Title	Feasibility and potentials of online support for stress management among secondary school teachers
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Feasibility and Potentials of Online Support for Stress Management among Secondary School Teachers

Abstract

Teachers' work-related stress is a widespread problem. Few studies have used online communications to provide support to teachers, and these were mainly focused on novice teachers. Here, we performed an exploratory study to examine whether the use of online forums by secondary school teachers in Hong Kong could provide social support to manage work-related stress. Following seven days of forum use, content analysis and post-intervention evaluations were carried out to examine the anonymous communications of 75 secondary school teachers who participated in one of five online discussion forums. Consensus on the coding and categorization of the data was reached among three experienced researchers in qualitative analyses. The online forums were well received by the participants. Most participants reported that they received support from the forum and considered it useful for stress management. These results suggest that online support can be used for stress management among secondary school teachers. Further studies on using online approaches as stress-management tools are warranted.

Keywords online support; online communication; work-related stress; stress management, secondary school teachers

Introduction

Work-related stress has been recognized as a widespread problem in schoolteachers (Lau, Yuen, & Chan, 2005; Sato & Sato, 2004). Different strategies have been used to alleviate teachers' stress that mainly applied face-to-face interventions (Richardson & Rothstein, 2008). As the popularity of online communication has expanded, online support groups have emerged for stress management. This technology may be an effective strategy to help new and experienced teachers cope with work-related stress.

Computer-mediated discussion groups were created to build professional communities and provide support to interns and novice teachers in the U.K. (Scherff & Paulus, 2006; Selwyn, 2000) and Canada (Dalgarno & Colgan, 2007). The participants used the online platform for informal learning and psychological support. One electronic discussion group was reported to provide emotional support and decrease the sense of isolation in novice teachers (DeWert, Babinski, & Jones, 2003).

In Hong Kong, secondary school teachers were reported to have high occupational stress, but insufficient stress-coping resources (Leung, Mak, Chui, Chiang, & Lee, 2009). The most frequently reported sources of work-related stress by teachers in Hong Kong were heavy workloads, time pressure, and managing the students' behaviour and learning (Chan, Chen, & Chong, 2010). Additional stress was caused by education reforms introduced during recent years, including required proficiency tests for Chinese and English, external school reviews, and post-qualification continuing education (Chan et al., 2010; Tang, Au, Schwarzer, & Schmitz, 2001). Although Hong Kong Teachers' Centre and Hong Kong Professional Teachers' Union offer stress management programs and activities such as Tai Chi classes and dancing classes for teachers, support for relieving workplace stress is lacking. Chan (2002) noted that social support among Hong Kong

Chinese teachers could serve as a buffer to mitigate the effect of stress on psychological distress and recommended interventions that increased support from friends and colleagues.

Here, we performed an exploratory study to see whether the use of online forums by secondary school teachers in Hong Kong could provide social support to manage work-related stress during a short, seven-day study. The design of the online group discussion format drew upon research on coping theory, social support, and interventions for work-related stress across system levels. We also examined the feasibility of using online forums for stress management, as well as the sources of stressors and coping strategies used by secondary school teachers in Hong Kong.

Methods

Participants

Seventy-five secondary teachers registered to participate in the online forums. Among the participants, 63% were male, 63% were between 31 and 45 years old, 71% were married, and 44% had a monthly income of more than HK$50000 (equivalent to US$6410). Nearly half of the participants (41%) taught between 26 to 30 sessions (35-minute each) every week. The majority of the participants ($n = 43$) spent 21-40 h/week on their job apart from face-to-face teaching. The teachers were responsible for preparing the lessons, teaching materials, contacting parents, and other administrative duties. The teachers commonly planned extracurricular activities, and 28% spent over 11 h/week on these extracurricular activities.

