"My Online Friends Understand Me Better" :The Impact of Social Networking Site Usage on Adolescent Social Tie and Mental Health"

For Malaysian Communications and Multimedia Commission

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INTRODUCTION

- The popularity of Social Networking Site (SNS) is on the rise especially in recent years.

- InformationWeek (Diana, 2010), the usage of such media in the US has increased by 230% since 2007.

- Globally, there is an 82% increase in 2009 with an average of five and a half hours spent on popular SNSs (Nielsenwire, 2010b).

- In UK, it was reported that traffic to SNSs overtakes visits to search engines like Google, with Facebook tops the chart of famous SNSs (O'Hear, 2010).

INTRODUCTION

- Yee (2010) found that approximately **six million Malaysian own Facebook**.

This raises the question of how would usage of SNS

- relate to a user's social ties with others in real life
- how would such amount of usage affect the user's mental health.

OBJECTIVES

The objectives of this research are:

- To investigate the impacts of SNS on adolescent (i.e., those who aged between 17 to 22)

- To categorize the usage patterns of social networking sites (SNS) among adolescents.

- To examine the effect of race and gender on the usage pattern of SNS.

- To evaluate the impact of SNS usage on adolescents' mental health.

METHODOLOGY

- Data were collected using a survey research method with cross sectional design.

- These eight universities were selected based on their popularity as among Malaysia's largest universities SNS.

- A total of 1000 randomly selected participants participated in the study. Out of these, only 725 surveys were acceptable - 363 males and 362 females.

PARTICIPANTS

Regions		Universities
Peninsular Malaysia	Northern	Universiti Sains Malaysia (USM)
	East Coast	Universiti Malaysia Terengganu (UMT)
	Central	University of Malaya (UM) Universiti Kebangsaan Malaysia (UKM) Universiti Putra Malaysia (UPM)
	Southern	Universiti Teknologi Malaysia (UTM)
East Malaysia	Sabah	Universiti Sabah Malaysia (UNS)
	Sarawak	Universiti Sarawak Malaysia (UNIMAS)

Questionnaires

- Social Networking Site Addiction-

  A) Internet Addiction Test (IAT)

- Mental Health-

  A) Ryff's Scales of Psychological Well-Being (RPWB)

  B) Depression Anxiety Stress Scale (DASS-21).

- Social Ties

  A) The Social Provisions Scale (SPS)

Social Networking Site Addiction

Addiction	Score
Normal	**0-30**
Mild	**31-49**
Moderate	**50-79**
Severe	**80-100**

SNS Addiction	According to Young (as cited in Ozcan & Buzlu, 2007), problematic internet use is excessive time spent on various activities on the internet to an extent that might have negative effects on the user's physical and psychological health; social, academic, professional, and marital relationships, and other
Salience: When a particular activity, such as SNS use, becomes the most important activity in the subject's life and dominates his or her thinking	10. How often do you block disturbing thoughts about your life with soothing thoughts of SNS? 12. How often do you fear that life without the internet would be boring, empty and joyless? 13. How often do you snap, yell, or act annoyed if someone bothers you while you are SNS? 15. How often do you feel preoccupied with the internet when off-line or fantasize about being on SNS? 19. How often do you choose to spend more time on SNS over going out with others?
Excessive use Exceeding a normal, usual, reasonable, or proper limit. *Excessive* describes a quantity, amount, or degree that is more than what is justifiable, tolerable, or desirable	1. How often do you find that you stay on SNS longer than you intended? 2. How often do you neglect coursework/assignments to spend more time on SNS? 14. How often do you lose sleep due to late night log on to SNS? 18. How often do you try to hide how long you've been on SNS? 20. How often do you feel depressed, moody, or nervous when you are offline, which goes away once you are back on SNS?
Neglect of work To pay little or no attention.	6. How often do your studies suffer (e.g. missing classes, postponing things, not meeting deadlines, etc.) because of the amount of time you spend on SNS? 8. How often does your academic performance or productivity suffer because of the internet? 9. How often do you become defensive or secretive when anyone asks you what you do on SNS?
Anticipation To look forward to, especially with pleasure	7. How often do you check your SNS'S status before something else that you need to do? 11. How often do you find yourself anticipating to go on SNS again?
Lack of control The power to direct, manage, oversee	5. How often do others in your life complain to you about the amount of time you spend on SNS? 16. How often do you find yourself saying "Just a few more minutes" when on SNS? 17. How often do you try to cut down the amount of time you spend SNS and fail?
Neglect of social life Interpersonal relationships	3. How often do you prefer excitement of SNS to relations with your friends? 4. How often do you form new relationships with fellow SNS users?

Mental Health

Range	Depression Score	Anxiety Score	Stress Score
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	34+

Depression Anxiety Stress Scale (DASS-21)	Items
Depression: ▪ **Uniquely characterized by low positive affect.** ▪ **Measure symptoms typically associated with dysphoric mood (e.g., sadness or worthlessness).** ▪ **Assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest or involvement.**	3. I couldn't seem to experience any positive feeling at all. 5. I found it difficult to work up the initiative to do things. 10. I felt that I had nothing to look forward to. 13. I felt down-hearted and blue. 16. I was unable to become enthusiastic about anything. 17. I felt I wasn't worth much as a person. 21. I felt that life was meaningless.
Anxiety: ▪ **Has physiological hyperarousal as a unique feature.** ▪ **Related to symptoms of physical arousal, panic attacks, and fear (e.g., trembling or faintness).** ▪ **Assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect**	2. I was aware of dryness of my mouth. 4. I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion). 7. I experienced trembling (eg, in the hands). 9. I was worried about situations in which I might panic and make a fool of myself. 15. I felt I was close to panic. 19. I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat). 20. I felt scared without any good reason.
Stress ▪ **Measure symptoms such as tension, irritability, and a tendency to overreact to stressful events** ▪ **Assesses difficulty relaxing, nervous arousal, and being easily upset or agitated, irritable or over reactive, and impatient**	1. I found it hard to wind down. 6. I tended to over-react to situations. 8. I felt that I was using a lot of nervous energy. 11. I found myself getting agitated. 12. I found it difficult to relax. 14. I was intolerant of anything that kept me from getting on with what I was doing. 18. I felt that I was rather touchy.

PART A: Prevalence Usage Patterns of SNS among Malaysian Adolescents
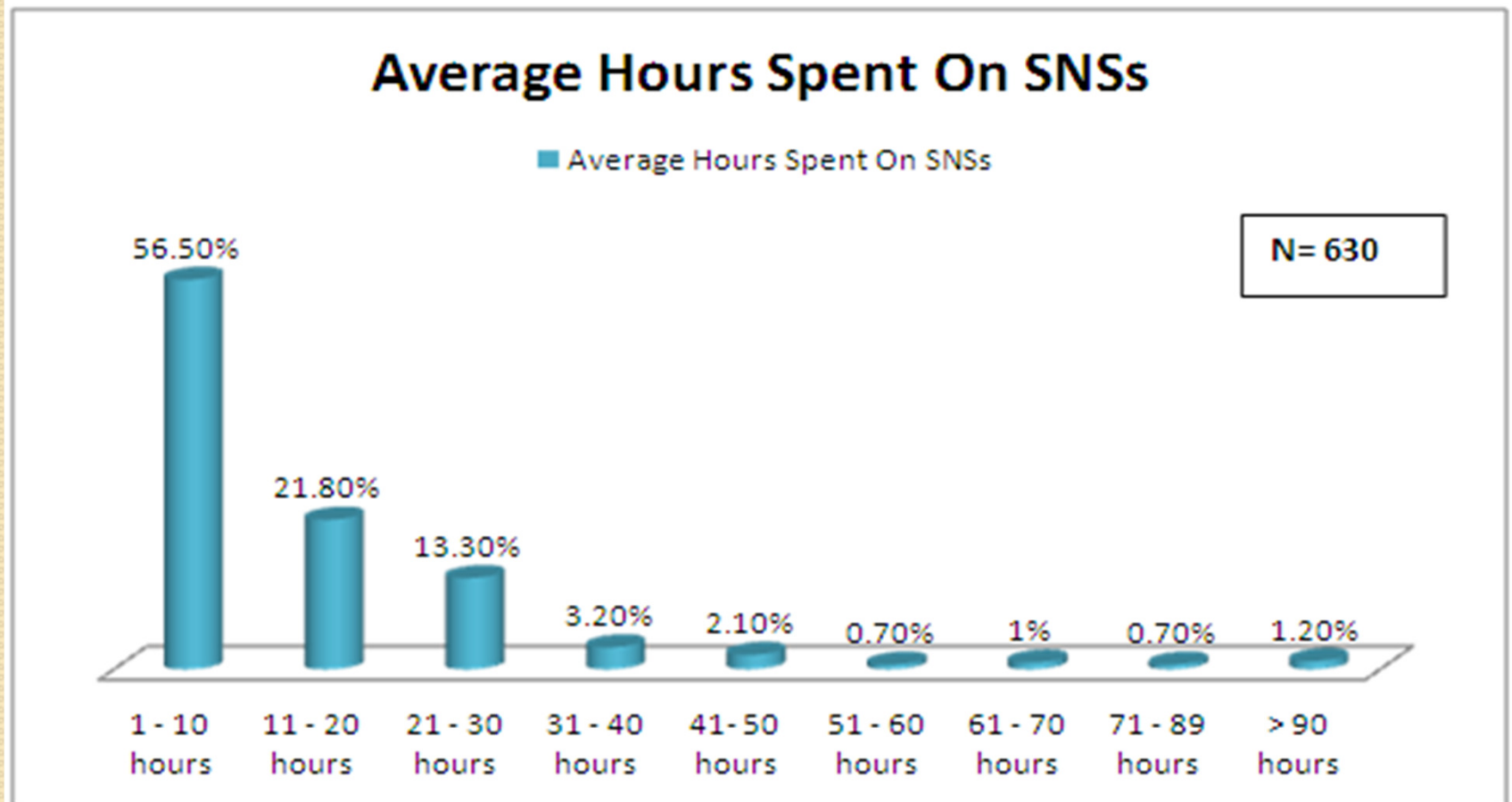
Literature Review

NielsenWire stated that social networking seated fourth place as one of the most popular online activities (Disalvo, 2010).

