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Revista de Cercetare si Interventie Sociala

ISSN: 1583-3410 (print), ISSN: 1584-5397 (electronic)

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Revista de cercetare și intervenție socială, 2020, vol. 71, pp. 162-175

https://doi.org/10.33788/rcis.71.11

Published by:
Expert Projects Publishing House

On behalf of:
„Alexandru Ioan Cuza" University,
Department of Sociology and Social Work
and
HoltIS Association

REVISTA DE CERCETARE SI INTERVENTIE SOCIALA
is indexed by Clarivate Analytics (Social Sciences Citation Index),
SCOPUS and CROSSREF

Effects of Social Comparison Effect on Self-Efficacy and Subjective Well-Being of Employees - Case on Medical Industry

Chia-Ling YAO[1]

Abstract

From the cradle to the end of human life, it is the process of a series of social comparison and self-evaluation which generally exists in daily life and deeply affects social interaction process. For this reason, the topic presents the meaning and importance for the cultivation. Medical industry, as an emerging service industry, is considered as the internationally new wellness revolution after IT industry. Taking biotechnology and life science as the precursors, medical industry, covering health service functions of medical health, nutrition and health care, as well as fitness and leisure, would become the primary industry leading global economic development and social progress in the 21st century. Taking employees of Fujian Health Industrial Park as the research objects, total 360 copies of questionnaire are distributed. After removing invalid and incomplete copies, 241 valid copies are retrieved, with the retrieval rate 67%. The research results show significantly positive correlations between 1.social comparison and self-efficacy, 2.self-efficacy and subjective well-being, and 3.social comparison and subjective well-being. According to the results, suggestions are proposed as the important reference for guiding the work and life adjustment of employees in medical industry as well as promoting the self-efficacy.

Keywords: medical industry, social comparison, self-efficacy, subjective well-being, self-evaluation.

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Introduction

Being in Chinese cultural context, people would passively or actively precede social comparison with others inevitably. “Comparisons”, like “there is always someone better”, are often spoken by Chinese people and are regarded as an important issue in Chinese cultural context. Social comparison has followed a person from the childhood who might benefit from or suffer from it. Merely those who engage in relative research on social comparison know the feeling. Scholars indicated that human life, from cradle to the end, was the process of a series of social comparison and self-evaluation, which generally existed in daily life and deeply affected the social interaction process. Accordingly, the cultivation of the topic presents the meaning and importance.

Under current trend of aging and low birth rate, increasing economic pressure of health care expenses and the needs for health management and health enhancement of chronic disease management and prevention emerge have medical industry become the most popular industry in the world, after IT industry. Medical industry, as an emerging service industry, is internationally considered as the new wellness revolution after IT industry. Taking biotechnology and life science as the precursors, medical industry with health service functions of medical health, nutrition and health care, and fitness and leisure would become the primary industry leading global economic development and social progress in the 21st century. The core competence of current enterprises contains knowledge, innovation, and learning; and, the knowledge resources of innovation and learning could mostly be found from suppliers, customers, academic units, research and development institutions, and talent-intensive clusters. In this case, a cluster intending to keep the leading and successful status in the knowledge-based economic era relies on the ability and cooperation of organizational members in the cluster. In life process with the series of social comparison, the enhancement of organizational members’ cognitive complexity and the increasing peer effect would have the function of social comparison among peers develop maximally. Most previous research on social comparison effect focused on the correlation of individual upward contrast comparison or honor effect upward assimilation comparison, while studies on the effect caused by group agreed social comparison was short. It therefore requires further research. This study discusses the effect of social comparison effect on self-efficacy and subjective well-being of employees in medical industry and further proposes specific suggestions, expecting to propose reference for the future work and life adjustment of employees in medical industry as well as the promotion of self-efficacy.

