Factors associated with reduced work functioning in people with moderate medically unexplained physical symptoms

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"ONDERGETEKENDE

Mark Leendert van Tilburg,

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ABSTRACT

Background. Medically unexplained physical symptoms (MUPS) are a leading cause of reduced work functioning. It is not known which factors are associated with reduced work functioning in people with moderate MUPS. Insight in these factors can help to better understand the moderate MUPS population and can contribute to future research on developing tailored prevention strategies for MUPS in becoming chronic and on prevention of impaired work performance, work absenteeism and associated work-related costs.

Aim. To identify which factors are associated with the degree of reduced work functioning, operationalized as impaired work performance and work absenteeism, in people with moderate MUPS.

Methods. Baseline data of an ongoing study on people with moderate MUPS were used in this cross-sectional diagnostic multivariable modelling study. Ten independent variables were measured to determine their association with reduced work functioning: severity of psychosocial symptoms (four domains), physical health, physical activity, age, sex, education level and duration of complaints. Two separate univariable and multivariable linear regression analyses were performed with backward stepwise selection, for both impaired work performance and work absenteeism.

Results. Severity of psychosocial symptoms domains 'depression' ($p < .01$) and 'somatization' ($p < .05$) were positively associated with work absenteeism, while domain 'Anxiety' ($p = .128$) and 'moderate/vigorous physical activity' ($p < .01$) were negatively associated with work absenteeism ($n = 104$). The multivariable model explained 17.3% of the total variance ($R^2 = .173$, $p < .001$). Severity of symptoms domains 'distress' ($p = .152$) and 'somatization' ($p < .001$) were positively associated with impaired work performance ($n = 102$). The model explained 23.6% of the total variance ($R^2 = .236$, $p < .001$).

Conclusion. People with moderate MUPS and a higher degree of reduced work functioning are more often less physically active and often have an increased probability of a depressive and a somatic symptom disorder.

Clinical Relevance. Employees should recognize early whether or not they are less physically active and have an increased probability of a depressive or somatic symptom disorder. They should feel free to discuss these factors with their employer or health professional, so that preventive measures can be taken.

Keywords [MeSH]: *Absenteeism, Work Performance, Medically Unexplained Symptoms*

INTRODUCTION

Medically unexplained physical symptoms (MUPS) are a common phenomenon in primary care.[1–3] MUPS are defined as physical complaints that last for more than a few weeks and cannot be explained by a medical condition after a proper medical examination.[4,5] Approximately, 25-50% of all symptoms for which people visit a health professional, like a general practitioner (GP), cannot be medically explained immediately.[2] These symptoms can be pain or fatigue and can affect any anatomical structure or body region.[6] MUPS can be categorized into mild MUPS (2 or less MUPS-related GP consults during the last 12 months), moderate MUPS (3 or more MUPS-related GP consults during the last 12 months) or chronic MUPS by using the PRESUME screening method.[7] People with moderate MUPS still experience symptoms after three months, without having a diagnosis of a functional somatic syndrome (FSS).[8] Moderate MUPS have an estimated prevalence of approximately 15%.[8] Chronic MUPS are characterized by the presence of a persistent FSS, such as fibromyalgia, chronic fatigue syndrome or irritable bowel syndrome, or a somatic symptom disorder according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V).[9] Only 2.5% of people with MUPS in primary care are identified with chronic MUPS.[2] However, Olde Hartman et al. showed in their systematic review that symptom improvement rates in all subgroups of MUPS together were 50% or more and 10% to 30% of people with MUPS deteriorate.[3]

