

Buffering Effect of Social Skills on Psychological Strain in the Workplace

Tomomi NODA,¹ Takuya NAKAGAWA,² and Takaharu MORISHITA³

Social skills, defined as an interpersonal interaction process, have a strain-reducing effect. The purpose of this study was to examine the social skill buffering model including occupational stressors, coping, social support, and psychological strain. The participants were 241 Japanese workers. Covariance structure analysis was used to examine the model. Factor analysis extracted six factors (work overload, role ambiguity, role conflict, aptitude for a job, evaluation, and workplace environment) as occupational stressors and three factors (self-subjective, giving up, and others-subjective) were extracted as coping. Covariance structure analysis revealed the social skill buffering effect on psychological strain. Social skills negatively affected role ambiguity, which enhanced psychological strain. Moreover, role ambiguity enhanced giving up coping, and giving up coping enhanced strain. These results suggested that social skills have an important role in stress management.

Key words: stress, social skill, covariance structure analysis

AIM

Social skills were first defined as interpersonal behavior that enhances the effectiveness of an individual as a member of an organization (Argyris, 1965). Though the definition of social skills is not consistent among researchers, Tanaka (2009) described Aikawa's (1996) definition as accurately embracing many other definitions that state that "social skills are circulative processes of ① interpreting other's reactions, ② deciding interpersonal goals and behavior, and ③ performing the interpersonal behavior with controlling one's emotion."

Argyle and Kendon (1967) developed a social skills model and postulated that social skills involve the functions of (1) goals of performance, (2) selective perception of cues, (3) central translation processes, (4) motor responses, (5) feedback and corrective action, and (6) the timing of

responses.

The literature on social skills has increased since this model was created, and studies indicate that social skill deficits have been implicated in many different forms of psychopathology (Randall & Alan, 1981). The relationship between social skills and depression has also been analyzed (Julian & Peter, 1973; Lewinson, 1975; Chris, 2000).

According to a report of the Japanese Ministry of Health, Labour and Welfare (2008), the ratio of those who have strong anxiousness, distress, and stress in vocational life reached 58%, and the biggest cause was interpersonal issues. Additionally, Bolger et al. (1989) pointed out that interpersonal stress is the most painful daily stressor, and its negative effect lasts longer than that of other stressors. Taking these facts into account, it is obvious that social skills play an important role in job stress because social skills are involved in interpersonal interaction situations.

¹ Graduate School of Human and Environmental Studies, Kyoto University, Yoshidanihonmatsu, sakyoku, Kyoto 606-8501, Japan

² Social welfare corporation Asuka-gakuin child support center Asuka, 265-4 Tani, Sakurai, Nara 633-0053, Japan

³ Department of Clinical Psychology, University of Tezukayama Graduate School, 3-1-3 Gakuenminami, Nara 631-8585, Japan

Regarding job stress, the occupational stress model of the National Institute for Occupational Safety and Health (NIOSH) describes individual factors (e.g., age, gender, and job tenure), non-work factors (e.g., domestic/family demands), and buffer factors (e.g., social support from supervisor, coworkers, and family) as intervening factors between occupational stressors and strain (Hurrell & McInaney, 1988). Type A personality and self-esteem are included in individual factors in this model, and it can be assumed that social skills are one individual factor. However, not many studies have examined social skills in the workplace.

Tanaka (2002) examined the relationship between social skills and occupational stressor/psychological strain (Tanaka, 2007), and the effect of social skills on social support and coping (Tanaka, 2003) in the workplace. These studies indicated that social skills negatively correlate with role ambiguity and inability that are subscales of occupational stressor, that social skills decrease psychological strain, that people with high social skills are aware of high social support within the company, and that people with high social skills adopt active problem-solving and support-seeking, while people with low social skills adopt giving up and avoidance.

These results are meaningful in terms of indicating the specific role of social skills as related to psychological strain in the workplace. However, each result is restricted to a divisional explanation. Additionally, Tanaka (2009) created a concept model that describes the process of psychological strain, focusing on social skills in the workplace (Fig. 1).