Literature review

Joo & Jo (2017) proposed several hypotheses, inference, and extension of the theory and considered that people, when facing fuzzy social situations and not finding objective standards, would attempt to compare with others to reduce the inner uncertainty. Özdemir & Erkutlu (2018) regarded social comparison as a component of performance control in self-regulated learning. An individual with uncertain opinions or ability or without absolute standards would take others' information about himself/herself into account for self-evaluation. Du Plessis & Boshoff (2018) indicated that social comparison environment might influence students' affection, e.g. self-efficacy. In Bandura's self-efficacy theory, comparison was regarded as a clue of effectiveness. An individual was aware of the ability through peer comparison to change self-efficacy. Malik *et al.* (2019) proposed the importance of comparing ability and achievement with others to the development and maintenance of self-efficacy; such an opinion was similar to the opinion of Aleksic & Vukovic (2018) who also regarded the critical effect of social comparison information on individual self-efficacy. Lee *et al.* (2019) stated that comparison information provided the standard for students' self-performance evaluation and students could enhance self-efficacy through the cognition and interpretation of comparison information. Heru & Haryokusumo (2018) explained that a student, through upward comparison cognition, could present the same excellent performance as the model, with efforts, to intangibly reinforce the ability belief and strengthen the self-efficacy; or, students, perceiving the difference from worse others and realizing that success was the result of effort in downward comparison, could promote self-efficacy in the comparison process. Saeed & Ali (2018) found out remarkably positive effects of students' active upward comparison on the self-efficacy. Zhang *et al.* (2018) concluded that the generation of assimilation effects in the upward comparison could form a model learning goal. A model learning goal allowed people presenting meaningful life and appearing self-efficacy. The following hypothesis is therefore established in this study.

H1: Social comparison shows significantly positive correlations with self-efficacy.

Tse *et al.* (2018) regarded self-efficacy as "ability", referring to the effectiveness of an individual coping with or dealing with environmental events. Nugroho, Oktavio, & Kartika (2019) explained it as an individual thinking from himself/herself and believing in the ability of completing certain activity. An individual, when encountering a task, would appear the perception of competence, self-confidence, self-value, and self-esteem. In the social-learning theory, Emilisa, Putra, & Yudhaputri (2018) indicated that individual behavior could be predicted through "value", "special situation", and "expectation", and individual expectation could be created through long-term behavior reinforcement. Khattak *et al.* (2019)

considered that individual behavior process to achieve a goal was affected by "efficacy expectation" and "result expectation". The former referred to the perception of individual ability of executing specific behavior under any situations; the latter, on the other hand, referred to individual evaluation of individual specific behavior resulting in specific result. Javed *et al.* (2019) indicated that a person with high self-efficacy showed optimistic thinking to present positive emotional responses. Ahmad *et al.* (2019) attempted to evaluate the prediction function of self-efficacy on subjective well-being and the variance explained and discovered that self-efficacy could positively predict subjective well-being, with high variance explained. Hendricks & Toth-Cohen (2018) mentioned that self-efficacy would actually deeply affect individual well-being; meanwhile, both presented positive correlations that individuals with higher self-efficacy would enhance the well-being. On the contrary, individual low self-efficacy was related to negative emotions of anxiety and depression to show lower subjective well-being. In the study on elementary school pupils, Braun & Peus (2018) revealed that pupils with upward comparison appeared higher self-performance evaluation to enhance the confidence in academic performance and further promote self-efficacy. Wei *et al.* (2018) proposed that the enhancement of self-efficacy would positively affect well-being. Accordingly, the following hypothesis is established in this study.

H2: Self-efficacy reveals remarkably positive correlations with subjective well-being.

Huang (2017) considered that social scientists considered well-being as individual positive and subjective perception, rather than external objective judgment. Laguna *et al.* (2019) regarded well-being as overall psychological perception, individual overall evaluation of life satisfaction emotionally and cognitively, and psychological perception generated from the mutual effects between personality traits and environment, including happy, content, and pleasant emotion; different individual need standards would present distinct well-being perception. Di Stefano, Scrima, & Parry . (2019) mentioned "judgment theory" in subjective well-being related theories and explained that individual well-being depended on the comparison among different reference standards, including others' living condition. It stressed on social comparison process, result, or effect on subjective well-being. Erkutlu, Özdemir, & Uslu (2018) pointed out "social information response" as the final stage in social comparison process, containing cognition, feeling, and behavior. In terms of feeling, Iqbal *et al.* (2018) indicated that emotional responses in social comparison contained positive responses (hope, optimism) and negative responses (jealousness, hatred, gloat). The former was positive emotion, and the latter was negative emotion; both were the key components of subjective well-being. Akanni *et al.* (2018) proposed that an individual with more positive emotional responses in the comparison process would enhance the well-being perception. Tran (2019) explained that an individual with more negative emotional responses in the comparison process might be frustrated and lack of self-confidence

to further affect the subjective well-being. Xu, Luo, & Hsu (2019) pointed out the undoubted relationship between social comparison and subjective well-being. It would be an extremely important research issue in the interpersonal situation full of comparison to induce individual positive evaluation of social comparison result through proper social comparison, to generate better social comparison effect, as well as to promote individual positive emotional perception in the social comparison process and enhance the well-being. Consequently, the following hypothesis is established in this study.