The burden of chronic MUPS, for patients, health professionals and society is high.[2] People with chronic MUPS experience persistent pain, fatigue, a decreased quality of life and feel more socially isolated.[6,10] Health professionals struggle with the disease management of patients with chronic MUPS and it requires substantial time commitment.[11,12] This struggle with the disease management of health professionals in combination with patients' illness beliefs of having a progressive illness can lead to inadequate use of healthcare resources.[13] People with chronic MUPS visit a medical specialist approximately 7 to 8 times and a health professional approximately 13 to 15 times per year. If specialists or health professionals miss the MUPS diagnosis and want patients to receive somatic interventions, or have fear to miss out on a medical diagnosis, these visits can be ineffective or even iatrogenic, because they might attribute to patients' beliefs of needing biomedical instead of bio-psycho-social interventions.[14–17] The inadequate use of healthcare resources and medication also leads to substantial excessive direct costs in health care.[14,15,18] All subgroups of MUPS are not only associated with direct costs, but also with high indirect work-related costs.[15,18] Hiller et al. estimated that indirect work-related costs are three times as high as direct costs in people with chronic MUPS.[19] Roelen et al. reported a high prevalence of MUPS (78%) among Dutch personnel working in a library, administrative office, a cheese factory and a metal producing company.[20] Work-related costs can be explained by the fact that MUPS lead to reduced work functioning, in terms of impaired work performance or work absenteeism.[21] Impaired work performance is operationalized as the amount of lost working hours per week due to health-

related productivity loss.[22,23] Work absenteeism is operationalized as the workdays a person was absent divided by the workdays a person was supposed to work in the last four weeks.[22,23] Over 80% of the people with MUPS, with no or only partial work absenteeism, reported impaired work performance.[14] Zonneveld et al. reported in their study that impaired work performance in people with MUPS costs €855.79 per employed person per year (PPPY).[14] These costs are based on two lost working hours per workweek. Furthermore, work absenteeism in people with MUPS costs by estimate €2,403.92 PPPY. These costs are based on the estimate of 67 disability days per employed person per year.[14] Löwe et al. reported comparable results of 18.2 disability days per person per three months in people with MUPS.[24] Although these numbers are related to all subgroups of MUPS, Rask et al. concluded that not only chronic MUPS have significant impact on work functioning, but also mild and moderate MUPS.[21]

Despite MUPS being a leading cause of work absenteeism, a systematic review by Aamland et al. identified only a small number of studies concerning factors associated with work absenteeism in the overall MUPS population.[25] After critical appraisal of existing literature, several factors hypothesized to be associated with reduced work functioning in people with moderate MUPS were identified. Roelen et al. defined an association between psychiatric comorbidity as well as severity of symptoms and work absenteeism.[20] Compare et al. found in a working population of people with non-specific low back pain that sex, type of work and physical behaviour were significantly associated with reduced work functioning.[26] In a qualitative study in people with spine related pain (SRP), duration of complaints was mentioned as an important factor related to work absenteeism. People who were previously unfamiliar with SRP prioritized their SRP over work and reported sick sooner than people that had endured episodes of SRP before.[27] Knowledge about these factors in the moderate MUPS population can help to understand why the degree of reduced work functioning varies from person to person for apparently comparable symptom burdens. Additionally, there is a lack of knowledge about people with moderate MUPS in general and about the transition from moderate to chronic MUPS. Therefore, the aim of this study is to identify which factors are associated with the degree of reduced work functioning, operationalized as impaired work performance and work absenteeism, in people with moderate MUPS, by developing a multivariable diagnostic prediction model.

METHODS

Design

Factors associated with the degree of reduced work functioning in people with moderate MUPS were studied with a cross-sectional diagnostic multivariable modelling study design.

Setting and characteristics of participants

Participants in this study were already included in a cluster randomized clinical trial about a blended and integrated mental health nurse and physical therapy intervention program (PARASOL).[7] In the PARASOL study, adult patients with moderate MUPS were recruited from 14 Dutch primary health care centres (Leidsche Rijn Julius Health Care Centres and the Eindhoven Corporation of Primary Health care Centres). Participant inclusion lasted from March 2017 until April 2018.[7] Baseline data from included patients in the PARASOL study were used. An additional inclusion criterion for this cross-sectional study was that the patient had a job in the past four weeks.

