACTION DIFFERS WITHIN TWO DIFFERENT SECTORS OF EARLY YEARS EDUCATION: CHILDCARE WORKERS AND PRIMARY SCHOOL TEACHERS”

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ABSTRACT

In today’s current economic society childcare workers and primary school teachers are possibly amongst some of the most significant and influential people in determining your child’s future. Upon these people rest the developmental years of any child which will affect their hope and their future. There is a high expectation from both professions regarding the delivery of their education and certain developmental milestones and expectations of the child at the end of attendance at a crèche or a primary school. What people tend to forget is the behind the scenes work and pressure that can occur from such professions. Obstacles are constantly being met in both professions both on a personal and professional level. The expectation to deliver a specific curriculum each year can lead to high levels of stress for both primary school teachers and childcare workers, including many other variables which influence levels of job stress and job satisfaction. The purpose of this study is to examine job stress between these two occupations, as well as examining their job satisfaction. The aim is to discover which group shows more stress and to determine if it is the actual aspect within the job which determines how stressed the participant might be. Using the job stressor and the job satisfaction questionnaires, along with a self-composed demographical data survey, different but important variables will be also used to analyse the two main hypotheses. Our hope is for this study to indicate if there are significant levels of job stress in these two professions and test between the groups which might indicate to have a higher amount of stress. Results of this study indicate that there are no significant difference in the results between primary school teachers and childcare workers in relation to job stress or job satisfaction.
INTRODUCTION

It takes a community to rear a child with many different relationships formed during a child’s life. Beginning at home with their primary caregivers usually their parents, children are introduced to the ways of the world and how to cope in their world through many different ways with many different cultures. For the first few years of their formative years children are vulnerable and need their carers for food, shelter, love and warmth, the first items of interest on Maslow’s Hierarchy of Needs (Maslow, 1943). As they grow children become more self-sufficient, they begin to learn to use the toilet, feed themselves, dress themselves and talk for themselves whilst building secure healthy attachments with their carers who provide safe and protected environments where they can grow and learn (Simpson & Rholes, 1998). In Ireland it may begin in a crèche/playschool or with a non relative home based carer for some children as in today’s economic climate of 2014 both parents have returned to the workplace (Growing Up In Ireland, 2013). According to this ongoing longitudinal study which was commissioned in 2006 by The Minister of Health and Children, links have been found between looking at the quality of childcare in non parental settings and how it affects children’s outcomes later on in life. Certain factors were reviewed such as environmental factors, for example, learned experiences, stimulation and interactions for children. Also researched was group size within the settings, adult-child ratios, particular aspects within the environment, and staff training. One hypothesis in this study is to record the qualification this sample have (degree or no degree), also what hours they work, staff turnover, their pay scale, and the number of children they have in their care on a daily basis. This study provides a gap in the current literature, by using the information collected, investigating the childcare workers and examine if they show higher levels of stress than primary school teacher. A mounting body of evidence is coming to the fore particularly in the childcare industry and the primary school industry regarding the stress levels of specifically childcare workers and
how it is impacting the children of today. In late 2013 a television programme was aired on Irish television, “A Breach of Trust: Primetime”, bringing to light some of the issues within the childcare section. This documentary showed footage of children being flung onto mattresses, manhandled, shouted and cursed at and strapped into chairs for hours at time. This programme also brought about information that obtained a HSE inspection report which showed that 75% of Irish childcare facilities were in breach of regulations last year. The report also stated that almost half of creches breached regulations on adult/child ratios and staff background checks, while over 40% failed to provide a safe environment for children. It was also expressed that there was a "dangerous over-emphasis on the business interests of childcare providers at the expense of the care of children." If regulations are not being met might this bring about frustrating situation for staff?

Preschool is the next typical step for children, for one or two years, before they attend primary school, however this is not mandatory. Statistics show that nearly forty (40%) percent of four (4) year olds in Ireland are enrolled in primary education (Department of Education and Skills, 2012) and virtually all five (5) year olds attend primary school. In 2010 the Irish government introduced a free preschool year (fifteen hours per week per child) administered by the Department of Children and Youth Affairs. However there is still no subsidy for children between the ages of birth to two and a half years in relation to childcare support (Department of Education and skills, 2012).

The two groups being examined in this study are childcare workers and primary school teachers. In this study it is perceived that childcare workers will predict a higher outcome of occupational stress but will show higher levels of job satisfaction than primary school teachers. Discussed will be the reasons for stress in both occupations.

Occupational stress can have positive and negative effects on individuals in their working environment. Stress is an unavoidable consequence of life and seems to be...
paramount across most organisations (Richardson & Rothstein, 2008). It is not possible to
totally eliminate stress within organisations but ways on how it is managed is paramount to
productive organisations and gaining positive outcomes across all disciplines.
THE CHILDCARE WORKER

In general children who are not already attending a crèche usually begin their first year in early education in their fourth year. Such early years’ methods of teaching implemented in the crèche/playschool settings could be Playschool, Montessori, Naionrai, or Highscope. Some children may be in early education for two years before primary school depending on their age. Between day care, sessional care and part time services, there are just over 4,300 childcare facilities regulated by the HSE (HSE, 2014). The regulations regarding adult child ratios within the childcare setting is three children to one staff for under one year olds, five-to-one for children aged between one and two, six-to-one for children aged between two and three, and eight-to-one for children aged between three and six. In sessional care (three hours) the staff child ratio is ten children to one staff member.

