

EXAMINING INDIVIDUAL, RELATIONAL AND ENVIRONMENTAL
DYNAMICS OF ADOLESCENT INTERNET USE:
A MIXED METHODS STUDY

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ABSTRACT

EXAMINING INDIVIDUAL, RELATIONAL AND ENVIRONMENTAL DYNAMICS OF ADOLESCENT INTERNET USE: A MIXED METHODS STUDY

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The present mixed methods study aims to examine adolescent Problematic Internet Use (PIU) from the Problem Behavior Theory (PBT) perspective. The first part of the study aimed to achieve an in-depth examination of adolescent PIU and explore the relational and environmental dynamics of PIU. Then, building on this qualitative part, a Structural Equation Model (SEM) that aimed to explain PIU was hypothesized and tested in the second part of the study. For this purpose, firstly, semi-structured in-depth interviews were conducted separately with 20 parent-adolescent pairs. Then, 1582 high school students participated in the quantitative study. Participants filled out questionnaires that measured perceived parenting practices for both mothers and fathers, perceived social support from family, loneliness, avoidant coping, self-regulation skills, and PIU. SEM was used to test the hypothesized model.

Findings provided an in-depth understanding of PIU as experienced and defined by adolescents and parents. Qualitative results revealed that self-regulation and coping skills are critical personal variables associated with PIU, whereas parenting practices, perceived support, and loneliness are important relational and environmental factors contributing to PIU. SEM findings also supported that accepting parenting style perceived from the mother, loneliness, self-regulation, and coping skills directly predict PIU. Also, accepting parenting perceived from the father had significant indirect paths to PIU through loneliness, self-regulation, and coping skills. The theoretical and practical implications and recommendations for future research were discussed along with further details of the findings.

Keywords: Problematic internet use, adolescents, parents, problem behavior theory, mixed methods design.

ÖZ

ERGENLERİN İNTERNET KULLANIMININ BİREYSEL, İLİŞKİSEL VE ÇEVRESEL DİNAMİKLERİNİN İNCELENMESİ: KARMA YÖNTEMLER ÇALIŞMASI

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Karma yöntem çalışması olarak tasarlanan bu çalışma, ergenlerin Problemlili İnternet Kullanımını (PİK) Problem Davranış Kuramı (PDK) bakış açısından incelemeyi amaçlamaktadır. Çalışmanın ilk bölümü, PİK'i ergen ve ebeveynlerinin bakış açısından incelemektedir. Bu bölümde, ergen PİK'inin derinlemesine incelenmesi ve PİK'in ilişkisel ve çevresel dinamiklerinin daha iyi anlaşılması amaçlanmıştır. Çalışmanın ikinci bölümünde, nitel bulgulara dayanarak PİK'i açıklamayı amaçlayan bir yapısal eşitlik modelinin (YEM) önerilmesi ve test edilmesi hedeflenmiştir. Bu amaçla, öncelikle 20 ebeveyn ve ergen çifti ile ayrı ayrı, yarı-yapılandırılmış derinlemesine görüşmeler yapılmıştır. Daha sonra, 1582 lise öğrencisi nicel çalışmaya katılmış ve algılanan sosyal destek, her iki ebeveyninden algılanan ebeveynlik tarzı, yalnızlık, kaçınan başa çıkma, öz düzenleme becerileri ve PİK ölçeklerini doldurmuştur. Önerilen modeli test etmek için YEM kullanılmıştır.

Bulgular, PİK'in ergen ve ebeveynler tarafından nasıl deneyimlendiği ve tanımlandığına dair önemli bilgiler sağlamıştır. Nitel sonuçlar, öz düzenleme ve başa çıkma becerilerinin PİK ile anlamlı ilişki gösteren kişisel düzeydeki değişkenler olduğunu göstermiş, algılanan ebeveynlik tarzı, sosyal destek ve yalnızlığın PİK'e anlamlı katkıda bulunan ilişkisel ve çevresel etkenler olduğu bulunmuştur. Ayrıca, YEM bulguları da anneden algılanan kabul edici ebeveynlik tarzı, yalnızlık, öz düzenleme ve başa çıkma becerilerinin PİK'i doğrudan yordadığını desteklemektedir. Ayrıca, bulgulara göre, babadan algılanan kabul edici ebeveynlik tarzı, yalnızlık, öz düzenleme ve başa çıkma becerileri yoluyla PİK'e dolaylı olarak etki etmektedir. Kuramsal ve uygulamaya dayalı çıkarımlar ve gelecekteki araştırmalar için öneriler bulguların detayları ile birlikte tartışılmıştır.

Anahtar Kelimeler: Problemlı internet kullanımı, ergenler, ebeveynler, problem davranış kuramı, karma yöntem çalışması.

*To my better half Cankat.
To our new life.*



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TABLE OF CONTENTS

PLAGIARISM.....	iii
ABSTRACT	iv
ÖZ	vi
DEDICATION.....	viii
ACKNOWLEDGMENTS	ix
TABLE OF CONTENTS.....	xii
LIST OF TABLES.....	xvi
LIST OF FIGURES	xvii
LIST OF ABBREVIATIONS	xviii
CHAPTERS	
1.INTRODUCTION	1
1.1.Background to the Study	1
1.2.Purpose of the Study.....	9
1.3.Research Questions and Hypotheses.....	10
1.3.1.Research Questions.....	10
1.3.2.Hypotheses	11
1.4.Significance of the Study.....	12
1.5.Definition of Terms	18
2.REVIEW OF THE LITERATURE	20
2.1.What Motivates Internet Use?	20
2.1.1.Users and Gratifications Theory.....	21
2.1.2.Rich Get Richer and Social Compensation Hypotheses.....	23
2.1.3.Displacement and Stimulation Hypotheses	24

2.2.What Makes Internet Use Problematic?	26
2.2.1.Disease Model of Problematic Internet Use	30
2.2.2.Cognitive-Behavioral Theory	31
2.2.3.Social-Cognitive Theory.....	34
2.2.4.Media Habit and Deficient Self-Control Perspective.....	36
2.2.5.Problem Behavior Theory.....	38
2.3.Study Variables within PBT Framework	46
2.3.1.Demographics/Social Structure System	46
2.3.2.Socialization System	50
2.3.3.Personality System	53
2.3.4.Perceived Environment System	60
2.4.Interventions for Treating and Preventing PIU.....	66
2.4.1.School-Level Interventions.....	68
2.4.2.Family-Level Interventions.....	69
2.5.Studies in Turkey	74
2.5.1.Intervention Studies in Turkey.....	76
2.6.COVID-19 and PIU.....	78
2.7.Summary of the Literature Review	81
3.METHOD.....	83
3.1.Research Design.....	83
3.2.Sampling and Participants	84
3.2.1.Sampling Procedure in the Qualitative Study	84
3.2.2.Sample Characteristics in the Qualitative Study	86
3.2.3.Sampling Procedure in the Quantitative Study	86
3.2.4.Sample Characteristics in the Quantitative Study	87
3.3.Data Collection Instruments	88
3.3.1.Interview Protocol in Qualitative Study	88
3.3.2.Instruments used in the Quantitative Study	90

3.4.Data Collection Procedure.....	101
3.4.1.Data Collection Procedure in Qualitative Study	102
3.4.2.Data Collection Procedure in Quantitative Study	106
3.5.Data Analysis	106
3.5.1.Data Analysis in Qualitative Study	106
3.5.2.Data Analysis in Quantitative Study	107
3.6.Limitations.....	107
4.RESULTS.....	110
4.1.Results of the Qualitative Study.....	110
4.1.1.Superordinate Theme 1: Problem Definition	112
4.1.2.Superordinate Theme 2: Experience of Adolescents.....	114
4.1.3.Superordinate Theme 3: Experience of Parents	122
4.1.4.Superordinate Theme 4: Facilitators & Solutions	128
4.2.Building to the Quantitative Study.....	134
4.3.Results of the Quantitative Study.....	136
4.3.1.Preliminary Analysis	136
4.3.2.Descriptive Statistics	141
4.3.3.Model Testing	146
5.DISCUSSION.....	167
5.1.Discussion of Qualitative Findings	167
5.1.1.Discussion of Problem Definition	168
5.1.2.Discussion of Adolescent Experience	171
5.1.3.Discussion of Parent Experience	176
5.1.4.Discussion of the Risks and Protective Factors	181
5.2.Discussion of Quantitative Findings	184
5.2.1.Socialization System: Parenting and PIU	187
5.2.2.Personality System: Self-Regulation and Coping	189
5.2.3.Perceived Environment System: Loneliness and Support	192

5.3.Implications for Practice and Theory	195
5.4.Recommendations for Future Research	199
REFERENCES	203
APPENDICES	
APPENDIX A: APPROVAL OF ETHICS COMMITTEE-QUALITATIVE	276
APPENDIX B: APPROVAL OF ETHICS COMMITTEE-QUANTITATIVE	277
APPENDIX C: APPROVAL FORM FROM MONE	278
APPENDIX D: INFORMED CONSENT FORM FOR FIRST STUDY	279
APPENDIX E: PARENT CONSENT FORM FOR FIRST STUDY	280
APPENDIX F: INTERVIEW PROTOCOL FOR PARENTS	281
APPENDIX G: INTERVIEW PROTOCOL FOR ADOLESCENTS	284
APPENDIX H: PARENT CONSENT FORM FOR SECOND STUDY	287
APPENDIX I: INFORMED CONSENT FORM FOR SECOND STUDY	288
APPENDIX J: DEMOGRAPHIC INFORMATION FORM	289
APPENDIX K: PROBLEMATIC INTERNET USE SCALE SAMPE ITEMS	290
APPENDIX L: SELF REGULATION INVENTORY SAMPLE ITEMS	291
APPENDIX M: ULS-8 SCALE SAMPLE ITEMS	292
APPENDIX N: COPING WITH STRESS SCALE SAMPLE ITEMS	293
APPENDIX O: PARENTING STYLES SCALE SAMPLE ITEMS	294
APPENDIX P: PERCEIVED FAMILY SUPPORT SCALE SAMPLE ITEMS	295
APPENTIX R: THE OUTPUT OF THE QUANTITATIVE MODEL	296
APPENDIX S. TÜRKÇE ÖZET/TURKISH SUMMARY	297
APPENDIX T. CURRICULUM VITAE	320
APPENDIX U: THESIS PERMISSION FORM / TEZ İZİN FORMU	322

LIST OF TABLES

Table 3.1 Demographics of the Adolescent Participants in the Study.....	86
Table 3.2 List of Schools According to the Districts.....	87
Table 3.3 Descriptive Statistics Regarding Age and Grade Level	88
Table 3.4 Factor Loadings, Standard Errors and R^2 of PIU	92
Table 3.5 Factor Loadings, Standard Errors and R^2 of ULS.....	94
Table 3.6 Factor Loadings, Standard Errors and R^2 of SSCA	95
Table 3.7 Factor Loadings, Standard Errors and R^2 of SRI	97
Table 3.8 Factor Loadings, Standard Errors and R^2 of CSI.....	98
Table 3.9 Factor Loadings, Standard Errors and R^2 of PSI.....	100
Table 4.1 Subordinate Themes, Superordinate Themes and Codes in the Study...	111
Table 4.2 The Means and Standard Deviations of Variables in the Study	142
Table 4.3 Intercorrelations among All Variables in the Study.....	145
Table 4.4 Factor Loadings and Cronbach Alpha Coefficients of Items	147
Table 4.5 Names and Items of Each Parcel.....	148
Table 4.6 Normality Values After Item Parceling.....	149
Table 4.8 Parameter Estimates of the Measurement Model.....	152
Table 4.9 Intercorrelations among Latent Variables.....	153
Table 4.10 Global Fit Indices of Structural Models Tested	156
Table 4.11 Direct, Indirect, and Total Estimates of Direct Paths.....	158
Table 4.12 Squared Multiple Correlation Coefficients for Latent Variables.....	161

LIST OF FIGURES

Figure 1.1 The Conceptual Structure of PBT.....	6
Figure 1.2 Hypothesized Model in the Present Study	9
Figure 2.1 Displacement & Stimulation Hypotheses.....	25
Figure 2.2 Cognitive Behavioral Conceptualization of PIU	33
Figure 2.3 Social Cognitive Theory Framework.....	35
Figure 2.4 The Conceptual Structure of Problem Behavior Teory	39
Figure 3.1 Exploratory Sequential Design.....	84
Figure 4.1 Assumption of Homoscedasticity	139
Figure 4.2 Histogram Distribution of Residuals.....	140
Figure 4.3 P-plot of Residuals.....	140
Figure 4.4 Linearity of Residuals	141
Figure 4.5 Measurement Model	151
Figure 4.6 The Structural Model	157

LIST OF ABBREVIATIONS

PIU: Problematic Internet Use

PBT: Problem Behavior Theory

SNS: Social Networking Sites

SEM: Structural Equation Modeling

CFA: Confirmatory Factor Analysis

EFA: Exploratory Factor Analysis

SRMR: Standard Root Mean Square Residual

RMSEA: Root Mean Square Error of Approximation

CFI: Comparative Fit Index

TLI: Tucker Lewis Index

CHAPTER 1

INTRODUCTION

1.1. Background to the Study

The internet has occupied an essential place in individuals' lives since the 1990s. It has created significant changes in various aspects of life, such as relationships, business, education, shopping, and obtaining information (Barak & Suler, 2008). Over time, the more individuals had access to the internet, the more the field of human experience in cyberspace was created to be discovered (Turkle, 1995). Recent statistics tell us that 94.1% of the household in Turkey has access to the internet in 2022, whereas this ratio was 92% in the prior year (Türkiye İstatistik Kurumu [TÜİK], 2021; 2022a). The percentage of children and adolescents' access to the internet has increased from 50% to 82.7% in the last six years. Among all users, 90.1% of children and adolescents have reported daily internet use (TÜİK, 2022b). Therefore, it is safe to infer that access to the internet and the frequency of internet use is rapidly increasing. Certainly, these numbers do not by themselves indicate a problem. On the contrary, increasing access to the internet is a sign of developing technology and improving socioeconomic status (Yoon et al., 2020). However, as daily routines such as shopping, communicating, working, and learning are being transformed into the online environment, it is becoming harder to maintain the balance between online and offline lives (Wiltgen, 2021). Therefore, in order to prevent problems that can arise from unbalanced internet use, learning to form a healthy relationship with the internet and guiding young individuals through the obscurity of the cyberspace is becoming a priority of modern society (Jancke, 2007).

Considering the growing dependence on technology, it is not easy to state the difference between necessity and problem regarding the amount of internet use (Cheung et al., 2018; Young & Abreu, 2011). Researchers have studied problematic internet use in the form of various behaviors such as online dating, video gaming, online gambling, social networking, and cyber-sexual behaviors (Young, 1999). In fact, there has been a lack of consensus on how to refer to this phenomenon. The terms '*internet addiction*', '*problematic internet use*,' '*excessive internet use*,' and '*compulsive internet use*' have all been used interchangeably in the literature to refer to the use of the internet to the degree that individuals neglect other areas of their lives (Widyanto & Griffiths, 2007). Beard & Wolf (2001) have argued that the term 'addiction' involves theoretical ambiguities; therefore, terms such as 'excessive,' 'problematic,' or 'maladaptive' are considered the more optimal choices. Besides, the internet use does not have to meet the criteria of 'addictive' or 'compulsive' behavior, to have psychosocial, behavioral, and medical consequences that require attention (Beard & Wolf, 2001; Durkee et al., 2016; Griffiths et al., 2016; Widyanto & Griffiths, 2007). The term problematic internet use is also considered a better alternative since it describes a broader scope of behavior from indicators of mild disturbances to severely disturbed behaviors (Ang et al., 2012). In association with these debates, the term 'problematic internet use' is suggested to be the most appropriate term over the alternatives such as addiction (Fernandes et al., 2019). Therefore, to preserve consistency, the term problematic internet use (PIU) was used throughout the study.

The most common outlook of PIU includes excessive amounts of time spent online, staying online longer than intended, having difficulty in managing time spent on the internet, and using online activities to modify daily life conflicts (Beard, & Wolf, 2001; Shapira et al., 2003; Young, 1996). Internet use most commonly becomes problematic when individuals use the internet to cope with adverse life events or counteract other inadequacies (Griffiths, 2000). Besides, low self-esteem, perceived lack of social support, feelings of isolation or dissatisfaction with physical appearance

can adversely affect healthy Internet use (Brand et al., 2016). As a result, this can lead to insomnia, stress, anxiety, depression, low self-esteem, and low academic performance (Younes et al., 2016; Samaha & Hawi, 2016). Studies in Turkey, similar to the studies in Western literature, highlight that unhealthy attachment styles (Atalan-Ergin 2018; Uygun et al., 2022), lack of social support, relational issues with family, depression (Boyacı, 2019), and low levels of academic achievement (Derin & Bilge 2016) are the most critical risk factors for PIU.

Although PIU can be a concern for all ages, specific age groups may be at more risk than others due to developmental characteristics (Cao et al., 2011). Thus, the nature of the problem is suggested to be examined separately in accordance with the individual's developmental stage (Derevensky, 2019). Adolescence, ages between 10 to early 20s, is especially considered a risky period for PIU and many other problematic behaviors (Griffiths & Kuss, 2011; Leather, 2009). It is a crucial period in human life in which many biological, psychological and social transitions occur (Sawyer et al., 2018). Biological, social and psychological transitions occurring within this period create a vulnerability for the development of mental health problems and risky behaviors (Andrews et al., 2021; Griffiths & Kuss, 2011; Kessler et al., 2007; Leather, 2009). Moreover, online tools such as instant messaging, social networking, and gaming have substantial places in adolescents' lives (Rideout et al., 2010; Tsitsika et al., 2014). They are valuable tools for developing and maintaining friendships, a primary psychological need in this period (Mittman et al., 2022). Therefore, children's and adolescents' development is closely related to how they relate to digital media and the internet (Gerwin et al., 2018).

The onset of adolescence, called the early adolescence period, refers to the ages between 10 and 14 (Hofmann & Greydanus, 1989). The appearance of secondary sexual characteristics, accelerated growth, concrete and short-term thinking, and the onset of defining boundaries within the family characterize early adolescence. Starting from the age of 14 until 17 is the middle adolescence period. In this period, growth relatively slows down, secondary sexual characteristics are advanced,

thinking is more abstract, more long-term thinking is possible, conflicts within the family are increased, and identification with a peer group is an important agenda. Finally, from the age of 17 to the early 20s, physical characteristics are entirely matured, abstract thinking is established, future-oriented thinking is possible, and family relationships are in more adult-to-adult form compared to prior child-adult relationship dynamics (Hofmann & Greydanus, 1989). Among these different periods, problematic relationship with the internet reach its highest potential in adolescents between 15 and 18 (Karacic & Oveskovic, 2017). Accordingly, in this period, compared to early adolescence, adolescents reach a greater level of independence-seeking, their free time or social activities are controlled relatively less by their parents compared to earlier periods in adolescents (Karacic & Oveskovic, 2017; Wu et al., 2016). Besides, in middle adolescence, adolescents distance themselves from their parents, wishing for more autonomy and spending most of their time with their peers rather than their parents (Steinberg & Silk, 2002). Online tools are great opportunities for adolescents to address their relational needs that is dominant in this period (Mittman et al., 2022). Adolescents' tendency to live in the here and now, look for exciting, stimulating experiences, and have trouble judging the long-term impact of their actions, require adults to guide and teach them to cope more positively in both the traditional and digital environments (Jancke, 2007). PIU in adolescents have been closely associated with emotional dysregulation (Gioia et al., 2021), depressive symptoms and substance use (Kiraly et al., 2021), attention problems (Marin et al., 2021), and sleep disturbances (Tereschenko et al., 2021).