Data collection

Dependent variables

The main dependent variable in this cross-sectional study was work functioning. Work functioning was operationalized as two variables: work absenteeism and impaired work performance. Both variables were assessed with the Trimbos/Institute for Medical Technology Assessment Questionnaire for costs associated with Psychiatric Illnesses (TiC-P). The TiC-P is a feasible and reliable instrument for collecting data on medical consumption and productivity loss in people with mental health problems.[29] The recall-period of the TiC-P is 4 weeks.

Work absenteeism

Work absenteeism was computed by dividing the number of days absent from work due to health problems during the last four weeks by the number of workdays a person was supposed to work in the last four weeks. A higher rate indicates more work absenteeism in the last 4 weeks.[22,23]

Impaired work performance

Impaired work performance rates were computed by a formula based on two items of the TiC-P. The first question was: "On how many workdays during the last 4 weeks did you perform paid work, although you were bothered by health problems?" The second question was: "Please rate how well you performed on the days you went to work even though you were suffering from health problems" which the respondent rated on a 10-point scale (0.0=maximally inefficient, 1.0=efficient as usual).[22,23] A higher rate indicates a more impaired work performance:[23]

$$\text{impaired work performance} = \frac{\text{days hindered} * (1 - \text{efficiency}) * \text{work hours per day}}{\text{work hours per week}}$$

Independent variables

Ten independent variables were measured to determine which of the factors were associated with reduced work functioning. Measured independent variables were: severity of psychosocial symptoms (four domains), physical health, physical activity, age, sex, education level and duration of complaints. These variables were selected following a review of the literature and subsequently the consensus opinion by the research group.[20,26,27]

Severity of psychosocial symptoms was measured with the Four-Dimensional Symptom Questionnaire (4DSQ).[30,31] The 4DSQ is a valid questionnaire, which measures 4 domains: distress (0–32), depression (0–12), anxiety (0–24), and somatization (0–32). Each domain consists of multiple items. After scoring the items, the sum of all items for each domain was calculated. A higher score defines an increased probability of a disorder.[30,31]

Physical health was measured with the Research And Development Corporation-36 item health survey (RAND-36).[32,33] The RAND-36 is a valid and reliable questionnaire, which measures eight domains: physical functioning, vitality, emotional well-being, social functioning, pain, general health, role limitations due to physical health, and role limitations due to emotional problems. Because the 4DSQ already covered the mental aspect in the analyses, only the physical health component summary score (PCS) of the RAND-36 was used in the analyses.[34,35] A score above 50 means a more favourable physical health state compared to the Dutch reference population.[32,33,36]

Physical activity was measured with the Activ8 activity monitor. The Activ8 is a valid instrument to quantify movement and motion.[37] Participants wore the Activ8 in their trouser pocket or in a leg strap for one week. Data were transformed into the average amount of hours of moderate or vigorous physical activity per day (MVPA).[37]

Age, sex (male; female), education level (low, higher general/preparatory academic education or lower; high, higher professional education or higher) and duration of complaints (<2.5 years; ≥2.5 years year) were assessed with a self-administered questionnaire.

Sample size

No adequate sample size calculation for prediction studies was available.[28] On the basis of empirical investigations a widely adopted rule of thumb for sample size was used. The rule is to have at least 10 outcome events (participants) per independent variable.[28] Based on that, a sample size of at least 100 participants was required.

