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Article title: Is brief daily spiritual practice desirable for elderly services staff?

Two pilot studies with care and professional workers

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Running title: Daily spiritual practice at workplace

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Symptoms-focused approach only had limited short-term effects in addressing burnout. A new trend is toward a positive approach in fostering well-being at workplace. The current study piloted a daily spiritual practice programme which provided a 15-minute small group meeting with staff of elderly services towards the end of every workday for one month at two study sites. Repeated measures on burnout, daily spiritual experience (DSE) and engagement were taken at pre, post and 1 month after intervention. The two groups showed different patterns in burnout reduction and increase of DSE. It is worthwhile pursuing randomized controlled trial on the programme.

Key words: Nursing home care; Older adult; Psychosocial intervention

#### INTRODUCTION

Well-being at workplace is a major concern in many sectors, including the welfare sector (Sanderson & Andrews, 2006). Occupations of elderly services share two core characteristics: humanitarian values and intensive emotional involvement. However, prolonged value struggles and emotional involvement can be a form of chronic mental labour making elderly services staff vulnerable to emotional exhaustion, which is a core feature of job burnout (Maslach, Schaufeli, & Leiter, 2001). Staff burnout leads to negative impacts at both individual and organizational levels. At individual level, workers are at risk of increased physical and mental health problems. At organizational level, service quality and productivity are affected due to increased staff turnover and missing days from work (Lerner et al., 2004).

It is of paramount importance to maintain and enhance the well-being of staff, which is arguably the most important asset in all human services. At organizational level, there are practical limits regarding what may be done to improve the tangible work conditions. Nevertheless, the tangible work conditions are generally not the critical factors affecting job burnout and engagement (Schaufeli & Bakker, 2004). At individual level, previous interventions tend to be symptoms-focused and have demonstrated rather limited short-term effects only (Schaufeli & Bakker, 2001). A symptoms-focused approach runs the risk of mislabeling work stress oversimplistically as entirely bad and undesirable. The mislabeling is conceptually wrong and may misguide the stakeholders to narrowly focus on stress reduction or avoidance.

A new trend is toward a positive approach in fostering well-being at workplace (Gonzalez-Roma, Schaufeli, Bakker, & Lloret, 2006; Ng, Fong, & Wang, 2009; Park & Folkman, 1997). Nurturing daily spiritual experience is one of these positiveoriented interventions that seems to have promising potentials (Holland & Neimeyer, 2005). Daily spiritual experience refers to a person's ordinary behavioral and emotional interaction with the transcendence in daily life (Underwood & Teresi, 2002). It may be evoked by religious beliefs or by ordinary events in daily life, in nature or in solitude. In contrary to mystical religious experience which occurs, if any, only sporadically in one's life, daily spiritual experience may occur as frequently as several times a day. The experience can be religious or non-religious. Examples are in the midst of a day feeling the God's presence, experiencing a connection to all of life, and being spiritually touched by the beauty of the creation.

There is evidence suggesting a robust connection between daily spiritual experience and health (Christopher & Fan, 2008). Our local studies have revealed the effects of holistic care culture in mitigating burnout and enhancing work engagement (Ng, Fong, & Wang, 2011). However, previous studies have mostly focused on theorizing and model building and there have been rare intervention studies. The current study aimed to conduct pilot trials of a daily spiritual practice programme for care and professional workers at elderly services. The practicability, acceptability and desirability of the programme were examined.

# The 'Spiritual Afternoon Tea' Programme

It is a big challenge to design a daily spiritual practice programme which is acceptable to staff of diversified cultural and educational background. In the elderly services, care staff account for around 80% of the workforce. Programs which are overly intellectual or 'middle class' will not be appropriate. After all, spiritual practices emphasize the experiential aspect rather than the intellectual deliberations. Attention and respect must also be paid to religious pluralism, including the non-religious orientation. The spiritual components of the programme should not be constrained to a single religion, and should also include spiritual but non-religious practices. Lastly but not the least, the programme should be simple and brief so that it will not unintentionally add to the burden to the facilitators and participants.