Facebook, founded in 2004, currently has recorded over 800 million monthly active users and over 400 million Facebook mobile products users by the end of December 2011 (Facebook Newsroom, 2011).

According to Accenture (SocialNetworkingWatch.com, 2010), Malaysia ranks number one on the list of most SNSs active country, overtaking countries such as India, Singapore, the US, China, Germany, France and Japan.
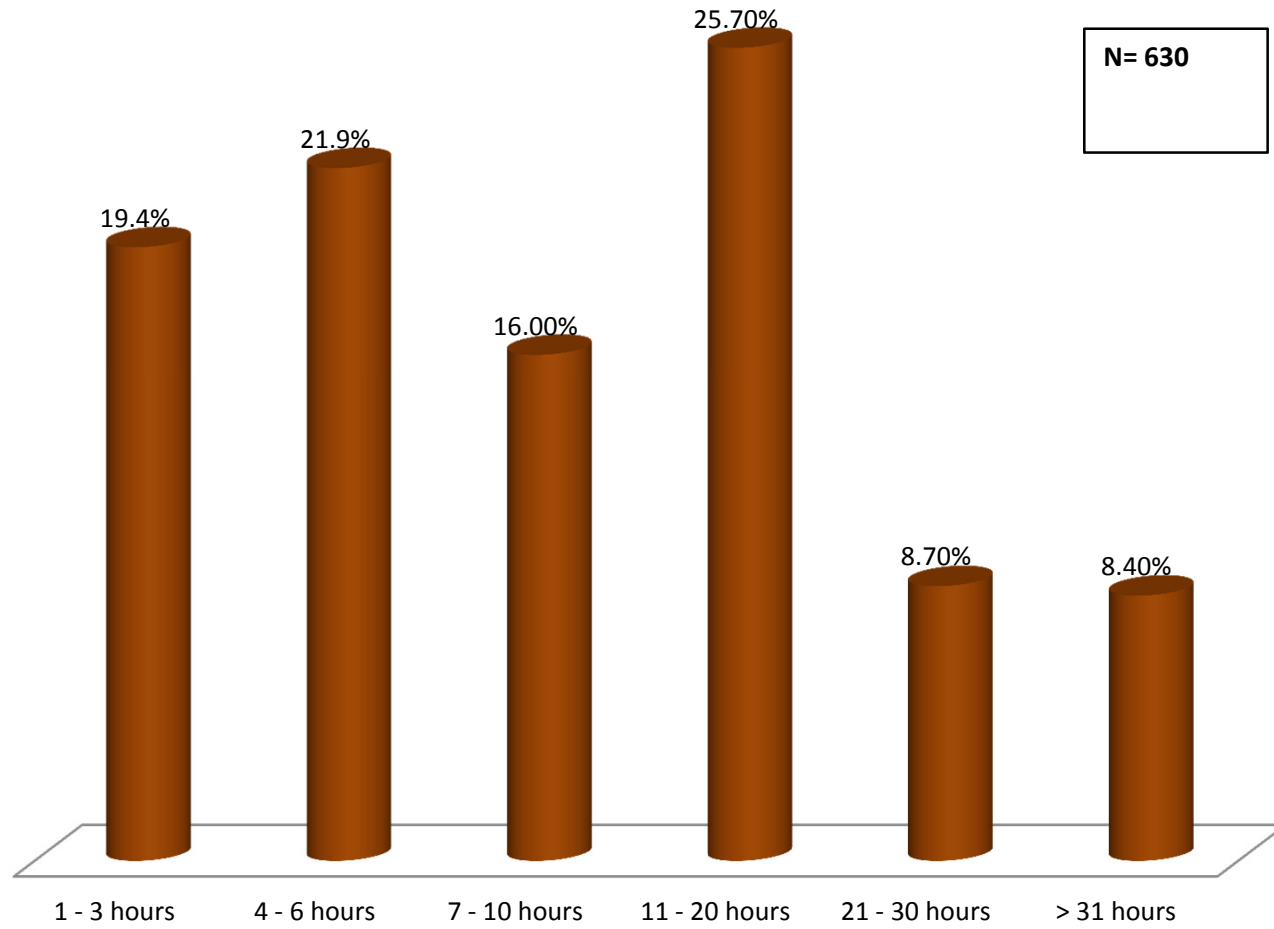
Result

- the most common hours of SNSs usage among adolescents was reported within the range of 1 - 10 hours per week, at 56.5% (N= 356), follow by 11 - 20 hours at 21.8% (N=137) and 21 - 30 hours at 13.30% (N=84).
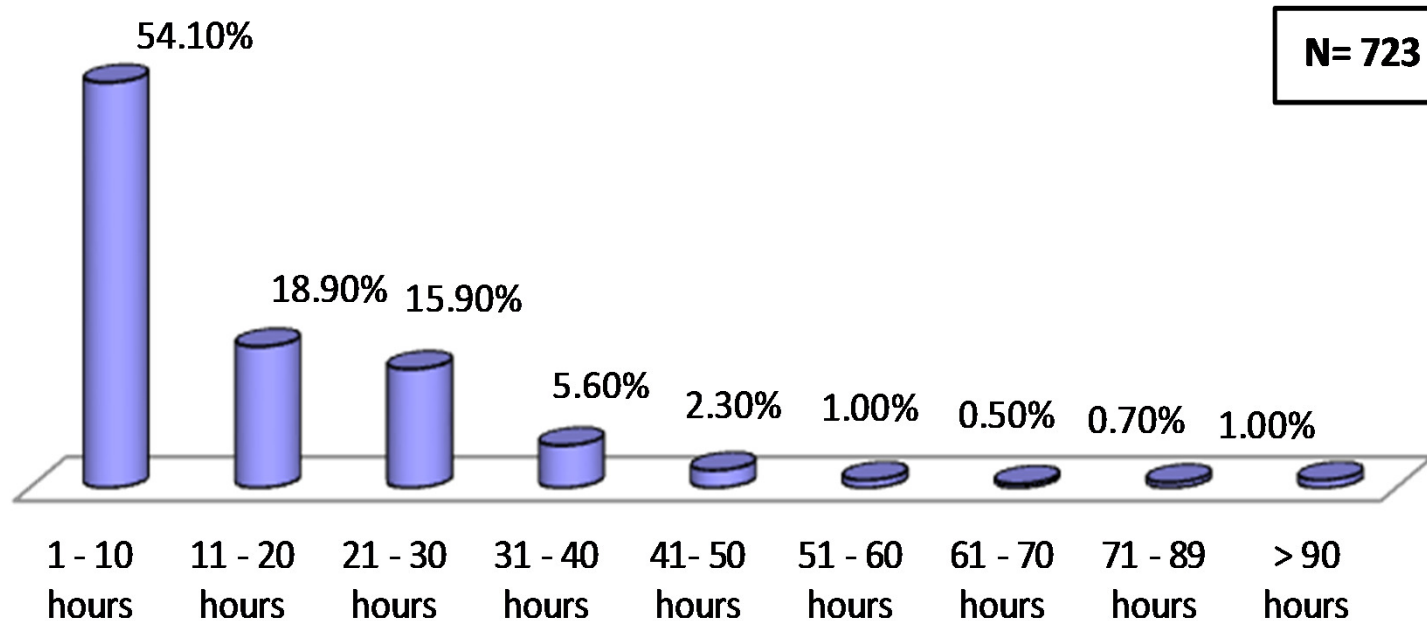
Average Hours Spent On SNSs

■ Average Hours Spent On SNSs

N= 630

1 - 10 hours	11 - 20 hours	21 - 30 hours	31 - 40 hours	41- 50 hours	51 - 60 hours	61 - 70 hours	71 - 89 hours	> 90 hours
56.50%	21.80%	13.30%	3.20%	2.10%	0.70%	1%	0.70%	1.20%

Average Hours Spent On SNSs

■ Average Hours Spent On SNSs

N= 630

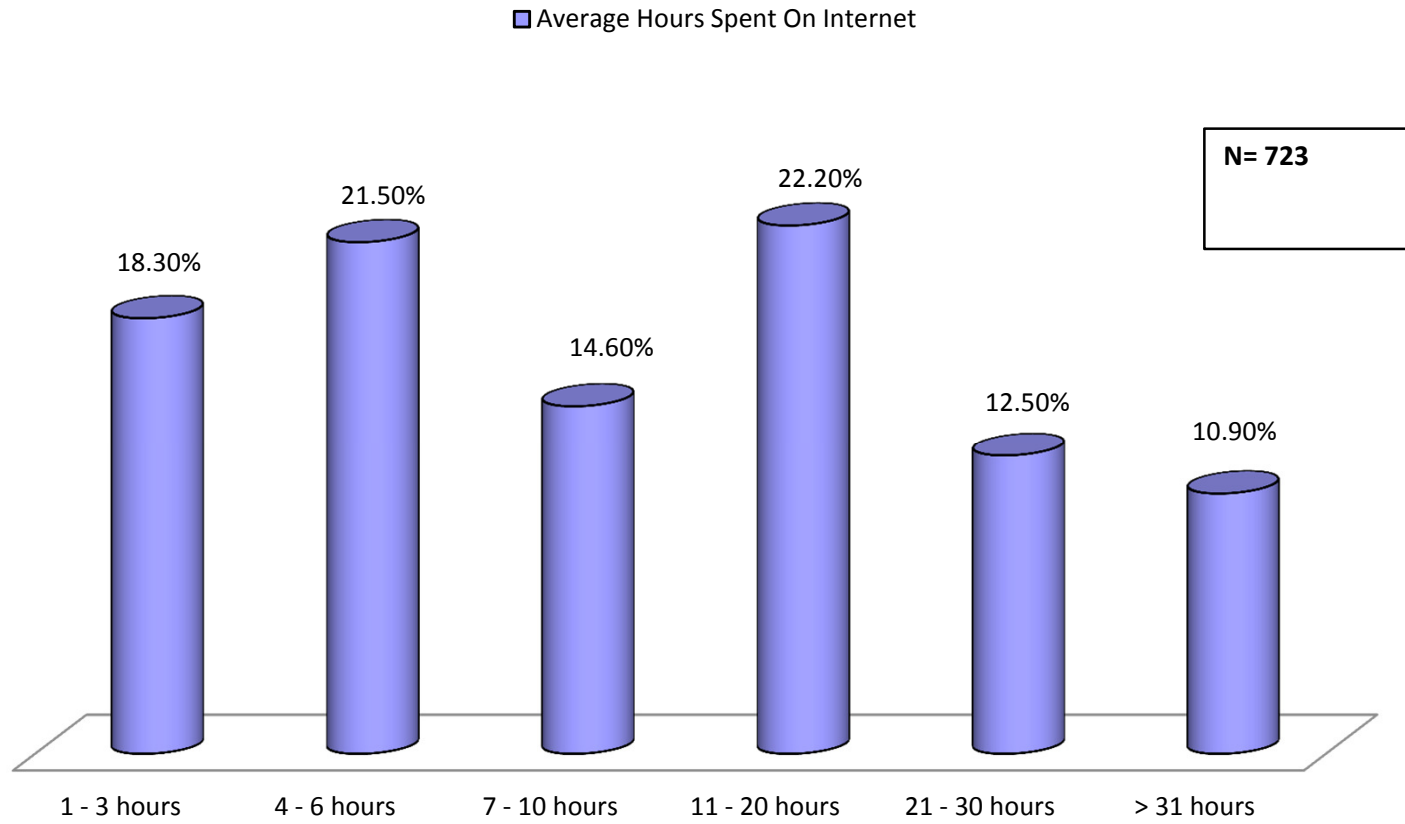|					
19.4%	21.9%	16.00%	25.70%	8.70%	8.40%
1 - 3 hours	4 - 6 hours	7 - 10 hours	11 - 20 hours	21 - 30 hours	> 31 hours