However, in this model, coping is the only vari-

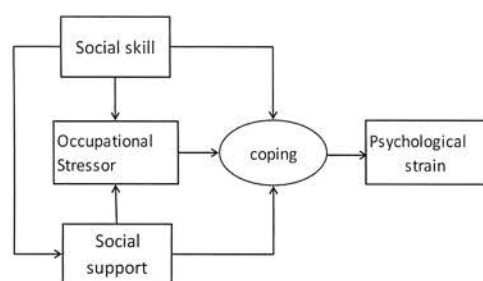


Fig. 1. Model of the psychological strain process.

able affecting psychological strain. Occupational stressors and social support can also affect psychological strain, according to the NIOSH occupational stress model. It is necessary to clarify the role of social skills as an occupational stress buffer. Figure 2 depicts the modified social skills stress-buffering model, based on Tanaka's model, assumed in this study.

The purpose of this study was to examine the social skills buffering model that describes the effect of social skills on occupational stressors, coping, and social support using covariance structure analysis. Such analysis allows examination of the fitness of the model, though previous studies did not include such examination. The process is as follows. (1) Conduct factor analysis on occupational strain and coping scales to identify specific factors related to social skills. (2) Analyze the correlation between social skills and other variables. (3) Construct an exact social skills buffering model based on the assumed model and the results of correlation analysis. (4) Examine the model with covariance structure analysis.

METHODS

Participants

The participants were 241 Japanese workers (184 males and 57 females). They were recruited by the person in charge of mental health at the Cooperative Union of Wholesale Industry complex in the Kansai area.

Participants who answered all survey items were used for the final analysis. The surveillance period was from 2009/7/20 to 2009/8/10. The participants' age bracket and positional category by

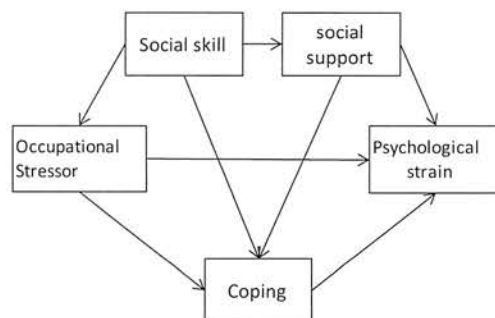


Fig. 2. Assumed social skills stress-buffering model.

Table 1. Age brackets by gender.

| | Male | Female | Total |
|-------|------|--------|-------|
| 20s | 33 | 38 | 71 |
| 30s | 64 | 13 | 77 |
| 40s | 52 | 3 | 55 |
| 50s | 35 | 3 | 38 |
| Total | 184 | 57 | 241 |

Table 2. Positional category by gender.

| | Male | Female | Total |
|------------|------|--------|-------|
| Senior | 118 | 6 | 124 |
| Non senior | 66 | 51 | 117 |
| Total | 184 | 57 | 241 |

gender are indicated in Tables 1 and 2.

Procedure

The surveys were distributed to each company in the cooperative union. To protect privacy, the surveys were placed in envelopes and sealed before they were collected, and returned directly.

Survey description

Attributes: Gender, age, and position classification were requested.

Stressors: Six items were chosen from the Simple Questionnaire Concerning Work-Related Stress (Shimomitsu, 1998), and 15 items were chosen from the Work Stress Scale developed by Morishita (1995) based on Karn's Organizational Stress Theory (1964). Responses were given on a five-point scale ranging from "Strongly disagree" to "Strongly Agree." Inverted items were used after converting them. Thus, the higher the point, the higher the perception of occupational stressor.

Social skills: Twelve items were chosen from Kikuchi's Scale of Social Skills (Kikuchi, 2004). Responses were given on a five-point scale ranging from "Strongly disagree" to "Strongly Agree."

Coping: Four items were chosen from the Interpersonal Stress Coping Inventory (Kato, 2000), and seven items were chosen from the Stress Self-Rating Scale (Ozeki, 1993). Responses were given on a four-point scale ranging from "Strongly disagree" to "Strongly Agree."

Table 3. Mean, SD, and α coefficient of each scale.

| Scale | n of items | Mean | SD | α |
|--------------|------------|-------|-------|----------|
| Stressor | 21 | 54.84 | 10.72 | .804 |
| Coping | 11 | 27.17 | 4.74 | .725 |
| Social skill | 12 | 38.65 | 6.63 | .871 |
| S-support | 20 | 63.68 | 9.82 | .917 |
| P-strain | 18 | 34.17 | 9.32 | .907 |

※S-support=social support, P-strain=psychological strain.

