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PRESENTEEISM: DEVELOPMENT OF AN INTEGRATIVE MEASUREMENT SCALE

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ABSTRACT

Existing literature defines presenteeism as being at work despite being sick, working more than the time assigned, and not fully engaged at work. Various tools have been applied to measure presenteeism, yet those addressed only one aspect, being at work despite being sick. Therefore, current study attempts to develop a quantitative scale to measure presenteeism, fulfilling a theoretical gap by incorporating the other two aspects left behind. Data were collected from executives of four selected manufacturing firms in Western Province by applying the survey method. The questionnaire consisted of 13 items, covering the three aspects of presenteeism as (i) being at work despite being sick, (ii) working more than the time assigned, and (iii) not fully engaged at work. 207 questionnaires were qualified for the final exploratory factor analysis. One variable from thirteen proposed variables has to be eliminated as a disqualified variable in developing the measuring instrument. Four factors were extracted as the achievement of work outcomes, not fully engaged at work, working more than the time assigned, and avoidance of distractions under the developed presenteeism instrument with 0.711 of validity and 0.589 of reliability levels. The developed scale fills the gap of non-availability of a quantitative measuring instrument capturing the whole concept of presenteeism, covering its identified dimensions in the literature. This scale facilitates measuring presenteeism and identify its variations associated with other variables and demographic factors.

Keywords: Presenteeism; Executives; Manufacturing firms; Measurement Scale

1. Introduction

According to Sam Walton, the founder of Wal-Mart, "People are the key within any organization." Human Resource is not a mere factor of production or a resource, just like other resources such as money, materials, and methods. Human Resources are unique as they have exceptional characteristics missing from all other resources (Opatha, 2012). Due to such uniqueness, reading human behaviors is much more complex and unpredictable. In identifying behavioral patterns of employees, it is essential to identify the attendance related behavior of them. An organization may be unable to function effectively when employees are not present during their assigned work times as scheduled (Bowling, Burns, & Beehr, 2010). Early departure, late arrival, early arrival, late departure, absenteeism, and presenteeism are some attendance related behavioral patterns. Among them, absenteeism and presenteeism behaviors have a considerable impact on organizations to run with their maximum capacity.

Absenteeism can be defined as a habitual pattern of absence from a duty or obligation as the leading cause of productivity loss. Here, it primarily focuses on the concept of absence, which employees report due to sickness (Yang & Liern, 2009). Absenteeism is an issue that has grown in importance over the past few years. The cost of absence is born by organizations and by the general population through costs to the health service in terms of health-related productivity losses resulting from staff absence, staff turnover, failure of skill base recruitment, and retraining. Further, absenteeism has been described as the single largest source of lost productivity in business and industry in the United Kingdom (McClearn, Greasley, & Griffith, 2010). Hence, absenteeism is sure costly and has been a concept that managers combat to decrease its level. That is why anti-absenteeism efforts have been increased, but they may have caused some unseen costs (Cetin, 2016).

Presenteeism is the concept that can be identified as an anti-absenteeism effort. It can be seen as the opposite of absenteeism, which comes to work when employees should not, due to sickness. Even though presenteeism is identified as an anti-absenteeism effort, many studies suggested that presenteeism is more costly than absenteeism in many ways (Hemp, 2004, Goetzel, Long, Ozminkowski, Hawkins, Wang, & Lynch, 2004). There are hidden costs related to presenteeism. However, many employers do not realize it, but presenteeism on the job productivity loss that's illness-related may be far more expensive for companies than other health-related costs (Hemp, 2004).

Further, it was emphasized that presenteeism is a bigger problem than absence and that a significant part of productivity loss is related to impaired performance on the job (Burton, Chen, & Conti, 2006). It is very reasonable that an ill employee underperforming on work may cause productivity loss. Similarly, an absent employee also causes productivity loss. However, an absent employee may be replaced by a performing one, but an underperforming employee may create customer dissatisfaction, which may not be reassured (Cetin, 2016).