Statistical analysis

Statistical analyses were performed with IBM SPSS statistics for Windows (version 23, IBM corp. Armonk, NY, USA). If missing data were less than 10% and under the missing (completely) at random assumption, missing values of independent variables were imputed

with 'Multivariate Imputation by Chained Equations'.[38] Analyses were performed with the pooled imputed data. Multicollinearity was assessed by examining the variance of inflation factor (VIF). A value of 5 was chosen as the maximum accepted level of VIF.[39]

To assess the association of the chosen independent variables with work functioning, two separate univariable and multivariable linear regression analyses were performed (impaired work performance and work absenteeism). Linear regression analyses were chosen because both the dependent variables have continuous outcomes.[28,40–42] Linear multiple regression analyses with backward stepwise selection were performed.[28,40–42] A *p* value of > .1 was chosen for removal of variables. Backward stepwise selection was used because with this selection procedure all correlations between independent variables were considered in the modelling procedure.[43] For each variable, unstandardized regression coefficients (*B*) with a standard error (*SE*) were calculated.

To assess the overall performance of the final model in predicting the degree of reduced work functioning, the R^2 statistic was calculated. The R^2 value is a measure of explained variance in the final model.[28] Means and standard deviations (continuous) or percentages (categorical) of both the dependent and independent variables were calculated by using descriptive statistics.

Ethics

The PARASOL study has been approved by the Medical Ethical Committee of University Medical Center Utrecht, the Netherlands.

RESULTS

A total of 104 participants were included in the present study. Descriptive characteristics of the study population are presented in Table 1. Participants had a less favourable physical health state compared to the Dutch reference population (*M* = 42.9, *SD* = 5.2).[32,33,36] Additionally, severity of psychosocial symptom scores were mildly elevated for domains distress (*M* = 11.9, *SD* = 7.9) and somatization (*M* = 12.7, *SD* = 6.8) and were low for depression (*M* = 1.4, *SD* = 2.5) and anxiety (*M* = 2.5, *SD* = 3.7). There was no work absenteeism in 67% of the participants. Also, there was no impaired work performance in 43% of the 104 participants.

Missing data were imputed and analyses were performed with the pooled imputed data. As a consequence, variables that contributed significantly to the regression model in one imputed dataset and contributed non-significantly to the regression model in other imputed datasets led to non-significant variables in the final pooled regression models.

Table 1

Descriptive characteristics of study population, including all studied variables (N = 104)

Variable	Value
Age	43.9 ± 10.8
Sex, female (%)	73.1
Education level, high (%)	40.4
Duration of physical complaints, ≥2.5 years (%)	65.4
Physical health (RAND-36; PCS)	42.9 ± 5.2
Severity of psychosocial symptoms (4DSQ)	
Distress	11.9 ± 7.9
Depression	1.4 ± 2.5
Anxiety	2.5 ± 3.7
Somatization	12.7 ± 6.8
MVPA (average hours per day)	2.5 ± 0.9
Work absenteeism, yes (%)	32.7
Impaired work performance, yes (%)	56.7

Data are presented as mean ± standard deviation of the mean.
Abbreviations: RAND-36, Research And Development Corporation 36-item Health Survey; PCS, Physical Component Summary; 4DSQ, Four-Dimensional Symptom Questionnaire; MVPA, average hours per day of moderate or vigorous physical activity.

Work absenteeism

To assess the association of variables with work absenteeism, all 104 participants were analysed. Some of the assumptions for multiple linear regression were violated. Residuals distribution was not normal, and homoscedasticity was violated. No multicollinearity was detected. The results of the univariable regression analysis are presented in Table 2. The results of the multivariable regression analysis are presented in Table 3. Controlling for other variables, work absenteeism decreased with 6.1% for every (average) hour per day increased MVPA. (B = -0.061, SE = 0.023, p = .009). Moreover, work absenteeism increased with 3.3% and 0.7% for every increased point on the 4DSQ for domain 'depression' (B = 0.033, SE = 0.010, p = .002) and domain 'somatization' (B = 0.007, SE = 0.004, p = .047), respectively.

Impaired work performance

To assess the association of variables with work performance, 102 participants were analysed. The level of impaired work performance deviated more than three standard deviations from the mean in two participants. These two participants were removed from the analysis. As a consequence, the range in the rate of impaired work performance was only 0-0.35. The assumptions for multiple linear regression were met and no multicollinearity was detected. The results of the univariable regression analysis are presented in Table 2. The results of the multivariable regression are presented in Table 3. Controlling for other variables, impaired work performance increased with 0.5% for every increased point on the 4DSQ for domain 'somatization' (B = 0.005, SE = 0.001, p < .001).