Procedure

   Ethics approval for the study was obtained from The University of Hong Kong. A total 75 of 99 teachers who attended a professional development course offered by The University of Hong Kong volunteered to participate in the study. All participants were informed of the purpose of the study and that participation was voluntary with the right to withdraw at any time. Written consent was obtained from all participants. The participants who registered for the online stress management program were randomly assigned into five online support forums (13–16 participants per forum). Confidentiality and anonymity were ensured, and the participants were able to conceal their personal information, age and gender. The participants were briefed on how to access the online forum and provided with a link by email to activate their accounts. They were asked to set up their own user name, password and personal profile on the forum. Following completion of the study, the participants were notified by email to complete an online post-forum questionnaire within one week.

Managing the online forum

   The forum was open for seven consecutive days. Participating teachers were encouraged to post messages and share their experiences regarding work-related stress and their coping strategies. Each forum was assigned a moderator, who was provided a prompting guide to ensure consistent facilitation across all five forums. Moderators were responsible for providing an orientation on the system, welcoming members, explaining the rules, encouraging focused discussions on work-related stress, prompting discussions on coping strategies, and summarizing and concluding the forum discussion. The moderators were prepared to provide urgent interventions if any participants expressed

self-harm behaviours or suicidal thoughts or attempts, but these actions were not required during the study.

Data analysis

The teachers' anonymous online communications were transcribed for qualitative analysis. The data were coded and analyzed using NVivo (version 2.0). Descriptive analyses were performed on the data collected in the evaluation questionnaires.

Trustworthiness

Trustworthiness (Lincoln & Guba, 1985) was established in several ways. Each of the three experienced qualitative researchers performed the analysis independently, and they subsequently met and reached a consensus on the categorization and coding, which ensured the confirmability of the findings, which were grounded in the data. The categories and themes developed were presented to the participating teachers during a report session after the analysis, and the teachers agreed on the categories and themes, establishing their credibility. Dependability and an audit trail were maintained and managed with the use of the computer-aided qualitative data analysis software, NVivo.

Results

The forums were well received by the participants. Most participants were positive about their forum and considered it useful for providing mutual support and sharing coping strategies to manage work-related stress.

Perceived support and encouragement

Many posts expressed a sense of support through sharing messages on the forum. The participants felt that they were not alone, that it was safe to vent their feelings and that the

other participants provided empathy and encouragement. These sentiments are reflected in the following teacher's quotes:

'This is the first time that I have logged in successfully and find the messages of our group members very supportive, positive and heartwarming.' (Participant #25)

'Perhaps you will feel better if you know that you are not alone in this busy world.' (Participant #63)

'Work hard everybody! It's really not easy to be a teacher. I understand your feeling, and in fact, most teachers should have it as well. You won't have any guilt if you have done your best' (Participant #48)

Receptiveness of online forum

Participants enjoyed the online support without the need to disclose their identities.

'Nice to read from you from now on as I get very excited to have new friends to air out something that I may not tell anyone I know!' (Participant #36)

'But teachers are relatively more reserved; very often unwilling to talk to other people or to consult others. But the advantage of this type of platform, teachers can use fake names. This minimizes a lot of worries. People can talk freely, through this forum' (Participant #18)

Feasibility

Table I shows the frequencies of logins and message posting for the five forums during the seven-day study. Among the 75 participants, eight never activated their accounts or logged in. Among the 63 who activated their accounts, 89% posted at least once. Four participants posted no messages, but logged in to view the forum. The frequency of individual logins ranged from 1 to 29 times, and there were 571 total logins in the five forums. The number of individual postings for the participants ranged from 0 to 20, and 269 total messages were posted by the participants of the five forums. Most participants logged in more frequently than they posted.

Table II presents the descriptive analysis of the forum evaluation, which indicates its strengths and limitations. The response rate for the online evaluation was 26 (36.6%), including two participants who did not post. The participants perceived that the online forum could provide them with support and could help stimulate new ways to manage work-related stress. Most of the participants thought the forum easy to follow (92%), an effective way to manage work-related stress (62%), stimulated new ideas for managing work-related stress (54%), and could enhance their confidence in managing work-related stress (50%). Participants reported some technical difficulties that could have been obstacles in using the forum effectively. Participants suggested that the seven-day duration was too short, that there should be more members per group and that professional advice should be provided in the forums.