From the companies' perspective, presenteeism seemed to be a costly problem. It was found that estimated productivity loss to a company due to sickness presenteeism ranged from EUR 4.6 million to EUR 5.6 million annually in Finnish society (Vanni, Subas, & Nygard, 2016). A study conducted among employees of a multinational consumer goods manufacturing company in German revealed a 12.3% annual loss in productivity equating to 7.8 million Euros due to presenteeism (Cooper & Cartwright, 1994). One of the research findings showed that absenteeism cost is 6% and cost related to presenteeism is 63% in the US context (Hemp, 2004). Due to presenteeism, the annual loss in US organizations varies from $23 to $44 billion (Lima & Serranheira, 2016). Similarly, a study conducted in the Sri Lankan context revealed

that overall productivity loss was about 10.43 days each year, equating to about LKR 8 million and 6.57 days related to presenteeism and 4.04 to absenteeism (Fernando, Caputi, & Ashbury, 2017). Even though the disparity in contextual factors between companies in Eastern and Western regions, in this scenario, different regional findings proved that presenteeism is far more costly than absenteeism.

For instance, an iceberg has only a small apparent surface and a vast hidden surface. Like that, presenteeism also is not always apparent but relates to huge unseen costs. Anybody cannot tell when or how much illness or medical condition hinders someone's performance, as well as researchers, have found that less time is lost from people staying home than from them showing up but not performing at total capacity (Hemp, 2004). Those research findings confirm that presenteeism has been quite extensive in the workforce and deserves more attention from the management for a possible solution. Not only that, the above results show a warning sign for the management that the majority of their employees might have to go to work while sick or whatever other reason. Consequently, it indicates that the management should not be surprised to see a high level of presenteeism within the workforce in the future and try to seek possible solutions to reduce all those related losses of productivity and hidden indirect costs (Yang & Liern, 2009). Before taking action in reducing the associated costs of presenteeism, there should be an exact way to capture the level of presenteeism within the organizational context. The need for a reliable and valid way to indirectly measure presenteeism across many types of jobs and organizations led to apply several self-report scales. However, some scales were only suitable for specific target groups only, and some were matched to a broader population that might have a variety of health conditions (Schultz, Chen, & Edington, 2009). However, it can be identified that the retrospective, discontinuous frequency scales typically used to measure the prevalence of presenteeism are suboptimal (Johns, 2010), and appropriate measurement tools were still in their infancy (Koopman et al., 2002). Existing measuring scales did not cover the whole concept of presenteeism and those were addressed presenteeism through its sickness approach only. It was not the only dimension that comes under the concept of presenteeism. Further, two qualitatively recognized dimensions were found (working more than the time assigned on a particular job, not fully engaged in work) in presenteeism literature without proper quantitative measures. The existing theoretical gap in the presenteeism literature was evident, which is the non-availability of an exact measurement scale to cover the whole concept of presenteeism. Therefore, developing a quantitative measurement scale covering all the identified aspects of presenteeism was the study's primary objective.

2. Literature Review

The term, presenteeism was meant either to be a literal antonym of absenteeism or to connote excellent attendance, and more contemporary definitions were emerged up to the current millennium (Johns, 2010) based on the idea of "attending work, as opposed to being absent" (Smith, 1970). As with all new endeavors, no single authoritative definition of presenteeism is in everyday use (Chapman, 2005), and there is a debate about the meaning of presenteeism (Schultz, Chen, & Edington, 2009). However, from the origin of the concept, in general, literature has straightforwardly elicited the idea as "Being at work, despite being sick" (Aronsson, Gustafasson, & Dallner, 2000) up to too long time, by most organizational scholars as well as occupational literature also.

With time, it can be identified the expansion of presenteeism definitions within the research literature aggregating more dimensions. presenteeism might involve attendance and associated productivity decrements in the face of various factors (childcare demands) in addition to ill health (Johns, 2010). This "definitional creep" leads to derive more definitions addressed

presenteeism beyond the sickness boundary. After reviewing the existing literature, Werapitiya et al. (2016) developed a working definition to get a holistic view on presenteeism, aggregating the main three dimensions. "Presenteeism is being at work despite being sick, working longer hours than the time assigned, and not fully engaged in work." The current study proceeds based on that conceptualization.