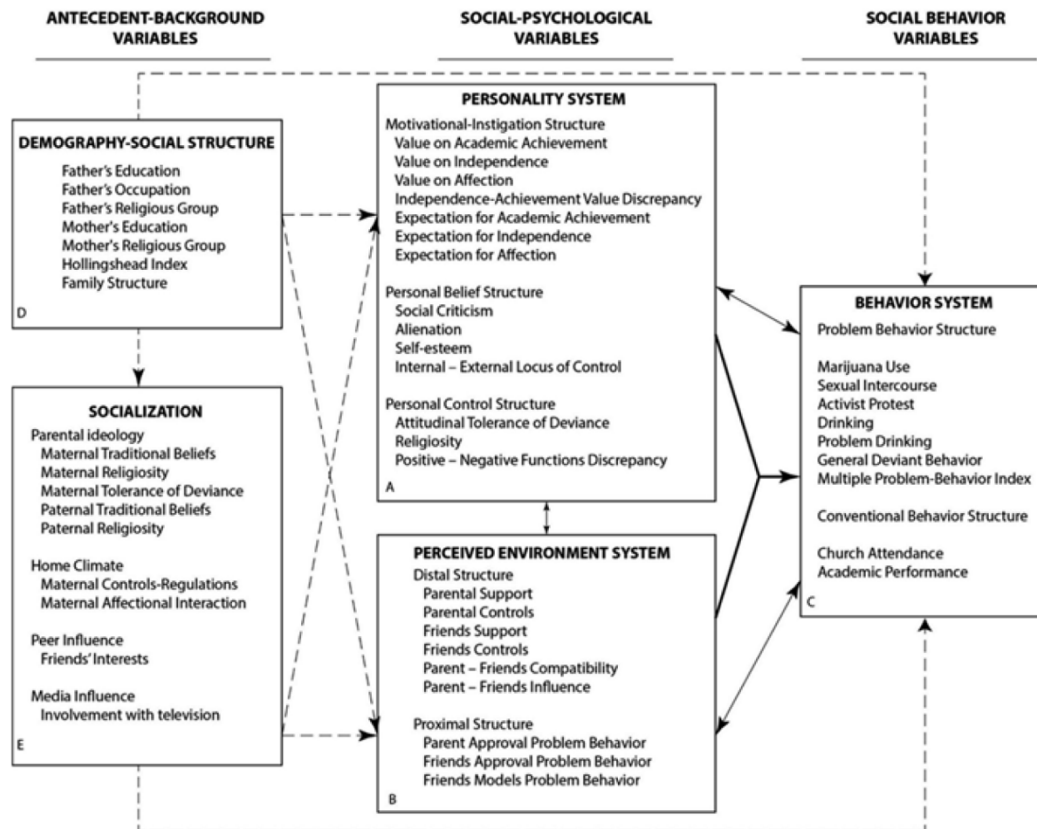
Research shows that adults display a noticeable moral panic, concern, uncertainty, and anxiety regarding the implications of technology use of young individuals (Dunkels et al., 2011; Herr, 2006; Herring, 2008). Especially parents, educators, counselors, and other healthcare providers have been expressing concerns regarding adolescents use of internet technologies and their consequences (Gentile, 2009; Hamlen, 2013; Kwon, 2011; Loader & Dutton, 2012). As a result of these panic, there is considerable speculation in both academia and popular media about the risks and benefits of online activities (Herring, 2008). Most of the parents are concerned for the

adolescents' well-being and seek help (Myrick, 2017). However, most adolescents are unwilling to seek help regarding internet use since they disagree on the existence of a problem (Kwon, 2011). This disagreement in the perception of the problem between the parent and the adolescents partly results from the generational difference. However, this generational difference is more than merely an age difference and involves a digital divide as well. To be more specific, those who have grown up in the digital world, namely digital natives and those who have not grown up in the digital world, digital immigrants (Prensky, 2001), are affected by a generational divide (Herring, 2008; Subrahmanyam & Smahel, 2011). Due to this generational divide, digital natives and digital immigrants attribute different meanings to technology use. While most digital natives perceive their internet use as regular, digital immigrants may see youth as in crisis (Eşgi, 2013; Herr, 2006; Herring, 2008; Vadeboncoeur, 2005). However, it is crucial to recognize that future life will be mediated by technology and embrace the task of encouraging adolescents to use digital technology wisely and cope with the demands of the digital world (Prensky, 2009). Since it is not possible to eliminate the internet from our lives anymore, a clear understanding of underlying mechanisms of internet use and comprehensive interventions in terms of promoting healthy internet use habits becoming more and more critical.

Different theoretical perspectives such as Cognitive Behavioral Theory (Davis, 2001) or Media Habit and Deficient Self-Control Perspective (LaRose, 2017) that is based on Social Cognitive Theory (Bandura, 1986) have been adopted in order to explain, prevent and treat adolescent PIU. Although the Cognitive-Behavioral model of PIU has been the most commonly used theoretical approach in studies that attempt to explain, prevent and treat PIU, it has been criticized in the sense that it lacks focus on interpersonal or social components of PIU (Caplan, 2002). Therefore, the need for further investigation of PIU from different perspectives has been underlined. Jessor's (1987) Problem Behavior Theory (PBT) offers a valuable framework that enables investigation of different aspects of the problem in the same model (Figure 1.1).

Figure 1.1

The Conceptual Structure of PBT



In PBT, human behavior is conceptualized as a result of person-environment interaction and characterized by the integration of social context and the individual. The theory examines the behavior within a multi-system perspective, including five major systems to contribute to the formation of behavior which are demographics system, socialization system, personality system, perceived environment system and the behavior system as the outcome (Jessor, 1991). More specifically, within the demographics system, variables such as gender, parent income, socio-economic status (SES), and neighborhood are included (Aydemir et al., 2021; Cao et al., 2011; Lai & Kwan, 2017; Sun et al., 2021). Socialization system is mainly construed by the parental beliefs and parental reward and control structures (Jessor et al., 1968; Laible & Thompson, 2007). Personality system, as the third system in the model, is most commonly defined by the variables such as, self-esteem, social competence,

personality characteristics, self-control and coping skills (Gioia et al., 2021; Jorgenson et al., 2016; Stavropoulos et al., 2017). Perceived environment system is consisted of the immediate surrounding of the adolescent which is the parents, peers and the school environment (Jessor, 2016). How they relate and communicate with each other as well as the amount of support they perceive from the immediate people in their lives and the general school climate are categorized under the perceived environment system (Alt & Boniel-Nissim, 2018; Longstreet et al., 2019; Musetti et al., 2020). Finally, the behavior system includes the outcome behavior as a result of interactional dynamics of the antecedent and psycho-social variables in prior systems. The outcome behavior can either be claimed healthy or unhealthy depending on the functionality and purposiveness of the behavior (Jessor, 1987).

Although PBT has been widely used with other problematic issues such as drinking and substance use (Chun et al., 2020) studies adopting a PBT perspective is relatively less common in PIU research (De Leo & Wulfert, 2013). However, there are several studies, including recent ones, that include PBT as their framework. For example, a study has examined PIU using variables from perceived environmental and personality systems and found supportive evidence of PBT (Jin et al., 2022). Another study has confirmed that PBT is a valid framework in explaining the relationship between parenting behaviors and adolescents' problematic mobile phone usage (Yao et al., 2021). Besides the studies that adopt PBT as their main theoretical framework, countless studies suggest that PIU should be examined in relation to the environmental, relational factors and personal factors (Ang, 2015; Jackson et al., 2012; Lai & Kwan, 2017; Throuvala et al., 2019; Vondrackova & Gabrhelik, 2016) as suggested in PBT. Therefore, a qualitative investigation was planned, to discover the systemic factors of the problem behavior as well as to determine the exact variables to be included in the model. Consequently, in the present study, parenting styles for both mother and father, more specifically accepting/warm parenting and control/strict parenting were included in the socialization system. Perceived level of loneliness and perceived social support from family were the two variables in the perceived environment system. Self-regulation success and avoidant coping was

variables in the personality system. And finally, problematic internet use was the outcome behavior in the behavior system. Overall, the choice of theoretical framework in the present study can be summarized by a number of criteria. First, the PBT allows to comprehensively examine the behavior in a multi-system framework. It is a theory which does not only attempt to explain unhealthy behavior but also aims to understand healthy adolescent behavior (Jessor & Turbin, 2016). Finally, the theory offers guidelines to the prevention of treatment regarding the adolescent behavior by focusing on risk factors and protective factors within each system, and promoting changes in both personal and socio-environmental levels (Jessor, 2016).

Through information and explanation that has been presented above, it is possible to say that technology and internet have become an inseparable part of the daily routine and in a very near future even higher number of children, adolescents and adults will be active users of the internet. In a world of enhanced technological opportunities, individuals, to some degree, are struggling to find a balance between digital world and real world (Wiltgen, 2021). This struggle is relatively harder for adolescents who, due to some developmental characteristics, lack sufficient mechanisms that hinders them to effectively make judgements, reasoning and self-regulate (Andrews et al., 2021; Şirin, 2020). Therefore, the risk of establishing an unhealthy relationship with the internet is even higher for adolescents (Karacic & Oveskovic, 2017). The generational divide between adults and adolescents, make it harder for parents and adolescents to agree on the norm of the internet use, which in turn result with increased conflict, disagreement between adolescents and adults, as well as panic and concern for adults (Özaslan et al., 2021). As adults, especially parents, can create critical changes in how the children and adolescents live and learn, anticipate and be ready to care for and guide their children with an open mind and responsibility (Gani, 2016). The ultimate outcome can only be reached collaboratively. As such, modern society needs researchers, educators, parents, and policymakers to work together to resolve the issue of PIU (Chi et al., 2020). In order to accomplish this goal, a comprehensive examination of adolescent PIU that integrates multiple systems and perspectives is necessary. As number of research and theoretical perspectives attempt

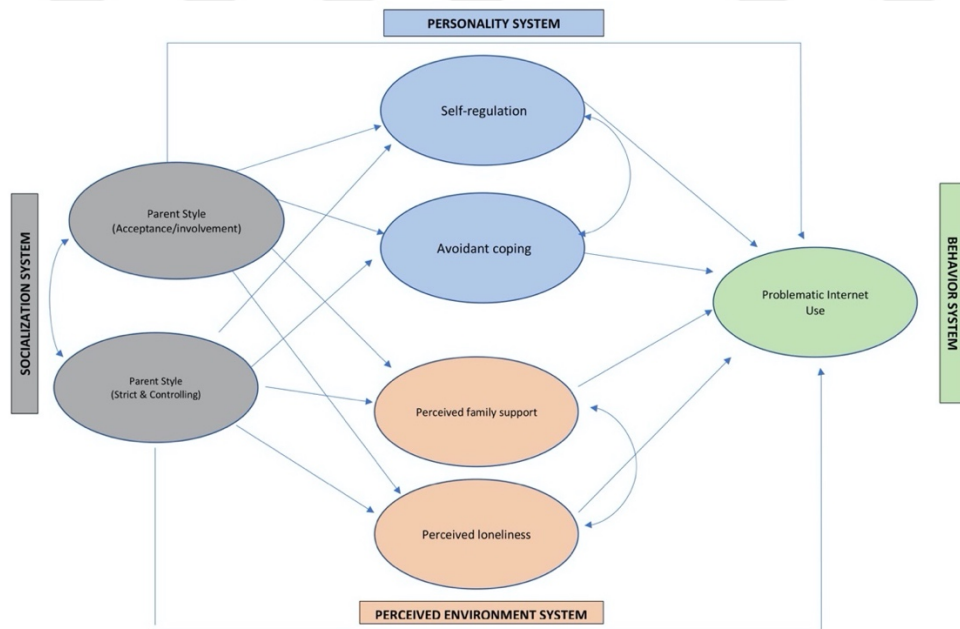
to understand, prevent and treat PIU are available, there are still areas that need more emphasis.

1.2. Purpose of the Study

From the broadest frame of reference, the purpose of the present study is to comprehensively examine the adolescent PIU in a multi-system framework based on PBT. More specifically, the study aims to investigate the dynamics between the predictors of adolescent PIU within different systems suggested by PBT, namely, the demographics system, the socialization system, the perceived environment system, and the personality system. The theoretical nature of these dynamics among the systems is presented and analyzed in a structural equation modeling framework (Figure 1.2).

Figure 1.2

Hypothesized Model in the Present Study



Although PBT clearly explains the common variables included in each system, studies that examine PIU in a PBT framework are scarce (De Leo & Wulfert, 2013; Huang et al., 2019; Lai & Kwan, 2017; Shek & Chai, 2018). Especially, the environmental factors of the adolescent PIU are under-investigated (Kuss et al., 2014). Therefore, the present study also involves a qualitative part with the purpose to determine the exact variables to be included in each system by conducting in-depth interviews prior to the model specification phase. To better comprehend the environmental and systemic dynamics of adolescent PIU, interviews were conducted with both adolescents and their parents. to understand the perceived problem from both perspectives to address the concern and stigma possibly created by parents as a result of generational difference. Besides investigating the essential variables that predict PIU in each system, the qualitative part of the study also attempts to inquire about the adolescents' and their parents' conceptualization of PIU and understand their experiences, observations, and challenges that reflect their perspective of the person-environment interaction dynamics. Therefore, the present study employed qualitative and quantitative methods together. Overall, this exploratory mixed methods design study aims to test a structural equation model that explains adolescent PIU, building on the prior qualitative study including in-depth perspectives of both the adolescents and their parents regarding the phenomenon of PIU.

1.3. Research Questions and Hypotheses

Creswell and Piano-Clark (2018) suggest forming three types of research questions (RQ) in a mixed-methods study: qualitative, quantitative, and mixed methods questions. Research questions for this study are presented below.

1.3.1. Research Questions

RQ.1: How do parents and adolescents define what is considered "problematic" regarding internet use?

RQ.2: What are the personal and environmental experiences of adolescents regarding internet use?

RQ.3: What are the areas of concern, coping strategies, and challenges experienced by parents regarding their child's internet use?

RQ.4: How do parents and adolescents perceive potential risks and protective factors that contribute to problematic internet use of adolescents?

RQ.5: What are major personal and environmental factors contributing to adolescents' problematic internet use?

1.3.2. Hypotheses

Hypothesis 1 assumes that socialization system variables (strict/controlling and accepting/warm parenting styles from both parents) will significantly and directly be related to problematic internet use.

Hypothesis 2 assumes that socialization system variables (strict/controlling and accepting/warm parenting styles from both parents) will significantly and directly be related to personality system variables (self-regulation and avoidant coping style)

Hypothesis 3 assumes that that socialization system variables (strict/controlling and accepting/warm parenting styles from both parents) will significantly and directly be related to perceived environment system variables (perceived loneliness and perceived family support)

Hypothesis 4 assumes that personality system variables (self-regulation and avoidant coping style) will significantly and directly be related to problematic internet use

Hypothesis 5 assumes that perceived environment system variables (perceived loneliness and perceived family support) will significantly and directly be related to problematic internet use

Hypothesis 6 assumes that socialization variables (strict and warm parenting styles) will significantly and indirectly be related to problematic internet use through personality variables (self-regulation and avoidant coping style).

Hypothesis 7 assumes that socialization variables (strict/controlling and accepting/warm parenting styles from both parents) will be significantly and indirectly related to problematic internet use through perceived environment variables (perceived loneliness and family support).

1.4. Significance of the Study

The present study has considerable contributions to the existing literature on several aspects. These contributions can be summarized under three main points, which are the theoretical aspect, the focus of the study sample, and the counseling aspect. The significance of the study is therefore discussed, along with the existing gaps in the literature and potential contributions of the study, accordingly.

To start with the theoretical drawbacks of the current literature, PIU research is still considered an area with major needs to understand the underlying mechanisms of PIU (Weinstein & Lejoyeux, 2010). To begin with, there is a strong need and confusion in some fundamental areas of PIU. For instance, the distinction between normal or excessive and problematic use is inconclusive and more research is needed to illustrate the difference between them clearly (Fernandes et al., 2019). The controversies regarding whether excessive involvement with the internet is a problematic issue or just a consequence of some other problems in life has still been going on. Another fundamental drawback of the existing literature is that majority of the studies on PIU focus on the prevalence of internet use and aim to identify the main

correlates of internet habits (Tokunaga, 2017). It is suggested that the study of internet use in adolescence must go beyond the examination of prevalence research and basic correlates; rather should focus on cultural practices, personal meanings, and psychosocial conditions (Livingstone, 2003). Besides, it is strongly suggested not to approach internet-related behaviors as merely an individual problem and that they need to be examined within a theoretical understanding that integrates environmental and interpersonal factors that constitute the behavior (Ang, 2015; Lai, 2016; Lam, 2015). Existing studies on PIU have not included a wide variety of variables in the analysis for the development of a comprehensive theory of the possible dynamics between the person-environment interactions and PIU (Lai, 2016). As also suggested by the PBT, either for understanding the behavior, or for intervening with the behavior, the pattern that constitutes that particular behavior should be examined as a whole rather than isolated factors (Donovan et al., 1991). In other words, there is a consensus among researchers on the necessity of examining all factors of PIU in adolescents in a multi-system model (Ceyhan, 2008; Jackson et al., 2012; Lai, 2016; Throuvala et al., 2018). Therefore, this lack of a multi-system investigation is also presented together with the lack of theoretical foundation in most of the existing studies (Tokunaga, 2017).

The aforementioned fundamental gaps in the very beginning of the examination of the problem lead treatment and prevention studies to slow down (King et al., 2018). Researchers have emphasized the lack of evidence-based treatment strategies specifically focusing on PIU (Bonnaire et al., 2019). A theoretically-based understanding of the associates of the PIU in personal, social, familial, and interpersonal aspects as well as further examination of risk and protective factors associated with these aspects would enable professionals to build more sound prevention and treatment strategies (for a review see Derevensky, 2019). However, many essential aspects of adolescents' life such as school and family environment, which are considered critical for the development and maintenance of PIU, remain under-investigated (Kuss et al., 2014). Therefore, more studies are needed to provide further insight into mediating and moderating variables, protective and harm-reducing

factors as well as the roles and needs of other stakeholders (e.g., parents, teachers, counselors) to gain a more comprehensive understanding of environmental correlates of PIU and to develop effective preventive strategies (Throuvala et al., 2019). The present study attempts to address this gap by presenting a theoretically based model that examines personal and environmental aspects of PIU behavior simultaneously.