Might the number of children influence levels of stress amongst these childcare workers? From an international perspective, some studies have shown results where lower ratios with smaller group size in the pre-school were associated with more positive teaching outcomes and behaviours (Taylor & Francis, 2004). A further study showed results that although there was high levels of emotional exhaustion and high stress levels amongst childcare workers they also show results with high quantities of job satisfaction even though their pay was low (Tsigilis, Zachopoulou, Grammatikopoulos, 2006). In this study we look at the amount of children each crèche staff has in their setting to care for each day and compare it to their levels of job stress. The HSE monitors that these standards are being met within these services, with inspections carried out on an annual basis, which is followed up by an inspection report. However the Primetime show aired on Irish television in 2012 has brought to light some problems regarding the frequency of these inspections. Since July, 2013, these reports are now available to be viewed online (www.HSE.ie). These inspections look at quality of service, management and staffing, safety, illness policy, quality of care, premises,
and equipment. Specifics for these regulations can be found in the Child Care (Pre-School Services) (No 2) Regulations 2006 and the Child Care (Pre-School Services) (No 2) (Amendment) Regulations 2006. Past research in psychology has shown and is well known throughout all disciplines that the formative years (conception to 6 or 7 years) are the most significant in a child’s life, yet the Irish Board of Education show no direct input until a child begins their ECCE scheme, a year before they begin primary school. Since this scheme has been implemented in 2010, a new National Curriculum Framework establishing principle themes and goals within each service for children from birth to six years. Called “Aistear” (Irish for Journey) and Siolta (Irish for seeds), the framework is broken down into 16 quality standards that all childcare services should work towards. With these new framework brings plenty of extensive paperwork for the childcare staff. It is also a framework that is being implemented in some primary schools too, to allow the service to reach their full potential and provide growth for the facility as a developmental tool.

Participants of the ECCE Scheme are required to follow the principles of “Siolta”. Childcare staff must demonstrate how they put the Siolta principles and standards into everyday practice, but when do child care staff get time to do their paperwork for the new framework? Are they under pressure to get things done before an inspection? Who looks after the children when they are documenting Siolta?

In as far back as 1984, Sharalee Whitehead writes in “The Childcare Worker and Occupational Stress” how childcare workers are perceived as possibly the least valued employees in terms of pay, with great evidence to support this, and on the other hand are relied on to provide great quality childcare for each child they look after. She writes how although they are provided professional association they are still deprived on an economic level. Today this topic is still up for discussion.
THE PRIMARY SCHOOL TEACHER

Primary school teachers are involved in the emotional, social, physical, intellectual and moral development of pupils in their class (GradIreland.com, 2014). The teacher is responsible for delivering a National Curriculum, covering a wide range of subjects set out and inspected by the Board of Education. The teacher designs age appropriate lesson plans, liaises with parents and other relevant individuals such as educational psychologists. According to gradireland.com (2014) their working conditions are extremely intensive, needing constant concentration with immense creativity and energy to deliver the curriculum material within their classroom of, on average, thirty children. The deliverance of the curriculum is monitored by The Department of Education and Skills. This ensures high standards of education are maintained. The Inspectorate, using the legislation *Education Act 1998*, evaluates and reports the quality of Education provided. Since January 1st, 2014, the *Child and Family Agency* is now responsible for private schools and also children who are not attending recognised schools. The work of the individual teacher is monitored by the Rules of the National Schools. Examined in the report is the curriculum provided, the teaching, the learning outcomes, and the assessment in general in the education system (Department of Education and Skills).

According to a report compiled by the ESRI (Economic and Social Research Institute) on behalf of the teaching council in Ireland, a considerable amount of factors contribute to job stress and job satisfaction amongst our primary school teachers. The analysis is drawn from a government funded national study by a team of experts and researchers from Trinity College Dublin and the ESRI called “Growing Up in Ireland” (2008). Using over eight thousand (8,000) children in this study their teachers and school principals were given questionnaires to record job satisfaction and job stress amongst the faculty. Even though the sample of teachers were only of the nine year old students, the results showed that fifty nine
(59%) percent of them felt very satisfied with their profession, but a higher number of forty six (46%) percent of female teachers reported “feeling very stressed” with forty two (42%) percent of their male counterparts felt “not at all” stressed. Is gender a factor?

According to a qualitative study on stress amongst urban teachers (Shernoff et al, 2011), it is apparent that job stress significantly impacted their personal relationships and physical health, it also recorded that human and material resources to be very significant in reducing job stress. In specific, emotional exhaustion was also reported to be a significant burn out factor amongst physical education teachers in another Greek review (Koustellios, 2005). Results in this study also indicated high job satisfaction for the actual job itself however conflicting the above research, some studies have shown that primary school teachers who have only worked in the school for between two-five years showed lower stress levels (Darmody & Smyth, 2013). Research in an Irish context has shown few studies which focus explicitly on job satisfaction and job stress of primary school teachers (Darmody and Smyth, 2013). This study also indicates results that overall Irish primary school teachers are satisfied in their jobs.

Anecdotal evidence has always said that working with children is a stressful job, although it is also well known that people who work with children although find it tough, find the day to day challenges of their work highly satisfying. For example as far back as 1988 , Stremmel and Kontos found in a study “Caregivers’ perceptions of working conditions in a Childcare Environment” that contact with the children and relationships with co workers to be the most satisfying aspects of the job, with wages and benefits being the most dissatisfying. Suggestions were also made by staff in the 1988 study, on improving their working conditions such as better pay and lowering the child-staff ratios. Has that changed in today’s working environment for childcare staff and primary school teachers, research is showing these issues are still prevalent amongst these professions today. The current study will look to
understand these ongoing issues. Being examined is the number of hours worked by both occupations, the pay level for both, the number of children in their care each day. Along with this geographical information and job stress questionnaires, an evaluation will be given to examine if there is a correlation between the variables for each participant.
**HOURS WORKED**

Comparing both occupations of primary school teacher and early year’s educators, their hours of work differ significantly. Childcare workers in crèches work forty hours a week in a full time position and less in a part time position, with the mandatory twenty days paid holidays a year, this is excluding bank holidays. Primary school teachers work usually 30 hours a week (in the classroom) with usually two (2) months off in the summer, two (2) weeks off at Christmas, a week off at midterm, usually Easter and Halloween. According to the Herald.ie (March, 2014), Irish teachers are the best paid for working fewer hours. Comparing thirty one countries surveyed, Irish primary school teacher’s work an annual one thousand and thirty seven (1037) hours, compared to the United Kingdom, primary school teacher’s work on average fifty (50) hours per week (Prospects, UK, 2012).
QUALIFICATIONS

Educational requirements for both occupations also differ significantly.