Social support: Ten items were chosen from the Social Support Scale developed by Morishita & Kato (2009) based on House's classification (1981). Questions asked about support from superiors and support from fellow workers. Thus, was a total of 20 items. Responses were given on a four-point scale ranging from "Strongly disagree" to "Strongly Agree."

Strain: The Stress Response Scale (Suzuki, Shimada, Miura, Katayanagi, Umano, & Sakano, 1997) consisting of 18 items was used. Responses were given on a four-point scale ranging from "Strongly disagree" to "Strongly Agree."

The number of items was reduced to lighten participants' burden. Items with high factor loadings were chosen from each factor of the scales.

Statistical methods

Factor analysis, correlation analysis, and *t*-test were performed using SPSS ver. 19. Covariance structure analysis was performed using Amos ver. 19.

RESULTS

Scale analysis

Mean, SD, and alpha coefficient of each scale are shown in Table 3. Alpha coefficients were all above .7; thus, it was assumed that these scales have sufficient internal consistency.

Factor Analysis

Stressor: Factor analysis was conducted on the stressor scale (principal factor analysis and promax rotation). Results indicated that factor loadings of three items were under .3. These items were: (12) There are many physically demanding

Table 4. Factor loading of stressor scale.

| | Work overload | Role ambiguity | Role conflict | Aptitude for a job | Evalu- ation | Commu- nality |
|--|------------------|-------------------|------------------|-----------------------|-----------------|------------------|
| 1) I have to get work done in a hurry even if it's overtime (b) | .919 | -.008 | -.005 | -.060 | -.080 | .806 |
| 2) I often have to do work that seems difficult to finish within the day (b) | .914 | -.027 | .019 | -.063 | .022 | .820 |
| 3) I have no time to take a day off (b) | .804 | -.019 | .003 | .032 | -.003 | .645 |
| 16) I can work at my own pace (b) | .479 | .086 | -.008 | .130 | .134 | .369 |
| 8) What is expected of me is unclear (b) | -.008 | .923 | -.032 | -.030 | .081 | .835 |
| 9) I often don't know what kind of role I'm fulfilling (b) | -.082 | .854 | -.015 | .063 | -.129 | .676 |
| 7) I often wonder what my real work is (b) | .156 | .592 | .065 | -.049 | .024 | .516 |
| 5) I am bothered by my junior partner's personal matters (b) | -.058 | -.050 | .811 | .063 | -.068 | .600 |
| 6) My judgment greatly influences my junior partner (a) | .006 | .026 | .659 | -.062 | -.043 | .450 |
| 3) I am often caught between a superior and a subordinate (b) | .122 | .030 | .639 | .036 | .064 | .531 |
| 20) My present position is appropriate for me (a) | .174 | -.029 | -.075 | .835 | -.119 | .210 |
| 21) I have a meaningful job (a) | -.045 | .037 | -.020 | .745 | .074 | .650 |
| 19) The atmosphere in my workplace is very good (a) | -.220 | .010 | .176 | .420 | .088 | .696 |
| 14) My abilities and achievements are evaluated properly (b) | -.021 | -.036 | -.055 | .016 | .869 | .717 |
| 15) My present salary is appropriate (b) | .033 | -.004 | -.005 | -.017 | .800 | .627 |

※ (a)=items from Simple Questionnaire Concerning Work Related Stress, (b)=items from Work Stress Scale

jobs, (17) My opinion can be reflected on worksite policy, and (18) There are conflicts in opinion in my department. These items were eliminated, and factor analysis was conducted on the remaining items. As a result, six factors were extracted; however, the alpha coefficient of factor 6 was low ($\alpha = .356$), and items loaded on factor 6 (items 10, 11, and 13) were eliminated.

The alpha coefficient of the final 15 items was .808. Factor loading and communality of the final analysis are presented in Table 4.