Bearing in mind the above considerations, we worked closely with a major elderly service provider in Hong Kong and developed a programme named 'Spiritual Afternoon Tea'. The programme provides 15-minute spiritual experience in small group format for staff toward the end of every workday. Although there was no actual tea drinking, the name 'Afternoon Tea' was chosen because it implied something brief, relaxing and enjoyed daily. Moreover it sounded inviting and was culturally appropriate. The targeted group size was 8. Usually, a social worker of the work team is assigned the facilitator of the group. The meeting is conducted in a quiet, compact room within the workplace. To create a relaxing atmosphere, participants sit on yoga mat on the floor. Those having difficulties sitting on the floor may sit on chairs instead. Each meeting lasts for about 15 minutes and will go through 3 standardized components:

- 1. <u>Slowing down</u> (about 5 minutes): In religious and spiritual practices, slowing down is a common first step. A key objective is to bring back participants' concentration and awareness to the here-and-now so that one may get in touch with oneself and the immediate environment. Examples of simple activities for that purpose are silence sitting, lying down, and listening to soft music or recorded sound of the nature. The facilitator may use his/her spontaneity in picking one of these activities for each meeting.
- <u>Golden sentence sharing</u> (about 8 minutes): Before each meeting the facilitator will select a golden sentence for reflection and discussion in the

group. The sentence should be positive, thought-provoking and related to meanings or philosophies of life. Some examples are 'A spacious house is less desirable than a "spacious heart", 'Thing that is most difficult to see clearly is yourself', and 'Money may buy you a house but not a family'. Our facilitators found it easy to find suitable golden sentences because there are abundant sources in books, magazines and on the Internet. The facilitator will have the selected sentence printed on small pieces of paper for distribution in the group. Firstly, the facilitator and all members read out the sentence together. Then each member quietly examines his/her reactions for about a minute. Afterwards, the group will have free sharing of views together. The key objective is to promote reflections on meanings and philosophies of life.

3. <u>Group ending ritual</u> (about 2 minutes): The activities can be singing a spiritlifting song together, cooperative movement or music exercises, greeting and hugging games, or simple self and mutual light massage. In enacting body contacts, cultural norms are taken into consideration. The facilitator may use his/her spontaneity in picking one of these activities for ending the meeting. The objective is for bringing out positive energy of the group so that the members will leave with a revitalized feeling. These activities may also help nurture a mutual care culture in the group. Because the programme was rather simple to lead, our experience suggested that a new facilitator with basic group work training could comprehend the design and rationale of the programme within an hour of briefing by a research team member. To ensure compliance to the protocol, a research team member sit in the first 2 or 3 meetings conducted by a new facilitator and provided him/her feedback. We found these measures suffice in ensuring consistence and adherence to protocol.

## METHOD

## Design

An A-B-A experimental design was adopted for piloting the Spiritual Afternoon Tea programme at two sites, with measures taken at pre-intervention (T0), postintervention (T1; the intervention lasted for 1 month) and 1-month after intervention (T2). In addition to outcome study, process evaluation was conducted by means of focus group interview with the participants at T2.

# Participants

The Spiritual Afternoon Tea programme was piloted at 2 study sites, which were a home help service team (Site 1) and an elderly home with day care centre (Site 2). At Site 1, the targeted participants were home help service workers who provide outreach domiciliary service for the elderly people living in the community. At Site 2, the targeted participants were the social workers and nurses. All participants joined the programme on a voluntary basis. Table 1 summarizes the basic demographics of the 2 groups. The group sizes were the same, with 8 participants in each group. In comparison with the social workers/nurses group, the home helpers group was older in age, had a longer period of service in the agency, lower level of education, and more followers of folk religion. The groups at Site 1 and Site 2 achieved an overall attendance rate at 84% and 82% respectively.

# [Please insert Table 1 here]

#### Measures

The questionnaire included measures to assess the level of job burnout, daily spiritual experience, work engagement, and demographic characteristics of the participants such as gender, age, educational level, religion, and years of service.

Job burnout was measured by the Chinese version of the Maslach Burnout

Inventory (Maslach, Jackson, & Leiter, 1996). The scale is a 16-item widely used measurement tool with three subscales: exhaustion (5 items), cynicism (5 items), and reduced professional efficacy (6 items). The items are scored on a 7-point Likert scale ranging from 0 ("never") to 6 ("always"). Previous studies have indicated acceptable reliabilities and construct validities for the scale (Schaufeli & Enzmann, 1998).