2.1. Presenteeism - Being at work despite being sick

From the origin as a global phenomenon, presenteeism is often defined as loss of work productivity and quality and quantity of work done due to illness or injury in people present at their job, focusing its sickness approach. Although adequate measurement remains a challenge, several instruments were available for measuring health-related difficulties with workplace tasks, work limitations, or work impairments, although not originally developed to quantify presenteeism, are increasingly being used for that purpose. Most of the existing instruments are disease-specific (Ospina, Dennett, Waye, Jacons, & Thompson, 2015). Therefore, it is impossible to assess presenteeism, applying those instruments in general. However, the Stanford presenteeism Scale can be recognized as the best measuring instrument in the existing literature that directly focuses on sickness under presenteeism.

Stanford presenteeism Scale has developed to assess the relationship between presenteeism, health problems, and productivity in working populations and measures a worker's ability to concentrate and accomplish work despite health problems. Further, this was developed to reflect cognitive, emotional, and behavioral aspects of performing work, despite possible health problems and summation of the six items then produce a total presenteeism score under two principal factors: one was emphasized presenteeism in achieving the outcomes of work, and the other focused on avoidance of distraction in the process of doing work (Koopman et al., 2002). Hence, based on such criteria, this was employed to assess the identified first dimension of presenteeism.

2.2. Presenteeism – Working more than the time assigned on a particular job

With time, the concept of presenteeism has been expanded beyond the originated approach of sickness. As a result, the practice of working more hours than is required by one's term of employment is identified as one of the dimensions under the concept of presenteeism. There can be two aspects within this dimension, and the correct elements have to be selected as presenteeism. In one way, sometimes employees (lower-level employees as machine operators, supervisors) who work more than assigned work hours may receive overtime payments. Such situations are not considered as presenteeism. On the other way, some employees (especially managerial level employees) have to work more than assigned work hours without overtime or any other benefits due to workload or any other reasons. Such situations reveal presenteeism behavior. The Institute of Management (1996) has found that 84% of managers claimed to work over their official working week regularly, and some of the respondents took work home. Some other respondents have revealed that they work at weekends. Similarly, (Goffee & Scase, 1992) found the majority worked an average week of over 50 hours.

Further, 20% of recruitment consultants worked long hours due to fear of job losses or direct line manager pressure (Knight, 1995). It is an essential measure of success because the number of hours worked in offering career chances and working long periods leads to an advanced career by demonstrating a heightened commitment and avoiding future rounds of redundancies (Newell & Dopson, 1996). However, in working more hours, it was found that productivity and performance have dropped after 7 pm and they may feel their career as a suffer (Accountancy, 1996). It is poorly affected by the right balance between work and home and personal relationships (Benbow, 1996).

2.3. Presenteeism – Not fully engaged in work

As per the current study's focused working definition, "not fully engaged at work" is the third dimension that comes under the concept of presenteeism. Under this dimension, employees are physically present but mentally absent, and their cognitive energy is not devoted to their work (Gilbreath & Karimi, 2012). Most of the research on presenteeism that appeared in literature argued that presenteeism occurs when employees work but spend a portion of the workday engaging in personal business while on the job, such as e-mailing friends, paying private bills, having social conservations, surfing the Internet. Further, it was found that employees spend approximately one hour and twenty minutes in a typical workday engaged in personal activities (D' Abate & Eddy, 2007). Those non-work-related activities done within the workplace were provided signs in developing indicators to measure presenteeism under the dimension of "not fully engaged on a particular job."

3. Research Method

3.1. Designing Procedure of the scale development

Presenteeism is a phenomenon that cannot be directly measured. Based on the technique of reducing abstract notions or concepts by breaking them down into observable characteristic behaviors (Sekaran & Bougie, 2016), the study designing procedure is depicted in Figure 1.