- The most common hours of Internet usage among adolescents was reported within the range of 1 - 10 hours, 11 -20 hours and 21 – 30 hours per week, at 54.10% (N= 391), follow by 18.90% (N = 136) and 15.90% (N = 115) respectively.

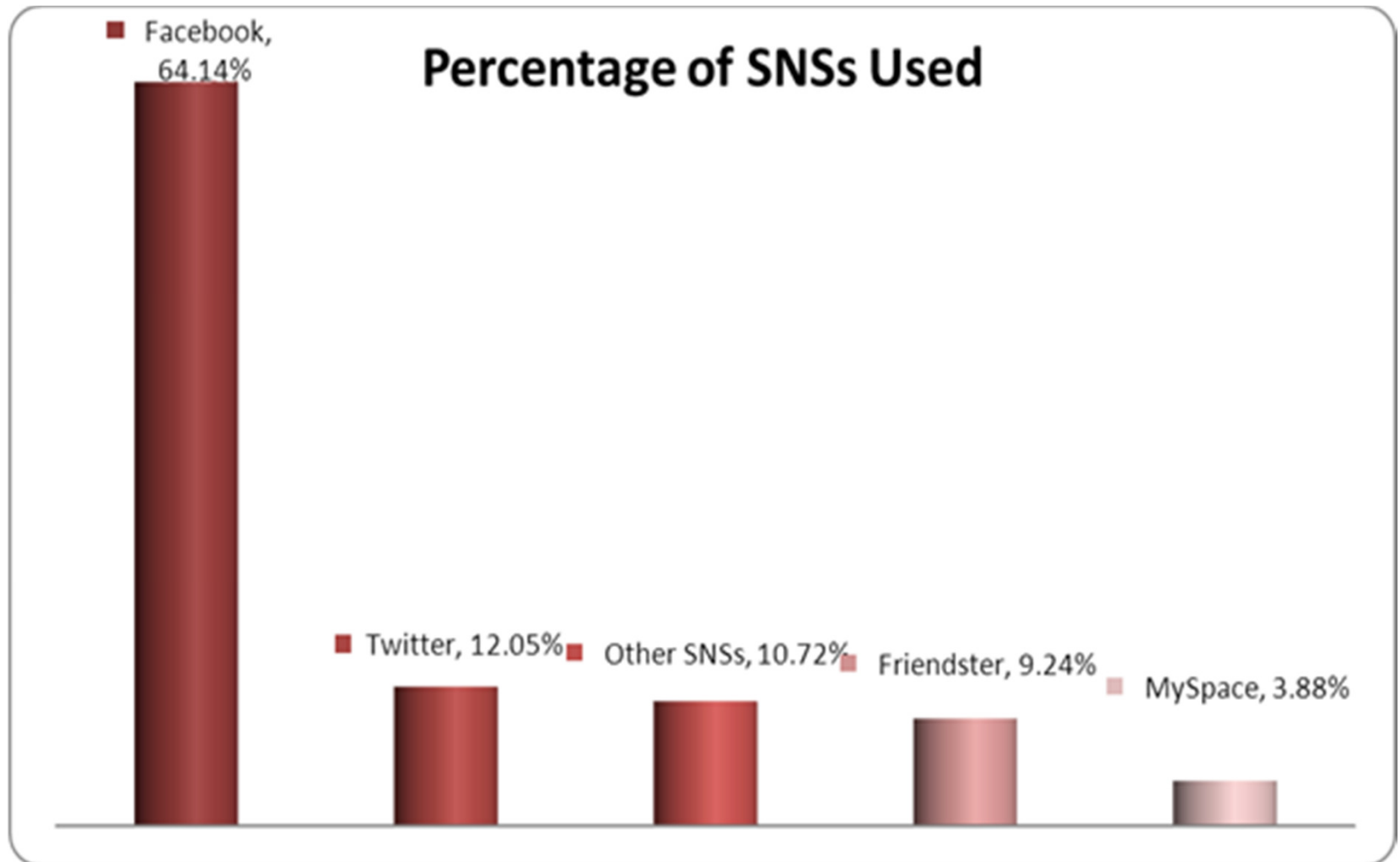## Average Hours Spent On Internet

☐ Average Hours Spent On Internet

N= 723

| | 54.10% | 18.90% | 15.90% | 5.60% | 2.30% | 1.00% | 0.50% | 0.70% | 1.00% |

| 1 - 10 hours | 11 - 20 hours | 21 - 30 hours | 31 - 40 hours | 41- 50 hours | 51 - 60 hours | 61 - 70 hours | 71 - 89 hours | > 90 hours |

Average Hours Spent On Internet

☐ Average Hours Spent On Internet

N= 723

18.30% 21.50% 14.60% 22.20% 12.50% 10.90%

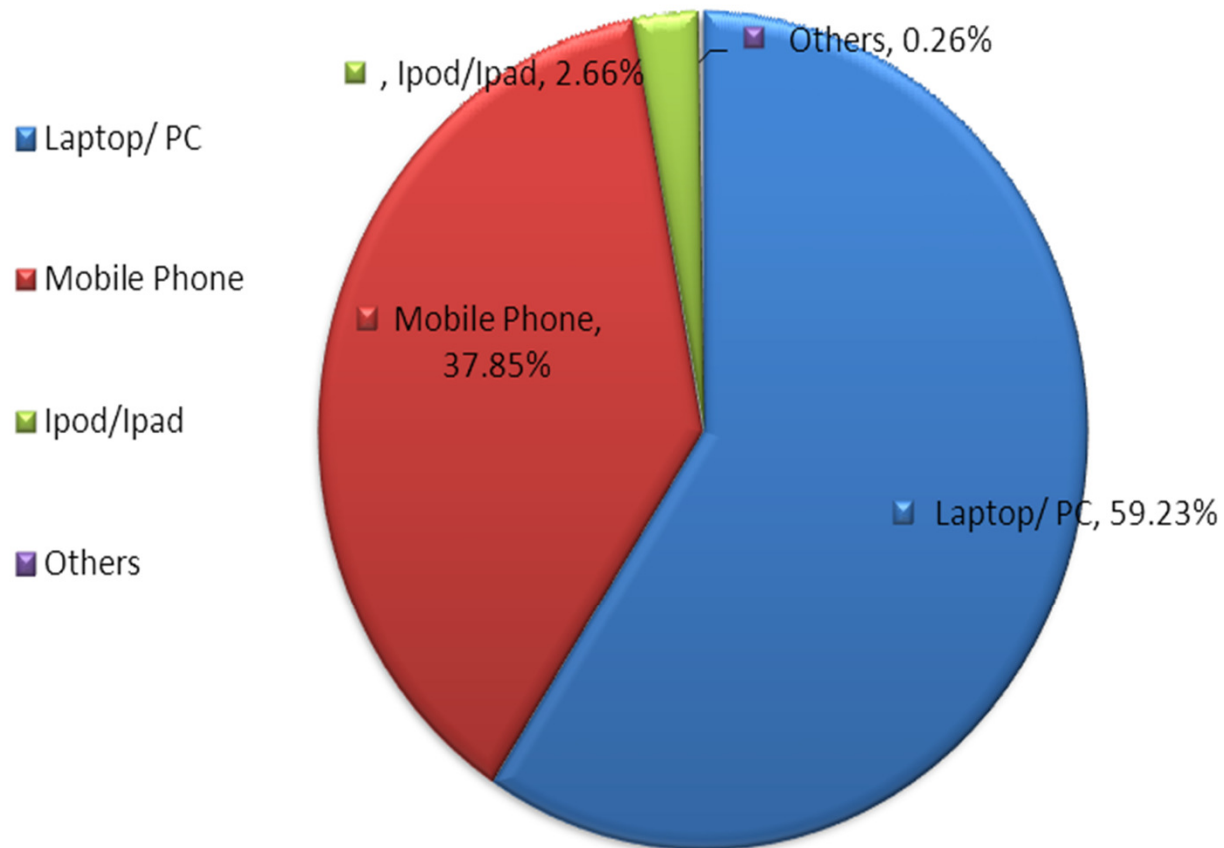1 - 3 hours   4 - 6 hours   7 - 10 hours   11 - 20 hours   21 - 30 hours   > 31 hours

- For the ranking of the most and frequently used SNSs, Facebook ranked the first, at 64.14% (N= 694), followed by Twitter at 12.05% (N= 130), other SNSs at 10.72% (N=116) such as Tagged, Skype, and Yahoo Messenger, Friendster at 9.24% (N= 100), and MySpace at 3.88% (N= 42)