As a result, five factors were extracted. The number of factors was decided by the scree rule and eigenvalue (<1). Items such as "I have no time to take a day off" and "I have to get work done in a hurry even if it's overtime" loaded on factor 1, work overload ($\alpha = .863$). Items such as "What is expected of me is unclear" and "I often don't know what kind of role I'm fulfilling" loaded on factor 2, role ambiguity ($\alpha = .831$). Items

such as "I am bothered by my junior partner's personal matters" and "My judgment greatly influences my junior partner" loaded on factor 3, role conflict ($\alpha = .568$). Items such as "My present position is appropriate for me" and "The atmosphere in my workplace is very good" loaded on factor 4, aptitude for a job ($\alpha = .676$). Items such as "My ability and achievements are evaluated properly" and "My present salary is appropriate" loaded on factor 5, evaluation ($\alpha = .799$).

Coping: Three factors were extracted (principal factor analysis and promax rotation). The number of factors was decided by the scree rule and eigenvalue (<1). Factor loadings of all factors were above .3, and no items were eliminated. Factor loading and communality are presented in Table 5. Items such as "Try to do something helpful for another person" and "Try to understand what others are feeling" loaded on factor 1, others-subjective ($\alpha = .720$). Items such as "Try to think like

Table 5. Factor loading of coping scale.

| | | Others- subjective | Giving up | Self- subjective | Communi- tality |
|-----|--|-----------------------|--------------|---------------------|--------------------|
| 10) | Try to do something helpful for another person (a) | .830 | -.098 | -.059 | .651 |
| 9) | Try to understand another person (a) | .826 | .044 | .042 | .721 |
| 11) | Try to serve another person by tuning in to them (a) | .790 | -.033 | -.008 | .620 |
| 8) | Try to understand what others are feeling (a) | .702 | .035 | .082 | .560 |
| 6) | Try to go with the flow (b) | -.064 | .855 | .008 | .735 |
| 7) | Try to think that things like this just happen and give up (b) | .008 | .696 | .066 | .466 |
| 5) | Try to take things as they come (b) | .023 | .670 | -.075 | .477 |
| 1) | Try to change the situation (b) | -.073 | -.092 | .812 | .645 |
| 2) | Try to find the cause of the problem (b) | -.013 | -.069 | .782 | .631 |
| 4) | Try to look at the bright side of the problem (b) | .211 | .105 | .492 | .384 |
| 3) | Try to encourage myself (b) | .138 | .180 | .344 | .190 |

※ (a)=From Interpersonal Stress Coping Inventory, (b)=From Stress Self-Rating Scale

Table 6. Correlation between social skills and stressors.

| | Social skill | Work overload | Role ambiguity | Role conflict | Aptitude for a job | Evaluation |
|--------------------|--------------|---------------|----------------|---------------|--------------------|------------|
| Social skill | — | | | | | |
| Work overload | -.068 | — | | | | |
| Role ambiguity | -.298*** | .272*** | — | | | |
| Role conflict | .191* | .383*** | .187* | — | | |
| Aptitude for a job | -.343*** | .137* | .388*** | .013 | — | |
| Evaluation | .009 | .164* | .196* | .091 | .272*** | — |

* $p < .05$, *** $p < .001$

Table 7. Correlation between psychological strain and stressors.

| | Psychological strain | Work overload | Role ambiguity | Role conflict | Aptitude for a job | Evaluation |
|----------------------|----------------------|---------------|----------------|---------------|--------------------|------------|
| Psychological strain | — | | | | | |
| Work overload | .240*** | — | | | | |
| Role ambiguity | .449*** | .272*** | — | | | |
| Role conflict | .225*** | .383*** | .187* | — | | |
| Aptitude for a job | .250*** | .137* | .388*** | .013 | — | |
| Evaluation | .120 | .164* | .196* | .091 | .272*** | — |

* $p < .05$, *** $p < .001$

taking things as they come” and “Try to think that things like this just happen and give up” loaded on factor 2, giving up ($\alpha = .782$). Items such as “Try to find the cause of the problem” and “Try to look at the bright side of the problem” loaded on factor 1, self-subjective ($\alpha = .873$).

Factor analysis was not conducted on social skills and social support because Kikuchi's Scale of Social Skills was developed as a one-dimen-

sional scale and the correlation between social support and social skills was weak ($r = .152$, $p < .05$).