Overall, the definitional confusion regarding PIU, lack of understanding regarding the dynamics of environmental and relational factors constitute important focal points that needs further attention for understanding and preventing adolescent PIU (King et al., 2018). The present study significantly contributes to the existing literature by adopting a PBT perspective and presenting a model that contributes to the comprehensive understanding of adolescent PIU in which environmental, relational, and individual systems that lead to PIU are examined together. Besides, in the qualitative part of the study that aims to investigate the variables in the under-examined systems that predict PIU, it is also aimed to get a better understanding of parents' and adolescents' conceptualization, their experiences that shed light on the future correlational and intervention studies. Therefore, the study adds to the existing literature considerable data that could be used for future prevention studies by adopting a comprehensive methodology that involves both qualitative and quantitative methods.

Another a contribution of the present study is its focus on the adolescents and their parents including a generational difference perspective. Behavioral problems associated with the internet are more prevalent among adolescents compared to adults due to certain biological changes in brain structures, that make adolescents more vulnerable to impulsive, addictive and problematic behaviors (Chambers et al., 2003; Chamorro et al., 2012). Research has supported the notion that major changes in the brain during adolescence make interventions at this age crucial and timely (Murray & Rosenbalm, 2017). Due to the quick changing nature of the developmental period, studies need to be conducted specific to the characteristics of a certain age period (Derevensky, 2019). Therefore, the need for research to comprehend and intervene

with the different periods of adolescent PIU is crucial. Especially middle adolescence is known to be the period in which most problematic behaviors occurred (Karacic & Oveskovic, 2017). Although many studies indicate that adolescents usually do not agree that internet use is problematic, O'Reilly et al. (2018) have demonstrated adolescents, in fact, agree that there are dangerous aspects to the internet that adversely affect mental wellbeing. However, studies that focus on adolescents' perspectives on the normal amount of internet use are scarce. Therefore, besides focusing on adolescents, and specifically to middle adolescence, the present study makes an essential contribution by attempting to understanding the limits of healthy and unhealthy internet use through adolescents' perspective.

As there is a great amount of speculation regarding harmful consequences of internet use, it is believed that social stigma about the internet use (e.g. gaming and SNSs) and stereotypes about heavy internet users do more harm than the internet itself (Nielsen & Kardefelt-Winther, 2018). Considerable portion of problems associated with adolescents and internet use is depicted by adults, mostly parents. Therefore, it is important to unravel which is real and which is a social stigma constructed by concerned adults. Besides, existing studies have not been given appropriate discussion for parents and educators (Lai & Kwan, 2017). It is crucial to incorporate family, individual, peer relationships and school environment in studies and interventions (McNicol & Thorsteinsson, 2017). Especially parents have a critical place in PIU studies. Since parent-adolescent relationship is an important aspect to understand and intervene, in order to understand the entirety of the problem, the phenomenon should be examined through both perspectives (Borca et al., 2015). However, in the current literature, studies that involve parents mostly involve mothers (Yang & Kim, 2021) or grasp an overall idea of parenting perspective than separately examining the parents (Çetinkaya, 2019; Wei et al., 2020). As the relationship between perceived parent-adolescent relationship and parental behavior on PIU shown to differ according to the gender of the parent (Liu et al., 2013) it is suggested to include both parents in the PIU studies.

In the present study, the purpose of focusing on parents' perspective is twofold. On one hand, it is used as a supplementary source of data aimed to get a better understanding of the critical variables to include in the systems in the theoretical model. On the other hand, to understand the perceived problem from both perspectives to address the concern and stigma possibly created by parents as a result of generational difference or to understand parents' experience and get a more clear indication of the problem by including both perspectives. Ellert et al. (2011) suggested that, parental perspectives on adolescents' behaviors is suggested not to replace self-report of adolescents in older age (such as middle adolescence period) and only be used as supplementary information. As suggested, parental perspective is only used as a supplementary source to get a better understanding of the overall picture and only to shed light on parents' own experience rather than to explain adolescents' behavior. The present study has a clear stance in which, the adolescents' perspective is the main source in explanation of the phenomenon and it is merely supported by the parents' perspective and experiences.

Lastly, the present study has contributions from the counseling aspect as well. The issue of PIU has become a significant concern to the counseling profession, as an emerging mental health problem (Carlisle et al., 2016). According to the Ministry of National Education (2017) Guidance Services Regulation in Turkey, and American School Counseling Association (2019), it is school counselors' duty to provide family guidance services, help students cope with stress and personal problems, and provide education for families, teachers, administrators, and students. As parent-school cooperation is vital to conduct effective prevention interventions (Karadağ & Kılıç, 2019; Zajac et al., 2017) school counselors are in a unique bridging position to assist reducing and preventing online problematic situations because of their continual interaction with students, parents, and other school staff (Lambie & Rokutani, 2002; Watkins et al., 2006). As the most common provider of mental health services to students in school setting, school counselors do not directly perform addiction-related psychotherapeutic interventions with their students (Foster et al., 2005). However, they serve as facilitators to support their students' change efforts (Hagedorn & Young,

2011). School counselors may be the primary contact person for parents and students seeking information (Chibbaro, 2007). For example, they can provide parents with information on the various dangers associated with cyberspace and inform them on the importance of talking to their children about these issues (Bhat, 2008) or help adolescents learn emotional regulation and self-regulation strategies (Lumley & Provenzano, 2003), which is known to be effective in eliminating PIU (Gökçearsan et al., 2016).

However, the majority of school personnel, including counselors, report feeling unprepared to address matters related to PIU (Finn et al., 2004; Wells et al., 2006). Furthermore, there is limited research available in general on counseling youth and their families with Internet safety issues (Burnham, 2009; Rosen, 2007; Wolak et al., 2008). As technological integration into daily life continues to grow, school counselor must stay up to date with current research and trends within this area to address the needs of their students and to help identify and provide services to students who may be struggling with digital addiction or who need support in developing healthy technology habits (Chibbaro et al., 2019). School counselors must be concerned and well informed about the causes and consequences of inappropriate internet and social media use (Oriji & Efebo, 2013). Therefore, research in this field will help counselors have a better understanding regarding the holistic and contextual conceptualization of the issues related to the online behavior of adolescents and they will be better equipped to recognize the problems that may arise due to social media use (Hoffman, 2013). The outcome of the present study could significantly contributes to understand various factors that are associated with PIU, elaborate the perceived problem from both parent and the adolescent's perspective, reveal their needs and challenges so that effective strategies can be developed by counseling professionals.

To summarize, the present study has significant theoretical and practical contributions. First of all, it aims to contribute to the definitional confusion and lack of theoretically based explanations that include multiple systems rather than focusing on the individual level. Secondly, focusing on the middle adolescent period, it helps

to explore the experiences and needs of a certain period more clearly. Also, including the parents as a supplementary source of information it adds a significant perspective that deepens the understanding of relational and environmental dynamics as well as helps to enlighten the parents' personal experiences. Thirdly, in the counseling field, preventing and treating PIU requires the collaboration of parents, the school, and the individual. The multisystem theoretical model and the in-depth examination of adolescent and parental perspectives can further contribute to the counseling field to lay out the foundation for that collaborative relationship.

1.5. Definition of Terms

Problematic Internet Use: "Excessive amounts of time spent online, difficulty in managing time spent on the Internet, feeling that the world outside of the Internet is boring, becoming irritated if disturbed while being online, and decrease in social communication" (Kraut et al., 1998).

Self-Regulation: Kopp (1982) "Ability to comply with a request, to start and cease acts according to situational demands, to adjust the strength, incidence, and duration of acts in social settings, to delay desired object or goal, and to perform socially acceptable behaviors in the absence of external monitors (pp.190).

Loneliness: The perception that the person's social relations is deficient either in quality or quantity (Perlman & Peplau, 1981).

Avoidant Coping: Coping is defined as "cognitive and behavioral efforts to manage external demands that are exceeding the resource of the person" (Lazarus & Foikman, 1984, p.141). Avoidant coping pattern, in particular, is defined by diverting one's thinking or distracting/distancing oneself from the situation or the thought that is bothering the person (Curry & Russ, 1985)

Perceived (Family) Social Support: Social support can be defined as the person's perception that he/she is loved, valued, cared for, and that he/she is a member of a social group with mutual obligations (Cobb, 1976). Perceived family support stands for the degree to which the individual believes that he/she is being valued, loved, and esteemed by their family.

Parenting Styles: The pattern of attitudes and behaviors exhibited by parents that defines their general child-rearing practice (Baumrind, 1971).

Controlling/Strict Parenting Style: The extent to which participants perceive that they are monitored, restricted, observed, and disciplined by their parents (Steinberg et al., 1991).

Affectionate/Warm Parenting Style: The degree to which the person believes that they are loved, accepted, cared for, and understood by their parents (Steinberg et al., 1991).

CHAPTER 2

REVIEW OF THE LITERATURE

The review of the literature chapter consists of six main sections. The first section aims to provide a general outlook on individuals' motivations for internet use and lay out the underlying mechanisms of internet use with respect to the main theories and hypotheses in the field. Secondly, major theoretical perspectives that aim to define and explain the nature of problematic internet use are discussed prior to the presentation of the main theoretical framework of the present study. In the third section, variables included in the present study are examined in relation to PIU. The following section aims to describe existing treatment and prevention strategies targeting PIU. The fifth section aims to bring together the findings of the PIU studies conducted with a Turkish sample. The sixth and final section briefly summarizes the outlook on PIU studies during the COVID-19 pandemic.

2.1. What Motivates Internet Use?

Today, the internet is substantially accessible as it is a part of almost every household. Increasing accessibility of the internet, along with innumerable benefits, makes it more likely for individuals to turn to the internet (e.g., online games, SNS) as an alternative to spending their leisure time. Since it does not cost a lot to use every day, it provides a convenient and affordable choice for entertainment or gaining information for the majority of the population (Griffiths, 2003). Besides being a convenient and affordable alternative to other activities, some unique features of the online environment lead individual users to experience certain feelings and states of being that can only so quickly be experienced in cyberspace. Such unique emotional

and cognitive experiences that come with being online (e.g., SNSs, games) can create certain feelings, such as losing track of time, dissociation, and being in a trance-like state that leads to longer hours of internet use (Griffiths et al., 2006). In cyberspace, the inhibition of behavior becomes greatly diminished, which is called the online disinhibition effect (Joinson, 1998; Suler, 2004). Due to this disinhibition effect, individuals feel looser, less restrained, and therefore able to express themselves more openly than they do in their offline encounters (Suler, 2004).

Consequently, people tend to spend more time online, given its relative social comfort (Griffiths, 2003). Another feature of the internet that supports social comfort is anonymity. The feelings of comfort in anonymous communication are greatly enhanced due to the absence of stigma, disapproval, and signs of judgment in other people's social cues, such as gestures and eye contact (Griffiths, 2003). Communicating with the comfort of anonymity can also increase feelings of social acceptability. Especially if the person longs to be valued and accepted in the real world, the online environment, together with its features that facilitate a socially more comfortable environment, provides an easy, accessible, and affordable opportunity to fulfill those needs (Griffiths, 2010). Besides these unique features of the online world that explain why individuals prefer to spend more time online, several theories and hypotheses have been put forward to explain why individuals have used online media since the very beginning of media culture. These major theories are explained in detail below.

2.1.1. Users and Gratifications Theory

Uses and Gratifications Theory (UGT) is one of the oldest and most popular theories that intends to understand the underlying motivations of technology use (Coyne et al., 2015; Elhai et al., 2017). The primary aim of the theory is to understand the way, the reason, and the purpose of everyday media use (Weiyan, 2015). The basic premise of the UGT is that individuals actively, in a goal-directed way, seek out media to fulfill their various needs and reach ultimate gratification (Katz et al., 1973; Lariscy et al.,

2011). Studies have supported the basic tenet of UGT and showed that gratifications received through media use are meaningful predictors of continuous media use behavior (Kaye & Johnson, 2002).

The most common gratifications sought through online media are social interaction, information seeking, entertainment, and expressing opinions in a relatively free environment (Whiting & Williams, 2013). These gratifications have been brought together under three main categories of gratifications sought in general media use: content gratification, process gratification, and social gratification (Stafford et al., 2004). Content gratification, as apparent in the name, refers to searching for specific information online. The gratification individuals receive stems from the information they purposefully seek and obtain. Process gratification addresses the gratification sought merely by browsing the internet. This browsing behavior can serve several purposes, such as spending leisure time, seeking out information, or distracting oneself. However, it is essential to note that the process of browsing rather than the outcome is the source of gratification in this category. Finally, social gratification is obtained from forming new social relationships online or strengthening existing social ties. This type of gratification can easily be obtained through SNSs that enable distant communication with the existing social network and new relationships (Stafford et al., 2004).

The UGT have also been studied with the adolescent population and their needs and gratifications. Adolescents prefer to use technology to support their needs for autonomy, intimacy in social relationships, to seek sources for their identity experimentations (Coyne et al., 2015), entertainment, to deal with boredom (Rokito et al., 2019), and to cope with daily life stressors (Leung, 2007). In a study with adolescents using UGT as a theoretical framework, each type of gratification has found a place in explaining adolescent online behavior (Duvanege et al., 2020). For instance, as adolescents usually use the internet to connect with others emotionally, this emotional support seeking in the online environment is parallel to social gratification. Moreover, they also use the internet to seek new information regarding

their interests, fulfilling content gratification. Lastly, as a self-distraction method, adolescents usually use the internet just to browse it, referring to the process of gratification.

Although UGT has presented plenty of information regarding motivations of internet use that help explain the purposes of online media use behavior, further explanations are needed to answer the question of how it affects an individual's wellbeing (Duvenage et al., 2020). Several other hypotheses have been proposed to explain the relationship between well-being and online media use.

2.1.2. Rich Get Richer and Social Compensation Hypotheses

The relationship between internet use and psychosocial well-being has long been a concern of researchers. The rich-get-richer (RGR) hypothesis suggests that individuals who are already satisfied with their existing social networks and good social skills benefit the most from the internet (Kraut et al., 2001). Findings in support of this hypothesis assert that people with higher social skills and higher competence in their skills are able to benefit from online communication (Ledbetter, 2009; Poley & Luo, 2012). In other words, according to RGR, the richness of existing social resources (e.g., social skills and social networks) functions as a moderator in the relationship between internet use and well-being. Alternately, the social compensation (SC) hypothesis proposes that individuals who are socially anxious and isolated prefer to use the internet to compensate for their poor social connections and benefit more since the internet provides them a safe space to socialize (Kraut et al., 1998; 2001). The unique features of online communication provide a less threatening environment for individuals who are relatively restrained in social relationships and enable them to relate with others more easily (McKenna & Bargh, 2000). Although findings support that socially anxious individuals prefer to communicate online rather than face-to-face (Baker & Oswald, 2010), there are also contradictory findings which suggest that individuals with higher levels of social skill problems do not prefer to use online communication to compensate for their poor skills (Sheldon, 2013).

Therefore, neither hypothesis is sufficient to explain the relationship between internet use and its effects.

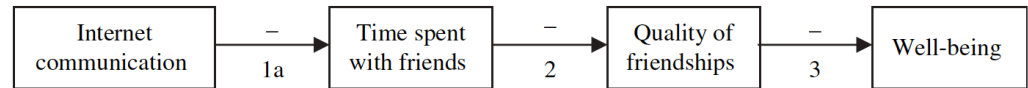
2.1.3. Displacement and Stimulation Hypotheses

The displacement and stimulation hypothesis, two opposing hypotheses, carry the common assumption that online communication influences adolescents' well-being through social relationships (Valkenburg & Peter, 2007a). While the displacement hypothesis argues a negative influence on the time spent online with existing friends and well-being, the stimulation hypothesis assumes a positive relationship between the two. More specifically, the fundamental tenet of the displacement hypothesis is that the internet encourages adolescents to invest in online relationships rather than spending time with their offline, real-world friends. With a priori assumption that internet-formed relationships lack affection and commitment are relatively weaker, the displacement hypothesis suggests that time spent online influences adolescents' well-being in a negative direction. On the other hand, the stimulation hypothesis, also called the augmentation hypothesis (Walther, 1996), argues that online communication technologies, such as instant messaging, encourage communication with existing friends (Bryant et al., 2006). During the time in which adolescents are online, they are also spending time socializing with their existing friends, which strengthens social ties and increases well-being (Gross, 2004; Subrahmanyam et al., 2000; Valkenburg & Peter, 2007a). Both hypotheses are visualized in Figure 2.1 below.

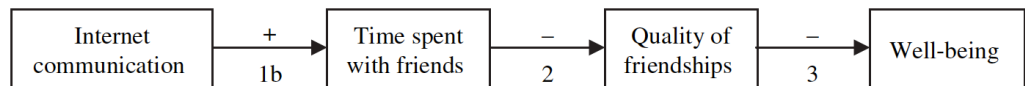
Figure 2.1

Displacement & Stimulation Hypotheses

Displacement Hypothesis



Stimulation Hypothesis



These hypotheses have gained significant attention over the years, and numerous research has tested displacement vs. stimulation hypotheses to evaluate the effect of online media on adolescent social relationships and well-being. Findings indicate that adolescents have consistently been found to use SNS to keep in touch with their existing friends (Valkenburg et al., 2011) and feel closer to their existing peers in support of the stimulation hypotheses (Valkenburg & Peter, 2007b). In the study of Ahn and Shin (2013), the aspect of media that enables individuals to maintain existing social relations are consistent with the stimulation hypothesis. Although the effect was small, online communication enhanced face to face (FtF) communication six months later (Dienlin et al., 2017). In the study by Lee (2009), it was found that adolescents who already had strong relationships tended to use online communication and develop better connectedness to their friends and to school, which is in line with the rich-get-richer and stimulation hypotheses. Findings also suggest that those with poorer social skills report a lessened need for email, contradicting the social compensation and displacement hypothesis. The study (Lee, 2009) also examined the parental relationship in addition to peer relationships and found that frequent use of social media or any online method of communication lessens the time spent with parents. However, it did not weaken or strengthen the quality of the relationship. Although media use does not necessarily replace social interactions, it consumes the time spent on face-to-face communication, which supports the displacement hypothesis. Several studies have failed to find strong arguments supporting either one

of the hypotheses. A longitudinal study examining adolescents' social media use and friendship quality in 2009, 2010, and 2011 failed to find sufficient support for both hypotheses, such that there was no significant association between social media use and direct social contact (Hall et al., 2019). Finally, Shklovski et al. (2006) conducted a meta-analysis that examines whether adolescent internet use facilitates or hinders interactions with friends. However, the results did not sufficiently confirm either hypothesis.

As the studies above show, the displacement hypothesis lacks sufficient empirical support. While the findings favor the stimulation hypothesis, studies supporting neither hypothesis also exist. The lack of support could be due to the more complex rather than a unidirectional relationship between social media use and well-being (Winstone et al., 2021). The use of social media can both be beneficial and harmful depending on the purpose of its use, which cannot be evaluated independently. (Tokunaga, 2016). Therefore, the need to explain the psychosocial consequences of internet use in adolescents continues.