Daily spiritual experience was assessed by the Chinese version of the Daily Spiritual Experience Scale (Ng, Fong, Tsui, Au-Yeung, & Law, 2009). It is a 16-item, one-factor instrument assessing the frequency of original spiritual experience in daily life. The items are scored on a 6-point Likert scale ranging from 1 ("not ever") to 6 ("many times per day"). The scale showed high level of internal consistency in the validation study (Cronbach's alpha = .97).

Work engagement was measured by the Chinese version of the Utrecht Work Engagement Scale (Fong & Ng, 2012). It is a 9-item, three-factor measurement scale with three subscales: vigor (3 items), dedication (3 items), and absorption (3 items). The items are scored on a 7-point Likert scale ranging from 0 ("never") to 6 ("always"). Previous studies have indicated acceptable reliabilities and construct validities for the scale (Schaufeli, Bakker, & Salanova, 2006; Schaufeli, Bakker, & Van Rhenen, 2009). Procedures

At each study site, the Spiritual Afternoon Tea programme was promoted among the target participants in their regular staff meeting through the agency partner of the study. The objectives and contents of the 1-month programme and the expected commitments of the participants were explained in details. Enquiries and unclear points were handled immediately in the meeting. Target group size at each site was 8 and the places were offered on a first-come-first-serve basis. Subsequently, all the places of the 2 groups were filled up in one week time after the meeting. Informed written consent was obtained from each participant before proceeding to the study. Questionnaire survey was administered by a research assistant at T0, T1 and T2 for each pilot group. The questionnaires were completed on a self-report manner and took about 5 minutes to complete. For protection of personal data, all completed questionnaires were handled by the research team and the agency could have no access to individual' data.

Regarding data analysis, firstly, descriptive statistics of each group were computed and examined. Outcomes at each study site were analyzed by examining T0-T1 comparisons, T0-T2 comparisons, and T1-T2 comparisons. In view of the small sample size (8 at each site), Wilcoxon Signed Rank test was adopted for performing the comparison analyses. At T2, in addition to the questionnaire survey, a focus group interview was conducted by the first author with the participants at each site. The key objective was to collect subjective views on the process and outcomes of the 1-month programme. The key prompting questions were:

- Overall, do you find the programme useful? In what ways?
- Which parts of the programme do you like most and least? Why?
- What are your views on the delivery mode of the programme that was 15 minutes each time conducted towards the end of a workday, 5 times a week and lasting for 1 month?

Each interview lasted for about half an hour and was video-recorded. The author reviewed the video and noted down participants' views and suggestions.

#### RESULTS

# **Quantitative Findings**

Tables 2 and 3 summarize the outcome findings at Sites 1 and 2, respectively. T0-T1, T0-T2 and T1-T2 comparisons were examined by Wilcoxon Signed Rank Test. At Site 1, the home help workers group, there were significant decreases in the total score and exhaustion subscore of burnout at T1 in comparison to T0. On the other hand there was significant increase in the reduced efficacy subscore at T2 in comparison to T0. Regarding daily spiritual experience, significant increase at T2 in comparison to T0 was revealed. There were significant decreases in the total score and vigor subscore of engagement at T1 in comparison to T0.

#### [Please insert Table 2 and 3 here]

At Site 2, the professional staff group, there were significant decreases in the total score and 3 subscores of burnout at T1 in comparison to T0. The direction of change was reversed in the total score and the exhaustion and cynicism subscores, showing significant increases at T2 in comparison T0. There was significant decrease in the reduced efficacy subscore at T2 in comparison to T0. Regarding daily spiritual experience and engagement, there were no significant changes at T1 or T2 in comparison to T0.

Participants of the two sites seemed to have some baseline differences which might partially account for their different serial trends depicted above. At baseline T0, participants at Site 1 appeared to have lower level of burnout and daily spiritual experience and higher level of engagement than that of the participants at Site 2 (all p's < .01).

## **Qualitative Findings**

Generally speaking the feedback of the participants at Site 1, the home help service workers, was rather homogeneous and positive towards the programme. They felt relaxed, refreshed and revitalized after each meeting. They could put down the negative emotions aroused during the course of work. With positive energy brought out from the group, they felt like being activated and had the capacity of showing affection and concern to family members in the evening. Some of them reported enhanced relationship with spouse and children.