Percentage of SNSs Used

- Facebook, 64.14%
- Twitter, 12.05%
- Other SNSs, 10.72%
- Friendster, 9.24%
- MySpace, 3.88%

Types of electronic devices used in surfing SNSs, laptops were ranked as the most commonly used device, at 59.23% (N= 690), followed by mobile phones, at 37.85% (N= 441), Ipods/Ipads, at 2.66% (N= 31), and other devices such as a tablet, at 0.26% (N= 3)

Devices Used to Access the SNSs

- Laptop/ PC
- Mobile Phone
- Ipod/Ipad
- Others

Others, 0.26%
, Ipod/Ipad, 2.66%
Mobile Phone, 37.85%
Laptop/ PC, 59.23%

Participants normally go on SNSs when they are at the university, 42.37% (N= 586). They also accessed these sites when they are at home, 28.63% (N= 396), at Wi-Fi hotspots, 25.96% (N= 359), and other places such as cafeterias and cybercafés, 3.04% (N= 42)

Location Used to Access the SNSs

- University
- Home
- Wi-Fi Hotspot
- Others

Others, 3.04%

Wi-Fi Hotspot, 25.96%

University, 42.37%,

Home, 28.63%
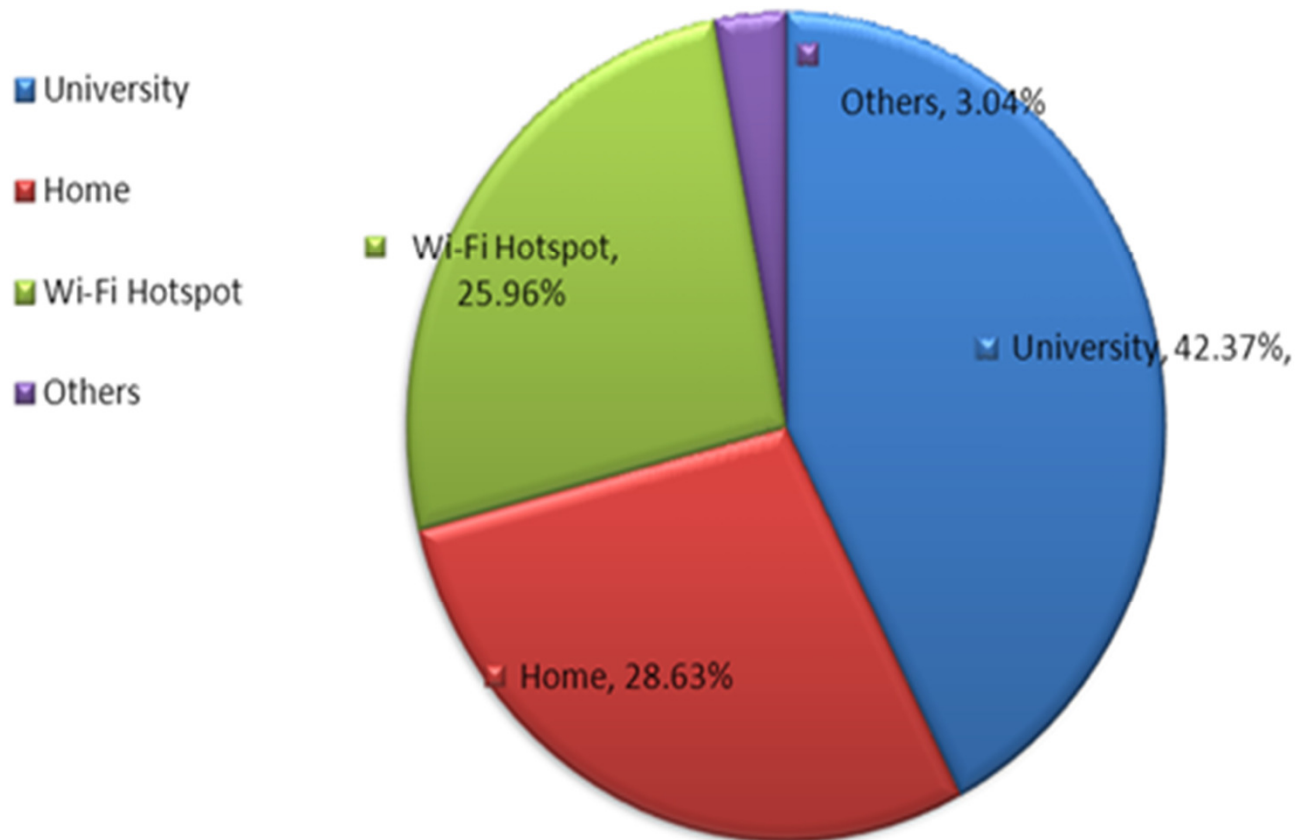
SNS addiction level into four different groups, namely normal usage, mild addiction, moderate addiction, and severe addiction. The results showed that as high as 90% of the participants are addicted to SNS. When further classifying these addicted users, 57.5% (N= 417) of them are considered moderately addicted, 29.9% are mildly addicted and 1.7% are severely addicted. Only less than 11% of the participants are at normal SNS usage level

Addiction Level

■ Normal ■ Mild ■ Moderate ■ Severe

10.90%	29.90%	57.50%	1.70%
Normal	Mild	Moderate	Severe
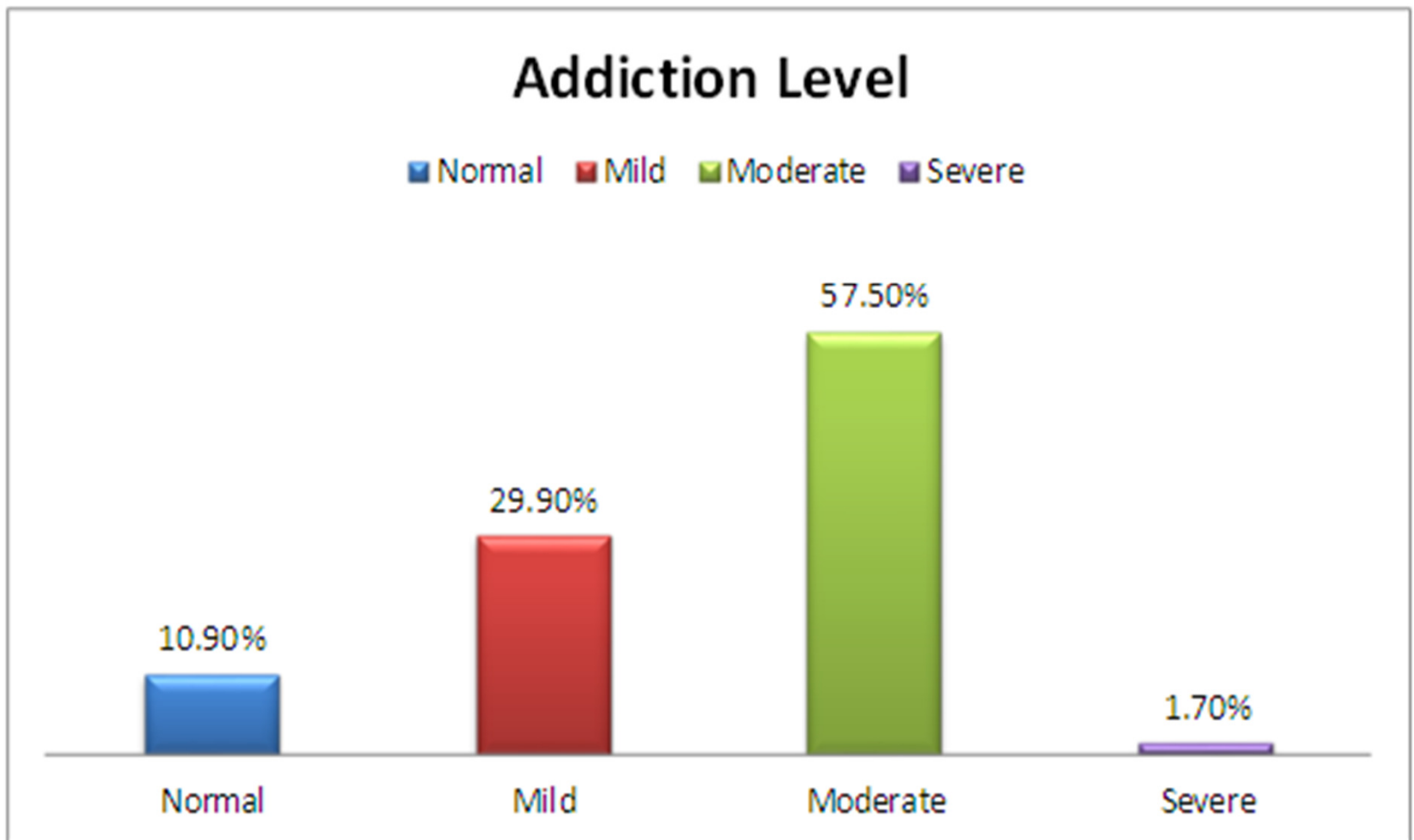
- Universiti Malaya tops the chart with the highest moderate level of SNS addicts (N= 63). This is followed by Universiti Kebangsaan Malaysia (N= 58), Universiti Malaysia Terengganu (N= 57), Universiti Sains Malaysia (N= 56), Universiti Putra Malaysia (N= 52), Universiti Malaysia Sarawak (N=48) and Universiti Malaysia Sabah (N= 48). The university with the lowest number of SNS addiction is Universiti Teknologi Malaysia (N= 46).
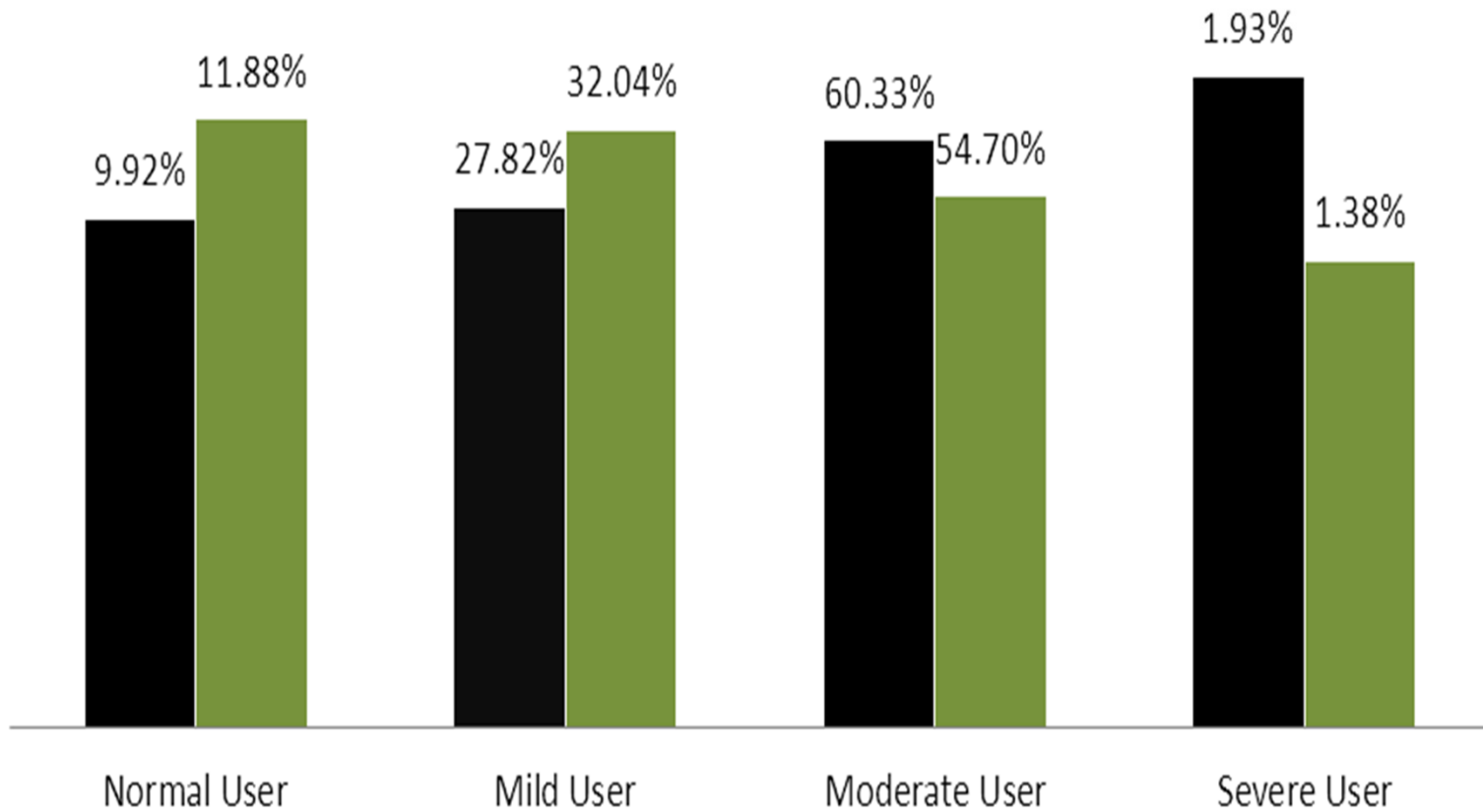

