Scandinavian Journal of Public Health, 1–10

ORIGINAL ARTICLE

Directive and nondirective social support in the workplace – is this social support distinction important for subjective health complaints, job satisfaction, and perception of job demands and job control?

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Abstract

Aims: Social support is associated with well-being and positive health outcomes. However, positive outcomes of social support might be more dependent on the way support is provided than the amount of support received. A distinction can be made between directive social support, where the provider resumes responsibility, and nondirective social support, where the receiver has the control. This study examined the relationship between directive and nondirective social support, and subjective health complaints, job satisfaction and perception of job demands and job control. *Methods:* A survey was conducted among 957 Norwegian employees, working in 114 private kindergartens (mean age 40.7 years, SD = 10.5, 92.8% female), as part of a randomized controlled trial. This study used only baseline data. A factor analysis of the Norwegian version of the Social Support Inventory was conducted, identifying two factors: nondirective and directive social support. Hierarchical regression analyses were then performed. *Results:* Nondirective social support was related to fewer musculoskeletal and pseudoneurological complaints, higher job satisfaction, and the perception of lower job demands and higher job control. Directive social support had the opposite relationship, but was not statistically significant for pseudoneurological complaints. ***Conclusions:*** **It appears that for social support to be positively related with job characteristics and subjective health complaints, it has to be nondirective. Directive social support was not only without any association, but had a significant negative relationship with several of the variables. Nondirective social support may be an important factor to consider when aiming to improve the psychosocial work environment.**

Key Words: *Social support, directive social support, nondirective social support, subjective health complaints, job satisfaction, job demands, job control, employees, coworkers, preschool teacher*

Trial registration: Clinicaltrials.gov: NCT02396797. Registered 23 March 2015.

Introduction

Social interaction is an important part of human life, and social support is associated with health and well-being [1], and predictive of health-promoting behaviour [2]. Being part of a social network, such as a workplace, provides us with good opportunities for provision of social support and may have an important health-promoting impact. A large longitudinal study found a significantly reduced risk of mortality among employees reporting high levels of peer social support [3], and low social support is associated with subsequent sick leave [4]. Social support in the workplace is assumed to be a highly important resource in helping employees cope with stress by reducing strains and stressors [5], and also to have a positive

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Date received 9 September 2016; reviewed 11 May 2017; accepted 7 July 2017

DOI: 10.1177/1403494817726617
journals.sagepub.com/home/sjp
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influence on well-being [6]. However, being part of a social network does not ensure that individuals will be supported. Social networks and relationships may also be characterized by negative qualities such as stress, conflicts or dissatisfaction, and thus serve as a model for ill health [7].

Social support can be categorized either by the type of social support or by roles and relationships between support providers and the support receivers. The most familiar classification is probably the distinction in function of support, e.g. instrumental or emotional support [8], but there are different opinions regarding the number of categories and their defining characteristics, and thus also different measurements used in existing literature. Fisher et al. [9] have made a distinction between directive and nondirective social support, based on the roles and relationships presumed between the support provider and the support receiver. Directive social support refers to support where the provider assumes responsibility, takes control, and tells the support receiver what he or she should do, think or feel. Directive social support can thus be seen as a way to impose one's own agenda on to the support receiver's coping [10, 11]. In contrast, nondirective social support shifts the focus of control from the support provider to the support receiver. It refers to support where the support provider cooperates with the support receiver, and acknowledges the support receiver's feelings, thoughts and choices. Nondirective social support can thus be seen as a way to achieve shared decision-making, where the support provider seeks to promote the support receiver's intentions [10, 11]. The distinction of directive and nondirective social support is based on the way support is provided, and each distinction in function of support can be delivered in either a directive or a nondirective way.

The items assessing directive and nondirective social support make it possible to empirically study how each type of support is associated with positive or negative outcomes [11]. This is because they describe actions the individual perceives to have received, without using language implying judgement of those actions. Measures of directive and nondirective social support also assess actual behaviours rather than perceptions of available support, which may be influenced by personality characteristics [12], or actual received support during a given time period. Received support is related to need for support and may not accurately reflect the amount of support available during a specified time period. These two features allow for the investigation of different outcomes to be pursued as empirical questions regarding how directive and nondirective social support lead to more or less benefit in different circumstances [11].