2.2. What Makes Internet Use Problematic?

Although addictive or problematic internet use certainly exists, it is known to affect a small proportion of users. In other words, not all excessive use can be defined as a problem or addiction (Griffiths et al., 2016). Therefore, the question becomes what makes Internet use problematic or addictive and what determines the 'normal' usage? There have been many attempts to define functional and dysfunctional Internet use operationally. There is no agreed-upon term to describe this behavior. The term "technological addiction" has been used and defined as a behavioral addiction that involves human-computer interactions" (Griffiths, 1995; 1996). These can either be passive as watching TV, or active as playing video games that produce reinforcing addictive features (Griffiths, 1995). Some researchers called it "Internet addiction" (Bai et al., 2001; Mitchell, 2000; Shapira et al., 2000, Young, 1998), "pathological Internet use" (Davis, 2001), and "problematic Internet use" (Davis et al., 2002).

Whatever the name is, the most general outlook is an intense preoccupation with using the Internet in excessive amounts of time spent on the Internet (Chou, 2001, Treuer et al., 2001), accompanied by difficulty in managing the time spent on the Internet, anything else besides the Internet is boring, feeling disturbed when offline, and a significant decrease in offline social interactions (Kraut et al., 1998), thus, increased feelings of loneliness (Nalwa & Anand, 2003, Whang et al., 2003).

Earlier studies tried to define PIU through behavioral patterns that differentiate it from healthy internet usage. However, as PIU research progressed, etiological factors other than behavioral patterns were also examined (Kuss, 2016). The first notion of internet use as an addiction was referred to in 1996 (Young, 2015). The examination of criteria that leads to addiction was an adapted version of the DSM-IV criteria for Pathological Gambling (Young, 1998). According to these criteria, the individual is required to possess at least three symptoms which are tolerance, withdrawal, lack of control, relapse, large amounts of time spent online, negative consequences, and continuation of use despite problem awareness over 12 months (American Psychiatric Association [APA] 1994). One of the very first and most commonly used criteria to differentiate between normal and problematic internet use is defined by Young (1996, p. 899-900) as;

1. Constantly feeling preoccupied with the Internet.
2. Feeling the need to use the internet with increasing time to achieve satisfaction.
3. Repeated unsuccessful efforts to alleviate or control the Internet use.
4. Feeling restless or irritable when trying to alleviate or control Internet use.
5. Staying online longer than intended.
6. Having risk the loss of a relationship, academic, or career opportunity due to the Internet.
7. Lying to family members or others to conceal the real amount of internet use.
8. Using the Internet as a way of escaping from problems or regulating unwanted moods.

Then, Pratarelli et al. (1999) introduced a four-factor model to define the types of Internet users. The first type of user is (1) experiencing dysfunctional behaviors regarding internet use (e.g., social isolation, missing appointments, or being late for school/work). The second type is characterized as (2) functional use of the internet in general or for particular purposes. Thirdly, (3) using the internet for sexual gratification or social reinforcement. Finally, the fourth category is (4) having no problem internet-related, not being engaged, or even being mildly averted to the internet. Although this model is beneficial in assigning users to a category, the overall model does not explain how and why Internet use behaviors can be defined as dysfunctional. Therefore, more detailed explanations have further been sought.

In later years, Beard and Wolf (2001) criticized Young's criteria regarding their objectivity and reliance on self-report, suggesting a modified version. These criteria are summarized below. Individuals must experience having all of the first five following criteria to be called a problematic user /addict (Beard and Wolf, 2001, p.379.)

1. Being preoccupied with the Internet
2. Feeling the need to use the Internet with increased amounts of time to achieve satisfaction
3. Unsuccessful efforts to control or stop Internet use.
4. Feeling restless, moody, or irritable when attempting to control or stop Internet use
5. Staying online longer than originally intended.

Additionally, the individual must experience at least one of these three criteria:

1. Jeopardized the loss of a significant relationship, educational, or career opportunity because of the Internet.
2. Lying to family members or others to conceal the amount of internet use.
3. Using the Internet as a way of escaping from problems or to regulate mood.

Another attempt to define the maladaptive engagement with the internet has been put forward by Shapira et al. (2003). They suggest that if the individual experience at least one of the following, it indicates a maladaptive preoccupation with the internet (p.213);

1. Irresistible preoccupations with the use of the Internet.
2. Use of the Internet for periods longer than intended.
3. The Internet use or the preoccupation with the internet use causes significant distress or impairment in social, occupational, or other important areas of functioning.
4. Excessive Internet use does not occur exclusively during periods of hypomania or mania and is not better explained by any other Axis I disorder.

Finally, Griffiths (2005) has suggested six basic criteria to operationally define a behavior, including internet use, as addiction. The six components that should be observed in order to call it an addictive behavior are (1) salience, (2) mood modification, (3) tolerance, (4) withdrawal symptoms, (5) conflict, and (6) relapse. The first criterion of salience refers to a constant preoccupation with the internet, as the internet is essential in one's life. Individuals, who have a problematic relationship with the internet, constantly imagine the possible activities they could do online or merely think about when they will be able to go online again. The second criterion that makes internet use somewhat problematic is using the internet to modify one's mood. As internet use primarily aims to modify an individual's unpleasant moods, similar to a coping strategy, the risk of addiction increases. As individuals spend more time on the internet, the amount of time spent online to receive the same amount of reward gradually increases, which creates the third criterion of tolerance. Similar to the case of all addictions, as individuals spend time apart from the object of addiction, which is the internet in this case, symptoms of withdrawal arise. These symptoms are unpleasant feelings such as irritable mood and an uncontrollable urge to connect to the internet as soon as possible. Expectedly, the behaviors that characterize excessive internet use create conflict with the people who are close (e.g., family, friends, spouse)

and other areas of their lives (e.g., hobbies, work, studying). Finally, to be defined as an addiction, this pattern mentioned above needs to be repeated after periods of control, called relapse.

These definitions described above explain addiction criteria in detail; yet, lack a theoretical foundation and personal and social determinants that lead to addictive behavior. Over the years, different conceptualizations and theoretical frameworks have been discussed to explain problematic internet use and addiction in a relatively more comprehensive way.

2.2.1. Disease Model of Problematic Internet Use

One of the most recognized and oldest approaches to PIU is the disease perspective (Beard & Wolf, 2001; Pratarelli et al., 1999; Shaffer et al., 2000; Young, 1996; 1998). Addiction, conceptualized as a disease, refers to the continuous use of a particular stimulus together with compulsive urges, loss of behavioral control, and unpleasant personal consequences (Bozarth, 1990; Koob & Bloom, 1998). According to this perspective, internet addiction is a psychological dependence on the internet. It is characterized by increasing investment of personal resources on internet activities, experiencing unpleasant feelings when offline, increasing tolerance to being online, and denial of the problem (Kandell, 1998). According to this perspective, PIU can be categorized among other impulsivity disorders such as gambling disorder (Beard & Wolf, 2001; Young, 1996; 1998; Young & Rogers, 1998).

The disease model of addiction holds a biological rather than a psychosocial approach. Neurobiological theories suggest that internet addiction can be explained by abnormalities in neurotransmitters that deliver serotonin and dopamine, which can cause depressive symptoms and reward dependence (Hou et al., 2012; Kim et al., 2010; Shaw & Black, 2008). The majority of the theories conceptualizing internet addiction within the framework of the disease model suggest comorbidity with psychosocial problems (Beard, 2005; Young et al., 2011) and view internet addiction

as an indication of a broader mental disease that triggers feeling depressed and lonely (Young et al., 2011). There are researchers that even question the existence of PIU or internet addiction as a separate disorder since they consider it a symptom triggered by a different underlying pathology (Mitchell, 2000; Yellowlees & Marks, 2007). Researchers have conceptualized it as a part of an impulse control disorder (Shapira et al., 2003), and most of the individuals, who are diagnosed as addicts, are already vulnerable people who have a history of other impulse control (Yellowlees & Marks, 2007). Eventually, American Psychiatric Association (2013) included Internet Gaming Disorder in the appendix of the DSM-5 as a separate disorder. However, besides the disease perspective, more psychosocial approaches to PIU have been developed by several other theoretical perspectives.

2.2.2. Cognitive-Behavioral Theory

Davis' (2001) cognitive-behavioral model aims to identify the etiology of PIU. In the most general outlook, this model posits that problematic cognitions and behaviors that maintain the maladaptive response lead to PIU. The central element of the cognitive-behavioral model of PIU is the presence of maladaptive cognitions of the individual about themselves, others, and the world. Focusing on cognitions as the primary source of abnormal behavior rather than affective or behavioral symptoms locates this theory in a unique place compared to other theories, in which affective or behavioral symptoms are the main focus. Cognitive symptoms that maintain PIU are ruminative cognitive style, low self-esteem, self-doubt, or negative self-appraisal. Examples of these cognitions are *"I am worthless offline, but online I am someone"* or *"The Internet is the only place I am respected."* These maladaptive cognitions are triggered in the presence of a stimulus. As this stimulus-response association gets stronger, symptoms of the PIU are heightened.

In the cognitive-behavioral model of PIU, Davis (2001) has defined two different types of PIU, namely specific pathological internet use (SPIU) and generalized pathological internet use (GPIU). In SPIU, individuals become dependent on a

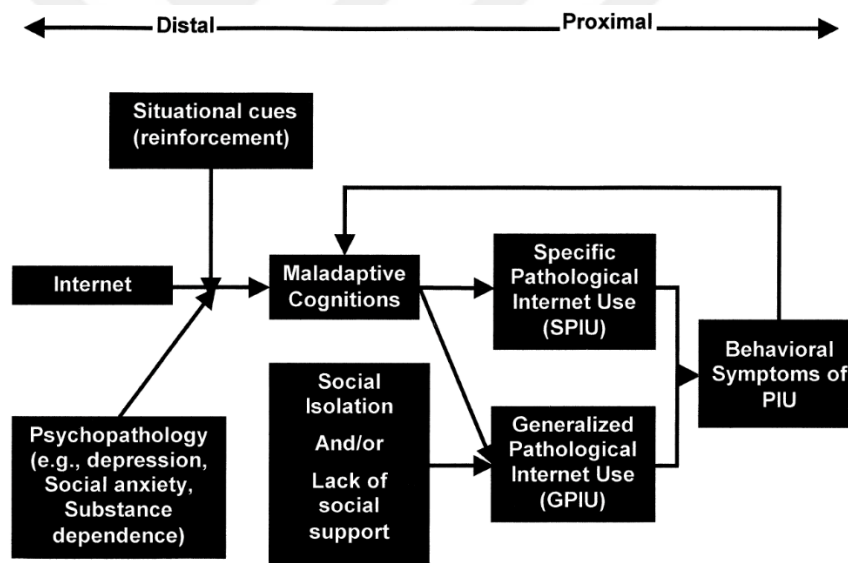
specific function of the internet, such as using sexual services, shopping, or gambling. It should be noted that these content-specific dependencies could just as easily exist in the absence of the internet. GPIU, on the other hand, overuse of the internet is multidimensional, and no clear objective of use is needed. This type of internet dependency is often associated with social reinforcement derived from internet use, such as chatting or social networking. The model defines healthy internet use as “*expressed purpose in a reasonable amount of time without cognitive or behavioral discomfort*” (p. 193). Individuals who have a healthy relationship with the internet see the internet as a helpful tool and are able to separate internet communication from that of real life. The fact that there is no specific time limit or behavioral criteria makes it harder to differentiate normal use from pathological use. Instead, the model proposes a continuum of functioning without setting a specific threshold. To better understand the cognitive model of PIU, several concepts that are required to be revised are summarized below.

In order to identify whether internet use is problematic or not, Abramson et al. (1989) elaborated on the concepts of necessary, sufficient, and contributory causes of symptoms. Causes define the etiological reasons (E) behind symptoms (S), and the model hopes to explain how a certain E leads to the S. A necessary cause is defined as a factor that must be present or at least have occurred at some point in life, in order for the symptoms to occur. It is important to point out that symptoms do not have to occur in the presence of a necessary cause. In this case, E is necessary for S to occur but may not be sufficient. A sufficient cause, on the other hand, guarantees that symptoms will occur, which means that E is sufficient for S to occur and no other cause is needed. The third kind of etiological cause is a contributory cause, which increases the likelihood of developing symptoms, yet is neither necessary nor sufficient for the onset of symptoms. To summarize all etiological causes, a necessary cause must be present for behavioral symptoms to develop. However, not all necessary causes are enough to produce the symptom by itself. A sufficient cause is an etiological cause that can readily be enough for a person to develop symptoms. Finally, the contributory cause is insufficient to produce symptoms, nor does it have

to be present in each case. However, if a contributory cause exists, it increases the chance of developing symptoms. In addition to types of etiological causes and their relations to symptoms, Abramson et al. (1989) also discussed proximal and distal causes depending on how close the etiological cause is to creating a symptom. While proximal causes are more likely to contribute to symptom development, distal causes are less powerful. The cognitive-behavioral model of PIU aims to address maladaptive cognitions as a proximal sufficient cause of developing symptoms of PIU (Davis, 2001). A summarized schema of the model mentioned above can be observed in Figure 2.2 below.

Figure 2.2

Cognitive Behavioral Conceptualization of PIU



Another model that needs to be clarified to understand the cognitive-behavioral model better is the diathesis-stress framework. According to the diathesis-stress framework, any abnormal behavior is caused by the combination of an existing vulnerability, called the diathesis, and a life event that generates stress (Caplan 2002; 2005). In Davis's (2001) cognitive-behavioral model, underlying psychopathology is the vulnerability (diathesis) and a distal necessary cause of PIU. In other words, the model

assumes that basic psychopathology might cause an individual to be vulnerable to PIU or PIU-related symptoms, yet, it may not be sufficient. The stressor in the cognitive-behavioral model is the internet or the experience of the new content found on the internet, such as pornography, games, and SNSs. Exposure to such technologies is considered a distal necessary cause of PIU symptoms. The reinforcement an individual gain from the new online experience is a determinant factor regarding the maintenance of the action in line with the principles of operant conditioning. Similarly, any cues that are related to the primary reinforcement sources, which is the internet or the computer in this case, such as typing sound of the keyboard, the place of the computer, or the opening sound, may act as a secondary reinforcement, which contributes to the maintenance of symptoms.

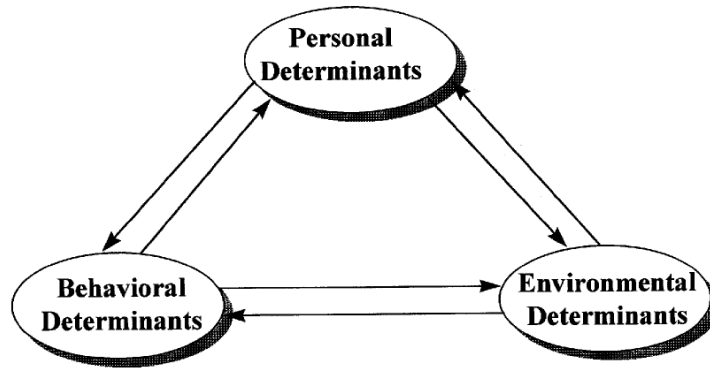
Although the cognitive-behavioral model of PIU has been widely used in studies, further research points to the existence of interpersonal or social components contributing to the development of PIU (Caplan, 2002). Therefore, other perspectives may help with the understanding of other components that cannot be sufficiently explained by the cognitive-behavioral model of Davis (2001).

2.2.3. Social-Cognitive Theory

Social-Cognitive Theory (SCT) (Bandura, 1986) asserts that behavior can be explained by the reciprocal causal relationship among individuals, their environments, and behaviors (Figure 2.3). Within this causal process, sensory information from the social environment is transformed into cognitive models that individuals further use to guide their actions. Besides, the theory argues that individuals acquire these cognitive models not only by engaging with the behavior but also by observing others. Because of this complex reciprocal mechanism, individuals eventually understand themselves and their environmental and situational demands better through their evaluations of experiences and self-reflective capacity.

Figure 2.3

Social Cognitive Theory Framework



SCT is a complex and comprehensive theory of human behavior, which has also been used to explain media use behavior (Bandura, 2002). It is beyond the scope of this chapter to provide a holistic explanation of the social cognitive theory, given the breadth of its concepts and its reciprocal relationships among them. Four cornerstones of the theory can be listed as human agency, human capabilities, vicarious learning, and self-efficacy (Pajares et al., 2009). The theory describes a psychological matching process in which individuals identify with others to achieve social and personal rewards such as establishing connections or enhancing their self-esteem.

Bandura (2002) argues that changes in human behavior have a strong motivational component. Communication through media directly promotes behavioral changes by motivating and guiding individuals (Bandura, 2004). Besides, through a socially mediated pathway, media-related technologies are being used to link individuals to social networks, which constantly include social incentives and support. Types of incentives on the internet (e.g., social relations, status, and achievement) create expectations about positive outcomes, which in turn increases usage (La Rose et al., 2001). Another important mechanism that is related to internet use is the self-regulation mechanism (Turkle, 1995). Bandura (1986) argues that individuals are capable of self-regulation that creates the base of their actions through self-monitoring, judgment, and self-reaction. Therefore, dysfunctional forms of self-

regulation influence the outcome behavior, and addictions represent the failure of the self-regulation mechanism (Bandura, 1999). Self-claimed ‘addicts’ usually know that they spend excessive time online, and that time disrupts their social life. However, deficient self-regulation inhibits them from regulating themselves (Turkle, 1995). Inability to control themselves due to low levels of self-regulation is not limited to addicts but also applicable to moderate-level internet users (La Rose et al., 2001).

Although social cognitive theory does not directly attempt to explain internet addiction behavior as strongly as other theories, it has proposed a base for other models to explain healthy and unhealthy internet use, especially for media habits and deficient self-control perspectives summarized below.

2.2.4. Media Habit and Deficient Self-Control Perspective

Media habits are used to define media consumption behavior. These habits refer to repeated behaviors over normal circumstances and are determinants of how individuals use media and how it affects them (LaRose, 2017). An essential element of media habits is their automaticity, which refers to a state of low levels of attention, awareness, intention, or control. Habits are formed through the reinforcement of behavior. Once they are formed, further reinforcement loses its effect, and individuals rely on stable and long-lasting expectations of outcomes as guidance for their repeated behavior (LaRose, 2017). Habits are also defined as implicit associations that people form through learning and respond in ways that are rewarded (Verplanken & Orbell, 2022; Wood, 2017; Wood & R  nger, 2016). As La Rose et al. (2001) argued, this formulation of seeking gratifications through media and forming behavioral habits as a result of rewards obtained is closely related to the mechanism in the Social Cognitive Theory of Bandura (1986).

Unregulated use of the Internet is characterized as an automatic and unconscious media habit rather than the existence of a pathological condition (LaRose, 2010; LaRose et al., 2003). These internet habits are formed through deficient self-

observation and self-reaction to personal internet use (LaRose, 2015). Like any other automatic process, the strength of these habits varies in a continuum. Internet addiction, the highest end of this continuum, is where people use the internet to relieve their non-pleasant emotions and experience severe impairments in their daily functioning (LaRose, 2011). As we move along to the middle of the continuum, individuals fail to control their internet habits and experience milder adverse outcomes (Tokunaga, 2015), such as low academic performance, decrease in work productivity, or relational problems (Caplan, 2005; Kim et al., 2009; Tokunaga, 2014). There is a paradoxical relationship in the definition of addictive habits, which are habits that individuals are aware of and wish to terminate yet are unable to control. In other words, these habits lack intentionality and controllability, yet they demand awareness and attention (LaRose, 2017). Although these non-conscious habits are usually assumed to be direct behavior, it does not mean that humans are overpowered by their habits alone (LaRose, 2017).