Regarding the early year’s requirements for staff qualifications the regulation of pre-school childcare services in Ireland, the Irish law states that in the employed staff who are working directly with children at all times must be over eighteen (18) year’s, it also states that there must be a sufficient number of competent adults with adequate appropriate experience in caring for children and/or have appropriate qualifications to care for the children. It also appropriate Garda vetting is mandatory (Citizens Information, September, 2011). Since the implementation of the ECCE scheme in 2010, all pre-school leaders must hold a national qualification accredited by the National Framework of Qualifications or equivalent. This award must be in childcare or early childhood education (Department of Children and Youth Affairs, 2013). According to Early Childhood Ireland (2012), in a survey with over four hundred (400) childcare staff they found that eighteen (18%) percent of staff had no qualifications, sixty six (66%) percent had level five (5) or level six(6), and sixteen (16%) percent had level seven (7) qualification from the National Framework of Qualifications.

For a primary school teacher, according to the teacher qualification at primary and post primary level, teachers must be qualified to teach children ranging in age from four to twelve years. They must have completed a recognised three year full time programme receiving a Bachelor of Education degree or they must have received a recognised graduate/higher diploma in education (primary) combined with a primary degree at level eight or level nine qualifications on the National Framework of Qualifications. It is also mandatory that primary school teachers pass a written, aural and oral exam in the Irish language, including a three week approved course in the Gaeltacht (An Irish speaking region in Ireland) (Citizens Information, 2013).
This study will concentrate and examine if the participants have a degree or have no degree and their levels job stress and job satisfaction.
**PAYSCALES**

Pay scales for both occupations differ significantly which may influence stress levels for the lower paid occupation, whom in this study is the childcare worker, who work more hours and get less pay. According to a salary survey in Ireland (2012) with over 400 participants, results showed that a childcare worker on average with no qualifications gets paid an hourly rate of €10:58, with qualifications of FETAC level five or six, the hourly rate is €11:46, and staff with level seven receive €12:03 per hour (Early Childhood Ireland, 2012). Some key issues emerging from this survey show that the pay is low for childcare workers compared to the national average. The survey also noted that the rates of pay do not reflect the importance of the work that childcare workers do, they believe the childcare sector is undervalued and underpaid.

According to Tougas (2010) on Childcare, “A Paper of the Child Care Advocacy Association of Canada”, it was found that their Government looked from the perspective of the childcare workers and by having more of a regulation in childcare options within the field will lead to better job opportunities By increasing the budget the child care staff receive higher wages and improved working conditions. May this be the case in Ireland with the implementation of the new framework for Childcare Services? According to some research the ECCE scheme has provided that some private childcare providers find with the ECCE scheme in place, find it very difficult to offer full time employment to childcare workers (Early Childhood Ireland, 2013). In relation to childcare workers many studies have shown that they also reach a burnout stage.

In a Greek study “Job Satisfaction and Burnout among Early Years Educators” (2006) it was found that the childcare workers showed burn out and occupational exhaustion above the average and that pay levels were quite low. It was also reported by Schaufeli and Dierendorck (1995) as cited in Tsigilis, Zachopoulou & Grammatikopoulos (2006) gave
evidence that this may vary from country to country. In as far back as 1984, Sharalee Whitehead writes in “The Childcare Worker and Occupational Stress” how childcare workers are perceived as possibly the least valued employees in terms of pay, with great evidence to support this, and on the other hand are relied on to provide great quality childcare for each child they look after. She writes how although they are provided professional association they are still deprived on an economic level. Today this topic is still being investigated.

Research has shown that primary school teachers are paid, according to the INTO (Irish National Teachers Organisation), a yearly income of E30,702. However this pay scale increases on a yearly basis, up as far as E59,940, after twenty five years of service (INTO, 2013). Taken into consideration on the rate of pay is the allowance for their level of academic qualifications (Department of Education and Skills, 2013). As a polarising issue many believe teachers and childcare workers alike are not paid enough for the job that they do. Although some resent their long holidays and short working day. According to “The School Environment” in Education Today (2013), discussed is how much teachers are paid, trends show that “Teachers salaries increased in real terms in most countries between 2000 and 2011. In Denmark, Estonia, Ireland and Portugal, salaries increased at all levels of education by at least twenty (20) percent” (Pg. 64). According to The Journal.ie (2014), all teacher salaries are down thirty (30) percent since 2010.

According to a qualitative study on the impact of stress on urban teachers (Shernoff, Mehta, Atkins, Torf & Spencer, 2011) it is apparent from their results that job stress significantly impacted their personal relationships as well as the participants’ physical health, it also recorded that human and material resources provided stress relief. Might better pay, or a reduction in working hours, all add to reducing occupational stress for childcare workers or primary school teachers. The objective of this thesis is to examine if childcare workers
provided higher levels of stress than primary school teachers. A large amount of past research is evident showing both occupations are very stressful and demanding.

The rationale of this study is to examine using the geographical factors to explain and understand their contribution to the stress levels amongst the childcare workers. Such as how many children the participant has in their care or how many hours they work in a week. So is working with children a vocation or a career?

Currently there are many studies stating the stress levels for both occupations but no research showing where both are compared to investigate which occupation is more stressful. Also considered in this study is if the particular age of the children adds to stress levels or does it matter, a child is a child period.