People tend to function better when they have a strong sense of coping and self-worth, feel that their lives have meaning, and are driven by inner motives rather than external pressures, and nondirective social support underpins these attributes. Nondirective social support focuses on the support receiver's intrapsychic challenges, such as the need to restore feelings of self-worth, rather than the external condition of the support receiver's challenges. Nondirective social support often leads to an increase in positive health behaviours, better health outcomes, greater life satisfaction, heightened self-esteem, and greater hope and optimism [10, 11, 13]. Directive social support is, on the other hand, more frequently associated with negative outcomes, such as higher levels of depression and loneliness, more subjective health complaints (SHCs), reduced self-esteem and increased dependence [10, 13, 14]. However, it is important to acknowledge that directive social support is useful in some situations and one cannot conclude that nondirective social support is always positive and directive social support is always negative. For instance, when the individual lacks the necessary skills to handle a challenge, is initiating a behaviour change, or the circumstances are acute, directive social support may be preferred or even necessary [9, 15]. In acute situations, attention to immediate solutions may be more important than the support receiver's psychological needs, and failure to take control could jeopardize the support receiver's well-being and also imply insufficient caring.

Both health complaints and job characteristics may be related to employee absenteeism. SHCs, such as back pain, anxiety and depression, are the most frequent reasons reported for sick leave in Norway [16]. Low job satisfaction is associated with higher sick leave proportions [17], while high job demands [18] and low job control [19] are found to be predictive of later sick leave. Social support may have a positive influence on these factors [20], and thus an important aspect to consider when aiming to promote a positive work environment and greater work presence.

In summary, current research substantiates a considerable difference in outcomes of support and help provided in a nondirective manner, and support and help provided in a directive manner. Nondirective social support normally promotes coping and control, while directive social support may restrict these resources. Numerous research studies on the impact of workplace social support have been conducted, both in relation to health [3] and job characteristics [6, 20]. To our knowledge, there is however limited research distinguishing between the provision of directive and nondirective social support in a workplace setting, and whether the type of support influences employees'

health, job satisfaction, and perception of job demands and job control. The current study adds to the literature by assessing this support distinction in a sample of Norwegian private-sector employees. The aim was to investigate whether the distinction between receiving directive or nondirective social support from coworkers was related to the amount of SHCs reported, employees' satisfaction with their job, and the perception of job demands and job control. Our hypothesis is that nondirective social support is more positive for these variables than directive social support.

Methods

Sample and procedure

The sample consisted of 957 Norwegian employees recruited from 114 private kindergartens in Norway, as part of a large randomized controlled trial [21]. All employees in the participating kindergartens were invited to answer the questionnaire. At the start of the study, all employers were instructed to report the number of employees working in each kindergarten and this totalled 1312 employees. Nine hundred and ninety employees chose to answer the questionnaire, giving a response rate of 75%. We did not have data on those employees not responding to the questionnaire. Of the 990 employees who chose to answer the questionnaire, 33 employees did not answer any of the standardized instruments used in this present study. These participants were thus excluded from the analysis, leaving a total sample of 957 employees (92.8% females, mean age = 40.7 (SD = 10.5; range 18–69), 51% had higher education).

Ethical considerations

The study was approved by the the Regional Committee for Medical and Health Research Ethics for South East Norway (Registration 2014/162/REC South East), and conducted according to the Declaration of Helsinki. A declaration of informed consent was collected from all participants using electronically secure survey software [21], emphasizing the right to withdraw from the trial at any time without any explanation (Trial registration: NCT02396797).

Instruments

Directive and nondirective social support were measured by a Norwegian version of the 16-item Social Support Inventory (SSI) [9, 10, 13]. Eight items assessed directive social support, and consisted of the following statements: 'Tell you to feel proud of yourself' (#6), 'Push you to get going on things' (#8), 'Do not let you dwell on upsetting thoughts' (#16), 'Point out harmful or foolish ways you view things' (#14), 'Solve problems for you' (#2), 'Take charge of your problems' (#4), 'Give you clear advice on how to handle problems' (#10), and 'Tell you what to do' (#12). The other eight items assessed nondirective social support, and consisted of the following statements: 'Show interest in how you are doing' (#1), 'Make it easy to talk about anything you think is important' (#5), 'Ask how you are doing' (#9), 'Are available to talk anytime' (#13), 'Ask if you need help' (#3), 'Cooperate with you to get things done' (#7), 'Provide information so you understand why you are doing things' (#11), and 'Offer a range of suggestions' (#15). Using a five-point scale ranging from 1='not at all typical'–5='very typical', employees indicated how typical each statement was for the way colleagues provided help and support. The internal consistency of the SSI has been found to be adequate in other samples [9, 10, 15]. For the present study, principal component analysis was used to assess the validity of the distinction between directive and nondirective social support.