Participants at Site 2, who were all professional staff, revealed more difficulties in maintaining concentration throughout each group meeting, largely because of the heavier workload and responsibilities. Because the meetings were conducted within the workplace, some participants found it hard to be mentally detached from work. The soundproofing of the room was inadequate in shielding off the public address announcements of the service unit. Nevertheless, they generally liked and enjoyed joining the programme, as reflected by a satisfactory overall attendance rate at 82%. The participants particularly treasured the mutual care atmosphere and the opportunities for sharing views of life.

Regarding the structure of each meeting and its three standardized components, which were slowing down, golden sentence sharing and group ending ritual, both groups shared similar positive views and liked the design. All the three components were considered as essential and helpful, and the flow was coherent. The facilitators of both groups also endorsed the meeting design and found it easy and enjoyable to prepare for and lead the group. While 15 minutes per meeting was generally considered to be rather brief, it was, however, considered to be appropriate from the perspective of practicability and sustainability.

Regarding the current 5 times a week mode, some participants suggested to have more flexibility, say 3 to 5 times a week at the discretion of individual participant. With such flexibility, most participants were of the opinion that a commitment of 2 months was appropriate for each time. The principle of voluntary participation was considered as crucial. In the future groups, the facilitators and participants should regularly review and discuss their commitment to the group. It is fine to suspend a group for a certain period of time if the facilitator and participants make the decision after frank and open deliberation. With more flexibility for participants' commitment and having the option of suspending the group at certain time, the Spiritual Afternoon Tea programme will be desirable and beneficial to more elderly services staff.

## DISCUSSION

Both pilot groups were completed with satisfactory attendance rate, which suggested the practicability and acceptability of the programme. Over the one month period, 15minute meetings were held 5 times a week towards the end of each workday. This was rather intensive and was a remarkable commitment from the participants as well as the facilitators. Qualitative feedback generally endorsed the design of the meeting and the coherence of the 3 standardized components. Maintaining it brief at about 15 minutes per meeting was considered to be appropriate from the perspective of practicability and sustainability. While the programme was largely favored by the participants, there was a near consensus that more flexibility, say 3 to 5 times a week at the discretion of individual participant, was preferred in joining the programme in the future, and a commitment of 2 months each time was considered appropriate.

Regarding the quantitative findings, there were interesting differences between the two groups. Participants of Site 1, the home help service workers, appeared to benefit more in terms of reduction in burnout and increase in daily spiritual experience. Interestingly, they also showed a reduction in job engagement. A plausible explanation is that engagement is not necessarily the higher the better. Instead, it may have a certain optimal level. Exceeding the optimal range may lead to increased stress due to overly high expectations on the work environment. At baseline T0, the Site 1 group had a significantly higher level of engagement than that of the Site 2 group (engagement total score at 4.0 [SD = 0.8], versus 3.0 [SD = 1.0] of the Site 2 group). The engagement total scored decreased to 3.4 (SD = 0.8) and 3.5 (SD = 1.0) at T1 and T2 respectively. The decrease may not be a sign of deterioration, but is perhaps a sign of restoration of balance and returning to a more functional level. In the local validation study of the Chinese Utrecht Work Engagement Scale, the overall mean score was revealed to be 3.5 (SD = 1.1), and the mean scores of support and professional staff were respectively 3.6 (SD = 1.1) and 3.3 (SD = 1.0) (Fong & Ng, 2012). The current pilot group of Site 1 appeared to be above norm at baseline.

Participants of Site 2, the professional group, showed mild reduction of burnout at T1. The reduction did not seem to be maintained well at T2. A plausible explanation is that the professional staff was working under high stress. An open-ended, continued programme seems to be needed. This group had a higher baseline level of daily spiritual experience (59.5 [SD = 12.6], versus 43.9 [SD = 11.9] of the Site 1 group). The fact that further increase in daily spiritual experience was not observed at T1 and T2 might be explained by the ceiling effect. In the local validation study of the Daily Spiritual Experience Scale, the overall mean score was revealed to be 49.9 (SD = 16.5), and the mean score for those with tertiary education level was 47.4 (SD = 13.8) (Ng, Fong, Tsui, et al., 2009). The current pilot group of Site 2 appeared to be highly spiritual. For a more average group, an increase in daily spiritual experience may be observed in response to the programme.

### Limitations

There were several significant limitations in the current study. Due to its pilot nature, there were no randomization or control groups. Sample size was small and therefore the statistical power of detecting real changes was low. An intervention period of one month may not be long enough to reach the optimal effects. Participants of the current study suggested a commitment of 2 months each time was appropriate. The soundproofing of the meeting room used at Site 2 was fair only and might have hampered the results to some extent. These points should be addressed in future more rigorous studies.