At the core of all operational definitions of maladaptive internet habits is a loss of self-control and two psychological states: loneliness and depression (Tokunaga & Rains, 2016). Although there are strong arguments that internet habits result from loneliness and depression, the expectation that internet use will cure or relieve the emotions that these psychological states create is the main reason that creates maladaptive internet habits (LaRose et al., 2003; LaRose, 2011). The ability to regulate unpleasant feelings enables the individual to gain the resources necessary to control the behavior (e.g., internet use), primarily when the internet is used to relieve the unpleasant feelings (Tokunaga, 2016).

Besides the aforementioned psychological states that set the stage for maladaptive internet habits, addictive behaviors are also formed due to deficient self-regulation (Marlatt et al., 1988). Deficient self-regulation is a failure to have self-control over an impulse (Baumeister, 2002), such as the desire to use the internet (LaRose, 2010; LaRose et al., 2003). When the ability to self-regulate is relatively low, there is a struggle between the desire to obtain the novel object (e.g., the internet) and willpower

(Hoch & Loewenstein, 1991). Efforts to control a specific behavior result in an increase in willpower and increases the ability to self-control (Baumeister et al., 2006). The enhanced willpower and the muscle of self-control slow down the depletion of personal resources that aims to regulate behavior and increases the chances of regulating later behaviors as well (Muraven & Baumeister, 2000; Tice et al., 2001).

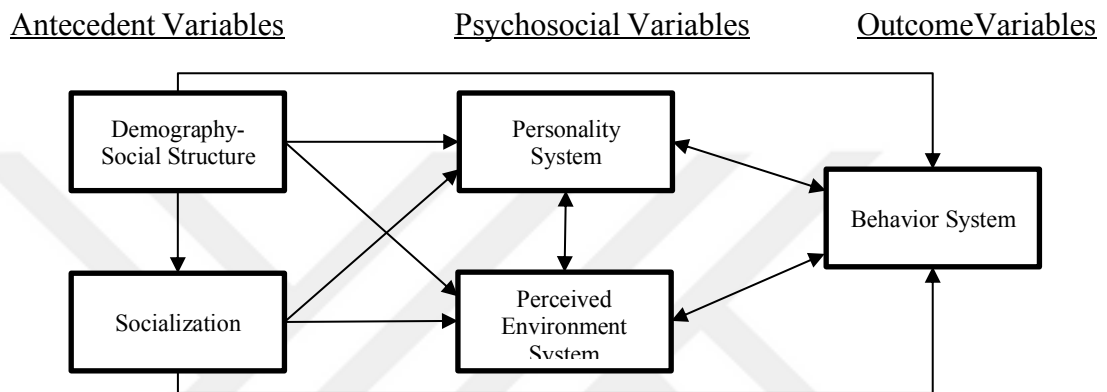
2.2.5. Problem Behavior Theory

Problem Behavior Theory (PBT), the main theoretical framework of the present study, holds a psychosocial perspective to explain adolescent behavior. According to Jessor (1987), all learned behaviors are functional and purposively done to achieve a particular goal. PBT proposes that all behavior is a result of a person-environment interaction, and problem behavior is defined as "*behavior that departs from the norms of the larger society; it is behavior that is socially disapproved by the institutions of authority, and that tends to elicit some form of social control response*" (Jessor, 1987, p. 332). PBT has particularly emphasized the external context of an adolescent's life and stressors or satisfactions that contribute to the expression of problem behavior. The incorporation of both the social context and individual together is what characterizes PBT (Jessor, 2016). The latest version of the PBT framework (Jessor, 1991) focuses on three types of behaviors and five domains to explain adolescent behavior. Firstly, antecedent or background variables are considered the roots of certain psychosocial variables and behaviors. They are categorized under demographic/social structure or socialization system. The core variables, social-psychological variables, contain the fundamental systems of an adolescent's life: the personality and the perceived environment system. In the end, the social behavior variables contain the outcome behavior system. According to Jessor (2017a), efforts to explain any behavior within a single domain are considered incomplete since each domain has both direct and indirect effects on adolescent problem behavior (see Figure 2.4). The basic premise of the PBT is that variation in each system accounts for the variation in the problem behavior, and, together, they provide a more robust

account than they do alone (Jessor, 2016). These five domains reveal the complexity of the adolescent problem behavior, consisting of multiple domains and interactions (Jessor, 1991). It is a comprehensive, interdisciplinary, and explanatory framework to understand youth behavior, health, and development (Jessor, 2016).

Figure 2.4

The Conceptual Structure of Problem Behavior Theory



2.2.5.1. Systemic Structure of PBT

PBT is comprised of five major systems that are in a direct and indirect relationship with each other. The first system, Demography/Social Structure, contains antecedent factors such as family structure or socioeconomic status that have a distal effect on the likelihood of engaging in prosocial or problem behaviors (Jessor, 1991). Education and occupation of the parents, family structure, and adherence to a religious or ethnic group are crucial factors in the demographic system. Secondly, the socialization system, also called the social environment, can be defined within three major structures of societal influence on problem behavior: an opportunity structure, a normative structure, and a social control structure (Jessor, 2016). Opportunity structure can be defined as the opportunity of access to societally valued goals. Limited access to opportunity structure can result in deviant behavior in order to achieve personal goals. The normative structure can be summarized as the agreement on the appropriate ways of behaving and normative control over behavior. Finally,

the social control structure constitutes social control against the problem behavior. More specifically, the socialization system includes variables such as home climate (e.g., strict/controlling vs. affectionate), family values, the ideology of parents, and peer influence (e.g., interest in immediate friend environment).

Next, the personality system mainly reflects social meanings and developmental experiences such as values, expectations, beliefs, attitudes, and orientations toward self and others (Jessor, 1987). The personality system is categorized into three structures; motivational-instigation, personal-belief, and personal-control. The motivational aspect of the personality system includes personal values and expectations of academic achievement and independence. The personal-belief sub-dimension includes commonly known variables such as self-esteem, locus of control, or alienation. Finally, the personal-control aspect includes elements such as attitudinal tolerance of deviance or religiosity of the individuals that serve to control the behavior.

The perceived environment system mainly reflects environmental characteristics such as support, influence, control, modeling, and expectations of others as perceived by the adolescent (Jessor, 1987). The perceived environment of the adolescent typically includes parents, friends, and teachers, as well as their influence, control, and attitude toward problem behaviors. The perceived environment includes a proximal structure, variables that directly influence behaviors (e.g., deviant peers, peer modeling, parental approval), and a distal structure, which has a more indirect effect (e.g., parental support, parental control, friend support, parent-friend influence). Theoretically, proximal variables are more strongly associated with the problem behavior; however, they are theoretically less appealing since the relationship is too apparent (Jessor, 2017b). Therefore, examining distal variables that the behavior derives from can strengthen the theory. Theoretically, the perceived context of support and control is the most proximal to the behaviors of adolescents (Jessor, 2017b). Mostly, the contribution of the perceived environment system is more significant than that of the personality system, as proximal variables in the perceived

environment system outweigh the more distal variables of the personality system. Whether a youth is parent or peer-oriented is the most significant determinant in the distal structure of the perceived environment system. In the more proximal structure, peer models and support for the problem behavior carry weight more than other variables.

Finally, the last component of the PBT is the behavior system which includes the problem behavior structure and the conventional behavior structure. The problem behavior structure comprises a set of actions that, when performed by adolescents, elicit a response from adults to control (i.e., prevent) future occurrences. Problem behavior may function to express solidarity with peers or demonstrate identification with the youth culture. They may be an instrumental effort to attain goals that are blocked or seem otherwise unattainable (Jessor, 1987). Conventional behavior structure includes behaviors oriented toward two conventional institutions of society and school. For example, school performance correlated negatively and significantly with problem behaviors (Donovan et al., 1988).

2.2.5.2. Risk and Protective Factors

Explanatory variables either instigate or control the behavior within the systems proposed in the PBT. Each system's variables are directly or indirectly related to the behavior in question (Jessor, 2016). In PBT, it is possible to speak of different levels of proneness, such as personality proneness, environmental proneness, and behavioral proneness. All of these, taken together, create a dynamic state of proneness to a problem, which is used synonymously with the concept of risk factors behavior (Jessor, 1987). Jessor (1991) defined risk as any factor that can compromise the psychosocial aspects of healthy adolescent development (p.599). Protective factors, on the other hand, operate only when risk is present. However, in the absence of risk, protective factors promote pro-social behavior and healthy development (Jessor, 2016). They act as a buffer to reduce the likelihood of the occurrence of risk behaviors.

In each system, there are protective factors and risk factors, which makes explaining adolescent behavior more comprehensive and complex (Jessor, 1991). Protective factors in the socialization system can be listed as the presence of a caring adult and a cohesive family and resources of the neighborhood, and quality schools (Jessor, 1991). On the other hand, poverty, racial inequality, and the absence of an interested and caring adult figure are the risk factors in this system. According to Jessor (1987), risk factors in the personality system consist of lower value on academic achievement, higher value on independence, lower expectations of attaining goals, higher social criticism, greater alienation, lower self-esteem, more external control, higher tolerance of deviance, less religiosity, and low self-control. As defined by Jessor (2016), the characteristics of an adolescent who is likely to engage in problem behavior are having little concern for academic achievement, lack of interest in the wellness of society, and being overly concerned with gaining autonomy. Therefore, risk factors in the personality system consist of lower value on academic achievement, higher value on independence, lower expectations of attaining goals, higher social criticism, greater alienation, lower self-esteem, more external control, higher tolerance of deviance, and less religiosity, and low self-control. Finally, according to Jessor (1987), distal and proximal structures in the perceived environment system together constitute the characteristics that determine whether an environment is problem-prone or not. Basic characteristics of a problem-prone environment consist of lower parental support and controls, lower friend controls, lower parent-friends compatibility, greater friend influence than parent influence, lower parental disapproval of problem behavior, and greater friend approval for models of problem behavior.

To the extent that protective factors are present and operative, they balance the impact and effects of risk factors (Jessor, 1991). It should be noted that the conceptual structure of PBT aims to achieve a comprehensive explanation of each system and therefore includes a large number of variables. For example, social environment risk factors may influence the risk factor personality domain and, therefore, indirectly influence problem behavior. This is an important factor of PBT because it is one of

the most important characteristics of the theory, which differentiates it from additive regression models (Jessor, 2016).

2.2.5.3. Emphasis on Healthy Behavior and Prevention

An important contribution of PBT is that the same theoretical framework is also tested for its explanatory power for non-problematic behavior, primarily seeking motivation for discriminant validity evidence (Jessor, 2016). As Jessor and Jessor (1977) stated, PBT does not attempt to encompass concepts of maladjustment or abnormality in youth; instead, this framework aims to apply to youth in general and not to account for disorders. The very same protection and risk model account for variation in both problem behavior and pro-social behavior (Jessor & Turbin, 2016). Theoretically, specified protective and risk factors influence behavior (Jessor & Turbin, 2014). Protective factors both prevent problem behavior and promote pro-social behavior. Involvement in pro-social behavior can itself serve as a protective factor (Jessor, 2016).

There is a complex web of causal relationships in PBT. Behaviors (problematic or non-problematic) are conceptualized as part of an interrelated and broader system of adolescent life rather than isolated and unrelated actions (Donovan et al., 1991). As suggested by this complexity, efforts to treat or prevent problematic behavior require comprehensive planning, such as addressing several risk domains and promoting protecting factors. Neither focusing merely on risk factors nor does focusing merely on protective factors fulfill the requirements of sufficient prevention or treatment. (Jessor, 2016). Programs that are individual and social environment-level based are critical. The individuals should not alone be held responsible for behavior change, and the surroundings should create a supportive climate of social change (Jessor, 2016). Although sincerely challenging to do so, lifestyle change, rather than fixing a part of the issue, is the solution that brings long-lasting effects (Jessor, 2016).

2.2.5.4. Problem Behavior Theory and Problematic Internet Use

Although many studies examine the correlates of PIU, a limited number of studies do it within a theoretical framework (De Leo & Wulfert, 2013). Studies have frequently referred to PBT when studying various problematic adolescent behavior (Chun et al., 2020; Chun & Mobley, 2010; Jessor et al., 2010; Mobley & Chun, 2013) as well as problematic use of the internet (Brunelle et al., 2012; De Leo & Wulfert, 2013; Huang et al., 2019; Ko et al., 2008; Lai & Kwan 2017; Rücker et al., 2015; Shek & Chai, 2018; Sung et al., 2012). However, the scope of the studies examining PIU in a PBT framework is limited. In their study, Lai and Kwan (2017) aimed to reveal the possible mechanism which shaped PIU in adolescents by adopting a PBT perspective. They have proposed a model consisting of three levels, which are sociodemographic variables (e.g., parental education, family income, and neighborhood), school-related variables (e.g., peer relationship, relationship with teachers, and educational stress), and patterns of internet use (e.g., social media, online gaming, online music of the video, educational internet use). Another study revealed that socioeconomic background variables (e.g., parent education, family income) influence PIU as a distal antecedent through other mediators, as PBT suggested (Lai & Kwan, 2017).

Additionally, a considerable amount of studies examine PIU in relation to other problematic behaviors. Sung et al. (2013) have suggested that in line with PBT, the causal factors responsible for internet addiction increase adolescents' risk of other problem behaviors. Another study (Ko et al., 2008) found an association between problem behaviors such as alcohol abuse and problematic internet use based on PBT. Internet addiction may also provide channels for youth to access unhealthy information, which may impair their development and lead to other problem behaviors (Durkee et al., 2016). In their longitudinal study, Shek and Chai (2018) found that students who met the criteria of internet addiction had a higher likelihood of displaying problem behaviors in the future. In other words, problematic internet use predicts other problem behaviors in the future.

Recent studies have also adopted the PBT perspective when explaining online behavior. A study has examined online deviant behavior using variables from the perceived social environment (or family subsystem) and individual systems and found supportive evidence of PBT (Jin et al., 2022). Another study confirmed the problem-behavior theory and clarified the underlying mechanisms between parenting behaviors and adolescents' problematic mobile phone usage (Yao et al., 2021). Finally, De Leo and Wulfert (2013) have used the PBT framework and found an association between PIU and internalizing problems. However, PIU was not part of the cluster of externalizing behaviors suggested by PBT. Students who scored higher on the measure of problematic internet use did not show more of those characteristics correlated with traditional problem behaviors. More specifically, they were not more impulsive and did not have attitudes that were more antisocial or showed lower academic performance.

Although the study of De Leo and Wulfert (2013) supports that individuals experiencing mood disruptions or interpersonal conflict may be at greater risk of developing PIU, they suggest that PBT may not be a suitable framework for PIU. However, Jessor and Jessor (1977) have argued that PBT aims to explain all adolescent behavior rather than merely focusing on externalizing or pathological behaviors. PBT framework emphasizes the complexity of adolescent problem behavior, which consists of multiple domains and interactions (Jessor, 1991), and none of these studies tested a theoretical model that includes all five systems. Besides, countless studies suggest PIU should be examined in relation to the contextual and interpersonal factors and intrapersonal factors (Ang, 2015; Jackson et al., 2012; Lai, 2016; Throuvala et al., 2019; Vondrackova & Gabrhelik, 2016). Therefore, previous findings are not considered sufficient evidence to suggest that the PBT framework is unsuitable for studying adolescent PIU. Since the studies examine PIU in the PBT system and provide little information regarding the variables to be integrated into the comprehensive explanatory model, predictors within each system in the literature will be examined in detail.

2.3. Study Variables within PBT Framework

This section aims to describe how predictor and mediating variables in the present study are associated with problematic internet use. The section is outlined by the categorization of Problem Behavior Theory. Therefore, it starts with the description of variables that fall under demographics/social structure system, continues with variables that fall under the category of socialization system, followed by personality system and perceived environment system.

2.3.1. Demographics/Social Structure System

The demographic system provides a deeper understanding of the social context in which the adolescents live (Jessor, 2016). Understanding the comprehensive outlook on the adolescent's demographic system helps researchers gain a deeper understanding of the adolescent's rewards and opportunities, risks, and protective factors in those settings. However, the elements in the demographic system are too distal to provide a sufficient explanation of the outcome behavior. For environmental or demographic variables to be influential, they need to be proximal and be perceived by the actor of the behavior (Jessor 2016). The main variables that are discussed in PBT are parent education, occupation, the structure of the family, neighborhood as well as age and gender of the individual (Jessor & Jessor, 1977).

2.3.1.1. Demographics and PIU

Studies investigating the relationship between demographic variables and problematic internet use reveal findings that do not always coincide with each other. While some studies found no significant relationship between PIU and demographic variables (Ioannidis et al., 2018), others indicate that demographic variables have an important influence on PIU (Lai et al., 2017; Sun et al., 2021; Yu et al., 2018). Nevertheless, demographic variables are important antecedents to PIU behavior, as suggested by problem behavior theory (Lai et al., 2017). Commonly studied variables

are gender, grade level, parent education, income, and time spent online, which will be discussed in relation to PIU.

2.3.1.2. Gender

The majority of the findings regarding gender indicate that being a male is a risk factor in terms of PIU (Aydemir et al., 2021; Chi et al., 2020; Chung et al., 2019; Li et al., 2010; Odacı & Kalkan, 2010; Shi et al., 2017; Yang et al., 2014; Yu et al., 2018). Studies also indicate that males develop more severe symptoms of PIU than females (Li et al., 2014). Studies indicate higher levels of PIU for females (Beşaltı, 2016; Griffiths, 1995;2000; Jiang & Zhao, 2017). However, gender is not always a significant predictor in PIU studies (Debbarma & Umadevi, 2021; Eldeleklioğlu & Vural-Baltık, 2013; Odacı & Berber-Çelik, 2013; Seyrek et al., 2017). As the availability of the internet increases, gender differences in PIU become no longer determinant (McNicol & Thorsteinsson, 2017).

Rather than being a predictive risk factor, gender usually creates a difference in how individuals spend time online (Yang et al., 2014). While males usually prefer online gaming (Bahrainian et al., 2014; Chou et al., 2005; Yang et al., 2014), females prefer to use the internet for social networking (Ak et al., 2013; Durkee et al., 2012; Vigna-Taglianti et al., 2017) and academic purposes (Yang et al., 2014). Another study suggests that mechanisms that lead to PIU may function differently between genders (Mo et al., 2018). Associations between emotion dysregulation and PIU are found to be stronger for females, whereas the relationship is non-significant for males. Therefore, when designing interventions or helping individuals develop strategies, gender differences can be an essential factor.