Subjective health complaints were measured by the Subjective Health Complaints Inventory (SHC) [22]. The SHC Inventory is a reliable and valid measure of common health complaints [22] and consists of 29 questions concerning subjective somatic and psychological complaints experienced during the last 30 days. The SHC Inventory records complaints, without asking for attributions or medical diagnosis [22]. The severity of the complaints is rated on a four-point scale (0='not at all', 1='a little', 2='some', 3='severe'). The SHC Inventory yields five subscales, and sum scores of the five subscales were computed: musculoskeletal complaints (headache, neck pain, upper back pain, low back pain, arm pain, shoulder pain, migraine and leg pain during physical activity, $\alpha = 0.80$), pseudoneurology (extra heartbeats, heat flushes, sleep problems, tiredness, dizziness, anxiety, and sadness/depression, $\alpha = 0.72$), gastrointestinal problems (heartburn, stomach discomfort, ulcer/non-ulcer dyspepsia, stomach pain, gas discomfort, diarrhoea, and obstipation, $\alpha = 0.71$), allergy (asthma, breathing difficulties, eczema, allergy, and chest pain, $\alpha = 0.54$), and flu (cold/flu and coughing, $\alpha = 0.64$).

Job satisfaction was measured using a single item from Quinn and Shepard's global job satisfaction scale [23]. The wording of the item was 'All things considered, how satisfied are you with your current job?', rated on a five-point Likert scale ranging from 1 = very dissatisfied to 5 = very satisfied. Single-item questions measuring overall job satisfaction have shown convergent validity with multi-item scales [24].

Psychological demands and *decision latitude* were measured using the short Swedish version [25] of the

Demand Control Support Questionnaire, based on the Demand–Control Model by Karasek and Theorell [26]. The scale consists of three subscales: demands, decision latitude and support. Only the demand and decision latitude subscales were used in this current study. The demand subscale consisted of five items: 'Does your job require that you work very fast?' (#1), 'Does your job require that you work very hard?' (#2), 'Does your job require too great a work effort?' (#3), 'Do you have sufficient time for all your work tasks?' (#4), and 'Do conflicting demands often occur in your work?' (#5). The decision latitude subscale consisted of six items; 'Do you have the opportunity to learn new things in your work?' (#6), 'Does your work require skills?' (#7), 'Does your job require creativity?' (#8), 'Does your job require doing the same tasks over and over again?' (#9), 'Do you have the possibility to decide for yourself how to carry out your work?' (#10), and 'Do you have the possibility to decide for yourself what should be done in your work?' (#11). However, item #9 (repetitive work) correlated poorly with the other items measuring decision latitude, and also reduced the internal consistency ($\alpha = 0.56$). Item #9 was thus removed, leaving five items in the decision latitude subscale. Each item was scored on a four-point scale (1='yes, often', 2='yes, sometimes', 3='no, rarely', 4='no, almost never'). The necessary items were reversed before scores were added, giving subscale scores from 5 (minimum score) to 20 (maximum score) for both demands ($\alpha = 0.70$) and decision latitude ($\alpha = 0.64$). Low and high scores represented low and high levels of demands and decision latitude, respectively.

Statistics

All analyses were conducted using SPSS version 21.0 (Chicago: SPSS Inc). A principal component analysis (PCA) with Kaiser Oblimin Rotation was used to assess the latent structure of the SSI items. Items were considered to load on a factor if the loadings were greater than 0.4 on the primary factor, and the secondary loading at least 0.3 less than the primary loading. Items not meeting the criteria were removed, and a new factor solution excluding the eliminated items was performed to ensure that no items were cross loading on factors. Similar procedures have been used in other studies when refining the measure of directive and nondirective social support [11, 13]. Based on the factor structure, subscales were constructed by taking the mean score of the items loading on each factor, and Cronbach's alpha was used to determine the internal consistency of the factors. Cronbach's alpha was also used to determine the internal consistency of the five different subscales on the SHC Inventory, job demands and job control.

A series of hierarchical regression analyses was used to assess the relationship between directive social support, nondirective social support, SHCs and job variables. The main interest was the unique variance explained by directive and nondirective social support. Separate analyses were conducted with musculoskeletal complaints, pseudoneurology, gastrointestinal problems, allergy, flu, job satisfaction, job demands, and job control as outcome variables. In each of these analyses age, gender, and education were entered as a block in the first step, to control for demographic variables. The education variable was dichotomized into lower education ('no completed education', 'primary school', 'middle school', 'high school' or 'certificate of apprenticeship') and higher education ('up to four years of college or university' or 'over four years of college or university') before being entered in the regression models. Directive and nondirective social support were entered as a block in the second step. This method allowed for the assessment of the unique contribution of directive and nondirective social support to each of the dependent variables.