Correlation analysis

Correlation analysis was conducted to examine the relationship between social skills and each factor of occupational stressors. The result indicated that social skills were negatively correlated

with role ambiguity ($r = -.298, p < .001$) and aptitude for a job ($r = -.343, p < .001$). A slight positive correlation existed between social skills and role conflict ($r = .191, p < .05$). The correlation matrix is presented in Table 6.

To explore the reason for the positive relation between social skills and role conflict, an unpaired *t*-test was conducted by position classification. The results indicated that the senior group had higher rates of both social skills ($t(238.06) = 3.66, p < .001$) and role conflict ($t(239) = 7.47, p < .001$).

The result indicated that social skills were positively related to self-oriented coping ($r = .375, p < .001$) and other-oriented coping ($r = .387, p < .001$). It also indicated a slight negative correlation with giving up ($r = -.148, p < .05$).

The result indicated that stressors work overload ($r = .240, p < .001$), role ambiguity ($r = .449, p < .001$), role conflict ($r = .225, p < .001$), and aptitude for a job ($r = .250, p < .001$) had a moderate correlation with psychological strain (Table 7).

The correlation coefficient between social skills and psychological strain was $-.300$ ($p < .001$). That between social skills and social support was $.152$ ($p < .05$), a slightly positive correlation.

Next, a social skills stress-buffering model was developed based on these results. Specifically, it is assumed that social skills moderate occupational stressors and enhance selectable coping. It is also assumed that an occupational stressor increases psychological strain and enhances coping behavior, and that coping behavior reduces psychological strain. Although social skills are negatively correlated with psychological strain according to the correlation analysis, it is quite unlikely that social skills themselves directly reduce psychological strain, because social skills involve interpersonal interaction and do not have any effect until used in a social situation. Social support was only slightly correlated with social skills and thus was not included in the model. The model depicted in Fig. 3 was developed based on these considerations.

Covariance structure analysis

Covariance structure analysis was conducted to

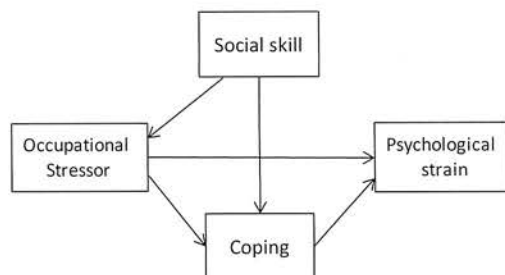


Fig. 3. Social skills stress-buffering model.

examine the social skills stress-buffering model. Practically, role ambiguity and aptitude for a job were chosen from the stressors, since they significantly correlated with social skills and psychological strain. All three factors of coping were used. As a result, the model depicted in Fig. 4 was developed ($\chi^2 = 23.824, df = 12, p = .134, GFI = .981, NFI = .924, CFI = .958, RMSEA = .037$).

The result indicated that social skills significantly reduced role ambiguity and aptitude for a job, whereas social skills significantly enhanced self-oriented and others-oriented coping. In particular, role ambiguity significantly increased giving up coping and psychological strain, and giving up coping significantly increased psychological strain. These results demonstrated the consequential effect of social skills on psychological strain.

The significance level of passes were all $< .001$. The determination coefficient was $.24$.

CONCLUSION

Correlation analysis indicated that social skills are moderately related to role ambiguity and aptitude for a job; this result supported Tanaka's previous study (2002). Although role ambiguity and inability were correlated with social skills in his study, inability can be interpreted as similar to aptitude for a job in this study, considering such loaded items as "My present position is appropriate for me" and "I have a meaningful job."

This result suggested that people with high social skills are less likely to feel role ambiguity and more likely to perceive their job as appropriate for them. Social skills may enable them to set ambiguities straight and simultaneously have positive feelings about their job. Thus, social skills are an