2.3.1.3. Age and Grade Level

Another critical variable is the age and grade level of adolescents. In general, younger people (below 30) are at a higher risk of developing PIU than older individuals (Oka et al., 2021). However, findings differ when the periods within adolescence are examined. Studies indicate that older adolescents and higher-grade students are more likely to score higher on PIU (Aydemir et al., 2021; Chung et al., 2019; Yu et al., 2018). Contradictory findings suggest that PIU levels decrease as children pass to late adolescence from middle adolescence (Toth-Kiraly et al., 2021). Several findings support the argument that middle adolescence years (14-17 years) are predominantly a risky period since studies report that these are the ages adolescents demonstrate the highest degree of problematic behavior compared to earlier adolescence periods (Karacic & Oveskovic, 2017; Wu et al., 2016).

2.3.1.4. Parent Education and Income

Parent education and family income, which partially represent the family's socio-economic status (SES), are intertwined variables that influence adolescent behavior (Lai & Kwan, 2017). Studies suggest that children and adolescents from high SES families have a lower risk of SNS addiction (Aydemir et al., 2021; Sun et al., 2021). Studies indicate a positive association between adolescents' PIU and family income (Ak et al., 2013; Cao et al., 2011). However, findings indicate a negative relationship (Leung & Lee, 2012; Wu et al., 2016) and no relationship (Dhir et al., 2015) between PIU and family income.

Few studies have examined Internet addiction and parents' education level. Several studies have reported no significant relationship between Internet addiction scores and parents' education level (Aydemir et al., 2021; Yu et al., 2018). Results seem inconclusive among those with a significant relationship between PIU and parent education. While some studies found that the higher education level of parents is associated with decreased levels of PIU (Demetrovics et al., 2008), other studies

indicate that having higher educated parents is a risk factor for PIU (Kabasakal, 2015; Kamaşak et al., 2022). In another study, a lower level of PIU was observed for adolescents whose parents have at least a high school or college education compared with those whose parents have a middle school education or below (Heo et al., 2014). More specifically, a better-educated father was a risk factor for PIU, while a better-educated mother appears to be a protective factor (Lai et al., 2017). Adolescents from low-income families with unemployed fathers and higher educated fathers were at higher risk of developing psychosocial problems (Öztürk & Ayaz-Alkaya, 2021).

The inconclusive results regarding parent education and family income could indicate that there are mediating factors in the relationship between parent education and PIU. For example, Wu et al. (2016) speculate that adolescents from low-income families possess fewer resources, which help them to fulfill their needs. Moreover, parents in lower-income families tend to have a lower educational background, which may cause them to lack the necessary information to guide their children and prevent risky online activities leading to higher vulnerability to PIU. A study suggested that among parental variables, parent-child relationship and perceived support from family have been more influential on children's Internet addiction than parents' educational status (Işık & Ergün, 2018). Therefore, the effect of socio-economic variables on parents may be moderated by the parent-child relationship or family environment.

2.3.1.5. Time Spent Online

Time spent online is a critical variable commonly included in the PIU studies. Findings on the relationship between the time spent online and PIU differ. Studies indicate that adolescents spending more than 5 hours online tend to score higher on PIU compared to those who spent 1 to 5 hours or less than one hour a day (Eldeleklioğlu & Vural-Baltık, 2013; Odacı & Kalkan, 2010). Others suggest that PIU was more prevalent in adolescents who use the internet daily or at least 14 hours per week (Koyuncu et al., 2014). However, it is impossible to suggest a clear-cut criterion regarding how much time spent online is standard and how much is not, as these

findings alone do not indicate that increased time spent online leads to PIU. Studies have consistently shown no significant associations between time spent online and PIU (Yıldız-Durak, 2000) and the focus should be on the activity rather than the time spent online (Throuvala et al., 2019). Parallely, parental estimates of how much time adolescents spent online were also not significantly associated with PIU (Bleakley et al., 2016). Therefore, as argued by Tokunaga (2016), time spent online does not lead to social or academic problems, even when different purposes of use are taken into account.

2.3.2. Socialization System

The socialization system in the PBT literature consists of a general outlook on parental belief, reward, and control structure (Jessor et al., 1968). Children's socialization is facilitated dramatically by parental behaviors and attitudes as a part of a much broader child of the parent-child relationship (Laible & Thompson, 2007). Children learn what behaviors are acceptable and what are not due to their parent's actions. However, for this association to emerge, there should be at least a moderately good relationship between the parent and the child. Otherwise, if their relationship is distant, the child may ignore those strategies and information. Therefore, whether parents adopt an accepting or controlling parenting style is an antecedent variable in children's cognition and behaviors in many other aspects.

2.3.2.1. Parenting Styles and PIU

Baumrind (1967) has suggested three basic types of parenting styles which are the authoritarian, the permissive, and the authoritative parenting styles. Authoritative parenting refers to a style in which parents set clear guidelines and individualized rules. Authoritative parents display high parental warmth and open communication (Baumrind, 1967; Freed, 2015; Gold, 2015; Horzum & Bektas, 2014; Ihmeideh & Shawareb, 2014; Özgür, 2016; Valcke et al., 2010). These parents expect mature behavior from their children, and their overall styles can be summarized as warm, controlling, and democratic (Steinberg et al., 1992). Children who grew up with

authoritative parents are generally self-reliant, content, and able to explore freely as their autonomy is encouraged. The authoritative parenting style offers favorable consequences on adolescents' personal and social adjustment compared to the other styles based on non-parental warmth (Gimenez-Serrano et al., 2021).

Another common parenting style is the permissive or non-directive parenting style (Ihmeideh & Shawareb, 2014), involving high warmth and low control and involvement with the child's behaviors, displaying an accepting attitude towards all the choices of the child (Gold, 2015; Horzum & Bektaş, 2014; Ihmeideh & Shawareb, 2014; Özgür, 2016; Valcke et al., 2010). Parents who adopt a non-directive style are accepting and tolerant of their child's impulsive actions and demands. There are no certain expectations from the child, and no punishment is applied. Children growing up with permissive parents usually have low levels of social responsibility, inability to control their impulses, low independence, and self-reliance. These children generally do not persist when faced with a frustrating event or stressful situation (Baumrind, 1991).

Thirdly, the authoritarian parenting style characterizes by strict rules within the household, low warmth, and high control over the child's actions and choices (Gold, 2015; Ihmeideh & Shawareb, 2014; Valcke et al., 2010). Parents who adopt this parenting style tend to emphasize obedience, respect for authority figures, and traditional values. (Baumrind, 1996). They strictly demand order and obedience from their child yet hardly provide responsiveness and warmth. Usually, children who have authoritarian parents display lower levels of independence and social responsibility (Baumrind, 1996; 1991). Permissive parenting style and uninvolved parenting style are other parenting styles that have been mentioned by Baumring (1967). Permissive parenting style refers to a near absence of any attitude or rules regarding a child's actions (Gold, 2015; Ihmeideh & Shawareb, 2014; Özgür, 2016;) whereas uninvolved or neglectful parenting style refers to a style in which parents do not interfere with the child's action at all and do not apply any rules, offering little communication. (Freed,

2015). These children tend to have low self-control and self esteem compared to their peers (Baumrind, 1967).

Parents have a vital role in the foundation of the adolescents' relationship with technology, considering that the very first exposure of the children to technological devices is through their parents (Nathanson, 2015). The family environment is the first place children learn how to spend their leisure time. At home, parents can decide which devices are allowed and what rules exist to use them (Harrison, 2015). Therefore, the parents' technology use and attitudes towards technology within the family determine children's understanding of these devices (Lauricella et al., 2015). Parental modeling of online behavior explains a lot of variation in adolescents' screen time (De Lepeleere et al., 2015). Parents, both intentionally or unintentionally, have a significant role in influencing their children's technology use through mechanisms of monitoring, mediating, and modeling online activities at home (Vaala & Bleakley, 2015).

PIU has been found to display an interwoven relationship with parenting practices (Sun & Wilkinson, 2020; Francis, Pai, Badagabettu, 2020). Authoritative parenting, the most common and effective parenting style in terms of internet use (Horzum & Bektaş, 2014; Ihmeideh & Shawareb, 2014; Özgür, 2016). Correspondingly, the authoritarian parenting style is associated with high levels of PIU, whereas permissive and authoritative parenting is associated with low levels of PIU (Moazedian et al., 2014; Yaffe & Seroussi, 2019). Having strict, punitive, and emotionally distant parents are associated with susceptibility to PIU (Sun & Wilkinson, 2020; Xiuqin et al., 2010).

Parents who are aware of the adolescent's online activities face less risk of their children developing PIU (Ang et al., 2012). Adolescents who have parents engaging in less monitoring of the adolescents' online actions because they are unaware of what their child is using the internet for or what activities they engage in are more likely to suffer from PIU (Bleakley et al., 2016). Knowing the online activities of the child

and having open communication contributes to an adolescent's healthy relationship with the internet (Ang et al., 2012). These findings suggest that a permissive or laissez-faire type of parenting is not associated with healthy outcomes in terms of PIU. However, considering the effect of parental control, it is important to distinguish between behavioral and psychological control. Behavioral control, which corresponds to parental restriction, is negatively associated with PIU. Psychological control, also called love withdrawal, was a positive predictor of PIU (Xian et al., 2013). Restrictive parenting is a risk factor for PIU (Chung et al., 2019). A study comparing internet addicts and non-addicts found that parental control over internet use was significantly higher in addicts (Dhir et al., 2015). Parents' psychological control enhances negative adolescent functioning (Gugliandolo et al., 2019). Therefore, adjusting the amount of control is crucial to maintaining a balanced relationship between parental control and PIU.

2.3.3. Personality System

The personality system is one of the most proximal systems influencing adolescent behavior. It includes significant variables that describe adolescents' beliefs about their capabilities, how they control and regulate their actions and emotions, and beliefs about themselves and others (Jessor et al., 1968). Among all these personality system variables, self-related cognitions (Davis, 2001), sensation-seeking (Durkee et al., 2016), low reward dependence (Rehbein et al., 2016), diminished self-control (Griffiths et al., 2016), low self-esteem (Jorgenson et al., 2016), high anxiety (Stavropoulos et al., 2017), less social competence (Rehbein et al., 2016), introversion (Griffiths et al. 2016; Jorgenson et al., 2016) and increased hostility and aggression (Andreassen et al., 2016; Carlisle et al., 2016; Lam, 2014) are commonly studied personality variables in PIU literature. Moreover, need frustration is a significant positive predictor of gaming addiction, social network addiction, internet addiction, and mobile phone addiction (Kuss, 2017). Unfulfilled psychological needs for competence and relatedness are significant predictors of adolescents' excessive

internet use (Shen et al., 2013). The present study covers two basic personality system skills: coping style and self-regulation.

2.3.3.1. Coping Style and PIU

Coping is the behavioral or psychological responses that individuals develop to handle stressors they encounter in life (Pearlin & Schooler, 1978). Stressors can be defined as particular environmental, social, or psychological circumstances that can be originated in one aspect of an individual's life (Pearlin & Schooler, 1978). Coping, as a process of adapting (Frydenber, 2018), is one of the most fundamental skills that young adults learn and master during adolescence (Modecki et al., 2017). Early coping patterns in childhood and adolescence are essential determinants of how individuals adapt to life and deal with stressors in adulthood (Frydenber, 2018). The ways individuals cope with stress partly reflect their values, beliefs, and goals in life (Frydenber, 2018). The family we are born to be the most significant incubator of one's development and constitutes the base socio-cultural context in which we progress gradually to adulthood (Frydenber, 2018). Regardless of the innate capacities, we are born with, the surroundings as we grow up present both opportunities and restrictions in terms of how we adapt to life. Family climate is one of the most important contexts in which we learn to deal with life and develop coping skills. It determines what skills and strategies are effective or ineffective (Frydenber, 2018). Although there are differences in coping and family association, the literature argues that the coping strategies of parents and children display a similar pattern. (Frydenber, 2018).

Conceptualizations of coping emphasize how individuals manage their environmental stressors and the resources they bring to that encounter. These resources can be intrapersonal as specific coping responses or certain personality characteristics, and interpersonal such as social support from others (Frydenber, 2018). Pearlin and Schooler (1978) have described three kinds of coping responses: ameliorative coping,

cognitive neutralization, and stress management. These can be exemplified as leaving the room when someone you do not like enters, trying to control the meaning of the stressful experience prior to exposure to that stressor, and asking someone to change the behavior when they get irritated, respectively (Pearlin & Schooler, 1978).

The research of Folkman and Lazarus has dominated the literature on the coping responses of children and adolescents (Frydenber, 2018). The model (Folkman & Lazarus, 1988; Lazarus & Folkman, 1984) is known as the transactional model of coping, and coping is seen as a dynamic process between the individual and the environment. Folkman (1997) describes three pathways; psychological states that give meaning to the situation, the response to the source of stress, and the psychological states that result from the coping processes that help the person stay motivated. Coping is neither unidimensional nor is there such a thing as good or bad coping (Frydenberg, 2018). However, it is possible to call some coping styles more helpful than others. The coping styles considered more helpful are the ones that aim to deal with the problem directly (Ebata & Moos, 1991). Problem-focused coping strategies are related to less emotional and behavioral problems than avoidant and non-productive coping strategies (Ebata & Moos, 1991). Other patterns of coping that are found to be associated with wellbeing are emotional support seeking, informational support seeking, and self-distraction (Zimmer-Gembeck & Skinner, 2011)

Another theory raised voice after that of Lazarus and Folkman is the conservation of resources (COR) theory of Hobfoll (1989). The COR approach emphasizes the objective elements of sources of stress and responses. It argues that individuals that share common culture and biology also share appraisals. (Hobfoll, 2010). Unlike Lazarus's emphasis on individual appraisal, Hobfoll emphasizes the objective reality of the circumstances in which stress occurs. The resources are categorized as tangible objects, conditions, personal resources such as skills, and energy resources like financial factors. Hobfoll (1998) argues that mainstream stress research reflects a western view of self, promotes individualism, includes culture and context in his theory, and evaluates resources within their settings. Another important tenet of COR

theory is the concept of loss. The theory focuses on the loss of resources rather than gain, with the premise that loss evokes a greater impact on individuals than gain. However, the theory also argues that the importance of gain increases when a loss is in question.

Dealing with negative emotions that stem from life stressors constitutes a significant amount of adolescents' motives for internet use (Leung, 2007). As youth enters adolescence, using media as a coping strategy significantly increases (Eschenbeck et al., 2018). When adolescents do not have the necessary resources to deal with life difficulties, they use the internet as a non-adaptive way of coping with stress (Laconi et al., 2017). A recent review of studies published in the last ten years revealed that PIU could be conceptualized as a coping strategy to compensate for deficits in the ability of self-regulation (Gioia et al., 2021). However, adolescents do not benefit from the short-term emotional relief online media provides as an effective method of coping (Duvenage et al., 2020). According to the compensatory-escapist mechanism, addictive Internet use results from psychosocial deficits such as lack of fulfillment of individual needs, low self-esteem, the high discrepancy between the ideal self and real self, low psychological well-being, social anxiety, depression, and loneliness. These dysfunctions increase the need to escape the unpleasant emotional states they bring or search for more pleasant emotional states (Poprawa et al., 2019). Research consistently suggests that using the internet as a coping tool to deal with stressful life events and escape reality is one of the most frequently observed predictors of problematic use (King & Delfabbro, 2018; Tang et al., 2014; Whang et al., 2003).

Recent research suggests that an avoidant coping style is significantly associated with many psychological problems such as generalized anxiety, eating disorders, depression in young individuals (Richardson et al., 2021), and unhealthy defense mechanisms (Vally et al., 2020). Avoidant coping strategies are associated with poor interpersonal relationships (Milani et al., 2009) and loneliness (Seepersad, 2004). Avoidant coping, even with other protective factors such as high levels of social

support, will result in decreased wellbeing (Tomaszek & Muchacka-Cymerman, 2019).

Adolescents with increased scores of PIU are found to have more non-adaptive coping strategies (Jung et al., 2019; Laconi et al., 2017). Especially avoidant coping is significantly predicted PIU (Büyükaşahin-Çevik & Yıldız, 2017; Seepersad, 2004). Avoidant coping style acts as a mediator between stressful life events and PIU (Li et al., 2016; Li et al., 2009). Problematic internet use is associated with a method of tension reduction or distraction, which falls under the escape-avoidant coping style (Vaish et al., 2014). However, adolescents who use the Internet for coping and adopting an avoidant coping strategy experience higher levels of stress which means that these coping strategies do not work as intended (Trnka et al. 2016). Adolescents who develop a healthy relationship with the internet seem to employ high self-care, less rumination, and healthier coping strategies (McNicol & Thorsteinsson, 2017).

2.3.3.2. Self-Regulation and PIU

Self-regulation is the basis for purposeful action (Bandura, 1991). As individuals take action towards a goal, they choose among many alternatives and filter relevant and irrelevant information to determine the most appropriate response (Baumeister & Vohs, 2003). Individuals control their behavior through automatic and non-automatic, in other words, conscious processes. The self-regulation concept deals with the question of how individuals resist tempting stimuli, effortfully persist towards their goals and weigh options before taking action. Bandura talks about purposeful action as *“people form beliefs about what they can do, they anticipate the likely consequences of prospective actions, they set goals for themselves, and they otherwise plan courses of action that are likely to produce desired outcomes”* (Bandura, 1991, p.248).

Kopp (1982) conceptualizes self-regulation with respect to external behaviors and defines it as *“..an ability to comply with a request, to start and cease acts according*

to situational demands, to adjust the strength, incidence, and duration of acts in social settings, to delay desired object or goal, and to perform socially accepted behaviors in the absence of external monitors” (pp.190). At the same time, Bronson (2000) argues that self-regulation encompasses control of emotions, behaviors, and cognitive processes, as well as engaging in prosocial behavior. Self-regulatory behavior has its roots in the very beginning of the infancy period (Kopp, 1982). Starting with the caregivers’ sensitivity and responsiveness, the child develops basic self-regulation skills as they become aware of external social demands. One of the most important tasks of parents is to teach their children to regulate their emotions, thoughts, and behaviors so that they can gain the ability to control themselves (Finkenauer et al., 2005). Although not directly, parenting practices play an important role in adolescent PIU through the emotion regulation skills of the adolescents (Yu, Kim, & Hay, 2013). Harsh parenting practices were found to contribute to PIU by increased emotional dysregulation of adolescents (Wang & Qi, 2017). Especially fathers play a vital role in teaching children mechanisms of self-regulation from the child’s very early years of development (Dunbar et al., 2018; Young et al., 2011; Zimmerman, 2011). In later years, lack of social support and the problematic parent-adolescent relationship adversely influence self-regulation abilities (Gioia et al., 2021). As the development of self-regulation abilities grows through parental socialization, proper self-regulation begins as the child begins school and learns to comply with the demands of others.