Results

Participant characteristics

The participants reported receiving more nondirective than directive social support from colleagues; a general high score on job satisfaction, a moderate score on job demands, and a fairly high score on decision latitude (see Table I). Ninety-seven percent of the employees reported at least one SHC during the last 30 days. Eighty-eight percent reported musculoskeletal complaints, 78% reported pseudoneurological complaints, 60.8% reported gastrointestinal complaints, 44.3% reported allergic complaints, and 50.9% reported flu. Women reported significantly more musculoskeletal and pseudoneurological complaints than men (see Table II). Tiredness, reported by 62.8% of the employees, was the most frequently reported single complaint, followed by headache (61.9%), neck pain (51%), low back pain (50.3%), and flu (45.8%).

Refining the measure of social support for the current sample

PCA was used to determine whether the SSI loaded on two factors (nondirective and directive). Suitability for performing PCA was assessed prior to the factor analysis. The inspection of the correlation matrix revealed a clear majority of coefficients of 0.3 and above, the Kaiser-Meyer-Olkin value was 0.91, exceeding the recommended value of 0.6, and the Bartlett's Test of Sphericity reached statistical significance. PCA revealed three factors with eigenvalues exceeding 1, explaining 37.9%, 12.5% and 6.5% of the variance

Table I. Mean and 95% CI for baseline characteristics on age, social support, job satisfaction, job demands and job control.

Variables	*n*	Mean	95% CI
Age	954	40.7	39.99–41.33
Directive support (1–5)	957	2.38	2.33–2.42
Nondirective support (1–5)	957	3.73	3.68–3.78
Job satisfaction (1–5)	956	4.32	4.28–4.36
Job demands (5–20)	944	13.25	13.09–13.41
Job control (5–20)	945	17.66	17.54–17.80

respectively. An inspection of the scree plot revealed a clear break after the second component, and it was decided to retain two factors for further investigation. The two-component solution explained 50.4% of the variance. Oblimin rotation was then performed to aid the interpretation. In this sample of Norwegian employees, seven items loaded on the nondirective factor ($\alpha = 0.88$), and three items loaded on the directive factor ($\alpha = 0.51$), see Table III. The reported pattern coefficients summarize the pattern factor loadings for the items on the two principal components, and indicate the effect of the factor on an item having controlled for the effect of the other extracted factor. The structure coefficients determine the correlation of each item with the two rotated principal components. Six items did not meet the predefined criteria with a loading greater than 0.4 on the primary factor and the secondary loading at least 0.3 less than the primary loading, and were thus not included when calculating the scores of the two subscales. Inter-correlations between the two subscales and outcome variables are presented in Table IV. One of the items included in the nondirective subscale was identified as directive in the original SSI (*'Tell you to feel proud of yourself')*, but loaded strongly on the nondirective factor in this sample. With a setting of $\delta = 0$ there was nearly no correlation between the two factors when excluding items not meeting the predefined criteria ($r = .03$).

Relationship between SHC and social support

Hierarchical regression analysis was used to assess the contribution of directive and nondirective social support for each of the five subscales measuring SHC. In the analysis containing musculoskeletal complaints as dependent variable, age, gender and education explained 2.7% of the variance. Adding directive and nondirective social support explained an additional 1.4% of the variance. In this final step of the equation, four factors significantly explained the variance in musculoskeletal complaints. Being female, having lower education, receiving a high degree of directive social support and a low degree of nondirective social support predicted musculoskeletal complaints (see Table V).

In the analysis containing pseudoneurological complaints as dependent variable, age, gender and education explained 1.2% of the variance. Adding directive and nondirective social support explained an additional 1.1% of the variance. In this final step of the equation, three factors significantly explained the variance in pseudoneurological complaints. Being female, having lower education, and receiving a low degree of nondirective social support predicted pseudoneurological complaints (see Table V).

There were no significant relationships between gastrointestinal complaints or flu and type of social support. For allergy, only directive social support was a significant factor in explaining the variance ($\beta = 0.068$, $p = 0.04$). However, the model as a whole was not significant ($R^2 = 0.008$, $F(5, 915) = 1.54$, $p = 0.175$), and neither was R^2 change for the final step (R^2 change $= 0.005$, $F(2, 915) = 2.18$, $p = 0.114$).

Relationship between job satisfaction and social support

In the hierarchical regression analysis containing job satisfaction as dependent variable, age, gender and education explained 1.1% of the variance. Adding directive and nondirective social support explained an additional 15.1% of the variance. In this final step of the equation, three factors significantly explained the variance in job satisfaction. Higher age, receiving a low degree of directive social support and a high degree of nondirective social support predicted reporting high job satisfaction (see Table V).