Anecdotal evidence has always said that working with children is a stressful job, although it is also well known that people who work with children although find it tough, find the day to day challenges of their work highly satisfying. For example as far back as 1988, Stremmel and Kontos found in a study “Caregivers’ perceptions of working conditions in a Childcare Environment” that contact with the children and relationships with co workers to be the most satisfying aspects of the job, with wages and benefits being the most dissatisfying. Suggestions were also made by staff in the 1988 study, on improving their working conditions such as better pay and lowering the child-staff ratios. Has that changed in today’s working environment for childcare staff and primary school teachers, research is showing these issues are still prevalent amongst these professions today. The current study will look to understand these ongoing issues. Being examined is the number of hours worked by both occupations, the pay level for both, the number of children in their care each day. Along with this geographical information and job stress questionnaires, an evaluation will be given to examine if there is a correlation between the variables for each participant.
METHOD SECTION

PARTICIPANTS:

Participants in this study were early childhood workers \( n=39 \) and primary school teachers \( n=41 \) from Ireland \( m=65, \ SD=14 \) \( m=62, \ SD=12 \). The participant criterion included those who were over eighteen years old and worked in either occupation in a full time or part time position. There was no required gender but the majority of respondents were female \( M=7\%, \ F=93\% \).

An email was sent to crèches and primary schools asking to participate in a study. It was explained in an e mail that this current study was looking at stress levels and job satisfaction between childcare workers and primary school teachers. They were also contacted by phone to participate in the same. The staff of the organisation were asked if they wanted to participate, once they agreed an online link was forwarded via e mail. Participants were also gathered using social networking sites such as Facebook. A post was also placed on parenting and childcare websites to gather participants. The questionnaires were then completed online using a popular survey company called Survey Monkey. All answered surveys were returned anonymously. No inducements were made to take part in the study, all participation was voluntary.

The survey was used to measure two variables: job stress and job satisfaction. A third variable of personality was also being examined but due to a computer malfunction this variable from excluded. Each participant also filled out a self composed demographical questionnaire.
**DESIGN:**
A non-repeated/between groups design was used to compare job stress and job satisfaction between childcare workers and primary school teachers. The participants were assigned to two groups, primary school teachers and childcare workers. In this correlational study the predictor variables were the crèche setting, the primary school classroom, and job satisfaction. The criterion variable will be perceived stress levels and job satisfaction.

**MATERIALS:**
The only materials used were a laptop and Survey Monkey, an online tool for sending out and gathering questionnaires.

**THREE QUESTIONNAIRES WERE SPECIFICALLY USED:**
1. **Self-composed demographically designed questionnaire:**
   Included sixteen questions: fourteen were rated on different scales with two being open ended. These questions were used to determine different aspects the study required. The scaled questions included for example, hours worked per week, occupation, age, education level, number of children being taught on any one day, pay and frequency of meetings, both parental and staff.

2. **Job stressor scale (ICAWS, OCS & QWI):**
   (Likert Scale)
   ICAWS (interpersonal conflict at work scale) rated 1-5, from never to very Often. OCS (organisational constraints scale) rated 1-5, from less than once a month or never to several times per day. QWI (quantitative workload inventory) rated 1-5, from less than once per month or never to several times per day. PSI (Physical symptoms inventory) were measured
using three responses: 1. No symptom, 2. Have symptom (didn’t see doctor), 3. Have symptom (saw doctor).

The reliability and validity of this questionnaire is reported by Spector and Jex (1998) to confirm internal and consistent reliability using thirteen studies (Spector, 2001).

3. **Job satisfaction scale:**

(Likert scale)

ICAWS (interpersonal conflict at work scale), OCS (organisational constraints scale), QWI (quantitative workload inventory). All are rated 1-6, from disagree very much to agree very much. Positive and negative marking and reversed scoring were used, with missing items also adjusted.

The reliability and validity score for the measures were gathered from previous research. The job satisfaction scale showed internal consistency reliabilities based on a sample of 2,870 (Spector, 1994).

(See appendix for questionnaires)
PROCEDURE:

1. A research proposal was sent to the ethics board to obtain ethical permission to carry out the study. Permission was granted.

2. The questionnaires were designed using survey monkey and were accessed through a link from social networking sites and through e mails.

3. A cover letter/email was provided at the time of initial contact explaining about the study, included in this cover letter/email was the option to withdraw at any time but not after their questionnaires had been returned.

4. Each participant was informed that their responses were held in complete confidence and were purely used for academic purposes.

5. Each participant gave informed consent.

6. The links were sent out through the networking sites or through email with a link attached.

7. Results were monitored and the first eighty questionnaires returned participated in the study.

8. The results were then analysed.
RESULTS SECTION

An independent samples t test was used to examine if childcare workers (M=65, SD=14) were found to not show higher levels of stress than primary school teachers (M=62, SD=12). The 95% confidence interval limits shows that the population mean difference of the variables lies somewhere between -6.289 and 8.6. This independent samples t-test found that there was no significant difference between stress levels of childcare workers and primary school teachers ($t(47)=.317, p=.752$). Therefore the null hypothesis must be accepted.

Table 1:

*Independent samples T Test for job stress and occupation*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>DF</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Stress</td>
<td>Primary Teacher</td>
<td>62</td>
<td>12</td>
<td>0.317</td>
<td>47</td>
<td>0.752</td>
</tr>
<tr>
<td></td>
<td>Childcare Worker</td>
<td>65</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Childcare workers ($M=128$, $SD=24$) were found to have not shown higher job satisfaction than primary school teachers ($M=126$, $SD=23$). The 95% confidence interval limits shows that the population mean difference lies somewhere between -12.8 and 17. An independent samples t test found that there was no significant difference between overall job satisfaction of childcare workers and primary school children ($t(39)=.91$, $p=.76$). Therefore the null must be accepted.

**TABLE 2:**

*Independent samples T Test for job satisfaction and occupation*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>$t$</th>
<th>Df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Job Satisfaction</td>
<td>Primary Teacher</td>
<td>126</td>
<td>23</td>
<td>.91</td>
<td>39</td>
<td>.76</td>
</tr>
<tr>
<td></td>
<td>Childcare Worker</td>
<td>128</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
An independent samples t-test was conducted to examine if childcare workers (M=1.1, SD=.50) were more stressed than primary school children (M=2.7, SD=.70) because of the number of children they have in their care. The 95% confidence limits show that the population mean difference of the variables lies somewhere between -1.83 and -1.3. Therefore there was a significant difference between how many children the worker had and overall stress (t(47)=.32, p=.752) and age of children (t(76)=-11, p<.001) they have in their care and how it affects stress levels. We can reject the null hypothesis.