# **Conclusions and Future Directions**

The two pilot trials provided preliminary evidence of the efficacy of the intervention for home help workers and professional elderly services staff in reducing work burnout, and enhancing job engagement and daily spiritual experience. An inspiring finding was the differences in the change of job engagement between the 2 groups. The home help workers group, who had exceptional high baseline level, showed significant decrease in job engagement from T0 to T1. The decrease might not be a sign of deterioration, but was perhaps a restoration of balance and returning to a more functional level. The findings suggest that engagement is not necessarily the higher the better, but may have a certain range of optimal level. This is a research gap that has important theoretical and practical implications, and therefore further more rigorous investigation is recommended.

The high attendance rates of both groups and the positive, enthusiastic feedback collected at the focus group interviews seemed to suggest the practicability and desirability of the Spiritual Afternoon Tea programme. The design of the daily 15minute meeting and the coherence of its 3 standardized components were endorsed by both the facilitators and participants. In view of the favorable results, it is worthwhile putting the intervention to a rigorous randomized controlled trial for evaluating its efficacy in reducing burnout and enhancing daily spiritual experience and work engagement. In light of the qualitative findings, it seems relevant to include positive and negative emotions in the outcome measures.

#### REFERENCES

- Christopher, G. E., & Fan, D. (2008). Daily spiritual experience and psychological well-being among US adults. *Social Indicator Research*, 88, 247-271.
- Fong, T. C. T., & Ng, S. M. (2012). Measuring engagement at work: Validation of the Chinese version of the Utrecht Work Engagement Scale. *International Journal* of Behavioral Medicine(19), 391-397.
- Gonzalez-Roma, V., Schaufeli, W. B., Bakker, A. B., & Lloret, S. (2006). Burnout and work engagement: Independent factors or opposite poles? *Journal of Vocational Behavior*, 68, 165-174.
- Holland, J. M., & Neimeyer, R. A. (2005). Reducing the risk of burnout in end-of-life care settings: The role of daily spiritual experiences and training. *Palliative and Supportive Care, 3*, 173-181.
- Lerner, D., Adler, D. A., Chang, H., Berndt, E. R., Irish, J. T., Lapitsky, L., & Rogers,
  W. H. (2004). The clinical and occupational correlates of work productivity
  loss among employed patients with depression. *Journal of Occupational and Environmental Medicine*, 46, 46-55.
- Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach Burnout Inventory Manual* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. Annual Review of

Psychology, 52, 397-422.

- Ng, S. M., Fong, T. C. T., Tsui, E. Y. L., Au-Yeung, F. S. W., & Law, S. K. W. (2009). Validation of the Chinese Version of Underwood's Daily Spiritual Experience Scale-Transcending Cultural Boundaries? *International Journal of Behavioral Medicine*, 16(2), 91-97.
- Ng, S. M., Fong, T. C. T., & Wang, X. L. (2009). A Hong Kong Perspective. In N. Thompson & J. Bates (Eds.), *Promoting workplace well being* (pp. 174-188). Basingstoke: Palgrave Macmillan.
- Ng, S. M., Fong, T. C. T., & Wang, X. L. (2011). The role of holistic care culture in mitigating burnout and enhancing engagement: A study among elderly service workers in Hong Kong. *Aging & Mental Health*, *15*(6), 712-719.
- Park, C. L., & Folkman, S. (1997). The role of meaning in the context of stress and coping. *General Review of Psychology*, 2, 115-144.
- Sanderson, K., & Andrews, G. (2006). Common mental disorders in the workforce: Recent findgins from descriptive and social epidemiology. *Canadian Journal* of Pyschiatry, 51(2), 63-75.
- Schaufeli, W. B., & Bakker, A. B. (2001). Work and well-being: Toward a positive approach in occupational health psychology. *Gedrag & Organisatie, 14*, 229-253.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25(3), 293-315.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire - A cross-national study. *Educational* and Psychological Measurement, 66(4), 701-716. doi:

10.1177/0013164405282471

- Schaufeli, W. B., Bakker, A. B., & Van Rhenen, W. (2009). How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism. *Journal of Organizational Behavior*, 30(7), 893-917. doi: 10.1002/job.595
- Schaufeli, W. B., & Enzmann, D. (1998). *The burnout companion to study and practice: A critical analysis*. Washington, DC: Taylor & Francis.
- Underwood, L. G., & Teresi, J. A. (2002). The Daily Spiritual Experience Scale:
  Development, theoretical description, reliability, exploratory factor analysis, and preliminary construct validity using health-related data. *Annals of Behavioral Medicine*, 24, 22-33.