Relationship between job demands and social support

In the hierarchical regression analysis containing job demands as dependent variable, age, gender and education explained 3.1% of the variance. Adding directive and nondirective social support explained an additional 6.6% of the variance. In this final step of the equation, three factors significantly explained the variance in job demands. Having higher education, receiving a high degree of directive social support and a low degree of nondirective social support predicted reporting high job demands (see Table V).

Relationship between job control and social support

In the hierarchical regression analysis containing job control as dependent variable, age, gender and education explained 5.7% of the variance. Adding directive and nondirective social support explained an additional 10.3% of the variance. In this final step of the equation, three factors significantly

Table II. Mean and 95% CI of subjective health complaints. Separate values for women and men.

	Total			**Women**			**Men**			***p*-value**
	n	Mean	CI	*n*	Mean	CI	*n*	Mean	CI	
SHC total	922	11.07	10.52–11.62	855	11.29	10.72–11.86	67	8.22	6.43–10.0	**.004**
Musculoskeletal complaints	923	4.51	4.25–4.77	856	4.67	4.39–4.94	67	2.51	1.81–3.20	**< .001**
headache	924	0.87	0.82–0.92	857	0.88	0.83–0.94	67	0.72	0.53–0.90	.113
neck pain	922	0.77	0.72–0.83	855	0.82	0.76–0.87	67	0.25	0.12–0.38	**< .001**
upper back pain	922	0.49	0.44–0.54	855	0.52	0.47–0.57	67	0.15	0.06–0.24	**< .001**
low back pain	925	0.77	0.71–0.83	858	0.79	0.73–0.85	67	0.48	0.30–0.65	**.006**
arm pain	923	0.43	0.38–0.48	856	0.45	0.40–0.50	67	0.18	0.04–0.32	**.006**
shoulder pain	923	0.64	0.59–0.70	856	0.66	0.61–0.72	67	0.40	0.21–0.60	**.017**
migraine	922	0.24	0.20–0.28	855	0.25	0.21–0.29	67	0.19	0.06–0.33	.498
leg pain during physical activity	922	0.29	0.24-0.33	855	0.30	0.25-0.34	67	0.13	0.04–0.23	**.045**
Pseudoneurological complaints	922	2.84	2.65–3.02	855	2.89	2.70–3.08	67	2.17	1.56–2.78	**.046**
extra heart beats	922	0.22	0.19–0.25	855	0.23	0.19–0.26	67	0.09	0.01–0.15	**.032**
heat flushes	921	0.28	0.24–0.32	855	0.30	0.26–0.34	66	0.02	-0.02–0.05	**< .001**
sleep problems	923	0.58	0.53–0.64	856	0.59	0.54–0.65	67	0.46	0.26–0.66	.210
tiredness	923	0.91	0.85–0.96	856	0.92	0.87–0.98	67	0.70	0.50–0.91	**.041**
dizziness	922	0.32	0.28–0.36	855	0.33	0.29–0.38	67	0.13	0.02–0.25	**.010**
anxiety	922	0.20	0.17–0.23	855	0.19	0.16–0.23	67	0.28	0.13–0.44	.181
sadness/depression	922	0.32	0.28–0.36	855	0.31	0.27–0.35	67	0.46	0.29–0.63	**.047**
Gastrointestinal complaints	922	1.76	1.61–1.92	855	1.77	1.62–1.93	67	1.64	1.09–2.20	.655
heartburn	922	0.22	0.19–0.26	855	0.21	0.18–0.25	67	0.36	0.18–0.54	**.035**
stomach discomfort	922	0.15	0.12–0.17	855	0.14	0.11–0.17	67	0.24	0.09–0.39	.082
ulcer/non-ulcer dyspepsia	922	0.05	0.03–0.07	855	0.05	0.03–0.07	67	0.07	0.00–0.15	.441
stomach pain	922	0.31	0.27–0.35	855	0.32	0.28–0.36	67	0.16	0.06–0.27	**.043**
gas discomfort	924	0.52	0.47–0.56	857	0.53	0.48–0.58	67	0.33	0.17–0.48	**.029**
diarrhoea	922	0.33	0.29–0.37	855	0.33	0.29–0.37	67	0.33	0.19–0.47	.991
obstipation	921	0.19	0.16–0.23	855	0.20	0.16–0.23	66	0.14	0.03–0.24	.357
Allergy	922	1.05	0.95–1.16	855	1.05	0.94–1.16	67	1.04	0.71–1.38	.970
asthma	923	0.18	0.14–0.21	856	0.18	0.14–0.21	67	0.19	0.06–0.32	.779
breathing difficulties	922	0.13	0.10–0.16	855	0.13	0.10–0.16	67	0.09	0.02–0.16	.414
eczema	921	0.27	0.23–0.31	855	0.27	0.23–0.31	66	0.27	0.13–0.42	.951
allergy	922	0.37	0.33–0.42	855	0.37	0.33–0.42	67	0.36	0.17–0.54	.870
chest pain	922	0.11	0.08–0.13	855	0.10	0.08–0.13	67	0.12	0.02–0.22	.759
Flu	925	0.92	0.84–0.99	855	0.92	0.84–1.00	67	0.85	0.54–1.16	.632
cold/flu	925	0.61	0.56–0.66	858	0.61	0.56–0.66	67	0.61	0.41–0.82	1.000
coughing	924	0.31	0.27–0.35	857	0.31	0.27–0.35	67	0.24	0.09–0.39	.362