TABLE 3:

Independent samples t test for age of children and occupation

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>Df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Of Children</td>
<td>Primary Teacher</td>
<td>2.7</td>
<td>.70</td>
<td>-11</td>
<td>76</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Childcare Worker</td>
<td>1.1</td>
<td>.50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


A Mann-Whitney U test was used to test which group showed higher amounts of stress depending on the number of the children they had. This test was used to show there would be a significant difference between participants in the childcare workers group and the primary school teachers group. The childcare workers had a mean rank of 26 for overall stress and a mean rank of 35 for the number of children they had. The primary school teachers had a mean rank of 25 for overall stress and a mean rank of 42 for the number of children. The Mann Whitney U revealed that the childcare workers and primary school teachers did not differ significantly (Overall stress: U=-.34, p=.73 Number of children: U=-1.3, p=.18).

### Mann Whitney U T Test for number of children and occupation

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number Of Children</strong></td>
<td>Primary Teacher</td>
<td>42</td>
<td>.70</td>
<td>-1.3</td>
<td>.18</td>
</tr>
<tr>
<td></td>
<td>Childcare Worker</td>
<td>26</td>
<td>.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
An independence samples t test was conducted to examine if pay under E2000 (M=1.1, SD=.31) and pay between E2000-E3000 (M=1.8, SD=.62), to show different levels of stress in both groups. The 95% confidence limits show that the population mean difference of the variables lies somewhere between -91 and -48. This test found that there was a significant difference between the two groups and their pay scales (t(76)=-6.2, p<.001), showing the primary school teachers to earn more. Furthermore an independent samples t test found no significance difference between overall stress levels (t(47)=.31, p=.76) for the two groups. Therefore we must reject the null hypothesis.

**Independent samples T Test for pay and occupation**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>T</th>
<th>DF</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay</td>
<td>Primary Teacher</td>
<td>1.8</td>
<td>.62</td>
<td>-6.2</td>
<td>76</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Childcare Worker</td>
<td>1.1</td>
<td>.31</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A one way Anova was conducted, with overall stress being conducted against all demographical variables to find significance. A number of independent sample t tests were carried out to see if any significant effects were found, however there was no significant difference between any of the groups. Some results showed there was a slight difference within groups but not between groups. Results in this instance showed that primary school teachers teaching lower primary (junior infants, senior infants, 1st and 2nd class) scored less on their overall stress questionnaire than those teaching higher primary school age groups (3rd, 4th, 5th, 6th class).

However there was evidence to support in some circumstances that in the pay variable against overall stress, those who earned under E2000 a month scored the maximum result on overall stress (max: 109) than those who earned more than E2000 a month (f(4.2)=.051, p>.950).
Fig. 1

Occupation: Childcare Worker

Education

- No College Degree
- College Degree or higher
The above pie charts (Fig. 1 & Fig 2) show the distinct difference regarding the qualifications between the two groups. Each group has practically a mirror opposite view regarding the childcare workers who have no college degree and the primary school teachers who hold a college degree.
The pie chart represents the higher difference between gender in these two occupations with the male sector being 7.5% and the female sector showing to be the majority at 93%.

Although this was not a variable in this study it still brings significant discussion to the occupations. The 7.5% for males are from the primary school occupation with no males in the childcare worker occupation. Finally, an independent samples t-test was conducted to examine if childcare workers (M=2.18, SD=.756) were more stressed than primary school children (M=2.7, SD=.70) because of their age. The 95% confidence limits show that the population mean difference of the variables lies somewhere between -.693 and .126. Therefore there was a significant difference between the participants age (t(78)=5.0, p=.027) and their length in the job (t(78)=.033, p<.857), however this result did not affect their overall stress levels. We can accept the null hypothesis.
**DISCUSSION**

The central purpose of this study was to investigate if childcare workers showed higher levels of job stress than primary school teachers within the Irish domain of these occupations. Using the Job Stressor Scale Questionnaire (Interpersonal conflict at work strain, organisational constraints scale & quantitative workload inventory) (Spector, 1998), also investigated was a between groups job satisfaction questionnaire, using the Job Satisfaction Scale Questionnaire (Interpersonal conflict at work strain, organisational constraints scale & quantitative workload inventory) (Spector, 1998). These two questionnaires were used to specifically examine our hypothesis, if childcare workers showed higher levels of job stress or job satisfaction than primary school teachers. Based on the responses of the participants using specific demographical questions, helped to gain an understanding as to what factors may increase or decrease job stress. Overall, there was no significant result’s between the two groups. Clear evidence was provided to support past research, which indicated that although these professions showed stress levels as two separate professions, they also indicated job satisfaction and being happy in their job (Tsigilis, Zachopoulou, Grammatiikopoulos, 2006).

Within these two professions of childcare worker and primary school teacher, their stress questionnaires showed that although there is high stress amongst both occupations neither one differed significantly from each other for job stress or job satisfaction. A demographical data survey addressed the following areas: age, gender, experience in the area, length in job, pay, hours worked per week, ages of children cared for, number of children cared for per day, qualifications, benefits, how often staff and parental meetings were held.

Job satisfaction relates to the gratification, satisfaction and fulfilment from working in any occupation (Collie, Shapka & Perry, 2012) as cited by Duff (2013). Job satisfaction refers to how the individual feels their job meets their own personal needs. Improving job satisfaction amongst a workforce can help reduce costs in relation to job stress which goes hand in hand
with job satisfaction (Smith, 1989). However job stress can sometimes if not always over
shadow the satisfaction within a job. For primary school teachers and childcare workers job
stress can hinder how a teacher performs their daily duties (Collie, Shapka & Perry, 2012) as
cited by Duff (2013). Stress within this area can lead to the experience of high and unpleasant
emotions, most commonly referred to in some studies are two main issues, work load and the
student’s behaviour or lack of support with regards behaviour as cited by Collie et al (2012)
in their study on predicting teacher stress and job satisfaction.