H3: Social comparison appears notably positive correlations with subjective well-being.

Methodology

Conceptual structure of the study

Summing up above literature review, the conceptual structure of this study is drafted (*Figure 1*) to discuss the relationship among social comparison, self-efficacy, and subjective well-being.

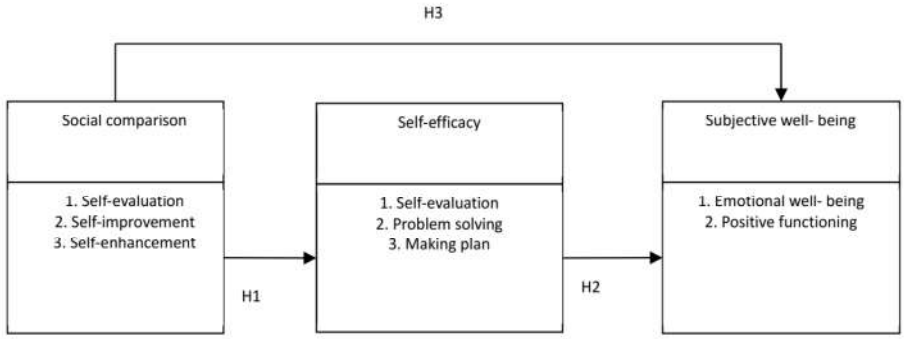

Figure 1. Conceptual structure

Operational definition

Social comparison. Referring to Wu & Chen (2019), social comparison effect is divided into three dimensions: (1) *Self-evaluation*: An individual, when appearing uncertainties on the ability, opinions, or attitude, would compare with objects with close performance or others with similar characters to achieve self-evaluation and expect to understand and define himself/herself as well as realize self-conditions after comparing personal opinions and ability with others; (2) *Self-improvement*: Self-improvement is the comparison process to promote self-efficacy through social comparison with others; the self-improvement function presents the meaning

in the achievement situation; (3) *Self-enhancement*: A lot of research indicated that an individual, intending to protect or promote self-esteem, might present non-truly positive viewpoint of himself/herself and tend to self-protection attitude toward the selection of information reception.

Self-efficacy. Referring to Xu & Li (2019), self-efficacy in this study contains the following dimensions: (1) *Self-evaluation*: Being able to clearly state reasons for selecting work objectives and select departments or jobs suitable for the ability; (2) *Problem solving*: Being able to finding out solutions for frustration at work and being capable of solving worries; (3) *Making plan*: Knowing how to make plans to achieve the work objective.

Subjective well-being. Referring to Hu *et al.* (2018), subjective well-being covered two dimensions: (1) *Emotional well-being*, including the cognition of measuring positive emotion and overall life satisfaction; (2) *Positive functioning*, containing psychological well-being and social well-being.

Research object

Fujian Health Industrial Park, located in Xiuyu District, Putian, shows the features of social capital investment and market operation, presents the development idea of "health, low carbon, green, and high technology", is a modern health care industrial park integrating headquarters economy, high-tech health care, characteristic specialist, health care tourism, health care, health management, medicine instrument transaction, exhibition economy, and health care reality, and shows comprehensive advantages of good location, high positioning, large size, full variety, and excellent service. Taking Fujian Health Industrial Park as the research object, the employees are distributed 360 copies of questionnaire. After removing invalid and incomplete copies, 241 valid copies are retrieved, with the retrieval rate 67%.

Analysis method

Regression analysis is applied in this study to understand the relationship among social comparison, self-efficacy, and subjective well-being.

Results and discussion

Factor analysis

The factor analysis results in this study are shown in Table 1. Social comparison scale, with factor analysis, is extracted three factors of "Self-evaluation" (eigenvalue=2.755, α=0.86), "Self-improvement" (eigenvalue=2.381, α=0.88), and "Self-enhancement" (eigenvalue=1.677, α=0.90). The cumulative covariance

explained achieves 77.185%. Self-efficacy scale, with factor analysis, is extracted three factors of "Self-evaluation" (eigenvalue=2.233, α=0.89), "Problem solving" (eigenvalue=2.026, α=0.87), and "Making plan" (eigenvalue=1.744, α=0.91). The cumulative covariance explained reaches 83.621%. Subjective well-being scale, with factor analysis, is extracted two factors of "Emotional well-being" (eigenvalue=3.237, α=0.93) and "Positive functioning" (eigenvalue=2.856, α=0.91). The cumulative covariance explained achieves 86.334%.