p-values were calculated with independent sample t-test. $p < 0.05$ when numbers are in bold.

explained the variance in job control. Having higher education, receiving a low degree of directive social support and a high degree of nondirective social support predicted reporting high job control (see Table V).

Discussion

This study examined whether directive and nondirective social support were related to SHCs, job satisfaction, job demands, and job control in a sample of Norwegian employees working in private kindergartens. Employees reported receiving more nondirective than directive social support from their colleagues. Nondirective social support was related to more positive perceptions for all outcome variables, while directive social support was related to more negative perceptions.

For SHCs, nondirective social support was significantly associated with fewer musculoskeletal and pseudoneurological complaints, while directive social support was associated with more musculoskeletal and pseudoneurological complaints, but the relationship was not statistically significant for pseudoneurological complaints. Musculoskeletal complaints were most frequently reported by the employees, followed by pseudoneurological complaints. These findings are supported by a growing body of literature suggesting the benefit of nondirective social support on health outcomes. Previous studies have found nondirective social support to be associated with lower depression, lower anxiety

Table III. Pattern and structure matrix for PCA with oblimin rotation of the two-factor solution of SSI items.

	Original analysis				Second analysis			
	Pattern coefficients		Structure coefficients		Pattern coefficients		Structure coefficients	
	Nondirective	Directive	Nondirective	Directive	Nondirective	Directive	Nondirective	Directive
Show interest in how you are doing (#1)	**.823**	−.153	.792	.011	**.824**	−.032	.823	−.008
Make it easy to talk about anything you think is important (#5)	**.816**	−.131	.790	.032	**.805**	−.059	.803	−.036
Ask how you are doing (#9)	**.806**	−.115	.783	.046	**.805**	−.014	.805	.009
Ask if you need help (#3)	**.777**	−.025	.772	.130	**.782**	.048	.784	.071
Cooperate with you to get things done (#7)	**.753**	−.240	.705	−.090	**.736**	−.153	.732	−.132
Tell you to feel proud of yourself (#6)	**.742**	−.031	.736	.117	**.750**	.065	.752	.087
Are available to talk anytime (#13)	**.669**	.065	.682	.198	**.685**	.119	.688	.139
Point out harmful or foolish ways you view things (#14)	−.254	**.706**	−.113	.655	−.151	**.749**	−.129	.745
Tell you what to do (#12)	.161	**.651**	.291	.683	.227	**.643**	.246	.649
Push you to get going on things (#8)	−.156	**.575**	−.041	.544	−.051	**.728**	−.029	.727
Give you clear advice on how to handle problems (#10)	*.597*	*.380*	*.673*	*.499*	·	·	·	·
Provide information so you understand why you are doing things (#11)	*.577*	*.289*	*.634*	*.404*	·	·	·	·
Solve problems for you (#2)	*.473*	*.390*	*.551*	*.484*	·	·	·	·
Take charge of your problems (#4)	*.424*	*.466*	*.518*	*.551*	·	·	·	·
Do not let you dwell on upsetting thoughts (#16)	*.399*	*.276*	*.454*	*.355*	·	·	·	·
Offer a range of suggestions (#15)	*.353*	*.469*	*.447*	*.540*	·	·	·	·

Coefficients in bold loaded above 0.4 on the primary factor and at least 0.3 less on the secondary factor. Items in italics did not meet the criteria in the original analysis, and were not entered in the second analysis.

Table IV. Inter-correlation between musculoskeletal complaints, pseudoneurological complaints, job satisfaction, job demands, job control, nondirective social support and directive support.