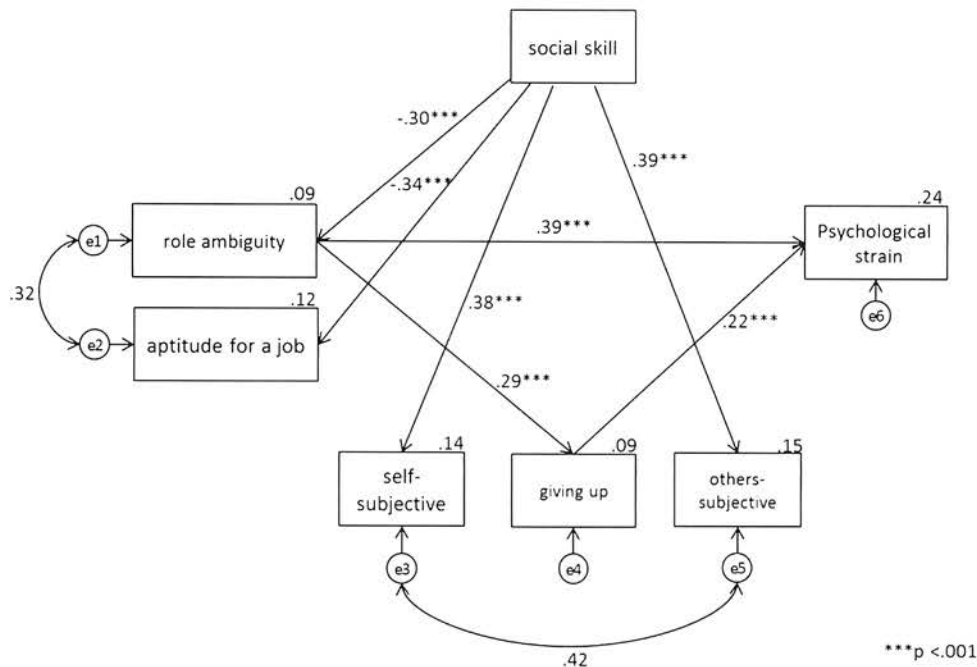


Fig. 4. Result of analysis of social skill buffer model of stress.

essential resource for coordination of occupational stressors.

Additionally, social skills were positively correlated with role conflict, though the connection was slight. *t*-test results indicated that a person in a senior position had a higher rate of both social skills and role conflict. These results suggest that the positive correlation may be due to positional influence.

Social skills were also moderately correlated with self-oriented and others-oriented coping, whereas they had slightly negative correlation with giving up. Shimada et al. (1996) found that social skills affect coping and cognitive evaluation, and are a personal resource that causes individual differences in strain. It is believed that social skills enrich usable coping variety and decrease strain. Tanaka (2003) reported that people with high social skills tend to employ proactive problem-solving and support-seeking, whereas people with low social skills tend to employ giving up and escape. The results of the present study supported this finding, indicating that people with high social skills employ coping that has a positive influence on strain, whereas people with low

social skills tend to employ giving up coping. However, the relationship between social skills and giving up coping was weak in this study, and further study is required.

Work overload, role ambiguity, role conflict, and aptitude for a job were moderately related to psychological strain, while evaluation was not related to it. Role ambiguity, role conflict, and aptitude for a job are related to quality of work life, with role ambiguity being most closely related to psychological strain. This result suggests that the focus must be on role ambiguity to develop stress management in the workplace. In particular, visualizing one's role or holding meetings for consensus-building could be useful.

The relationship between social support and social skills was confirmed, consistent with a previous study (Tanaka, 2003). However, the correlation was very weak, partially because the scale used in this study does not address validity. Additional examination using different scale is needed to determine whether social skills enhance the perception of social support.

Covariance structure analysis confirmed that social skills buffer psychological strain. Especially

in terms of role ambiguity, social skills increase psychological strain and giving up coping, and giving up coping increases psychological strain. In addition, social skills reduce role ambiguity. Thus, social skills can protect one from qualitative occupational stressors involving interpersonal matters; consequently, they reduce psychological strain.

The present result not only supports the previous study demonstrating that social skills decrease psychological strain (Tanaka, 2007), but it also clarifies how social skills buffer psychological strain in the workplace. The significance of this study is that it confirmed the fitness of the social skills stress-buffering model that had been only partially examined in previous paper.

These findings suggest that social skills training for workers is required in order to prevent mental malfunction in the workplace.

The results also indicated that social skills enhance self-oriented and others-oriented coping, although neither affect psychological strain. In addition, aptitude for a job does not affect psychological strain.

The purpose of this study was to examine how social skills buffer psychological strain, occupational stress, social support, and coping. However, social support was omitted from the social skills stress-buffering model because the correlation was weak. As discussed previously, this weak correlation may be due to the scale used; it could also be due to the smallness of the sample. In addition, it could be caused by the same reason that none of the coping factors affected positively psychological strain.