Table 1. Factor analysis

Variable	Factor	Eigenvalue	α	Cumulative variance explained
Social comparison	Self-evaluation	2.755	0.86	77.185
	Self-improvement	2.381	0.88	
	Self-enhancement	1.677	0.90	
Self-efficacy	Self-evaluation	2.233	0.89	83.621
	Problem solving	2.026	0.87	
	Making plan	1.744	0.91	
Subjective well-being	Emotional well-being	3.237	0.93	86.334
	Positive functioning	2.856	0.91	

Correlation analysis

Table 2 reveals notable correlations among social comparison, self-efficacy, and subjective well-being that H1, H2, and H3 are preliminarily supported.

Table 2. Correlation analysis

Research dimension	α	Social comparison	Self-efficacy	Subjective well-being
Social comparison	0.83			
Self-efficacy	0.85	0.28**		
Subjective well-being	0.87	0.35**	0.24**	

AMOS evaluation index

AMOS, combining factor analysis and path analysis in traditional statistics and adding simultaneous equations in econometrics, could simultaneously calculate multiple factors and multiple causal paths. The model fit could be evaluated from preliminary fit criteria, overall model fit, and fit of internal structure of model.

The research data are organized as followings. Preliminary fit criteria, internal fit, and overall fit are explained.

Table 3 reveals that three factors of social comparison (self-evaluation, self-improvement, self-enhancement) could significantly explain social comparison ($t>1.96$, $p<0.05$), three dimensions of self-efficacy (self-evaluation, problem solving, and making plan) could remarkably explain self-efficacy ($t>1.96$, $p<0.05$), and two dimensions of subjective well-being (emotional well-being, positive functioning) could notably explain subjective well-being ($t>1.96$, $p<0.05$). Apparently, the overall model presents good preliminary fit criteria.

Table 3. Overall linear structural model analysis result

Evaluation item	Parameter/evaluation standard		Result
Preliminary fit	Social comparison	Self-evaluation	0.683**
		Self-improvement	0.725**
		Self-enhancement	0.711**
	Self-efficacy	Self-evaluation	0.762**
		Problem solving	0.664**
		Making plan	0.692**
	Subjective well-being	Emotional well-being	0.733**
		Positive functioning	0.748**

*Note: * stands for p<0.05, ** for p<0.01, and *** for p<0.001.*

Table 4 shows positive and significant correlations between social comparison and self-efficacy (0.283, $p<0.01$), self-efficacy and subjective well-being (0.343, $p<0.01$), as well as social comparison and subjective well-being (0.261, $p<0.01$) that H1, H2, and H3 are supported.

Table 4. Overall linear structural model analysis result

Evaluation item	Parameter/evaluation standard	Result
Internal fit	Social comparison→Self-efficacy	0.283**
	Self-efficacy→Subjective well-being	0.343**
	Social comparison→Subjective well-being	0.261**

*Note: * stands for p<0.05, ** for p<0.01, and *** for p<0.001.*

Table 5 shows the overall model fit standards, $\chi 2/Df=1.334$, smaller than the standard 3, and RMR=0.004, revealing the proper results of $\chi 2/DF$ and RMR. Chi-square is sensitive to sample size that it is not suitable for directly judging the fit. However, the overall model fit standards, GFI=0.981 and AGFI=0.937, are higher than the standard 0.9 (the closer GFI and AGFI to 1 showing the better model fit). The model therefore presents good fit indices.

Table 5. Overall linear structural model analysis result

Overall fit	X2/Df	1.334
	GFI	0.981
	AGFI	0.937
	RMR	0.004

*Note: * stands for p<0.05, ** for p<0.01, and *** for p<0.001.*

Theoretical model discussion

Figure 2 presents the overall research results. The path coefficient achieving the significance is shown with solid lines, while the path coefficient not achieving the significance is shown with dotted lines. The path coefficients of variables clearly achieve the significance, revealing the convergent validity. It conforms to the basic requirement for model analysis that the research model matches the theory and presents validity.