This research also examined areas such as:

1. Is job stress impacted by the amount you earn, the hours you work or the amount of
   experience you have?

2. Is job stress related to the number of children the participants teach or the age of the
   children the participants teach?

3. Is job satisfaction still high even though stress levels between groups may also be
   high.

4. An open ended question was asked of participants to gain information on how job
   stress can be reduced within their organisation.

Interestingly in our study, no significant results were produced between the groups on levels
of stress, yet the open ended questions in the demographical questionnaire provided
contrasting data. This demographical questionnaire brings to the fore a different argument.
All participants were asked how stress levels could be minimised in their own personal
teaching environment. All of the open ended replies showed common trends amongst how to
minimise stress within their environment. The most common comments from participants
were to reduce the adult child ratios, reduce paperwork and more support including better
communication and better pay. Based on this analysis the lack of staff meetings and the high workload, resulted in a high number of participants not allowing these variables to affect them professionally or let it impact their levels of job stress. Some participants reported that more staff nights out and staff training as suggestions to help minimise stress within their workplace, even though no significant results showed on the job stress questionnaire result indicating high levels of stress amongst participants. The open ended question results support the Stremmel and Kontus (1988) study which found that pay and benefits were the most dissatisfying aspects of the job in childcare working conditions. These results also support research from Sharalee (1984) stating that since the childcare worker is the least valued profession for the work that they do, pay may lead to better working conditions for the profession. Today these issues still continue, according to Pozo-Munoz et al (2008) when colleagues experience and acknowledge problems within their working environment it strengthens the companionship amongst staff, which leads to an increase in internal coping mechanism within the working environment. If this companionship aids the relationships within the occupation, the future direction of external activities may also reimburse the companionship amongst staff and keep stress levels at a base line which also may aid in improving communication. This supports evidence from past studies indicating that in particular human and material resources provided stress relief (Shernoff, Mehta, Atkins, Torf & Spencer, 2011).

Early childhood education and a child’s education in general are important priorities in Ireland. With the implementation of the new national framework (ECCE Scheme) in crèches and playschools along with the national curriculum within primary schools, this study supports past evidence that teaching is a stressful job (ERSI, 2014). In this particular study, some participants scored very high results on their job stress questionnaire. However, the results also showed high scores on the job satisfaction questionnaire. This evidence supports
the hypothesis of some past studies in this particular domain, agreeing with evidence that contact with the children as well as relationships with co-workers to be the most satisfying aspects of the job, with wages and benefits being the most dissatisfying (Stremmel & Kontos, 1988). In a recent study by Emolina, (2011) conflicting the above evidence, results showed that burnout amongst two hundred and nine (209) childcare workers, was quite low, however there were limitations to this study.

Although levels of stress remained similar across all participants, there is a slight significance within groups in job stress resulting in the age of children taught. Those who taught lower primary school children (N=12), (78 out of 109) showed slightly lower stress than those who taught higher primary school children (N=10), (88 out of 109). However there were no significant results between groups for high levels of stress overall. This may relate to the length of time participants are in this profession. According to the ESRI in their “Growing up in Ireland” study, after a certain length of time in the teaching profession it is inevitable that most staff reach burnout from high levels of stress and low pay. Their report stated this as well as Darmody & Smyth (2013) reported that the length of time in a job influenced stress level, with those in the job two to five years as showing the lowest stress levels. This current study supports these results.

Factors which also showed to be significant overall of the participants although not significant in the tests administered, provided support and evidence for the controversial TV documentary aired on Irish television raising issues amongst childcare workers. In this study thirty eight (38%) percent of participants reported it was difficult to do their job because of conflicting job demands one to two times per week. The results also showed that thirty three (33%) of participants felt their job was difficult to do because of inadequate training, at least one to two times per month. Interestingly thirty (30%) percent of the participants told that one
to two times a week their job was difficult to do because of organisational rules and procedures.

We found few differences between those with a greater level of an educational background. 26% had a level 8 qualification and the highest percentage at 32% have a level 5 qualification. Results did show that all of the primary school teachers (N=41) had some form of a college degree or masters, with a low number of childcare workers with the same level of education. 98% of childcare workers had a level 6 qualification as graded on the National Framework of Achievement within the Irish realm. It is mandatory for primary school teachers to have at least a degree and a higher diploma when receiving a teaching position in Ireland so it is important that their level of pay relates to this qualification (Fig 1 & Fig 2). However, it does seem puzzling that a childcare worker who is teaching a child in a playschool does not require the same level of qualifications as a primary school teacher nor do they receive the same level of pay yet the children they teach may not differ in age at all, as some parents hold their child back in sending their child to school aged five years and others send them at four years. If a parent decides to send their child to school at four years and four months and another parent decides to send their same aged child to playschool for an extra year, the results are that the same aged child is being thought by two very differently qualified professionals. Much past research has shown that education does not begin when a child enters the main stream school domain but that it begins much earlier, even from the start of life. Many educators that date back over one hundred years (Montessori, 1901) have shown evidence that early education has a very important significance.

A current controversy on showing the large gap between the two sectors and the importance put on the early year establishments and mainstream primary school is a hot topic that is ongoing. Even though crèches are termed an educational institute with the children receiving an early years education under the new Siolta and Aistear framework they are
losing out and being discriminated in other areas. For example the Minister for Public and Reform has been asked to re designate preschools as educational in the upcoming valuation bill (2014) as they are now providing an educational service. So it seems the Irish government are proving a half in half out approach to improving the education system. When it comes to paying building rates, the crèche buildings are not exempt!