		1.	2.	3.	4.	5.	6.
1.	Musculoskeletal complaints	·	·	·	·	·	·
2.	Pseudoneurological complaints	**.480**	·	·	·	·	·
3.	Job satisfaction	**−.108**	**−.164**	·	·	·	·
4.	Job demands	**.160**	**.153**	**−.268**	·	·	·
5.	Job control	−.051	**−.085**	**.329**	−.052	·	·
6.	Nondirective social support	**−.077**	**−.086**	**.384**	**−.248**	**.288**	·
7.	Directive social support	.062	.029	**−.078**	**.078**	**−.136**	.038

$p < 0.05$ when number is bold.

and more adaptive coping [10, 14, 27], while directive social support was related to higher levels of anxiety and depression, less adaptive coping and more SHCs [9, 13, 14, 27]. Musculoskeletal and mental health complaints are the most frequent reasons for work absence, and a focus on providing

Table V. Standardized coefficients, R^2, and R^2 change for the two-step regression models with musculoskeletal complaints, pseudoneurology, job satisfaction, job demands, and job control as dependent variables.

	Musculoskeletal				**Pseudoneurology**				**Job satisfaction**				**Job demands**				**Job control**			
	Step 1		Step 2		Step 1		Step 2		Step 1		Step 2		Step 1		Step 2		Step 1		Step 2	
	β	***p***	*β*	***p***	*β*	***p***	*β*	***p***	*β*	***p***	*β*	***p***	*β*	***p***	*β*	***p***	*β*	***p***	*β*	***p***
Age	.004	.911	.014	.680	.030	.375	.034	.315	.082	**.013**	.075	**.016**	−.048	.150	−.033	.308	.067	**.039**	.054	.085
Females	.142	**.001**	.155	**.001**	.065	.054	.076	**.024**	.051	.124	.010	.731	.006	.849	.034	.287	.054	.098	.019	.533
Higher education	−.088	**.008**	−.087	**.009**	−.080	**.016**	−.084	**.012**	.007	.838	.032	.293	.165	**.001**	.158	**.001**	.224	**.001**	.237	.001
Directive support	.	.	.069	**.038**	.	.	.033	.320	.	.	−.076	**.013**	.	.	.106	**.001**	.	.	−.106	**.001**
Nondirective support	.	.	−.101	**.002**	.	.	−.102	**.002**	.	.	.387	**.001**	.	.	−.240	**.001**	.	.	.311	**.001**
R^2	.027	**.001**	.041	**.001**	.012	**.011**	.023	**.001**	.011	**.016**	.162	**.001**	.031	**.001**	.097	**.001**	.057	**.001**	.160	**.001**
R^2 change	.027	**.001**	.014	**.001**	.012	**.011**	.011	**.006**	.011	**.016**	.151	**.001**	.031	**.001**	.066	**.001**	.057	**.001**	.103	**.001**

$p < 0.05$ when number is bold.

nondirective social support may thus be important in the management of such health complaints in a workplace setting.

Previous studies have explored the relation between workplace social support and job satisfaction, and social support and job satisfaction are often positively related [20]. To our knowledge there are, however, no studies distinguishing between directive and nondirective workplace social support when exploring relations to job satisfaction. According to our findings this distinction seems to be important. In our sample, nondirective social support was significantly associated with reports of high job satisfaction, while directive social support was significantly associated with reports of low job satisfaction. This was also the case for job demands and job control. Nondirective social support was significantly associated with reporting lower demands and higher control, while directive social support was significantly associated with reporting higher demands and lower control. This suggests that the way support is provided influences the way employees perceive job demands and job control. Both the perception of job demands and job control is closely linked to health and well-being, and social support may function as a buffer. However, our results indicate that the type of social support provided is of importance. In our sample of kindergarten employees, those receiving a high degree of nondirective social support reported having lower job demands than their colleagues. As the perception of high job demands is linked to poorer health outcomes, nondirective social support may function as a tool to maintain employees' well-being even in job settings where it is difficult to reduce or redesign job demands. A similar result was found for job control; employees receiving a high degree of nondirective social support reported perceiving higher job control. For organizations, variables influencing the perception of job control among employees may be of importance, as job control is positively related not only with health but also work productivity. As earlier described, the two distinctions of support, or ways to communicate, imply two clearly different assumptions about people. When providing directive social support a person takes the role of an expert and communicates that he or she knows best what colleagues should do, think or feel, whereas nondirective social support communicates a belief that one has the ability to decide for oneself what is best. Nondirective communication and support between colleagues seems to promote a positive work environment, and our findings indicate that the distinction between directive and nondirective social support may be important in interventions aiming to influence employees' job satisfaction and perception

of demands and control. Studies with experimental designs are needed to enhance our understanding of the effect of each support type on these variables.