Table 2

Univariable associations between reduced work functioning and patient characteristics

	Work absenteeism (*n* = 104)			**Impaired work performance** (*n* = 102)		
	B	***SE B***	***p***	***B***	***SE B***	***p***
Age	0.000	0.002	.915	-0.001	0.001	.531
Sex, female	-0.038	0.051	.455	0.013	0.020	.513
High education level	-0.011	0.047	.814	-0.021	0.018	.233
≥2.5 years of complaints	-0.046	0.048	.346	0.007	0.018	.710
Physical health (RAND-36; PCS)	-0.001	0.005	.842	-0.001	0.002	.436
Average hours per day of moderate or vigorous physical activity	-0.065	0.024	.007**	-0.010	0.009	.297
Severity of psychosocial symptoms (4DSQ)						
Distress	0.008	0.003	.007**	0.004	0.001	.001**
Depression	0.028	0.009	.001**	0.005	0.004	.152
Anxiety	0.008	0.006	.178	0.007	0.002	.006**
Somatization	0.008	0.003	.018*	0.006	0.001	< .001***

*p < .05; **p < .01; ***p < .001

B, unstandardized regression coefficient; SE, Standard Error of the estimate; RAND-36, Research And Development Corporation 36-item Health Survey; PCS, Physical Component Summary score; 4DSQ, Four-Dimensional Symptom Questionnaire.

Table 3

Multivariable associations between reduced work functioning and patient characteristics

	Work absenteeism (*n* = 104)			**Impaired work performance** (*n* = 102)		
	B	***SE B***	***p***	***B***	***SE B***	***p***
Constant	0.149	0.077	.052	-0.005	0.017	.767
Age	e			e		
Sex, female	e			e		
High education level	e			e		
≥2.5 years of complaints	e			e		
Physical health (RAND-36; PCS)	e			e		
Average hours per day of moderate or vigorous physical activity	-0.061	0.023	.009**	e		
Severity of psychosocial symptoms (4DSQ)						
Distress	e			0.002	0.001	.152
Depression	0.033	0.010	.002**	e		
Anxiety	-0.012	0.008	.128	e		
Somatization	0.007	0.004	.047*	0.005	0.001	< .001***
R^2 statistic	0.173		< .001***	0.236		< .001***

*p < .05; **p < .01; ***p < .001

B, unstandardized regression coefficient; SE, Standard Error of the estimate; e, variable excluded from the regression model; RAND-36, Research And Development Corporation 36-item Health Survey; PCS, Physical Component Summary score; 4DSQ, Four-Dimensional Symptom Questionnaire.

DISCUSSION

In this cross-sectional study, the association between work functioning, operationalized as work absenteeism and impaired work performance, and demographic and health-related factors was examined in people with moderate MUPS. We found that fewer hours per day of moderate or vigorous physical activity, an increased probability of a depressive disorder and an increased probability of a somatic symptom disorder were significantly associated with a higher degree work absenteeism while controlling for the other variables, including an increased probability of an anxiety disorder. Furthermore, an increased probability of a somatic symptom was significantly associated with impaired work performance, while controlling for the other variables, including a higher level of distress. However, because of the low R^2 value, it is likely that the total variance in reduced work functioning might be explained even better by factors that were not measured in the present study.

