

Rapid Communication

Gender Differences in Relationships of Actual and Virtual Social Support to Internet Addiction Mediated through Depressive Symptoms among College Students in Taiwan

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ABSTRACT

This study examined gender differences in the relationships of actual and virtual social support to Internet addiction mediated through depressive symptoms among college students in Taiwan. Results revealed that in females, both actual and virtual social support directly predicted Internet addiction or were mediated through depressive symptoms. However, in males, while Internet addiction was predicted by virtual social support directly or indirectly mediated through depressive symptoms, the link of actual social support to Internet addiction was only mediated through depressive symptoms. Furthermore, in both genders, lower actual social support and higher virtual social support were associated with higher depressive symptoms.

INTRODUCTION

THE LACK OF SOCIAL SUPPORT is reported to be associated with depressive symptoms,¹ which might increase susceptibility to Internet addiction.² Researchers have found that social support also exists online.³ Previous studies indicate that people may develop a new lifestyle through Internet activities, which may cause a worsening in their actual social relationships.⁴ In other words, depressive feelings of people relying on the Internet for social support might remain or even worsen toward their real-life interpersonal relationships, increasing their risk of becoming Internet addicted. Although many

studies have focused on the importance of actual social support and virtual social support, few studies have probed into their effects on Internet addiction, and no empirically based model has been proposed. Meanwhile, gender differences on Internet addiction remained controversial. Therefore, the present study attempted to verify gender differences in the Internet addiction process model.

METHODS

Participants were recruited from the Project of Mental Health Survey of college students in Taiwan.

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A battery of questionnaires included the Social Support Scale, Virtual Social Support Scale, Ko's Depression Inventory,⁵ and the Chen Internet Addiction Scale.⁶ A total of 3,477 students completed the survey; 45% were male, and 55% were female. The mean age was 22.45 ($SD = 1.56$). Data analyses were performed using the statistical program Amos 5.0. The significance levels were set at 0.05.

RESULTS AND DISCUSSION

Using the structural equation model by the robust maximum likelihood method, the hypothesized models presented in Figure 1 were examined. The female model yielded a significant chi-square: $\chi^2 (38, N = 1,919) = 358.65, p < 0.05$. The other fit indices were 0.97 on the non-normed fit index (NNFI), 0.98 on the comparative fit index (CFI), and 0.07 on the root-mean-squared error of approximation (RMSEA). The same model in males also yielded a significant chi-square: $\chi^2 (38, N = 1,558) = 335.37, p < 0.05$. Corresponding fit indices were 0.97 on the NNFI, 0.97 on the CFI, and 0.07 on the RMSEA. The measurement model of both genders demonstrated a good fit.

Interestingly, the present study indicated that lower actual social support and higher virtual social support were associated with higher depressive symptoms in both gender models. A possible explanation is that although Internet users who per-

ceived lower social support found it easier to create new social relationships online, the consequence of exploring social support online could worsen interpersonal problems in reality, accompanied by psychological problems such as depressive symptoms.

Moreover, gender differences in the model pathway were found (Figure 1). In the female model, both actual social support and virtual social support to Internet addiction were partially mediated through depressive symptoms. However, in the male model, virtual social support to Internet addiction was partially mediated through depressive symptoms, but actual social support influenced Internet addiction only through depressive symptoms. This gender difference may result from the preference and styles in Internet activities between females and males. Women commonly invest more than men in cultivating social support.⁷ Women typically prefer to use the Internet for communication and personal information, whereas men are more likely to obtain information regarding weather, sports, and games.⁸ Consequently, when a lack of social support exists offline, women have a higher tendency than men to explore online, leading to the possibility of becoming Internet addicted.

Based on the findings in this study, we suggest that campus prevention programs place a focus on alleviating depressive mood and conduct early screening for high-risk groups with depressive symptoms. Programs should be designed to teach students proper social skills and to gain social re-

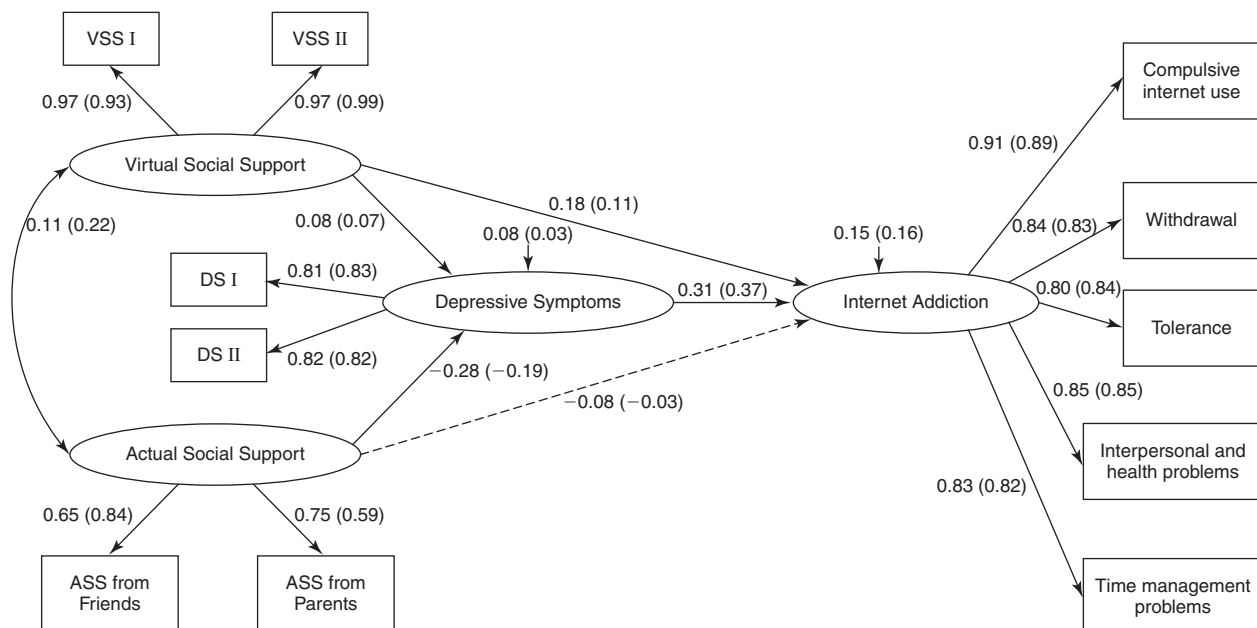


FIG. 1. The path standardized coefficient in the model for female and male (in brackets) participants.

sources. Specifically, females should be guided with programs that can teach them coping strategies to deal with interpersonal problems in order to increase their perceived social support in reality. However, the cross-sectional design of this study meant the causal relationship among these significantly related factors cannot be ascertained, and a longitudinal study design should be used in further explorations.

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