Descriptive statistics of the participants in Site 1 and Site 2					
	Site 1	Site 2			
N	8	8			
Gender					
Male	0 (0%)	5 (62.5%)			
Female	8 (100%)	3 (37.5%)			
Age					
Mean (SD)	51.1 (7.7)	35 (7.7)			
Range & median	38 - 59 / 53	22 - 49 / 33			
Educational level					
Primary	4 (50%)	0 (0%)			
Secondary	4 (50%)	0 (0%)			
Post-secondary	0 (0%)	8 (100%)			
Religion					
Christian/Catholic	1 (12.5%)	5 (62.5%)			
Buddhism/Daoism	0 (0%)	1 (12.5%)			
Folk religion	5 (62.5%)	0 (0%)			
Others	0 (0%)	0 (0%)			
No religion	2 (25%)	2 (25%)			
Years of service (mean (SD))					
In the unit	11.3 (5.9)	3.9 (6.1)			
In elderly service	11.8 (6.1)	6.0 (6.4)			

 TABLE 1

 construction of the posticipants in Site 1 and Site 2

TABLE 2

Descriptive summary and pairwise comparison of outcome variables across time points at Site 1

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Items	TO	T1	T2	T0-T1	<i>T0-T2</i>	<i>T1-T2</i>	
(Theoretical range)	Mean(SD)	Mean(SD)	Mean(SD)	comparison	comparison	comparison	
Burnout							
Total (0 - 6)	2.0 (0.6)	1.6 (0.4)	1.7 (0.6)	-2.14*	-1.32	-2.36*	
Exhaustion (0 - 6)	2.8 (1.0)	2.1 (1.2)	1.6 (0.8)	-2.73**	-1.87	-1.12	
Cynicism (0 - 6)	2.1 (0.6)	1.4 (0.1)	1.6 (0.5)	-1.01	-0.85	-2.01*	
Reduced							
Efficacy (0 - 6)	1.2 (0.8)	1.3 (0.9)	1.7 (1.1)	-0.26	-3.64**	-2.69**	
DSES (16 - 94)	43.9 (11.9)	49.3 (14.1)	49.6 (13.5)	-0.85	-2.72**	-1.70	
Engagement							
Total (0 - 6)	4.0 (0.8)	3.4 (0.8)	3.5 (1.0)	-1.98*	-1.63	-0.24	
Vigor (0 - 6)	4.5 (0.8)	3.9 (0.9)	3.8 (1.0)	-2.23*	-1.95	-0.49	
Dedication (0 - 6)	4.5 (0.9)	4.0 (1.1)	4.1 (1.2)	-1.25	-1.41	-0.73	
Absorption (0 - 6)	3.2 (1.4)	2.4 (1.1)	2.8 (1.1)	-0.65	0.00	-0.92	

*Note.* Z score from Wilcoxon Signed Rank Test; \*p < 0.05. \*\*p < 0.01.