SNSs Addiction Level Based on Universities
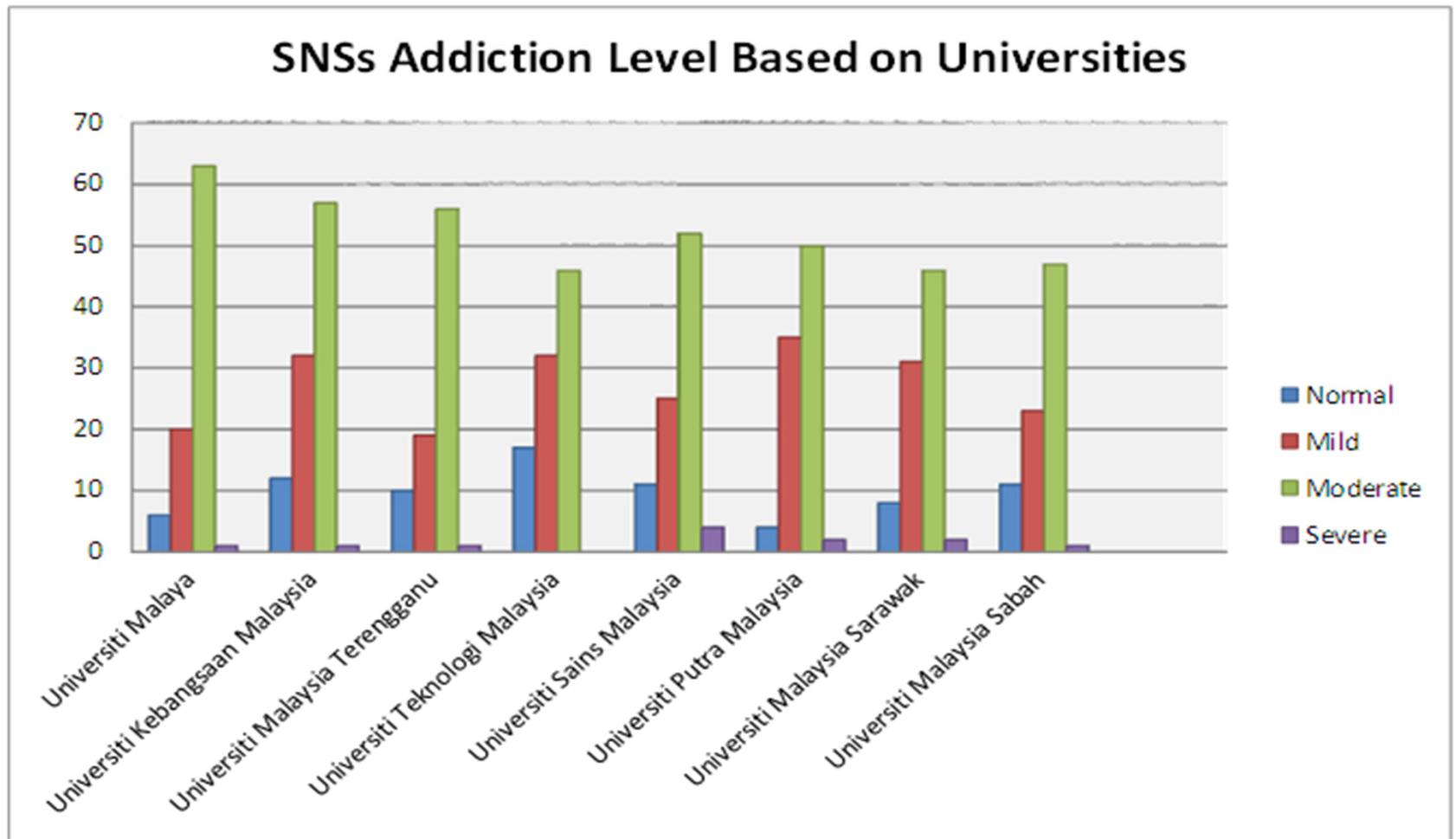
PART B: Prevalence of Race and Gender on Usage Pattern of SNS

- It is evident that there are more females who are at normal usage level (11.88%, N=43) compared to males (9.92%, N=36). The same goes with the mild user category where females scored higher at 32.04% (N= 116) compared to males at 27.82% (N= 101). However, as we move into the territory of moderate and severe addiction, males appear to be more highly addicted compared to females. Under the moderate user category, there are 60.33% (N= 219) males compared to 54.70% (N= 198) females. Similarly, for severe user category, males scored higher at 1.93% (N= 7) compared to females at 1.38% (N= 5).

Gender and SNS Addiction Level

■ Male ■ Female

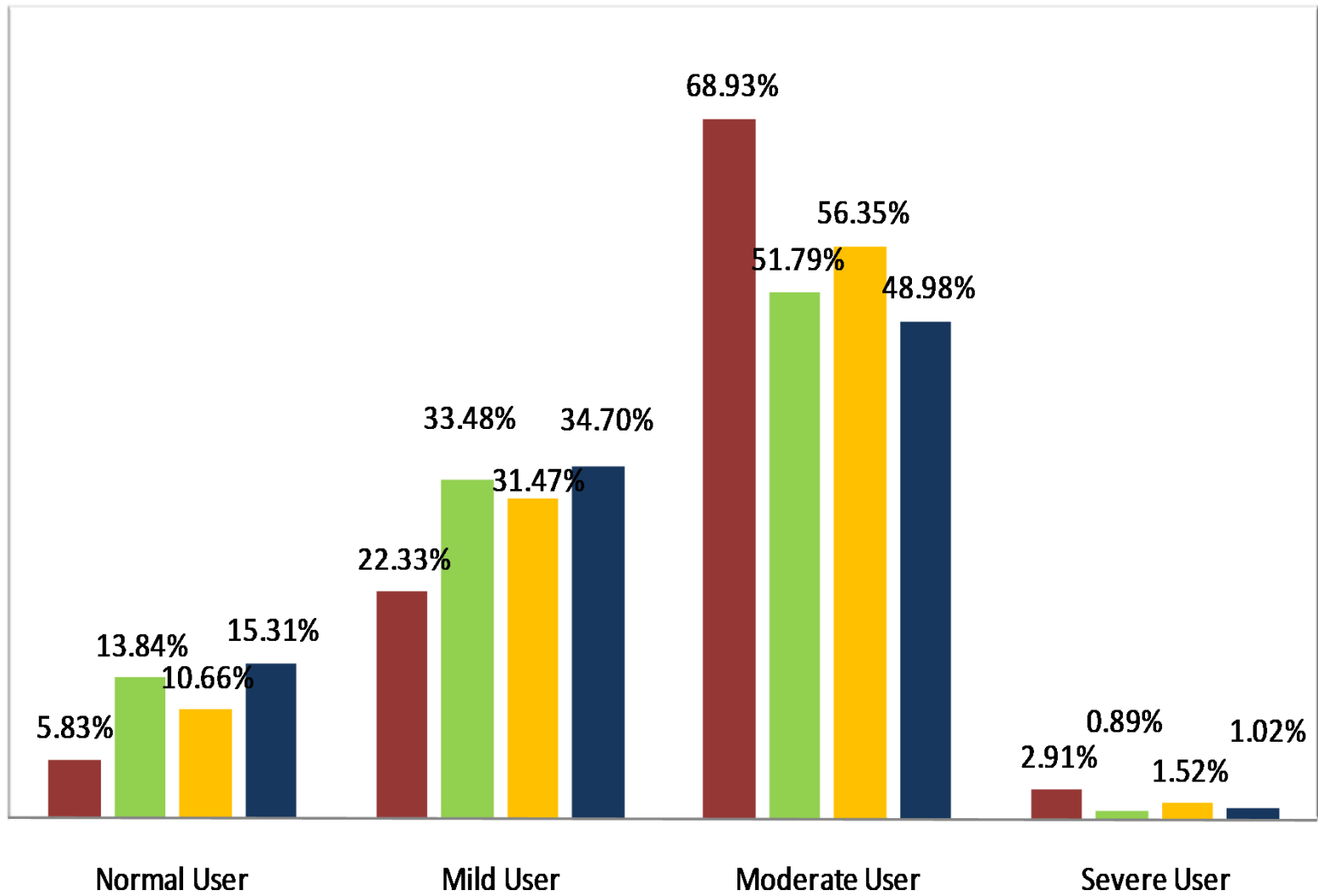|	Normal User	Mild User	Moderate User	Severe User
Male	9.92%	27.82%	60.33%	1.93%
Female	11.88%	32.04%	54.70%	1.38%