ACKNOWLEDGMENT

The authors would like to express our deep gratitude to Waka Kobuchi who made a significant contribution to this research.

REFERENCES

- Aikawa, A. 1996 The concept of social skill. In Aikawa, A., & Tsumura, T. (Eds.), *Social skill and interpersonal relationship: Supporting self-expression*. Seishin Syobo, pp. 4–21.
- Argyle, M. & Kendon, A. 1967 The experimental analysis of social performance. *Advances in Experimental Social Psychology*, 3, 55–98.
- Argyris, C. 1965 Explorations in interpersonal competence. *Journal of Applied Behavioral Science*, 1, 58–83.
- Bolger, N., DeLongis, A., Kessler, R. C., & Schilling, E. A. 1989 Effect of daily stress on negative mood. *Journal of Personality and Social Psychology*, 57, 808–818.
- Chris, S. 2000 Social skill deficits associated with depression. *Clinical Psychology Review*, 20, 379–403.
- House, J. S. 1981 *Work stress and social support*: Addison Wesley.
- Hurrell, L. J. & McInaney, M. A. 1988 Exposure to job stress. A new psychometric instrument, *Scandinavian Journal of Environment and Health*, 14, 27–28.
- Japanese Ministry of Health, Labour and Welfare 2008 <http://www.mhlw.go.jp/toukei/itiran/roudou/sai-gai/anzen/kenkou07/> (in Japanese)
- Julian, M. & Peter, M. 1973 Concept of social skill with special reference to the behavior of depressed persons. *Journal of Consulting and Clinical Psychology*, 40, 304–312.
- Karn, R. L., Wolfe, D. M., Snoek, J. E., & Rothenthal, R. A. 1964 *Organizational Stress: Studies in role conflict and ambiguity*: Wiley.
- Kato, T. 2000 Construction of the interpersonal stress-coping inventory for undergraduates. *The Japanese Journal of Educational Psychology*, 48, 225–234. (in Japanese)
- Kikuchi, A. 2004 Note on the Research Using Kiss-18. *Proceedings of the University of Iwate Department of Social Welfare*, 6, 41–51. (in Japanese)
- Lewinson, P. M. 1975 The behavioral study and treatment of depression. *Progress in Behavior Modification*, 1, 19–64.
- Morishita, T. 1995 A study of stress on Japanese workers: How do strain, stressor and an intervening variable relate each other?. *Journal of Osaka Sangyo University, Social Science*, 99, 9–20. (in Japanese)
- Morishita, T. & Kato, J. 2009 A study about the effect of strain for stress coping and social support among employee of local authority. *Proceedings of Kansai University of Welfare Sciences EAP laboratory*, 3, 23–34. (in Japanese)
- Ozeki, Y. 1993 Revision of Stress Self-Rating Scale for undergraduates: Toward transactional analysis. *Annual of Kurume University Graduate School of Comparative Culture*, 1, 95–114. (in Japanese)
- Randall, L. M. & Alan, S. B. 1981 The role of social

- perception in social skill. *Behavior Therapy*, **12**, 69–79.
- Shimomitsu, T. 1998 Development of Simple Questionnaire for measuring stress in workplace. *Research report on stress and influence for health in workplace*, 107–115. (in Japanese)
- Suzuki, S., Shimada, Y., Miura, M., Katayanagi, H. Umamo, R., & Sakano, Y. 1997 Development of new stress response scale and study about the reliability and the validity. *Journal of Behavioral Medicine*, **4**, 22–29. (in Japanese)
- Tanaka, K. 2003 The relationship between social skill and social support and coping in workplace. *Japanese Job Stress of Research*, **10**, 195–204. (in Japanese)
- Tanaka, K. 2007 The relationship between social skill and occupational stressor and psychological strain. *Osaka Eizai Ronsyu*, **58**, 253–261.
- Tanaka, K. 2009 *Social skill and occupational stress: Clinical psychosocial study in workplace: Koyo Syobou*. (in Japanese)
- Tanaka, K. & Kosugi, S. 2002 The relationship between event and chronic stressor and social skill. *Presented papers of Japanese psychological association 66th congress*, 1182. (in Japanese)