Neurological research has shown that at the age of three years a child’s brain is developing rapidly, with the development of over one hundred trillion brain synapses. The wiring of the brain is at its highest potential for learning which should give precedent to high quality preschools being paramount for a child’s development and giving a good foundation for learning in later years? According to Shonkoff & Philips (2000) report that as well as many other variables such as loving a child and taking time with them aids their brain development, so does taking care of yourself. So if our childcare workers and primary school teachers are stressed then their work is not being met to its full potential. Even if only slightly stressed out with simple everyday tasks causing indirect stress, this can hinder a child’s development. In this study sixty nine (69%) percent of the participants from both occupations felt they had “little time to get things done”, with thirty three (33%) of participants reporting they were “required to work very fast” several times a day. A lot of research has shown that stress can lead to hindering our cognitive processes influencing how individuals deliver their work.

Future research may lead to a change in this discipline, going forward all areas within the educational system may be given the same adequate support and importance as other areas, for example playschool on a par with mainstream school. The difference in qualification is also reflected in this study in the levels of pay amongst the participants, with a large number of the childcare workers on less than E2000 per month, whilst a large number of the primary school teachers were within the 2000-3000 pay scales. Overall 23% of all
participants earn between 2000-2500 per month. This level of pay should not be taken away from the primary school teachers but past research has shown that the low pay, long hours and low adult child ratios has been a continuous issue within the childcare industry. This study shows evidence that “raises are few and far between” in today working environment, with ninety even (97%) percent of participants agreeing very much with this statement.

Hours worked per week have been shown in many studies to contribute to job stress, the analysis of this study shows that crèche workers work longer hours than primary school teachers. Although the hours worked per participant did not show significance when answering their questionnaires it did feature within the open ended question in the demographical questionnaire. Some participants reported that shorter hours per day may help reduce job stress. In comparison supporting the evidence that primary school teachers do not work as many in classroom hours as childcare workers is in the Herald.ie (March, 2014) showing that Irish teachers are the best paid for working fewer hours.

Interesting percentages gathered from the data in this study:

With 62% of childcare staff working full time hours, and the remaining working part time this differs significantly to the 90% of the overall participants within the primary school teachers group working full time with 10% working part time. However 20% of the overall participants work more than the legal hours in Ireland of forty hours per week. 60% of the overall participants receive no benefits in their job. The highest percentage for the length in the job for overall participants is 6-9 years (29%). 75% of the participants work full time, and 25% working part time.

Most interestingly in this study are the percentages of the male participants. 93% of the participants were female with the remainder being male. Do these statistics give rise to future
studies where it may be interesting to investigate why the primary school teaching and childcare work are clearly female dominated professions?

Even though participants stated in their open ended question that the need for better communication within their environment was a must, when asked about their particular environment in their questionnaires their replies showed slight differences, with thirty-four (34%) percent agreeing very much that “communication is good in the organisation”.
LIMITATIONS:

Possible limitations within this study may provide more significant results in future research. The research points within this study provide no unfamiliar information that has not already been researched to job stress and job satisfaction within the realm of children’s education. However the certain aspects that did arise were the distinct difference of gender within the two occupations. Possibly a larger sample including more males may provide different results (Fig 3). Also to include a larger sample in general may adopt results to fill the gap in the literature when it comes to the importance of looking after the professionals who provide education for tomorrow’s future.

On review of the demographics within this survey, a breakdown of certain questions may provide for better analysis.

Another hypothesis within this study was to look at personality types. Initially the overall aim was to examine the data to analyse if there was a particular type of personality that follows the direction of a childcare worker or a primary school teacher as a profession. Due to a computer malfunction, the questionnaires appeared wrong when sent to each participant. But on analysing the results that were received back it was easy to analyse certain common traits that appeared amongst both occupations. Ninety (90%) percent of childcare workers stated they were reliable workers, with ninety three (93%) of primary school teachers stating the same trait. Seventy seven (44%) of childcare workers stated they preferred work that was routine whilst only thirty seven (37%) of primary school teachers stated the same. Only four (4%) of childcare workers ticked the depressed or feeling blue box and likewise only three (3%) of primary school teachers stated the same trait.
Future recommendations for this study could be repeated using a larger sample of participants. Past literature has specifically examined primary educators and childcare workers as separate studies. The gap in the literature gave way to examine which of these two educators showed higher stress levels and what variables influenced the results.
REFERENCES


Department of Education and Skills (2014)


Witherell, S. L. (2013). Work-Related Stress And Mental Health Of Child Care Center Workers.
WEBSITES CITED:

Eveningherald.ie (2014) retrieved May 2014


www.citizensinformation.ie retrieved March 2014

www.departmentofchildrenandyouthaffairs.ie retrieved March 2014


http://www.prospects.ac.uk/primary_school_teacher_salary.htm retrieved January 2014


http://digitalcommons.wayne.edu/oa_dissertations/718 retrieved May 2014


http://www.montessori-namta.org/maria-montessori retrieved May 2014
APPENDIX

JOB SATISFACTION QUESTIONNAIRE:

<table>
<thead>
<tr>
<th>JOB SATISFACTION SURVEY</th>
<th>Disagree very much</th>
<th>Disagree moderately</th>
<th>Disagree slightly</th>
<th>Agree slightly</th>
<th>Agree very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul E. Spector</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Department of Psychology</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>University of South Florida</td>
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<tr>
<td>Copyright Paul E. Spector 1994, All rights reserved.</td>
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</tr>
</tbody>
</table>

PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT.

