

Abstract

Background: Modern information and communication technology (ICT) comprising internet and mobile phone has become an integral part of daily life, shaping the behaviour of people including addiction/problematic use. This may emerge as a threat to the psychosocial wellbeing especially of young working adults.

Objectives: To describe the modern ICT behaviour, its underlying motives, relationship with psychosocial wellbeing and factors associated with problem use/addiction among modern ICT users in the young working population of Gampaha district

Methods: The study consisted of three components. *Component one* was a validation study to translate, culturally adapt and validate Young's Internet Addiction Test (IAT) and Mobile Phone Problem Usage Scale (MPPUS) to assess addiction/problem use, and to newly design and validate Psychosocial Wellbeing Questionnaire (PWQ) to assess psychosocial wellbeing of young working adults in Sri Lanka. Development and cultural adaptation were done by experts using modified Delphi technique. Validity of IAT, MPPUS and PWQ were assessed using judgmental (face, consensual and content) and construct validity (exploratory and confirmatory factor analysis, and theoretical construct testing) using samples of 320, 450 and 750, respectively. *Component two* was a community based cross sectional study conducted in the district of Gampaha among 1104 working adults aged 18-34 years who had been using both internet and mobile phone over 6 months, recruited using a three stage cluster sampling method. Following informed verbal consent, self-administered questionnaires collected data on demographic and socio-economic characteristics, modern ICT behaviour (duration and frequency of use, intention, connectivity, safe use practices and uncontrolled behaviour), and psychosocial wellbeing. Associations were assessed using prevalence odds ratio (OR) and 95% confidence intervals (CI). Logistic regression analysis was carried out to adjust for potential confounders. *Component three* was a qualitative study to identify their underlying motives of modern ICT behaviour. Fifteen in-depth interviews were conducted until data saturation and narrated using thematic analysis.

Results: The 18 item IAT-SL, 25 item MPPUS-SL and 30 item PWQ were obtained. Good model fit was demonstrated for IAT-SL (RMSEA=0.07, CFI=0.97, NNFI=0.96, SRMR=0.062, GFI=0.86), MPPUS-SL (RMSEA=0.06, CFI=0.96, NNFI=0.95, SRMR=0.06, GFI=0.86) and PWQ ((RMSEA=0.061, CFI=0.96, NNFI=0.96, SRMR=0.061, GFI=0.86). Internal consistency and test retest reliability of all three tools were satisfactory.

The main findings on internet related behaviour were: less than 5 years of use (n=657, 59.5%); initiated at 15-24 age (n=952, 86.2%); use after working hours (n=600, 55%); for communication purpose (n=872, 79%); predominantly with friends (n=624, 59.3%) and communication via social media as the most preferred method (n=882, 79.9%); and accessed via mobile phone (n=553, 50.6%). Mean duration of use was 2.1 hours (SD=2.2) on weekdays and 1.7 hours (SD=1.9) on weekends.

The main findings of mobile phone related behaviour were: 6-10 year of use (n=592, 53.6%); 6-10 calls per day (n=439, 40.0%); less than 6 daily SMS (n=511, 47.2%); voice calls as the first preference of intention (n=906, 83%); accessed internet (n=986, 89.7%); and owns smart phone (77%, n=844).

Internet addiction was 16.1 % (n=178). After adjusting for confounders, factors associated with it were: being unmarried (OR=1.76, 95% CI=1.18-2.61); problematic mobile phone use (OR=5.76, 95% CI=3.89-8.55); use for more than 5 years (OR=1.55, 95% CI=1.05-2.29); more than one hour per weekend (OR=3.01, 95% CI=2.04-4.44); creating new friendships through internet (OR=2.37, 95% CI=1.49-3.76); and being less agreeable (OR=1.79, 95% CI=1.20-2.67); unhappy with oneself (OR=5.25, 95% CI=2.46-11.23) and impulsive (OR=1.75, 95% CI=1.19-2.59).

Problematic use of mobile phone was 18.5% (n=204). After adjusting for confounders, factors associated with such use were: internet addiction (OR=5.8, 95% CI=4.0-8.4); anxiety when talking with someone (OR=1.72, 95% CI=1.13-2.62); low agreeableness (OR=1.42, 95% CI= 0.99-2.02); experience of a recent stressful event (OR=1.50, 95%

CI=0.95-2.36); and taking more than 15 call per day (OR=1.81, 95% CI=1.20-2.74) and sending more than 15 SMS per day (OR=2.41, 95% CI=1.57-3.71).

Poor psychosocial wellbeing was seen in 13.9% (n=153). It was significantly associated with internet addiction (adjusted OR=1.65, 95% CI=1.03-2.66) and problematic mobile phone use (adjusted OR=1.81, 95% CI=1.14-2.86) after controlling for confounders of poor psychosocial wellbeing. Underlying motives of use varied for internet and mobile phone.

Conclusions: IAT-SL, MPPUS-SL and PWQ are valid and reliable tools to be used among young working adults in Sri Lanka. Internet addiction or problematic mobile phone use was less than 20% among participants and it was significantly associated with poor psycho-social wellbeing. Motives such as connectedness, social identity, social interaction, relaxation and obtaining knowledge were underlined motives of modern ICT behavior of participants.

Recommendations: Policies on healthy worker concept should address relationship shown between poor psychosocial wellbeing and both internet and problematic mobile phone use by establishing programs at work places for preventing young workers modifying their behaviour to the extent of dependency on modern ICT.

Key words: internet addiction, mobile phone problem use, psychosocial wellbeing