Concerning the finding that fewer hours per day of moderate or vigorous physical activity were significantly associated with work absenteeism, it is possible that more physical activity leads to less work absenteeism in people with moderate MUPS. This is supported by evidence from the review of Amlani et al. who concluded that physical activity is effective in reducing sickness absence in the general working population.[44] Furthermore, Bhui et al. concluded in their review of systematic reviews that physical activity as an organisational intervention reduces work absenteeism in the general working population.[45] Besides less physical activity, an increased probability of a depressive disorder was significantly associated with a higher degree of work absenteeism in the present study. It is possible that an increased probability of a depressive disorder also leads to a higher degree of work absenteeism in people with moderate MUPS, since having a depressive disorder led to work absenteeism in previous research.[23] These findings are consistent with a study by Cooper et al. who reported that stress, depression and anxiety accounted for about 46% of days lost to illness in the British population.[46] Regarding the findings about an increased probability of a somatic symptom disorder in the present study, it is possible that an increased probability of a somatic symptom disorder leads to work absenteeism and impaired work performance in people with moderate MUPS. This is supported by evidence of Den Boeft et al. who reported that moderate or high risk of a somatic symptom disorder was positively associated with work absenteeism, even after adjusting for depressive and anxiety disorders and job characteristics.[47] Furthermore, the low percentage of explained variance by the final model in the present study coincided with a study of Rask et al. who reported for the overall MUPS population that depressive and anxiety disorders influenced the association between MUPS and work functioning, but did not fully explain the effect.[21] This suggests that other factors might influence work functioning even more. In the overall population, jobs that require less education are associated with a higher degree of work absenteeism and disability.[49] Additionally, a higher physically or emotionally demanding job, low support by colleagues, low task control and longer working hours were associated with reduced work functioning in the general population.[22,50–53]

In the present study about people with moderate MUPS, the period prevalence of work absenteeism over four weeks was 32.7% and the period prevalence of impaired work performance over four weeks was 56.7%. Zonneveld et al. found in their study in the overall MUPS population a period prevalence of work absenteeism of 46.6% over two weeks and a period prevalence of impaired work performance of 85.4% over two weeks.[14] Period prevalence of work absenteeism in the general Dutch working population was 45% over the year 2016, but people reported sick for just 3.8% of the total time they were supposed to work.[48] These numbers are hard to compare because they are prevalence percentages for different time periods. However, our findings suggest that people with moderate MUPS are slightly less absent from work and substantially less impaired in their work functioning compared to the overall MUPS population and probably have a substantially higher degree of reduced work functioning compared to the general Dutch working population.

The strength of this cross-sectional study was that only the moderate MUPS population was included. Since very little is known about this specific population, new insights in the moderate MUPS working population are valuable. Nevertheless, this study had some limitations. The work absenteeism analysis violated the assumptions for linear regression. This caused the regression coefficient to be less reliable, and the confidence intervals to be rather large. A possible explanation for the violation of assumptions is that more than two-third of the participants reported no work absenteeism. Therefore, the mean was low and relatively high values tended to be outliers. Furthermore, the impaired work performance analysis met the assumptions for linear regression. However, to meet these assumptions, two outliers had to be excluded from the analysis, leading to a relatively narrow range in impaired work performance in our sample. Consequently, the generalizability was limited to people with not more than 35% impaired work functioning. Other limitations of the present study were that reasons for absenteeism were not identified and impaired work functioning was based on the number of days hindered by health problems, but not specifically by MUPS-related health problems. Additionally, reduced work functioning was based upon self-reported data instead of payroll records. Nevertheless, a high correlation was found between self-reported work functioning data and employer payroll records.[54] Finally, associations with reduced work functioning were based upon cross-sectional data. By choosing this design it is impossible to make causality statements about the reported associations.

To prevent long-term work absenteeism and highly impaired work performance, physical activity and severity of psychosocial symptoms seem to play a significant role. However, because of the low explained variance, we suggest that future research should also focus on the relation between unfavourable job characteristics and reduced work functioning in people with moderate MUPS. Other new research should focus on the causality between physical activity, severity of psychosocial symptoms, unfavourable job characteristics and reduced work functioning. Additionally, the focus of future research should be on the development of tailored prevention strategies for moderate MUPS in becoming chronic and on the prevention of impaired work performance, work absenteeism and associated work-

related costs. These prevention strategies should at least focus on psychosocial symptom reduction and stimulating physical activity.