Self-regulation functions via a set of psychological sub-functions such as self-monitoring, self-observation, self-diagnosis, self-motivation, performance feedback, and valence of behavior (Bandura, 1991). Delay of gratification is one of the essential elements of self-regulation (Mischel & Ayduk, 2004). It represents the process of consciously and intentionally resisting immediate temptation and regulating impulsive behavior for more long-term goals. Besides, self-regulation involves various cognitive and motivational actions, which are acting to reach goals, ignoring environmental distractions, etc. It is a process in which people actively organize and manage their thoughts, emotions, and behaviors to achieve their goals (Miller et al., 1986). Therefore, self-regulation should be defined as something more than willpower

or the pursuit of a goal (Fitzsimons & Bargh, 2004). These acts of the self, which are deliberate and conscious regulation of self-responses, making plans, and making choices in line with that plans, require a source of strength (Baumeister et al., 1998; Baumeister et al., 1994). As resources that produce this strength are reduced, the individual becomes susceptible to self-regulation failure until the resource is renewed (Baumeister & Vohs, 2003). Low levels of self-regulation are associated with many adverse outcomes such as alcohol and drug addiction, eating disorders, unwanted pregnancy, sexually transmitted diseases, financial crisis, engaging in violent and criminal behavior, and failing academically or in professional work life (Tangney et al., 2004).

Self-regulation is among the most critical predictors of PIU, such that LaRose, Lin, and Eastin (2003) have even proposed that internet addiction can be redefined as deficits in self-regulation abilities. Low levels of self-regulatory abilities are proven to be one of the central aspects of PIU (Billieux & Van der Linden, 2012; Caplan, 2010) as well as a significant risk factor that increases the proneness of PIU for adolescents (Yıldız-Durak, 2020).

As research suggests, self-regulation plays an important protective factor for adolescent PIU (Debbarma & Umadevi, 2021; Faghani et al., 2020). Problems with self-regulation lead to problematic internet use by affecting metacognition and stress tolerance (Akbari, 2017). Self-regulation abilities significantly moderate the relationship between PIU and stressful life events (Li et al., 2010) and play the role of mediator between PI and parenting practices (Yu et al., 2013), stress tolerance (Akbari, 2017), and self-esteem and social relationships (Park et al., 2014). According to the risk-buffering hypothesis, Developing cognitive skills such as effortful control (Li et al., 2016; Luthar et al., 2015), self-regulation (Robertson et al., 2018), and self-control (Gardner et al., 2008; Liu et al., 2013; Zhang et al., 2019) acts as a buffer between environmental risk factors, maladaptive interpersonal relationships and problematic behaviors such as PIU. On the other hand, the reverse-buffering model (Rueger et al., 2016) suggests effortful control (Li et al., 2016) and emotion regulation

strategies (Wang et al., 2018) may not be as effective as a buffer if the environmental characteristics are not appropriate. In other words, for those strategies to work as a protective factor, adolescents need a low stressful environment (Li et al., 2016; Wang et al., 2018). By suggesting that merely one protective mediator such as self-regulation may not be sufficient to prevent PIU, and it is essential to consider an adolescent's immediate surroundings such as school, family, or peer environment, as well as other personal resources, the finding supports the idea that PIU is a systemic issue rather than an individual problem (Lam, 2015).

2.3.4. Perceived Environment System

The immediate environment, as the adolescent sees it is a critical and proximal system that has an influence on the outcome behavior of the adolescent. It includes their perceptions of their family, friends, and teachers (Jessor, 2016). Perceiving parents as cold, rejecting, intrusive, punitive, and non-supportive (Kwon et al., 2011; Liu & Ko, 2007; Xiuqin et al., 2010; Yu et al., 2013) having a dysfunctional family (Chung et al., 2019; Şenormancı et al., 2013), experiencing parent-child conflict (Koo & Kwon, 2014; Yu et al., 2013; Xiuqin et al., 2010), perceived marital conflict between parents (De Leo & Wulfert, 2013; Wang et al., 2011), poor parental attachment (Lei & Wu, 2007; Soh et al., 2014; Yang et al., 2016; Zhang et al., 2019) are important risk factors in the perceived environment system for adolescent PIU. Accordingly, high quality of relationships and communication with parents are consistently found to be a protective factor (Alt & Boniel-Nissim, 2018; Kim et al., 2010; Liu & Kuo, 2007; Liu et al., 2012; Liu et al., 2013; Nielsen et al., 2019; Yu et al., 2013 Van den Eijnden et al., 2010). Family-related unfulfilled needs, such as validation, being recognized for their achievements, and inclusion, may encourage adolescents to escape and seek a non-threatening, comfortable relationship in other environments (Caplan, 2010; King & Delfabbro, 2014; Schneider et al., 2017). Consequently, perceived loneliness and perceived social support from family are the main environmental variables included in the present study.

2.3.4.1. Loneliness and PIU

The need for social interactions and forming social bonds is universal, and feelings of loneliness indicate that this basic universal need is not being met (Bowlby, 1977). The discrepancy between the actual degree of social contact and the desired amount of social contact shows the amount of loneliness the individual experiences (Peplau et al., 1982). Loneliness is a multifaceted state reflecting unsatisfactory social relations and decreased interpersonal intimacy in an individual's life (Nilsson et al., 2008; Weiss, 1973). It should be noted that loneliness is more than just a need for a company. People with a significant number of social networks may experience loneliness as well (Asher & Paquette, 2003). Instead, it is necessary to form specific forms of social relationships or a relational deficit (Weiss, 1973). Commonly observed variables associated with loneliness are boredom, feelings of aimlessness, marginality, and loss of meaning, followed by anxiety and a feeling of emptiness (Weiss, 1973).

The concept of loneliness has been defined in different domains that are affective, motivational, cognitive, and behavioral (Peplau & Perlman, 1982). People who experience affective loneliness report feeling less happy, less satisfied, a feeling of emptiness, and adopting a pessimistic point of view in life. When loneliness is experienced in the motivational domain, individuals display fluctuating moods and motivational states. As for the cognitive domain, feelings of loneliness restrict individuals' ability to concentrate and focus. Finally, for the behavioral domain, feelings of loneliness are associated with self-disclosure behavior (either sharing a lot or extremely few personal details) and being less assertive in social relationships.

It is important to note that being alone is not necessarily a negative experience (Fromm-Reichmann, 1959). Loneliness is experienced when the individual does not want to be alone. However, aloneness or solitude is when the individual wish to be alone and may even use this time as an opportunity for fruitful experiences. Especially

in adolescence, spending time alone is associated with many cognitive rewards (Fromm-Reichmann, 1959; Heinrich & Gullone, 2006).

Loneliness is a state that is not associated with any demographic variable such as age, gender, or socio-economic status; rather, it could be experienced by anyone (Neto & Barros, 2000; Peplau et al., 1982; Russell et al., 2012). However, adolescence, a significant transition period in life, is mainly a risky period for experiencing intense feelings of adolescence (Peplau et al., 1982).

The relationship between loneliness and internet use is highly dynamic and bidirectional (Nowland et al., 2018). Among a variety of the psychological risk factors regarding PIU, loneliness has received a significant amount of attention. However, due to the lack of longitudinal or experimental designs, it is difficult to determine the direction of the relationship between PIU and loneliness. The vicious cycle, starting with excessive internet use, creates a social withdrawal from the face-to-face relationship, which triggers isolation. Then, increased feelings of loneliness lead to increased internet use to compensate for the declined social interactions (Moretta & Buodo, 2020).

Loneliness is positively associated with a preference for online social interactions (Morahan-Martin & Schumacher, 2003; Ye & Lin, 2015). Research suggests that individuals who feel lonely generally use the internet to find emotional support and to build social relations (Morahan-Martin & Schumacher, 2003; Teppers et al., 2014). People who experience loneliness are more likely to turn to the internet to compensate for their need for social interaction (Özdemir et al., 2014). The use of technologies to stimulate social connections could lead to a decrease in the individual's feeling of loneliness. However, when it is used to escape from the problems in the offline world, the association between internet use and loneliness becomes problematic (Nowland et al., 2018). Another differentiation is that as individuals spend more time online, it was found that they experience higher levels of emotional loneliness and lower levels of social loneliness (Moody, 2001). However, studies indicate that when individuals

use the internet to compensate for their poor social relations, they mainly experience adverse life outcomes such as being unsuccessful in other areas of life, such as school or significant relationships, rather than fixing their problems as intended (Kim et al., 2009).

PIU was directly related with higher levels of loneliness (Büyüksahin-Çevik & Yıldız, 2017; Ceyhan & Ceyhan, 2008; Koyuncu et al., 2014; Odacı & Kalkan 2010; Özdemir et al., 2014; Prievara et al., 2019). The findings are identical for the adolescent population as well, such that higher levels of loneliness are associated with higher levels of PIU (Shi et al., 2017; Mohan, 2020; Musetti et al., 2020). Some studies argue no significant relationship between the internet use and loneliness (Eldeleklioğlu & Vural-Baltık, 2013; Leung, 2002; Odacı & Berber-Çelik, 2013). Studies also mention mediators between the relationship with PIU and loneliness, such as interpersonal problems (Wongpakaran et al., 2021) and social anxiety (Caplan, 2006). For example, studies suggest that the relationship between loneliness and PIU may change according to one's motives for internet use (Nowland et al., 2018; Moretta & Buodo, 2020). Persons who experience an increased sense of loneliness tend to use the internet, usually for entertainment purposes. However, communication or informative purposes of internet use were not associated with high or low levels of loneliness (Seepersad, 2004).

2.3.4.2. Perceived Social Support and PIU

An exact definition of social support is hard to make (Hutchison, 1999). It is usually defined by the existence of social relationships and assistance they receive from their relationships when needed. (Almedom, 2005; Beerli & Lav-Wiesel, 2012; Cheng et al., 2014). The closest definition is the belief that the individual is being loved, cared for, valued (Wills, 1991), and a feeling of belonging to a social circle in which reciprocal responsibilities exist (Cobb, 1976). Wills (1991) suggests three kinds of support: information support, instrumental support, and emotional support. Information support can be defined as providing the information with valuable

information when needed. For example, teaching effective coping strategies and referring the individual to a good source can be examples of information support. Offering necessary materials such as finance or aids and goods when the individual is in need of help falls under the category of instrumental support. Finally, as the name suggests, providing an emotionally warm, trusting environment with a good amount of empathy is an example of emotional support.

It has long been argued that social support and the mental health of an individual are closely related. In general, social support provides active coping assistance and emotional sustenance that positively influence one's mental health (Almedom, 2005; Thoits, 2011). Social support is a buffer between stress and mental health (Bulduc et al., 2007). It enables individuals to adapt to stress better and overcome difficulties more easily (Lara et al., 1998) and helps to improve the social adaptability of an individual (Lu & Hampton, 2017; Thompson, 2015). Low social support is directly related to adopting avoidant coping strategies (Chao, 2011). Children and adolescents who perceive a higher amount of social support show lower levels of anxiety and depression-related symptoms when they encounter stress (Barrera et al., 2004). Besides, higher levels of social support are a strong predictor of self-esteem in children and adolescents (Antle, 2004). Females and young individuals are more prone to experience mental health problems due to poor social support (Van Droogenbroeck et al., 2018). Seeking social support when needed to cope with life difficulties is considered a healthy strategy (Sampson et al., 2014)

A study independently examined all three (family, friend, and teacher) sources of social support in adolescents from various grade levels. Findings suggest that all sources of support are negatively related to developing depression in later years. When the same three sources were examined in one model, friend support failed to show a significant association with depressive symptoms. Teacher support was only significant for grade levels 9 and 10. Only family support was a significant predictor for most grade levels included in the study. In other words, the study supported that

family support significantly reduced the adverse effects of stress in an adolescent's life and therefore impacted depressive symptoms (Pössel et al., 2018)

Until peer relationships are established in the later years of adolescence, perceived social support from family plays an essential protective role (Zimmerman et al., 2000). Although friends gain increasing importance in adolescence, it does not necessarily mean that family loses its significance for the adolescent (Muus, 1982). Researchers especially highlight the importance of the relationship issues between adults and adolescents (Kempf et al., 2017). Family, being the most proximal environment that can include adolescents and adults dynamics and the primary source of safety for the adolescents, is expected to be highly effective in healthy and non-healthy behaviors of the adolescent (Günüç & Doğan, 2013), including PIU (Boniel-Nissim & Sasson, 2018; Lam 2015).

Perceived social support has been consistently associated with lower levels of PIU (Jung et al., 2019; Kıran-Esen & Gündoğdu, 2010; Mo et al., 2018; Wu et al., 2016; Yeh et al., 2008). As an individual's resources, especially social resources such as social relationships and social support, become deficient, an individual's risk of developing problematic behaviors, including problematic internet use, increases (Tomaszek & Muchacka-Cymerman, 2019). Family conflict and poor communication significantly predicted PIU (Chi et al., 2020). Such adolescents living in a stressful environment were found to be more prone to developing PIU and suggesting that parental support is a crucial factor in overcoming stress (Boniel-Nissim & Sasson, 2018). Mo et al. (2018) speculate that a supportive parent can act as a role model to encourage healthy behavior and provide an example to overcome challenges. Therefore, social support can act as a buffer between psychological stress and PIU. Similarly, research argues that lack of perceived parental support and loneliness may lead to PIU as a way of coping with unwanted feelings (Longstreet et al., 2019; Musetti et al., 2020). There is an expected overlap between parenting practices and perceived social support from family. Although not extremely large in effect, authoritative parenting and parental social support significantly correlate (Supple &

Small, 2006). Findings also indicated that these outcomes are associated with having parents who are less emotionally available, inadequate in acceptance involvement style of parenting, and effective monitoring (Karaer & Akdemir, 2019).

2.4. Interventions for Treating and Preventing PIU

Since PIU is a growing concern, various methods and theories have been used to develop treatment and prevention strategies. Although cognitive-behavioral therapy techniques have been effectively and primarily used to treat PIU (Gresle & Lejoyeux, 2011; Young, 2007; Young, 2015; Chou et al., 2005; Davis, 2001; Wieland, 2005), treatment strategies include a variety of interventions from different theories such as motivational interviewing and systemic therapies. Multilevel counseling (individual counseling, group therapy, family involvement) and multimodal treatment (family training, teacher education) are promising for the treatment of PIU (Cash et al., 2012). Compared with individual counseling, group counseling possesses many advantages and benefits to PIU interventions (Shek et al., 2009). It can establish a support network of individuals encountering identical difficulties and challenges. The stories told by the remaining group mates might place the difficulties of the patients into perspective. Additionally, group counseling can establish an atmosphere to openly discuss sensitive issues and topics relevant to PIU.

There is a growing consensus on prevention and health promotion as a method of positively directing adolescents' engagement with online technologies rather than treatment (Kwon, 2011; Turel et al., 2015). However, prevention programs for PIU are still in the early formative stages, and empirical investigation into overall effectiveness has not been tested in any controlled studies (Jorgenson et al., 2016). According to the prevention guidelines of APA (2014), it is suggested for practitioners to select and implement evidence-based interventions, use culturally relevant practices, implement strategies that reduce risk and promote strengths, consider environmental and contextual issues, and increase their awareness, skills, and knowledge through education, consultation, and supervision, to engage in

systemic and institutional change interventions and to inform the deliberation of public policies that promote health and wellbeing of the community. Also, strengths-based health promotion and environmental improvement strategies (i.e., improving family-school coordination) help equip people with life skills such as coping skills or problem-solving skills that contribute to their capacity to face future stressful life events (APA, 2014). Preventive interventions are known to have several aims, such as (a) stopping a problem behavior from ever occurring; (b) delaying the onset of problem behavior, especially for those at risk for the problem; (c) reducing the impact of problem behavior; (d) strengthening knowledge, attitudes, and behaviors that promote emotional and physical well-being; and (e) promoting institutional, community, and government policies that further physical, social, and emotional well-being of the larger community (Romano & Hage, 2000, p.741). There are two conceptualizations of prevention interventions that are referred to commonly. Firstly Caplan's (1964)'s conceptualization of prevention intervention is categorized as primary (preventing the onset of a disease), secondary (reducing the incidence of a disease), and tertiary prevention (reducing the impact of a persistent health issue). Secondly, Gordon (1987) conceptualized prevention interventions as universal (targeting a wide population), selective (targeting subpopulations), and indicated (targeting at-risk or vulnerable populations). Universal prevention strategies regarding internet addiction could be categorized into five main approaches, which are (1) improving the digital literacy of the public through providing education on healthy and non-healthy use of the Internet; (2) raising awareness about internet addiction; (3) behavioral measures such as limiting the access; (4) technological measures such as limiting through passwords; and (5) legislative action such as or restriction on Internet use in a specific time of a day (King et al., 2018).

Researchers stress the importance of addressing risk factors on all levels, such as family, peer, school, and community, and targeting others (e.g., parents, teachers, peers) along with adolescents in designing prevention interventions (Vondrackova & Gabrhelik, 2016). Since risk factors are interrelated, it is recommended that these programs should not focus on single problem behavior (Shek et al., 2016). Regardless

of the nature of the intervention, relationship factors between adults and adolescents (Kempf et al., 2017; Vondrackova & Gabrhelik, 2016) and the psychosocial context of the problem (Greenfield, 2018) should be taken into account. If teachers, parents, and others in their everyday lives can detect early signs of a problem, there is a much better chance of responding or initiating prevention on time (Jancke, 2007).

2.4.1. School-Level Interventions

Studies highlight the importance of holistic and multimodal intervention studies covering parents, school, and society rather than focusing merely on the individuals (Kempf et al., 2017; Rutter & Glonti, 2016). A school is a place that enables reaching out to lots of students, parents, and teachers more quickly and cheaply than any other means; thus, it carries critical importance regarding interventions (Griffin & Botvin, 2010; Romano, 2014; Romano & Hage, 2016). Besides, school is not only a place where education takes place, but students also discover their interests such as music, painting, sports, or socializing with their peers, making it suitable for intervention programs (Slot et al., 2020). Developing hobbies or passions in the offline world not that are mediated by online media is an important protective factor (Tomczyk & Solecki, 2019). Therefore, the availability of extracurricular activities is an effective way of reducing children's over-exposure to the Internet (Hopper-Losenicky, 2010). Stage-environment fit theory (Eccles et al., 1997) suggests that adolescents have optimal development in school contexts, sufficiently satisfying their developmental needs. A multi-modal/whole-school approach includes such features as changes to the curriculum, including teaching skills and linking with academic learning, teacher education, collaboration/connection with parents, parenting education, community involvement, and collaborative work with outside agencies (Fontalba-Navas et al., 2015).

Andrisano-Ruggieri et al. (2016) have tested a school-based peer education program among high school students. The program lasted a whole year, and 3-hour sessions took place weekly. Results were successful in terms of the prevention of PIU. Other

intervention programs for high school adolescents have focused on improving cognitive, emotional, social, and behavioral competencies, such as enhancing self-esteem and interpersonal relationship skills and decreasing anxiety (Berdibayeva et al., 2016; Shek et al., 2016). A group counseling study on high school students with PIU tendencies has been investigated by Park & Kim (2011), in which discovering strengths and problem-solving skills are discussed. After ten sessions of group counseling, PIU tendencies have significantly decreased. Some of the school-related psychosocial factors that could be focused on in school-based interventions are deviant peer relationships (Skrine et al., 2013; Yen et al., 2009; Zhu et al., 2015), teacher rapport (Clunies-Ross et al., 2008; Diaz-Aguado et al., 2018; Martinussen et al., 2011) perceived school climate (Jiang, & Huang, 2008; Zhu et al., 2015), academic stress (Walburg et al., 2016)

2.4.2. Family-Level Interventions

Since PIU is considered a systemic problem rather than individual, family-focused prevention programs are highly recommended (Cacioppo et al., 2019; Cho, 2018; Lam, 2015; Wu et al., 2016) and emphasized as complementary to any treatment or prevention practices (Jorgenson et al., 2016). Family involvement and parental supervision play a critical role in preventing adolescent PIU (Vondrackova & Gabrhelik, 2016; Quinn, 2016). Parental strategies intentionally applied to diminish adverse media effects on children are helpful for adolescents' PIU (Su et al., 2018). For example, Jorgenson et al. (2016) suggested that it is vital for parents to model healthy internet engagement; set clear rules on time their children spend online, and restrict the use of the computer to a common area to enable the monitoring of the online activity and to encourage activities that do not involve the Internet for their children. However, the most important one is still having open communication with their children about the stressors in their lives. Hefner et al., (2019) advises parents to invest more in their relationships with children and monitor their internet use. As parents comprehend the importance and severity of the problem, they are more likely to engage in mediation practices (Hwang et al., 2017).