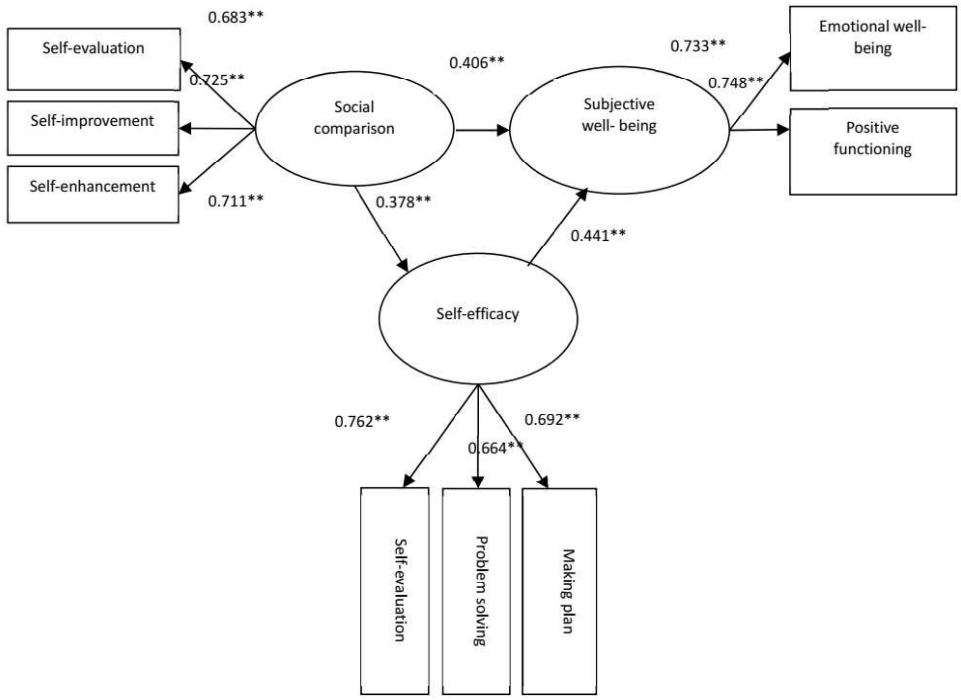

Figure 2. Path diagram

Conclusion

The research results prove that competitive climate could encourage the learning of employees in medical industry to work harder but also destroy the confidence to give up themselves. Modern society obviously stresses on competition and is the environment with high competition. Besides, the traditional habit of social comparison has employees in medical industry bear pressure to strike the self-confidence and well-being. After all, confidence and ability could complement each other; self-confidence could guide and deepen learning to further reinforce ability. Over-competitive environment, on the other hand, could not provide positive success opportunities for employees in medical industry, but reduce self-concept and damage the promotion of ability. Reflecting the industrial ecology nowadays, many employees are suffering from work pressure or competition comparison and even choose to end the life or result in the members' regret due to burnout. The time focusing on multi-intelligence has approached. An individual being placed at right position could have the space for development. Medical industry therefore should well apply education, cultivate employees' positive

characters, and induce individual potential according to individual employee's unique development characteristics to develop infinite possibilities. It is expected to confirm self-value and highlight personal advantages in the inevitable social comparison process.

Recommendations

From the research results and findings, the following practical suggestions are proposed.

1) Employees in medical industry being in the comparison climate might be nervous to blur the social learning focus. Medical industry managers could guide them to replace competition with cooperation, learn to reflect themselves from the comparison with others, and return the out-of-focus comparison process to learning so that they could replace the envy and hatred with appreciation or agreement even though they fail in social comparison. Moreover, medical industry managers could teach employees to precede self-comparison, emphasize self-learning and growth, and avoid improper comparison with others from resulting in negative effects.
2) Medical industry managers should devote to reinforce employees' self-efficacy; in addition to timely provide positive success experiences, they should teach employees learn self-copy and verification of ability from models. The employees therefore could consolidate the belief in the ability and believe that the promotion of well-being could foster the advantage to benefit the future.
3) Medical industry should realize that, in addition to cultivate employees' competitiveness, it should work hard on creating a friendly environment and provide employees with success experiences in order to seek for the balance between competitive challenge and success experience so that each competition or comparison could appear positive effects. Besides, it could reduce competition climate and stress on self-ability improvement, expecting to promote individual belief in ability and well-being perception for the future continuous efforts.

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