Although no causality statements could be made, it is recommended that employees should recognize early whether or not they are less physically active and have an increased probability of a depressive or somatic symptom disorder. Because these factors can be influenced by preventive measures, employees should feel free to discuss them with their employer or health professional. In addition, employers should provide their employees with accessible psychosocial health promotion and create opportunities to receive treatment. Moreover, employers should advise their employees about the importance of a healthy amount of physical activity and create opportunities for them to be more physically active during a workday.

CONCLUSION

Fewer hours per day of moderate or vigorous physical activity, an increased probability of a depressive disorder and an increased probability of a somatic symptom disorder were significantly associated with reduced work functioning in people with moderate MUPS. However, it is likely that the total variance in reduced work functioning might be explained even better by factors that were not measured in this study, such as unfavourable job characteristics.

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SAMENVATTING

Achtergrond. Somatisch Onvoldoende verklaarde Lichamelijke Klachten (SOLK) zijn een veelvoorkomende oorzaak van een verminderd werkfunctioneren. Het is niet bekend welke factoren zijn geassocieerd met een verminderd werkfunctioneren bij mensen met matige SOLK. Inzicht in deze factoren kan helpen om de matige SOLK-populatie beter te begrijpen en kan bijdragen aan vervolgonderzoek naar het ontwikkelen van gestratificeerde strategieën ter preventie van chronische SOLK, een verminderde werkprestatie, werkverzuim en geassocieerde werk-gerelateerde kosten.

Doelstelling. Identificeren welke factoren geassocieerd zijn met een verminderd werkfunctioneren, geoperationaliseerd als een verminderde werkprestatie en werkverzuim, bij mensen met matige SOLK.

Methode. Baseline data van een lopende gerandomiseerde klinische interventiestudie zijn gebruikt in deze cross-sectionele diagnostische multivariabele predictiestudie. Tien onafhankelijke variabelen zijn gemeten om de associatie met een verminderd werkfunctioneren te bepalen. De volgende variabelen zijn gemeten: ernst van psychosociale symptomen (domeinen: stress, depressie, angst en somatisatie), fysieke gezondheid, fysieke activiteit, leeftijd, geslacht, opleidingsniveau en duur van de klachten. Twee aparte univariabele en multivariabele lineaire regressieanalyses zijn uitgevoerd met de selectiemethode: 'backward stepwise selection'. Deze analyses zijn uitgevoerd voor zowel een verminderde werkprestatie en werkverzuim.

Resultaten. 'Ernst van psychosociale klachten'-domeinen 'depressie' (p < ,01) en 'somatisatie' (p < ,05) zijn positief geassocieerd met werkverzuim, terwijl domein 'angst' (p = ,128) en MVPA (p < ,01) negatief geassocieerd zijn met werkverzuim (n = 104). Het multivariabele model verklaart 17,3% van de totale variantie (R^2 = ,173; p < ,001). 'Ernst van psychosociale klachten'-domeinen 'stress' (p = ,152) en 'somatisatie' (p < ,001) zijn positief geassocieerd met een verminderde werkprestatie (n = 102). Het model verklaart 23,6% van de totale variantie (R^2 = ,236; p < ,001).

Conclusie. Mensen met matige SOLK en een hogere mate van een verminderd werkfunctioneren zijn vaker minder fysiek actief en hebben vaker een hogere kans op een depressieve- en somatisatiestoornis.

Klinische relevantie. Werknemers zouden vroegtijdig moeten herkennen of ze minder lichamelijk actief zijn en of ze een hogere kans hebben op een depressieve- of somatisatiestoornis. Werknemers zouden zich vrij moeten voelen om dit bespreekbaar te maken met hun behandelaars of werkgevers, zodat preventieve maatregelen getroffen kunnen worden.