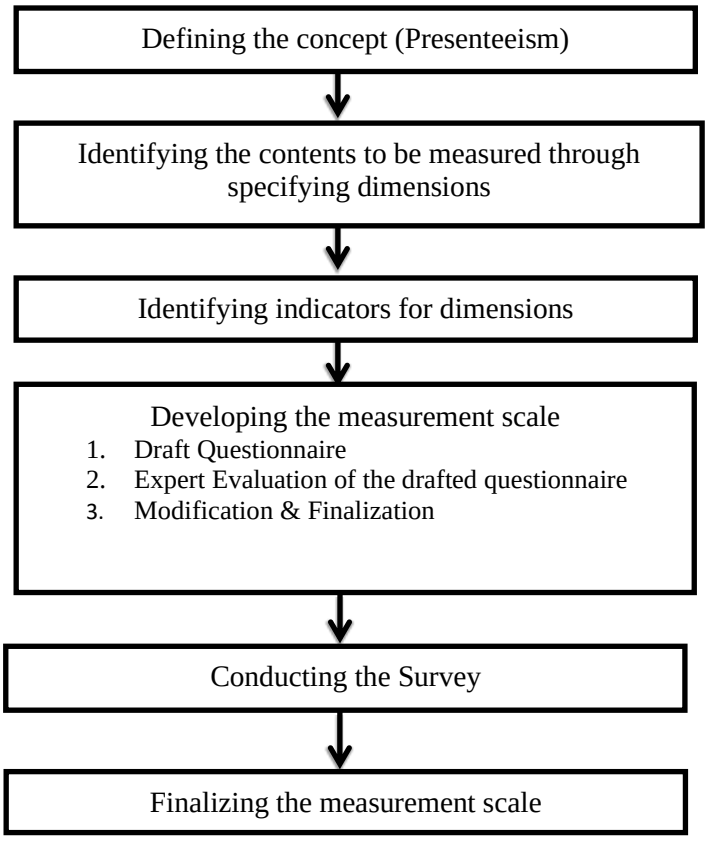

Figure 1
Research Design

Step 01: Defining the concept
Even though different terminologies were applied in the literature to define presenteeism, the current study focused on the concept of presenteeism as being at work despite being sick, working more than the time assigned on a particular job, and not fully engaged in work (Werapitiya, Opatha, & Fernando, 2016).

Step 02: Identifying the contents to be measured through specifying dimensions
This step involves the identification of observable characteristics of presenteeism as content to be measured. Through an in-depth search of existing literature, three dimensions were revealed as "being at work despite being sick, working more than the time assigned on a particular job and not fully engaged in work." The next step then attempted to reduce the complexity of this procedure by identifying indicators for each dimension.

Step 03: Identifying indicators for each dimension
Indicators are signs which represent the presence or absence of the concept, studying by the researcher. This step sought to identify indicators for each dimension of presenteeism identified above. Indicators of the first dimension were not required to be identified. Because there is an already developed measuring instrument (Stanford Presenteeism Scale) that comes under presenteeism literature solely addressing the first dimension. It is the only acceptable measuring instrument designed to address presenteeism through the sickness approach directly. Therefore, such an original scale was applied to measure presenteeism under the first dimension without any changes. Various signs of employees were identified as indicators addressing second and third dimensions after reviewing existing literature in-depth way.

Step 04: Developing the Measurement Scale
The Interval scale was applicable in capturing presenteeism within the current study because it measures individual preference differences (Sekaran & Bougie, 2016). Existing literature led to the initial questionnaire draft based on identified indicators, and the drafted questionnaire consisted of 22 items. It was sent to foreign and local experts who had researchable experience on the concept of presenteeism to check the face validity and obtain feedback. Modifications were done considering the foreign and local comments received and finalized the measuring instrument with 13 items.

The final questionnaire was comprised of two parts. Information of respondents' profile was collected from "Part A" through three simple, straightforward questions as "gender," "marital status," and "age." "Part B" captured the concept of presenteeism through 13 items subjected to a five-point Likert scale where 1= Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree, and 5 = Strongly Agree. Among the final 13 items, six were addressed the first dimension: being at work, despite being sick, two were addressed the second dimension: working more than the time assigned, and another five items were addressed the third dimension: not fully engaged at work. Respondents were clearly instructed to describe their work experiences of the past month, showing their agreement or disagreement with the questionnaire's presented statements. Further, the word "health problems," which is situated in the first six statements, has been described at the end of the questionnaire to get a clear idea for respondents. Finally, the time duration of fulfilling the questionnaire was scheduled as 5 to 10 minutes.

Step 05: Conducting the Survey
This step involves the action part of the current study, which is data collection. Data were collected from employees who possessed the executive designation of selected four

manufacturing firms in Western Province by distributing printed questionnaires with the selected four manufacturing firms' administration's approval.
Step 06: Finalizing the Measurement Instrument
After data collection, data were analyzed by applying exploratory factor analysis, and the second item has to be eliminated as a disqualified variable due to negative loadings. The other 12 items were valid.