Ethnic groups on the Usage Pattern of SNS

- Participants of Malay (N= 206), Chinese (N= 224), Indian (N= 197), and other ethnic groups such as Iban, Kadazan, Bidayuh and Murut (N= 98).

- Under the **Normal User Category**, other ethnic groups scored the highest compared to the rest of the ethnic groups at 15.31% (N= 15), followed by Chinese at 13.84% (N= 31), Indian at 10.66% (N= 21), and Malay at 5.83% (N= 12).

- Under the **Mild User Category**, other ethnic groups again scored the highest at 34.70% (N= 34), followed by Chinese at 33.48% (N= 75), Indian at 31.47% (N= 62), and Malay at 22.33% (N= 46).

- As for the **Moderate User Category**, Malay scored the highest at 68.93% (N= 142), followed by Indian at 56.35% (N= 111), Chinese at 51.79% (N= 116), and other ethnic groups at 48.98% (N= 48).

- For the **Severe User Category**, Malay scored the highest as well at 2.91% (N= 6), followed by Indian at 1.52% (N= 3), other ethnic groups at 1.02% (N= 1), and Chinese at 0.89% (N= 2).

Ethnic and SNS Addiction Level

■ Malay ■ Chinese ■ Indian ■ Others

	Malay	Chinese	Indian	Others
Normal User	5.83%	13.84%	10.66%	15.31%
Mild User	22.33%	33.48%	31.47%	34.70%
Moderate User	68.93%	51.79%	56.35%	48.98%
Severe User	2.91%	0.89%	1.52%	1.02%

PART C: The Relationship Between SNS on Adolescents' Mental Health

Literature Review

A recent report found that excessive use of SNSs leads to addictive behavior and as a result, users may spend an increasing amount of time on these virtual sites without realizing the associated negative effects (Kuss & Griffiths, 2011).

Depression is frequently displayed publicly on their Facebook profiles such as 'I feel hopeless' or 'I feel like giving up' (Moreno et al., 2011)

Jenaro et al. (2007) research revealed college students' Internet use and its relationship with depression and anxiety were significantly associated. Psychiatric disorders such as anxiety, depression, insomnia and social dysfunction are present among excessive Internet users.

Result -DASS

- Participants' mental health is divided into 3 dimensions, namely stress, anxiety and depression. The results show that about 60% of the respondents' anxiety level fall under severe and extremely severe category, followed by depression 31.7% and stress 20% respectively. The majority of the participants (n=699) score moderately on psychological well-being
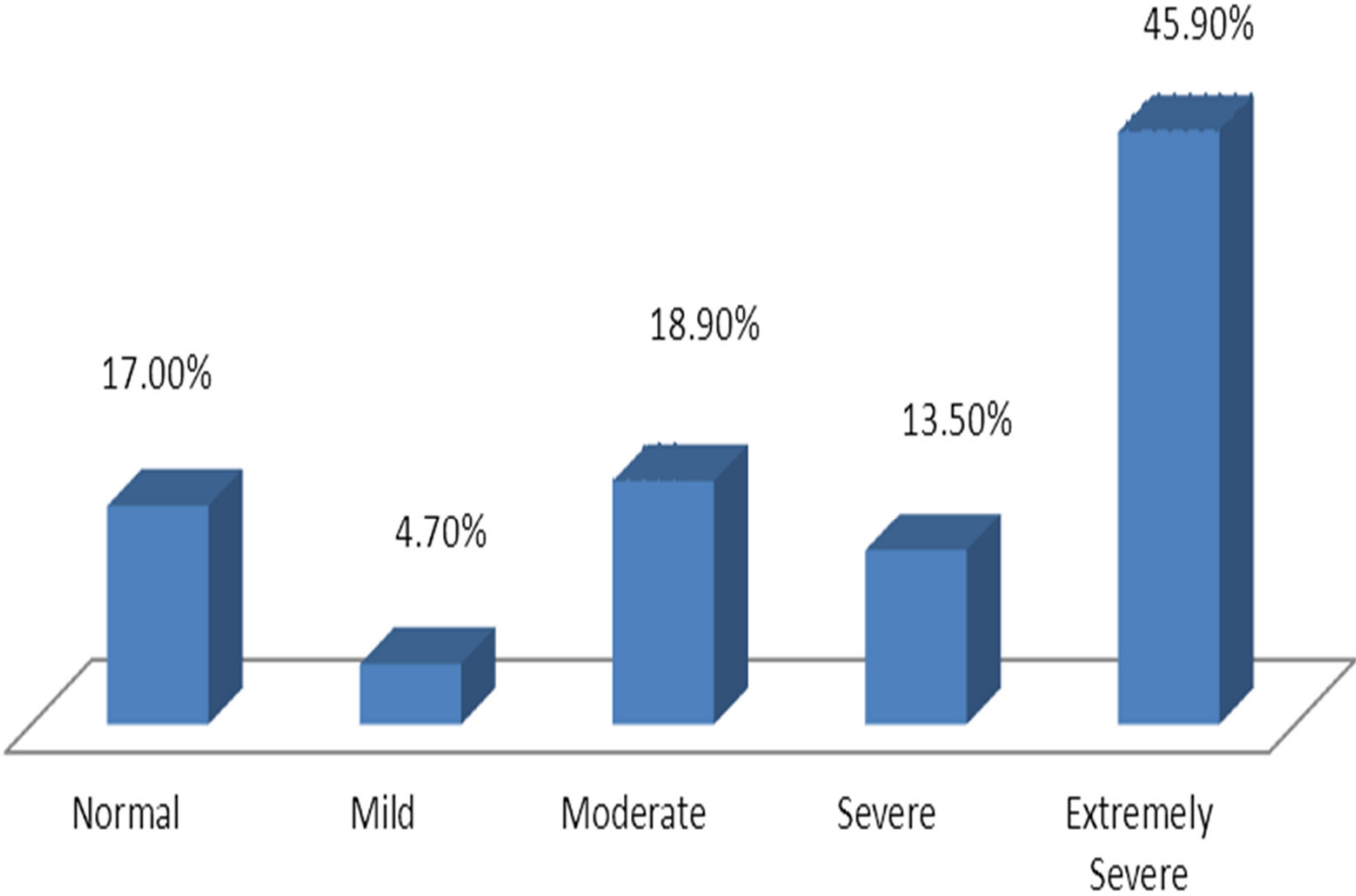
Depression Level