Discussion

This short-term, qualitative, exploratory study suggests that online support can be used for stress management among secondary school teachers. The forum provided a platform for the teachers to share their feeling and provide support to one another, and the

teachers reported that they benefited from the experience. Since forums are relatively easy to operate, they can provide a cost-effective stress-management strategy.

The anonymous and flexible nature of online forums matches the needs of secondary teachers. The teachers were able to incorporate forum use into their busy work schedules, and the asynchronous nature of the communications allowed the participants flexibility in controlling the time, location and pace of their interactions (Hsiung, 2000). The ability to maintain anonymity implicitly encouraged the participants to express their feelings (Adelman, Parks, & Albrecht, 1987). One participant clearly expressed the advantage of using fake names. This minimizes a lot of worries. People can talk freely, through this forum". The forum protected the self-image and privacy of the teachers in the Chinese cultural context in Hong Kong. In the forums, the teachers felt safe in expressing their struggles and venting their feelings to people who were facing the same difficulties. Participants often referred to their anonymous peers as "fellow travellers" ("同路人" in Chinese), which illustrates the sense of support they perceived in the group. This sense of common experience, referred to as homophily, was shown to be essential for fostering the emotional and physical health of teachers (DeWert et al., 2003; Troman, 2000).

Limitations of the study and recommendations

There are a number of significant limitations in this exploratory study. One major flaw in our quasi-experimental design is that we did not include control or comparison group to substantiate our conclusions. As raised by Shadish, Cook, and Campbell (2002), such design has several threats to internal validity including the inability to exclude possible events that might have been contributed to the change observed from the single post-test from our study. Including controls and comparison groups will be essential in future studies. Additionally, the duration of the study was short and could not measure possible long-term effects. Therefore, future studies should evaluate a

longer intervention period to assess the effectiveness of online support forums for stress management among teachers, and use multiple post-test design to improve the degree of causal inference (Shadish et al., 2002). Moreover, systematic comparisons of online support forums with other stress-management interventions will provide insights for managing work-related stress among teachers.

Since participants were recruited from a single professional development course, this might have contributed to a selection bias. In future studies, it will be necessary to include a larger, randomized sample and to evaluate the feasibility from the employer's perspective by assessing the utilization of the forums during paid work time or personal time. Future studies should also make technical and structural improvements to the forums to make enrolment as convenient as possible and maximize online participation.

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Table I Summary of participant activities

Forum group	Registered	Never logged in	Male	Female	Not reported	Lurkers[a]	Total login[b]	Maximum posts[c]	Total posts[d]
1	15	2	4	1	8	1	149	20	52
2	14	3	4	1	7	1	71	8	44
3	16	0	7	2	7	1	154	8	56
4	14	0	2	0	12	1	125	17	68
5	16	3	2	1	10	0	72	7	49
Total	75	8	19	5	44	4	571		269

[a] Logged in, but never posted.

[b] Total frequency of logins from all members in the forum.

[c] Maximum number of individual posts in the forum.

[d] Total number of posts from all members in the forum.

Table II Participants' feedback on the effectiveness of the online forum

	Agree, n (%)	Neutral, n (%)	Disagree, n (%)	
Easy to follow online forum	24 (92)	1 (4)	1 (4)	
Enhanced confidence to manage work-related stress	13 (50)	6 (23)	7 (27)	
Stimulated new ways to manage work-related stress	14 (54)	8 (31)	4 (15)	
Perceived support through program	Quite a lot	Some	Little	No
	9 (41)	10 (45)	2 (9)	1 (5)
Effectiveness to manage work-related stress	Good	Satisfactory	Fair	Poor
	6 (23)	10 (39)	8 (31)	2 (8)