3.2. Population and Sample Selection
The existing literature suggests that a higher level of presenteeism has been found among professions owing to the difficulty in replacements (Aronsson, Gustafasson, & Dallner, 2000). Therefore, employees who possess the executive designation in Western Province manufacturing firms were selected as the current study population.
The sample had to be derived by applying the convenience sampling technique due to the country's pandemic situation occurred inconvenience in collecting data. Therefore, four manufacturing firms were selected as the study sample, and as per the requirement of the exploratory factor analysis, the acceptable sample size was 130.

4. Result and Discussion

4.1. Sample Profile
Within the current study, executives of four selected manufacturing firms in the Western Province were taken as the study sample and aligning with the study objectives. The preferable sample size was at least 130. Hence, 300 questionnaires were distributed, and 251 responses were able to be collected back. Therefore, the response rate was 83.66% (251/300*100). However, 44 responses had to be eliminated due to missing values, and 207 remaining responses were qualified for the final analysis. Under the profile analysis of the selected sample, more than half of the respondents were males (62.3%), and the majority of respondents were married (51.7%). Moreover, the highest number of respondents (48.8%) belongs to 26 – 35 years, and the lowest number of (9.7%) respondents are above 46 years.

4.2. Factor Analysis
Since the outcome of the study is to generate a measurement scale to measure presenteeism, exploratory factor analysis had to be employed. The exploratory factor analysis technique is used under the principle component method to develop a measuring instrument subjected to presenteeism. Exploratory Factor Analysis is the first step in building scales or new metrics (Yong & Pearce, 2013).
Kaiser-Meyer-Olkin (KMO) measures of sample adequacy were carried out to establish whether variables correlated to each other with the end aim of finding out whether it was possible to carry out a factor analysis. The overall value of the KMO test (0.711) is greater than the generally acceptable level of 0.5. Therefore, sample adequacy was treated as good, and it facilitated the generalization of sample findings to the general population, and the data set was appropriate for accurate factor analysis.
Communality measure the proportion of variance explained by the extracted factors (Field, 2009). No item has shown communality extraction values less than 0.3 of the general rule. Therefore, all the question items were qualified, and the extracted factors have explained a good proportion of variance.
There are some stopping criteria for **extracting the number of factors**; by applying the Latent Root Criterion aligning with the component analysis and Scree Plot Criterion four factors were extracted as qualified for analysis.
Once factors have been extracted, it was possible to calculate the loadings of the variable on each factor. Here, a technique called factor rotation was used to discriminate between factors.

Rotation of Factors was done by applying the Varimax approach comes under orthogonal rotation was selected because it is an excellent general approach that simplifies the interpretation of factors and attempts to maximize the dispersion of loadings within factors. As per the resulting output of Varimax rotation, the second item, "Despite having my health problems, I was unable to finish hard tasks in my work" was disqualified due to negative loadings. All the other items were qualified for the analysis (Table 1).
After generating factor structure, it was essential to decide which variables make up which factors.

Table 1.
Factor Loadings in Measuring Presenteeism

	Component			
	1	2	3	4
Q3	.841			
Q4	.841			
Q1	.839			
Q2	**-.763**			
Q13		.739		
Q10		.729		
Q11		.678		
Q12		.556		
Q9		.525		
Q5			.863	
Q6			.858	
Q7				.896
Q8				.858

The reliability of the derived four factors was measured by employing Cronbach's Alpha Value, and the reliability of extracted factors was acceptable. However, the reliability of the overall scale (.589) was low towards presenteeism.

Table 2.
Reliability of The Measurement Scale

Factor	No of Items	Cronbach's Alpha Value
1	3	.845
2	4	.651
3	2	.718
4	2	.762
Overall Scale	12	.589

4.3. Interpretation of Derived Factors

As the next step, derived factors were named by observing patterns of factor analysis and considering the common themes of the items which are included under each factor as follows;
Factor 1: Avoidance of distractions – This factor consisted of items related to obstacles while working being sick to reach work outcomes.
Factor 2: Not fully engaged at work – This factor consisted of items related to extra activities that are not relevant to employees' work while working.
Factor 3: Achievement of work outcomes – This factor consisted of items that are related to achieving work targets while working being sick

Factor 4: Working more than the time assigned – This factor consisted of items related to extra time work experience.

5. Conclusion

The researchers have attempted to propose a quantitative measuring scale within the current study. The developed measurement scale is presented in the table below with extracted factors and included items under the themes of each factor.