■ Depression Level
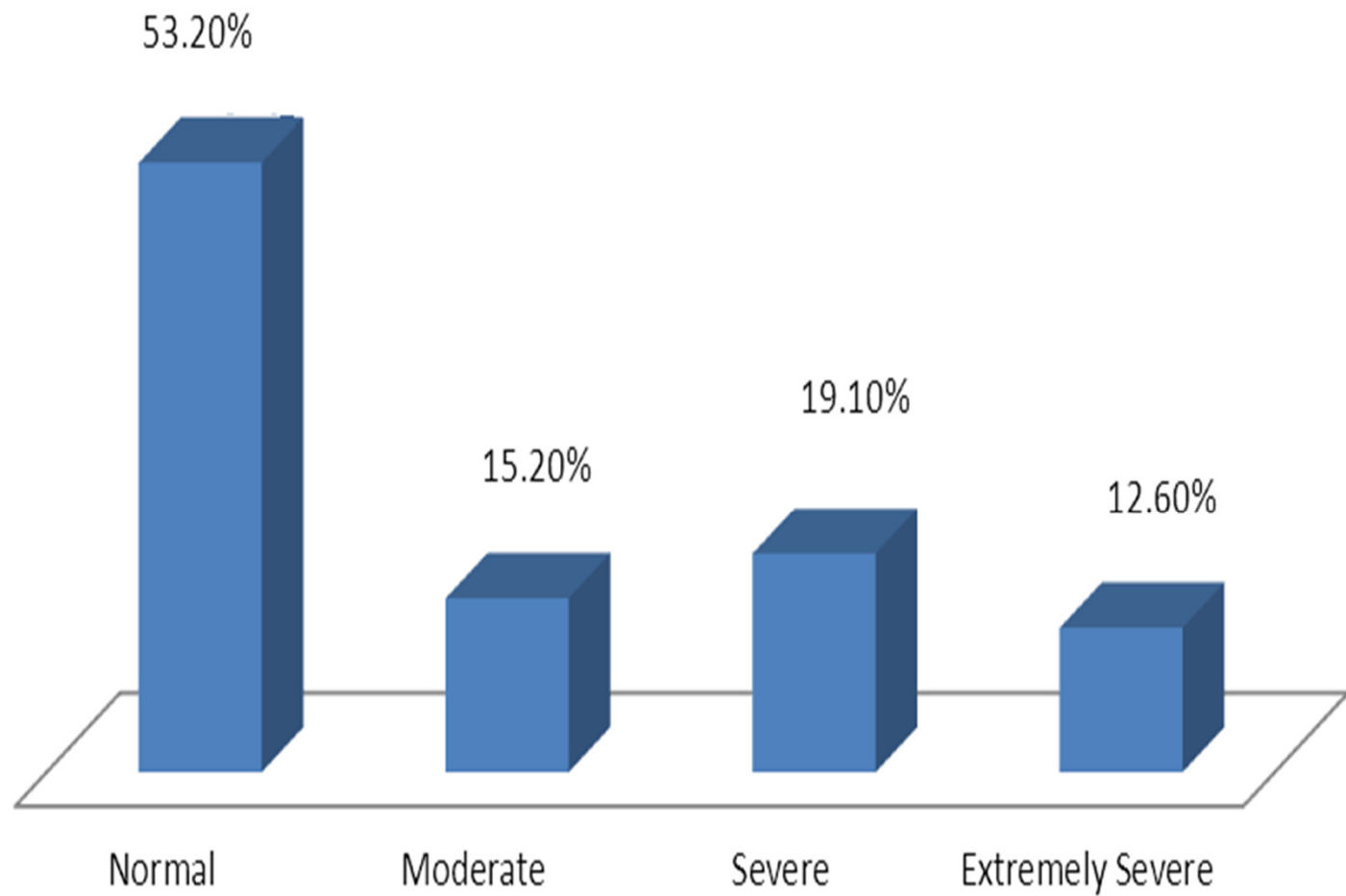
N = 724

53.20%

19.10%

15.20%

12.60%

Normal   Moderate   Severe   Extremely Severe
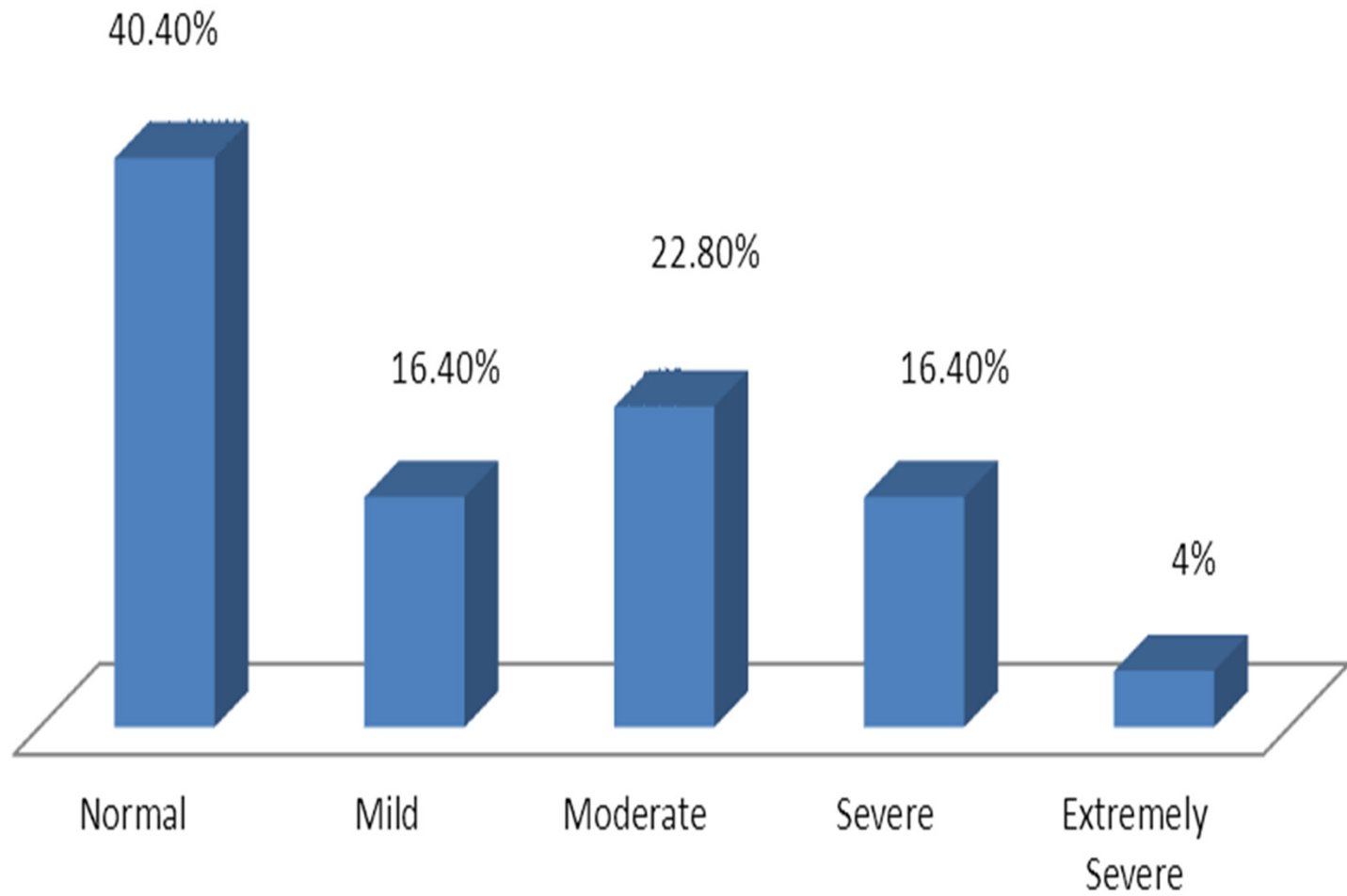
TABLE 1. CORRELATION MATRIX FOR ALL VARIABLES

|	1	2	3	4	5	6	7	8	9	10	11
SNS Addiction	1										
Excessive Use	.913**	1									
Salience	.914**	.777**	1								
Neglect of Work	.864**	.745**	.757**	1							
Anticipation	.719**	.618**	.582**	.552**	1						
Lack of Control	.833**	.729**	.692**	.646**	.575**	1					
Neglect of Social Life	.757**	.631**	.688**	.584**	.480**	.569**	1				
General Mental Health	.544**	.494**	.559**	.507**	.271**	.414**	.437**	1			
Stress	.510**	.470**	.518**	.472**	.249**	.386**	.409**	.936**	1		
Anxiety	.487**	.431**	.505**	.446**	.250**	.377**	.399**	.915**	.801**	1	
Depression	.513**	.470**	.527**	.486**	.250**	.384**	.404**	.921**	.806**	.737**	1

$N = 725$.

$**p < 0.001$.

Result: Psychological Well-Being

- Participants' psychological well-being is divided into 4 categories, the results revealed that about 92.3% of the respondents' psychological well-being level fall under moderate category.

Adolescents' SNS addiction on Psychological Well Being
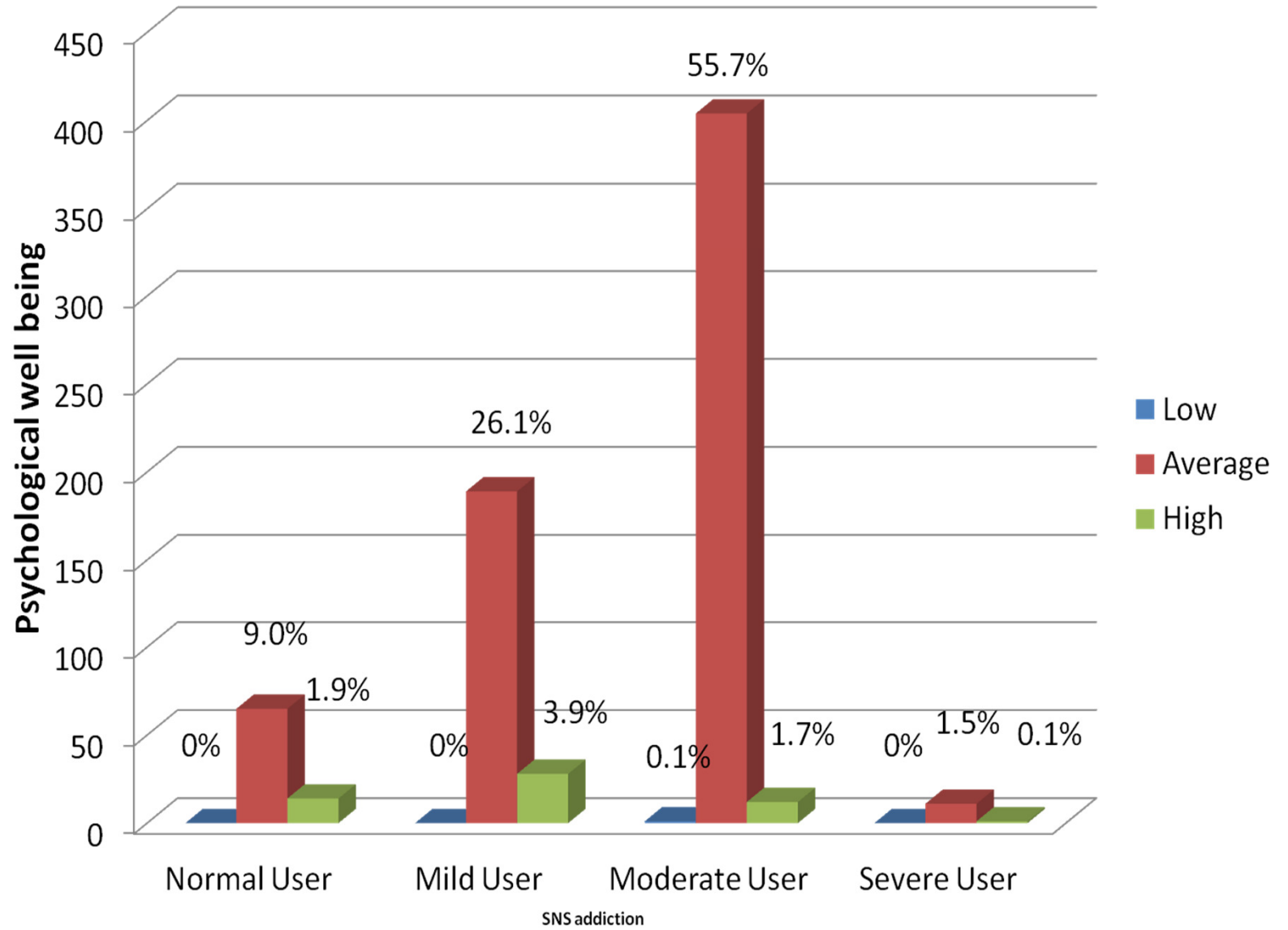
Result: Psychological Well-Being

	1	2	3	4	5	6	7	8
SNS Addiction	1	-.385**	-.149**	-.280**	-.338**	-.199**	-.411**	-.235**
Psychological Well Being		1	.613**	.815**	.799**	.623**	.815**	.764**
Autonomy			1	.502**	.345**	.278**	.341**	.440**
Environmental Mastery				1	.557**	.500**	.588**	.552**
Personal Growth					1	.450**	.633**	.522**
Positive Relation						1	.428**	.373**
Purpose in Life							1	.529**
Self-acceptance								1

**. Correlation is significant at the 0.01 level (1-tailed).

Ryff's Psychological Well-being

AUTONOMY

High Scorer: Is self-determining and independent; able to resist social pressures to think and act in certain ways; regulates behavior from within; evaluates self by personal standards.