Semmer et al. [28] argue that for social support to be perceived as helpful by the receiver, or to be 'effective', it needs to entail an emotional component. They propose that the inconsistency in the literature may be a consequence of instrumental support sometimes having emotional meaning. Results from their study on hospital patients indicate that for support to be perceived as useful, the communication of care and understanding should be present, even if the support provided is of an instrumental nature [28]. It is, however, difficult to know whether, and how, the support receiver attributes emotional meaning to different types of support provided. Looking at the items measuring social support in this present study, they could all be attributed an emotional meaning. However, whether the emotional meaning is perceived as positive or negative is probably dependent on the situation. For instance, 'being told what to do' may be preferred when you lack the necessary skills to handle a specific task, but may be perceived as offending in situations where you do have the skills needed or where there are no definitive answers and you would rather decide yourself. In these situations, nondirective social support may be required for it to be perceived as useful. Furthermore, results from the study conducted by Harber et al. [10] indicate that the distinction between nondirective and directive social support adds a unique dimension compared to other measures of support. They found nondirective social support to be associated with enhanced morale, and directive support to be associated with depleted moral, even after controlling for other traditional measures of social support.

Most studies on the distinction between directive and nondirective social support have been conducted with samples from the US [9, 10]. Kim et al. [29] argue that there may be cultural differences in the type of support sought and provided, how it is viewed, and its effect on health outcomes. Thus, it is important to examine whether the distinction between directive and nondirective social support is maintained in different countries and cultures, and also whether it is associated with health. Øyeflaten et al. [13] assessed this distinction in a sample of Norwegian rehabilitation patients, and found a two-factor solution reflecting the distinction between directive and nondirective social support, as with the US samples [9, 10]. However, they found some minor differences in the factor loadings compared to the original version of the scale, which was also the case in the current study. In both Norwegian samples, the distinction between directive and nondirective social support seemed to stand up well. Nevertheless, for the items meeting the predefined criteria, one item defined as directive in US samples loaded on the nondirective factor in both Norwegian samples ('Tell you to feel proud of yourself'). This supports the assumption that there may be a cultural difference in the manifestation of this item [13]. In US samples the wording of this item might be understood as being told what to think or feel, while in Norwegian it may be interpreted as supporting one's autonomy [13]. The item, 'Offer a range of suggestions', loaded on the directive factor in Norwegian rehabilitation patients [13], while it was identified as nondirective in US samples. This item did not meet the predefined criteria in the current study and is thus not included in the final two-factor solution. However, the item also loaded more on the directive factor in this Norwegian sample. In summary, the results of the PCA of the SSI for this current sample are similar to the results found in other studies [11, 13, 14]. There may however be a need for further development to consolidate its psychometric properties to a Norwegian context.

Study limitations

The main limitation of this study is the cross-sectional design, which does not allow us to determine causality, and thus only demonstrate that there is a positive association between nondirective social support, SHCs, job satisfaction, and perception of job demands and job control, and a negative association for directive social support on the same variables. Further studies are needed to assess exactly how these variables influence each other. Also, the directive social support factor only contains three items, which may limit the construct validity of this variable. The Cronbach's alpha value of this factor was low (α = 0.51), but this may be a function of few items being included in the analysis as Cronbach's alpha values are quite sensitive to the number of items in the scale. The mean inter-item correlation for the items was 0.26, which is within the recommended optimal range of 0.2–0.4 [30]. Furthermore, one of the items in the directive social support factor ('Point out harmful or foolish ways you view things') may be perceived as offending and conveying little understanding, thus being more associated with negative affect than the other items. Finally, participation in the study was voluntary, and we did not have data to investigate whether employees responding to the questionnaire were systematically different from non-responders.

Conclusions

This study showed that social support was related to employees' job satisfaction, how they perceived demands and control at work, and also the amount of

SHCs they reported. Nondirective social support had a positive relationship with these health and job variables, while directive social support showed a negative relationship. We suggest that future workplace interventions could focus on the characteristics and delivery of support, as nondirective social support seems to be favourable for many outcomes.

Acknowledgements

We want to thank the National Association of Private Kindergartens for assistance with recruitment and for recommending the project to its members. We also want to thank the kindergartens for their enthusiasm, participation and assistance in this research project.

Conflict of interest

The authors declare that there is no conflict of interest.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

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