Table 3.
Factors and Indicators of Developed Presenteeism Measurement Scale

Factors	Items
Avoidance of distractions	My health problems* distracted me from taking pleasure in my work
	I felt doubt in finishing certain work tasks, due to my health problems*
	Because of my health problems*, the assigned tasks of my job were much harder to handle
Not fully engaged at work	Even though I am dealing with a heavy workload per day, I could manage my times for online shopping while working
	It is my responsibility to handle my home activities even when I am at the office
	I engage in personal calls at work
	I engage with social media while working
	Playing computer games at work makes me relax from my heavy workload at the office
Achievement of work outcomes	At work, I was able to focus on achieving my goals despite my health problems*
	Despite having my health problems*, I felt energetic enough to complete all my work
Working more than the time assigned	I am normally working more than assigned work hours per month
	I am experiencing conflicts between domestic demands and long working hours

Based on exploratory factor analysis, data were analyzed, and from the proposed 13 items, the second item was disqualified due to the negative loadings. Moreover, four factors were able to be derived measuring presenteeism as "avoidance of distractions, the achievement of work outcome, not fully engaged at work, working more than the time assigned and achievement of work outcomes." However, the reliability of derived factors was acceptable factor wise; overall, the measurement instrument has shown a low value of reliability. It may be the result of variation in the sample size of the study. However, quantitative measurement of existing dimensions of presenteeism has been confirmed, which has been previously studied qualitatively.

Implications

Under the concept of presenteeism, a theoretical gap can be identified clearly as the non-availability of the exact way to measure presenteeism, capturing its specified whole dimensions. Therefore, the outcome of the current study addressed such a theoretical gap contributing to the existing literature under the concept of presenteeism. In addition to the researchable point of view, businesses are also concerned about presenteeism. Because it generates a hidden cost that is difficult to calculate and occurs a high burden for companies in

the indirect cost that employers are generally unaware of (Yang & Liern, 2009). Thus, it is worth it for employers to identify their companies' level of presenteeism to minimize the destructive impact of presenteeism on their companies.

Suggestions for Future Researchers

Within the current study, presenteeism has identified focusing three dimensions only. In addition to the existing three dimensions, another two dimensions were identified through Sri Lankan observations, which were addressed presenteeism as recorded as present in the workplace but not in work assigned and overacting and/or hyperactive in work assigned. However, those newly identified two dimensions have been identified within the Sri Lankan context only, and no significant evidence and literature base was addressing them within the existing literature. Therefore, it is suggested to do further investigation on those two dimensions and expand the proposed presenteeism scale. Further, future researchers can test the proposed presenteeism scale within a larger sample to enhance the developed scale's reliability. And it is better to conduct a confirmatory factor analysis for further confirmation of the proposed presenteeism scale.

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Appendix– Questionnaire used for the survey to develop the measurement scale

Please circle one of the following responses to show your agreement or disagreement with this statement in describing your work experiences in the past month.

Statement	Strongly Disagree	Somewhat Disagree	Uncertain	Somewhat Agree	Strongly Agree
Because of my health problems*, the assigned tasks of my job were much harder to handle	1	2	3	4	5
Despite having my health problems*, I was unable to finish hard tasks in my work	1	2	3	4	5
My health problems* distracted me from taking pleasure in my work	1	2	3	4	5
I felt doubt in finishing certain work tasks, due to my health problems*	1	2	3	4	5
At work, I was able to focus on achieving my goals despite my health problems*	1	2	3	4	5
Despite having my health problems*, I felt energetic enough to complete all my work	1	2	3	4	5
I am normally working more than assigned work hours per month	1	2	3	4	5
I am experiencing conflicts between domestic demands and long working hours	1	2	3	4	5
Playing computer games, at work makes me relax from my heavy workload at the office	1	2	3	4	5
It is my responsibility to handle my home activities even when I am at the office	1	2	3	4	5
I engage in personal calls at work	1	2	3	4	5
I engage with social media while working	1	2	3	4	5
Even though I am dealing with a heavy workload per day, I could manage my time for online shopping while working	1	2	3	4	5

*Note that the words "back pain", "cardiovascular problem", "illness", "stomach problem", or other similar descriptors can be substituted for the words "health problems" in any of these items.