Low Scorer: Is concerned about the expectations and evaluations of others; relies on judgments of others to make important decisions; conforms to social pressures to think and act in certain ways.

ENVIRONMENTAL MASTERY

High Scorer: Has a sense of mastery and competence in managing the environment; controls complex array of external activities; makes effective use of surrounding opportunities; able to choose or create contexts suitable to personal needs and values.

Low Scorer: Has difficulty managing everyday affairs; feels unable to change or improve surrounding context; is unaware of surrounding opportunities; lacks sense of control over external world.

PERSONAL GROWTH

High Scorer: Has a feeling of continued development; sees self as growing and expanding; is open to new experiences; has sense of realizing his or her potential; sees improvement in self and behavior over time; is changing in ways that reflect more self knowledge and effectiveness.

Low Scorer: Has a sense of personal stagnation; lacks sense of improvement or expansion over time; feels bored and uninterested with life; feels unable to develop new attitudes or behaviors.

POSITIVE RELATIONS WITH OTHER

High Scorer: Has warm satisfying, trusting relationships with others; is concerned about the welfare of others; capable of strong empathy, affection, and intimacy; understands give and take of human relationships.

Low Scorer: Has few close, trusting relationships with others; finds it difficult to be warm, open, and concerned about others; is isolated and frustrated in interpersonal relationships; not willing to make compromises to sustain important ties with others.

PURPOSE IN LIFE

High Scorer: Has goals in life and a sense of directedness; feels there is meaning to present and past life; holds beliefs that give life purpose; has aims and objectives for living.

Low Scorer: Lacks a sense of meaning in life; has few goals or aims, lacks sense of direction; does not see purpose of past life; has no outlook or beliefs that give life meaning.

SELF-ACCEPTANCE

High Scorer: Possesses a positive attitude toward the self; acknowledges and accepts multiple aspects of self including good and bad qualities; feels positive about past life.

Low Scorer: Feels dissatisfied with self; is disappointed with what has occurred in past life; is troubled about certain personal qualities; wishes to be different than what he or she is.

PART D: The Relationship Between SNS on Adolescents' Social Ties

Literature Review

- Research found that while adolescents use SNS to socialize with friends, they may not develop a strong emotional and social attachment with each other (Park, Kee & Valenzuela, 2009).

- Milani, Osualdella and Blasio (2009) point out that problematic Internet use exerts certain level of impacts on interpersonal relationship in which the quality of interpersonal relationships is found to correlate negatively with problematic Internet use and the amount of time spent on the Internet.

Under the normal user category, social ties were high at 8.8% (N= 64) compared to average social tie 2.1% (N= 15). The same goes to the mild user category where high social ties at 24.4% (N= 177) compared to average social ties at 5.5% (N= 40). Under the moderate user category, high social ties at 29.9% (N= 217) compared to average social ties at 27.60% (N= 200). However, for severe user category, high and average social ties were 1.1% (N=4) and 0.6% (N=8) respectively.

Adolescents' Social Ties
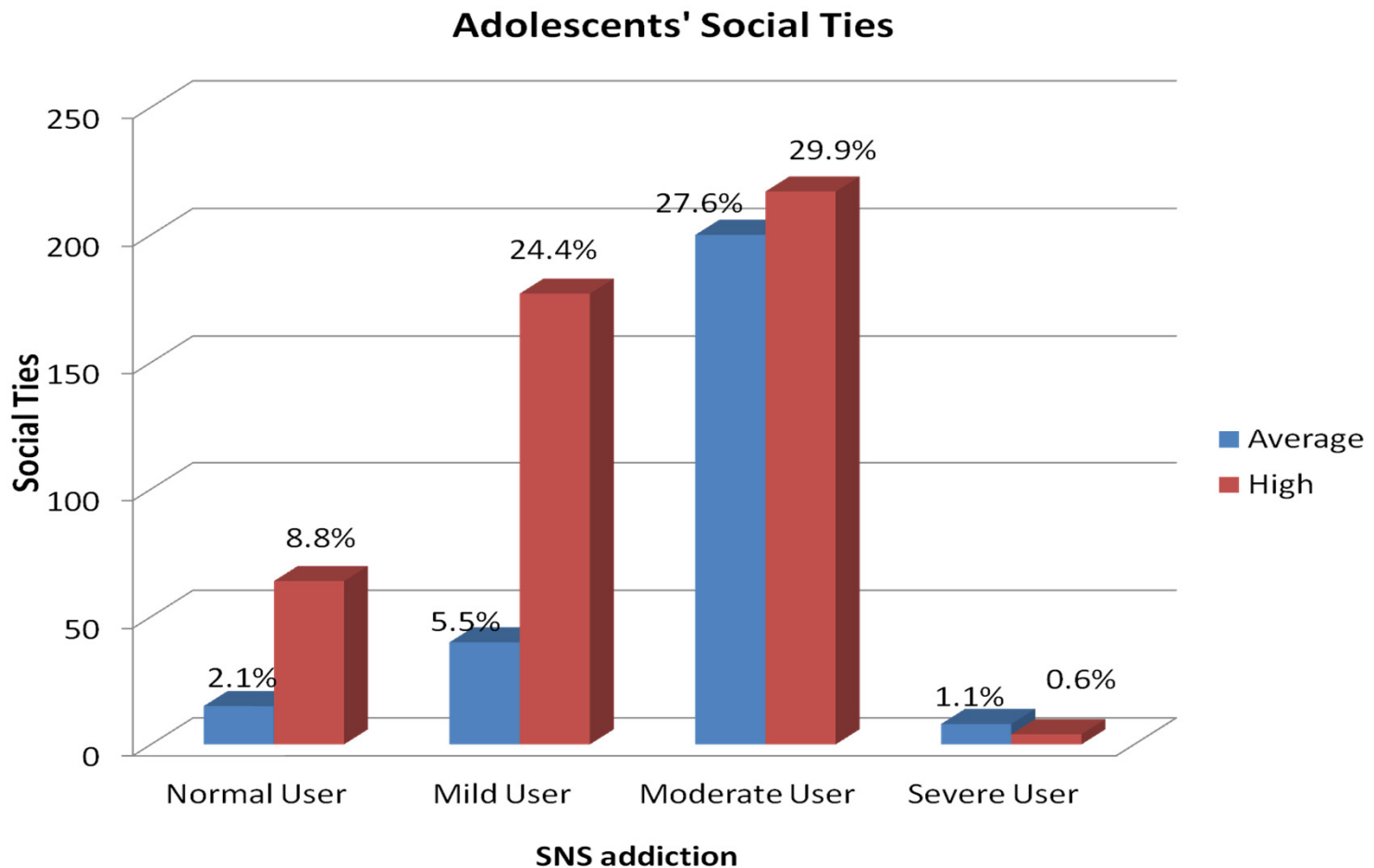
Correlations

	1	2	3	4	5	6	7	8
SNS Addiction	1	-.281**	-.134**	-.285**	-.187**	-.291**	-.204**	-.314**
Attachment		1	.474**	.665**	.564**	.687**	.557**	.896**
Guidance			1	.375**	.370**	.440**	.331**	.546**
Social Integration				1	.499**	.641**	.596**	.817**
Reassurance of worth					1	.529**	.505**	.716**
Reliable Alliance					.	1	.604**	.851**
Opportunity for Nurture							1	.749**
Overall Social Provision								1

**. Correlation is significant at the 0.01 level (1-tailed).

Social Provision Subscale

Attachment:

emotional closeness

Social Integration:

a sense of belonging to a group of friends

Reassurance of Worth:

recognition of one's competence

Reliable Alliance:

assurance that others can be counted on in times of stress

Guidance:

advice or information

Opportunity for Nurturance:

providing assistance to others

Limitation & Recommendation

- Secondary students and private university students should be included in future studies as children are exposed to the use of Internet at younger age due to the advancement of technology to increase its representation of the whole population.

- A remedial of intervention program should be installed to assist SNS addicts in confronting their excessive usage behaviors and in gaining control of their SNS usage.

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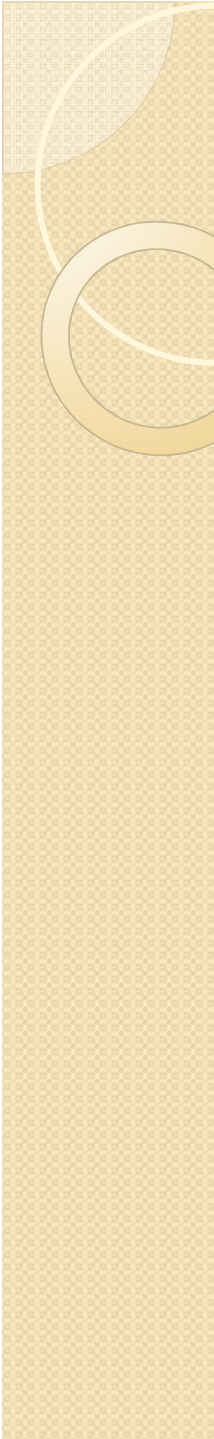
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THANK YOU