1 I feel I am being paid a fair amount for the work I do. 6
2 There is really too little chance for promotion on my job. 6
3 My supervisor is quite competent in doing his/her job. 6
4 I am not satisfied with the benefits I receive. 6
5 When I do a good job, I receive the recognition for it that I should receive. 6
6 Many of our rules and procedures make doing a good job difficult. 6
7 I like the people I work with. 6
8 I sometimes feel my job is meaningless. 1 2 3 4 5
<p>|   | Statement                                                                                       |   | 1 | 2 | 3 | 4 | 5 |
|---|------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|
| 9 | Communications seem good within this organization.                                             |   | 1 | 2 | 3 | 4 | 5 |
| 10| Raises are too few and far between.                                                            |   | 1 | 2 | 3 | 4 | 5 |
| 11| Those who do well on the job stand a fair chance of being promoted.                            |   | 1 | 2 | 3 | 4 | 5 |
| 12| My supervisor is unfair to me.                                                                 |   | 1 | 2 | 3 | 4 | 5 |
| 13| The benefits we receive are as good as most other organizations offer.                          |   | 1 | 2 | 3 | 4 | 5 |
| 14| I do not feel that the work I do is appreciated.                                               |   | 1 | 2 | 3 | 4 | 5 |
| 15| My efforts to do a good job are seldom blocked by red tape.                                    |   | 1 | 2 | 3 | 4 | 5 |
| 16| I find I have to work harder at my job because of the incompetence of people I work with.     |   | 1 | 2 | 3 | 4 | 5 |
| 17| I like doing the things I do at work.                                                          |   | 1 | 2 | 3 | 4 | 5 |
| 18| The goals of this organization are not clear to me.                                             |   | 1 | 2 | 3 | 4 | 5 |</p>
<table>
<thead>
<tr>
<th></th>
<th>PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>I feel unappreciated by the organization when I think about what they pay me.</td>
</tr>
<tr>
<td>20</td>
<td>People get ahead as fast here as they do in other places.</td>
</tr>
<tr>
<td>21</td>
<td>My supervisor shows too little interest in the feelings of subordinates.</td>
</tr>
<tr>
<td>22</td>
<td>The benefit package we have is equitable.</td>
</tr>
<tr>
<td>23</td>
<td>There are few rewards for those who work here.</td>
</tr>
<tr>
<td>24</td>
<td>I have too much to do at work.</td>
</tr>
<tr>
<td>25</td>
<td>I enjoy my coworkers.</td>
</tr>
<tr>
<td>26</td>
<td>I often feel that I do not know what is going on with the organization.</td>
</tr>
<tr>
<td>27</td>
<td>I feel a sense of pride in doing my job.</td>
</tr>
<tr>
<td>28</td>
<td>I feel satisfied with my chances for salary increases.</td>
</tr>
<tr>
<td>29</td>
<td>There are benefits we do not have which we should have.</td>
</tr>
<tr>
<td>30</td>
<td>I like my supervisor.</td>
</tr>
<tr>
<td>31</td>
<td>I have too much paperwork.</td>
</tr>
</tbody>
</table>

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>I don't feel my efforts are rewarded the way they should be.</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>33</td>
<td>I am satisfied with my chances for promotion.</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>34</td>
<td>There is too much bickering and fighting at work.</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>35</td>
<td>My job is enjoyable.</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>36</td>
<td>Work assignments are not fully explained.</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
**JOB STRES QUESTIONNAIRE:**

**Interpersonal Conflict At Work Scale, ICAWS**

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Quite Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often do you get into arguments with others at work?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. How often do other people yell at you at work?</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>3. How often are people rude to you at work?</td>
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<tr>
<td>4. How often do other people do nasty things to you at work?</td>
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<td></td>
</tr>
</tbody>
</table>

**Organizational Constraints Scale, OCS**

<table>
<thead>
<tr>
<th>Constraint</th>
<th>Less than once per month or never</th>
<th>Once or twice per month</th>
<th>Once or twice per week</th>
<th>Once or twice per day</th>
<th>Several times per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Poor equipment or supplies.</td>
<td></td>
<td></td>
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<tr>
<td>2. Organizational rules and procedures.</td>
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<tr>
<td>3. Other employees.</td>
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<tr>
<td>4. Your supervisor.</td>
<td></td>
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<tr>
<td>5. Lack of equipment or supplies.</td>
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<tr>
<td>6. Inadequate training.</td>
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<tr>
<td>7. Interruptions by other people.</td>
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</tr>
<tr>
<td>8. Lack of necessary information about what to do</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
or how to do it.

9. Conflicting job demands.

10. Inadequate help from others.

11. Incorrect instructions.

<table>
<thead>
<tr>
<th></th>
<th>Less than once per month or never</th>
<th>Once or twice per month</th>
<th>Once or twice per week</th>
<th>Once or twice per day</th>
<th>Several times per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often does your job require you to work very fast?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. How often does your job require you to work very hard?</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>3. How often does your job leave you with little time to get things done?</td>
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<td></td>
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</tr>
<tr>
<td>4. How often is there a great deal to be done?</td>
<td></td>
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<tr>
<td>5. How often do you have to do more work than you can do well?</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Quantitative Workload Inventory, QWI
Physical Symptoms Inventory, PSI. This is the original 18-item version with yes/no response format. The PSI page on my website [http://shell.cas.usf.edu/~pspector/scales/symppage.html](http://shell.cas.usf.edu/~pspector/scales/symppage.html) has 12-item and 13-item versions, using a 5-point frequency format that we now use.

During the past **30 days** did you have any of the following symptoms? If you did have the symptom, did you see a doctor about it?

<table>
<thead>
<tr>
<th>During the past 30 days did you have?</th>
<th>No</th>
<th>Yes, but I didn't see doctor</th>
<th>Yes, and I saw doctor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. An upset stomach or nausea</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. A backache</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Trouble sleeping</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. A skin rash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Shortness of breath</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Chest pain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Headache</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Fever</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Acid indigestion or heartburn</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Eye strain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Diarrhea</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Stomach cramps (Not menstrual)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Constipation</td>
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<td>14. Heart pounding when not exercising</td>
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<td>15. An infection</td>
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<td>16. Loss of appetite</td>
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<td>17. Dizziness</td>
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<td>18. Tiredness or fatigue</td>
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