TABLE 3

Descriptive summary and pairwise comparison of outcome variables across time points at Site 2							
TO	T1	T2	T0-T1	<i>T0-T2</i>	<i>T1-T2</i>		
Mean(SD)	Mean(SD)	Mean(SD)	comparison	comparison	comparison		
2.7 (0.7)	2.5 (0.8)	2.9 (0.9)	-3.62**	-3.62**	-0.36		
3.3 (0.8)	3.1 (0.9)	3.4 (1.2)	-3.52**	-3.62**	-0.03		
2.3 (0.9)	2.3 (1.1)	2.8 (1.4)	-3.58**	-3.62**	-1.48		
2.6 (0.6)	2.3 (0.6)	2.4 (0.5)	-3.62**	-3.62**	-0.98		
59.5 (12.6)	58.4 (17.9)	56.8 (16.2)	-1.08	-0.48	-0.18		
3.0 (1.0)	3.1 (1.1)	3.0 (0.7)	-0.35	-0.34	-0.17		
2.9 (0.9)	3.1 (1.2)	3.1 (0.6)	-0.35	-0.50	-0.09		
3.5 (1.1)	3.3 (1.2)	3.5 (0.7)	-1.09	-0.55	-0.67		
2.7 (1.3)	2.8 (1.1)	2.5 (0.8)	-0.20	-0.95	-1.27		
	nary and pair T0 Mean(SD) 2.7 (0.7) 3.3 (0.8) 2.3 (0.9) 2.6 (0.6) 59.5 (12.6) 3.0 (1.0) 2.9 (0.9) 3.5 (1.1) 2.7 (1.3)	$\begin{array}{c cccc} & \text{mary and pairwise compar}\\\hline T0 & T1 \\\hline Mean(SD) & Mean(SD) \\\hline 2.7 (0.7) & 2.5 (0.8) \\3.3 (0.8) & 3.1 (0.9) \\2.3 (0.9) & 2.3 (1.1) \\\hline 2.6 (0.6) & 2.3 (0.6) \\59.5 (12.6) & 58.4 (17.9) \\\hline 3.0 (1.0) & 3.1 (1.1) \\2.9 (0.9) & 3.1 (1.2) \\3.5 (1.1) & 3.3 (1.2) \\2.7 (1.3) & 2.8 (1.1) \\\hline \end{array}$	mary and pairwise comparison of outcoT0T1T2Mean(SD)Mean(SD)Mean(SD)2.7 (0.7)2.5 (0.8)2.9 (0.9)3.3 (0.8)3.1 (0.9)3.4 (1.2)2.3 (0.9)2.3 (1.1)2.8 (1.4)2.6 (0.6)2.3 (0.6)2.4 (0.5)59.5 (12.6)58.4 (17.9)56.8 (16.2)3.0 (1.0)3.1 (1.1)3.0 (0.7)2.9 (0.9)3.1 (1.2)3.1 (0.6)3.5 (1.1)3.3 (1.2)3.5 (0.7)2.7 (1.3)2.8 (1.1)2.5 (0.8)	mary and pairwise comparison of outcome variables $T0$ $T1$ $T2$ $T0-T1$ Mean(SD)Mean(SD)Mean(SD)comparison2.7 (0.7)2.5 (0.8)2.9 (0.9) $-3.62^{**}$ 3.3 (0.8)3.1 (0.9)3.4 (1.2) $-3.52^{**}$ 2.3 (0.9)2.3 (1.1)2.8 (1.4) $-3.58^{**}$ 2.6 (0.6)2.3 (0.6)2.4 (0.5) $-3.62^{**}$ 59.5 (12.6)58.4 (17.9)56.8 (16.2) $-1.08$ 3.0 (1.0)3.1 (1.1)3.0 (0.7) $-0.35$ 2.9 (0.9)3.1 (1.2)3.1 (0.6) $-0.35$ 3.5 (1.1)3.3 (1.2)3.5 (0.7) $-1.09$ 2.7 (1.3)2.8 (1.1)2.5 (0.8) $-0.20$	mary and pairwise comparison of outcome variables across time po $T0$ $T1$ $T2$ $T0-T1$ $T0-T2$ Mean(SD)Mean(SD)Mean(SD)comparisoncomparison2.7 (0.7)2.5 (0.8)2.9 (0.9) $-3.62^{**}$ $-3.62^{**}$ 3.3 (0.8)3.1 (0.9)3.4 (1.2) $-3.52^{**}$ $-3.62^{**}$ 2.3 (0.9)2.3 (1.1)2.8 (1.4) $-3.58^{**}$ $-3.62^{**}$ 2.6 (0.6)2.3 (0.6)2.4 (0.5) $-3.62^{**}$ $-3.62^{**}$ 59.5 (12.6)58.4 (17.9)56.8 (16.2) $-1.08$ $-0.48$ 3.0 (1.0)3.1 (1.1)3.0 (0.7) $-0.35$ $-0.34$ 2.9 (0.9)3.1 (1.2)3.1 (0.6) $-0.35$ $-0.50$ 3.5 (1.1)3.3 (1.2) $3.5 (0.7)$ $-1.09$ $-0.55$ 2.7 (1.3)2.8 (1.1) $2.5 (0.8)$ $-0.20$ $-0.95$		

*Note.* Z score from Wilcoxon Signed Rank Test; \*p < 0.05. \*\*p < 0.01.