Parents are identified as in greatest need of the educational intervention (Gilbo et al., 2014; Lim et al., 2005; Nock & Kazdin, 2005). Parental involvement in treatment or prevention planning, such as family education, empowering parents to help establish boundaries at home, and improving parents' technology skills, are essential (Greenfield, 2018). The beneficial effects of parent training not only impact youth outcomes but also change parent behaviors in positive directions as well, including reduction of dysfunctional parenting approaches, increased parental self-efficacy, and lower levels of parental stress (Morawska et al., 2011); also, demonstrated benefits of the reduction in inter-parental conflict over child-rearing practices (Dittman et al., 2016). On the other hand, interventions that aim to educate parents about the health risks of screen use in children may not be enough to produce parental behavior change (Lampard et al., 2012). It is recommended to focus on parental skill teaching and increase digital literacy in interventions (Coyne et al., 2017; Padilla-Walker & Coyne, 2017). Parents who have higher levels of digital literacy and who are skillful and confident in using the internet are more likely to feel more confident regarding communication with their children about internet addiction and, therefore, more likely to provide appropriate ways and levels of guidance and control on children's internet use (Duerager & Livingstone, 2012; Livingstone & Helsper, 2008). On the other hand, parents with lower self-efficacy about media use may find it more challenging to discuss the positive and negative sides of media use with children and engage in interventions regarding their use (Nikken & Schols, 2015).

One of the ways to overcome PIU is by emphasizing effective parenting practices (Toth-Kiraly et al., 2021). PIU prevention efforts should primarily reduce harmful authoritarian parental behaviors and practices. (Yaffe & Seroussi, 2019). Moreover, one of the best prevention strategies and protective factors for healthy internet use is supporting healthy interpersonal and parent-child alliances (Kalaitzaki & Birtchnell, 2014; Liu & Kuo, 2007; Senormanci et al., 2013). Family group counseling may be effective in adolescent PIU by providing need satisfaction by strengthening the relationship with parents. Suppose parent-adolescent communication practices and relationships are improved. In that case, adolescents' psychological needs for

relatedness or competence might be more easily fulfilled through their daily life interactions with their parents, which, in turn, could be helpful in reducing their reliance on the Internet for fulfilling their needs (Deng et al., 2017).

Parenting approaches that monitor children's online activities and support family cohesiveness are considered one of the most essential and effective strategies for preventing the future development of PIU (Xiuqin et al., 2010). Several different monitoring strategies have been referred to in the literature (Benrazavi et al., 2015; Collier et al., 2016; Livingstone & Helsper, 2008; Nathanson, 2001; 2002; Nikken & Jansz, 2006). The first one is no mediation, as indicated by its name; it includes applying no limits or actions to involve the child's internet use. In the second strategy, co-using, parent and child engage in online activities together without the parent having a critical attitude over the child's actions. Thirdly, active mediation refers to the parents supporting the child's internet use and establishing the rules regarding media use with the child without a critical attitude. Finally, restrictive mediation means applying strict limits to access to the internet. Studies investigating these mediation strategies have found that whereas no mediation tends to lead to harmful consequences for the child, active mediation provides the most beneficial results in terms of PIU (Nielsen et al., 2019). Studies suggest that parents mostly combine active and restrictive mediation (Steinfeld, 2021). Another common report by parents is that they employ fewer mediation methods as adolescents grow up (Steinfeld, 2021). As active mediation promotes internet use, restrictive mediation limits online time and activities. However, online risks are significantly correlated with restrictive mediation but not active mediation (Steinfeld, 2021). Without a doubt, restrictive mediation leads to a decrease in the adolescent's internet activity. It also leads to adolescents becoming less experienced on the internet, which in turn increases the possibility of the adolescent encountering risky online situations. On the contrary, active mediation allows adolescents to spend more time online and allows them to experiment and gain autonomy as they use the internet. Consequently, a balanced combination of restrictive and active mediation, as suggested in the authoritative parenting style

(Moilanen et al., 2015), enables adolescents to experiment and develop autonomy while coherent rules and restrictions exist (Steinfeld, 2021).

Samuel (2016) categorized parents' styles of managing technology use based on the limits and rules parents apply in the house. The first group is called digital enablers, which means the child defines the technology-related rules in the family, and parents surrender to the child's rules. According to Heitner (2016), digital enablers are similar to the Laissez-faire parenting style in terms of not engaging, limiting, and monitoring the child's actions. The second group is digital limiters who try to minimize their children's technology use (Samuel, 2016). This practice can be matched with an authoritarian parenting style, in which strict rules are applied and total obedience is expected from the child without much interaction with the rules (Freed, 2015; Gold, 2015; Heitner, 2016; Horzum & Bektaş, 2014; Ihmeideh & Shawareb, 2014; Özgür, 2016; Samuel, 2016; Valcke et al., 2010).

Kerr and Stattin (2000) identify three ways parents try to gain knowledge about their child's activities: control, solicitation, and disclosure. Control refers to a parent's efforts to control the child's actions by administering rules and restrictions. Secondly, solicitation is a style in which parents openly ask their children, their friends, or their teachers about the child's actions. These two activities can also be considered as monitoring activities regarding child actions. Different from these two, disclosure refers to children sharing information about their actions voluntarily. Findings regarding the effects of these styles on a child's risky actions in an online environment do not provide consistent results for control and solicitation (Kerr & Stattin, 2000; Stattin & Kerr, 2000; Law et al., 2010). For example, the solicitation was not found to be significantly associated with PIU (Xian et al., 2013). While parental monitoring was not found to reduce a child's risky online behaviors, disclosure has been negatively associated with risky online activities (Özaslan et al., 2021). In support of this finding, a study conducted with adolescents aged 10 to 18 found that as adolescents engage in disclosure to their parents about their online activities, they send fewer aggressive messages in an online environment (Law et al., 2010). These

findings, once again, support findings regarding the importance of open communication between parents and adolescents in terms of developing healthy online behavior (Boniel-Nissim & Sasson, 2018; van den Eijnden et al., 2010). A sincere interest in what the child thinks and feels is a crucial support for children's healthy relationship with their mobile phones (Cai et al., 2021). Parental knowledge about online media is not as necessary as the nature of their relationship with their child to protect the child from engaging in unhealthy internet activities (Cai et al., 2021). The quality of parent-child communication about internet use has more impact on healthy internet use than parenting practices such as mediation or restriction. (van den Eijnden et al., 2010).

Overall, a better understanding of the underlying mechanisms of familial conflict and PIU of adolescents may offer valuable suggestions to clinicians, educators, and policy-makers to design more effective treatments and prevention programs targeting adolescents' internet addiction (Yang et al., 2016). As parents continue to play a critical role in the lives of adolescents, for prevention and intervention strategies to be effective, they should encompass multiple systems such as the family, the peers, the school, and the community (Ang, 2015). However, it is essential to note that some studies suggest that intervention strategies that are family-oriented may particularly effective in cultures where the cohesion between family members is highly emphasized, such as in Chinese culture (Liu et al., 2015). While a higher level of parental monitoring was found effective for reducing problematic internet use (Bleakley et al., 2016; Collier et al., 2016; Jang & Ryu, 2016), some suggest parental monitoring might not be such an effective method for reducing problematic internet use (Choo et al., 2015; Shin, & Huh, 2011; Van den Eijnden et al., 2010). These inconsistent literature findings may be explained by different child-rearing practices between eastern and western cultures, and Chinese adolescents may be more likely to accept their parents' monitoring than Western adolescents (Su et al., 2018). Therefore, it is essential to evaluate each culture within its characteristics and culturally relevant design interventions (APA, 2014).

2.5. Studies in Turkey

Since cultural relevance is essential in PIU research, studies conducted with a Turkish sample have been examined under this heading. Correlational design studies and studies that aim to reveal the prevalence of the PIU seem to outnumber experimental or intervention studies (Balcı & Gülnar, 2009; Çam, 2015; Doğan, 2013; Tahiroğlu et al., 2008). The findings of the studies conducted with a Turkish sample are parallel with others. The most frequently studied variables in PIU studies in Turkey are family relations, depression, use of social networks, social support, and academic achievement (for a review, see Boyacı, 2019). To illustrate more clearly, studies in Turkey regarding the study variables and PIU have been summarized below.

Almost all PIU-related studies have reported findings regarding PIU and demographic variables. Although some studies suggest no difference between gender and PIU (Durak-Batıgün, 2010), most of the studies reported that men report higher levels of PIU compared to women (Akgün-Kostak et al., 2019; Say, 2016). Another demographic variable that is frequently reported is parent education. A recent study indicated that the education of the mother is not associated with PIU level, whereas low educated father is considered a risk factor (Çalık et al., 2021). On the contrary, another study suggested a positive relationship between maternal education level and PIU (Akgün-Kostak et al., 2019). These inconsistent findings suggest that parent education and PIU could have mediating and moderating variables. Besides, the amount of time spent online has been frequently reported in recent studies. Accordingly, individuals who have spent considerable time online are at risk of developing PIU (Savcı & Aysan, 2017). However, there is no consensus on how much time should be considered 'excessive' internet use. While some researchers suggest that using the internet more than 7 hours a day is a risk factor (Kaya & İşler-Dalgıç, 2021), in another study, that cutoff was found to be 3 hours a day (Çalık et al., 2021). However, the purpose of use has been found to be a better predictor of PIU than the time spent online (Durak-Batıgün, 2010). Interactive purposes such as chatting, online gaming, and browsing were found to be relatively highly associated with PIU

compared to other purposes (Balıcı & Gülnar, 2009). Information-seeking and school-related online activities are associated with the lowest level of PIU among other uses of the internet (Tahiroğlu et al., 2008). Overall results suggest that those using the internet primarily for gaming, sending e-mail, chatting, and virtual media are more likely to be addicted than those using the internet for homework. (Derin & Bilge, 2016).

Studies of parenting practices in Turkey are inspired mainly by the categorization of Baumrind (1971) and Maccoby and Martin (1983), and similar findings have been reported with that the western studies suggesting that parenting practices of warmth and involvement display favorable psychological characteristics compared to those who grow up in a controlling and restrictive family environment (Sümer et al., 2010). Parallely, problems within mother-adolescent and father-adolescent relationships are considered a risk factor for PIU adolescents (Balıcı & Gülnar, 2009; Kaya & İşler-Dalgıç, 2021; Say, 2016). Neglectful attitudes from parents are positively associated with PIU (Ayas & Horzum, 2013), whereas democratic and accepting attitudes (Ayas & Horzum, 2013), cohesive parenting (Tunalıoğlu, 2013).

PIU is associated with increased levels of loneliness both directly and indirectly (Durak-Batıgün, 2010; Eroğlu, 2014; Traş, 2019). Expectedly, excessive internet use leads to social isolation in adolescents, which inhibits the formation of healthy social relationships in real life (Savcı & Aysan, 2017). PIU has a negative relationship with social connectedness and social support (Akgün-Kostak et al., 2019; Metin et al., 2022). Especially perceived social support from parents can reduce children's PIU levels (Metin et al., 2022). A low to medium level of relationship between perceived social support from family is significantly and PIU (Günüç & Doğan, 2013; Işık & Ergün, 2018). However, there are studies that argue in the opposite direction (Büyükhahin-Çevik & Yıldız, 2017).

Other than study variables, basic psychological needs such as belonging and superiority are associated with PIU (Balkaya-Çetin & Ceyhan, 2014; Can & Zeren,

2019; Sever, 2021). Besides, variables such as impulsivity, unhealthy attachment styles and anxiety proneness (Atalan-Ergin 2018; Uygun et al., 2022), rejection sensitivity, loneliness, social anxiety, difficulty in emotion regulation (Elevli, 2019), low levels of academic achievement (Derin & Bilge 2016) are found to be risk factors for PIU. Social intelligence (Savcı & Aysan 2017) and school connectedness (Taş, 2017) a protective factors for adolescents.

2.5.1. Intervention Studies in Turkey

Besides correlational design studies, studies that aim to implement interventions to treat or prevent PIU in adolescents have been conducted with Turkish samples as well. While some of these programs aim to enhance the way individuals use and relate to the internet, others aim to reduce PIU by teaching specific skills such as coping skills, regulation and time management (Hamarta et al., 2021). A recent review has examined the intervention studies conducted with Turkish samples and found that these programs were usually based on Cognitive Behavioral Therapy (CBT). At the same time, some studies adopted mindfulness and social-cognitive approaches to preventing PIU (Hamarta et al., 2021). Psychoeducational programs and programs that cover school engagement and family functioning have also been used effectively for PIU (Çevik et al., 2021).

A few examples of intervention studies are summarized below. Various CBT-based interventions have been conducted as the most common theoretical approach. Both group interventions and individual interventions have been conducted. A CBT-based individual counseling study was conducted with a 14-year-old adolescent (Erden & Hatun, 2015). The intervention lasted seven sessions and reached a significant decrease in PIU level, increased healthy online behaviors, improved family and friend relationships, and improved school achievement. On the other hand, Canoğulları-Ayazseven (2019) conducted a CBT-based preventive intervention for problematic internet use in adolescents. The program included sessions that focus on the benefits

and disadvantages of internet use, examining motivations to use the internet, introducing the ABC model, working on negative automatic thoughts, breathing and relaxation exercises and emotion regulation skills, and safe internet use. Similarly, Taş and Ayas (2018) developed a CBT-based psychoeducation program to reduce PIU symptoms for high school students. It consists of 10 sessions, each taking 50 minutes. It was seen that symptoms significantly decreased in post-test and remained decreased after 45 days of follow-up. Another psychoeducation program examined the effect of a 10-session psychoeducation program aimed at reducing adolescents' psychological symptoms of internet addiction (Taş, 2018). The sessions include education about depression, anxiety, self-esteem, goal setting, adverse effects of internet use, and their relationship with PIU. Results of the study showed that PIU scores of the intervention group have significantly decreased. Recently, Bağatarhan (2021) developed a CBT-based eight-session psychoeducation program for adolescents and a four-session program for their parents. Findings indicate that the program has helped the relationship between parents and adolescents improve and have individuals realize their wrongdoings. Furthermore, in the end, adolescents scored lower on PIU scales. The scope of the parental psychoeducation was about the role of the internet in adolescents' lives, its negative and positive effects, risk factors for addiction, and national prevention and treatment programs. Parents have reported that the education program has helped their self-efficacy in dealing with internet-related problems.

Besides CBT-based interventions, Uysal and Balcı (2018) implemented a program based on the principles of the social cognitive theory called the 'Healthy Internet Use Program.' The program included eight sessions conducted over three months. Each of these sessions lasted approximately an hour. The focus of the training program was self-recognition, self-expression, healthy Internet use, the effects of Internet addiction on social life, the effects of a sedentary lifestyle on Internet use, introduction of proper methods for encouraging healthy Internet use, problems caused by Internet addiction, methods to cope with Internet addiction, and creating awareness to set goals and achieve changes in behavior. The program was found effective on PIU levels for the

intervention group at the post-test and the follow-up test in 9 months. Additionally, a psychoeducation program based on motivational interview techniques is applied by Özcan and Balcı-Çelik (2021) to adolescents at high risk of PIU, low-risk control, and intervention groups. The program aims to reduce online gaming addiction symptoms and consists of 5 group sessions conducted in a weekly period; each session lasts 120 minutes. At the end of each session, the students are allowed to form their individualized plans and goals for change and share this with their parents to achieve a shared plan. In the follow-up session, families are included to maintain the existing plans. Although a reduction in symptoms is observed in the high-risk group, this reduction is not statistically significant. Researchers expect this since the program carries the characteristics of a prevention program rather than a treatment. Besides, Berber-Çelik (2016) has conducted an intervention aiming to raise conscious internet use by focusing on adolescents' academic motivation and time management. The program lasted for five weeks; each session lasted about 90 minutes, while the control group did not receive any treatment. These five weeks have focused on intended use, time management, academic motivation, effective studying, and evaluation, respectively. Post-test results and follow-up results after six months have indicated that the program effectively alleviated the PIU tendencies of adolescents. Moreover, another approach utilized in intervention programs is a training program based on human-values orientation (Peker, 2013). It was shown to decrease PIU and cyberbullying in adolescents effectively, and the decreases remained the same in the follow-up measurements two months later.

2.6. COVID-19 and PIU

COVID-19 pandemic has created critical changes in personal and professional life the administration of regulations such as lockdown, working from home, distant education, restrictions, and social isolation. During the lockdown, adolescents used the internet to meet their physical and psychosocial needs (e.g., love, belonging, dignity) (Öztürk & Ayaz-Alkaya, 2021). The COVID-19 pandemic has severely affected various aspects of life, including problematic internet behavior (Oka et al.,

2021). Adolescents have been influenced more intensely than adults, such that increases in externalizing and internalizing problems and sleep disturbances were observed, which are also associated with higher risk for PIU either directly or indirectly (Siste et al., 2021). COVID-19 pandemic has been associated with worsening mental health symptoms in adolescents (Hussong et al., 2021).

Researchers have expressed concerns about PIU in these times of crisis (Yang et al., 2021). Studies indicated that the amount of time spent online with SNS and videogames have dramatically increased during the COVID-19 pandemic (Baltacı et al., 2021; Kamaşak et al., 2021; Teng et al., 2021). This increased time spent online has been associated with COVID-related anxiety (Kamaşak et al., 2022; Teng et al., 2021). During social isolation, SNS, games, and pornography use have sharply increased (Dubey et al., 2020; Kiraly et al., 2020), which concerns experts working with addictions. (Peeters et al., 2019). Few cases suggest problematic TV series watching and video game use have increased on lockdown days (Zarco-Alpuente et al., 2021). However, findings regarding the consequences of this increased use have suggested that an increase in time of use does not necessarily lead to unwanted outcomes such as addiction or problematic internet use. Increased time of use did not necessarily change the proportion of problematic users, and no significant addiction development was observed with increased time of use and PIU during lockdown (Öztürk & Ayaz-Alkaya, 2021; Zarco-Alpuente et al., 2021).

Changes in social and professional lives such as lockdown, working, or studying from home have inevitably put pressure on family life at home. (Brock & Laifer, 2020; Hale et al., 2020). Spending more time together has caused a decrease in parental support for adolescents and less reported positive parenting from parents. Adolescents have received their parents as less warm and supportive (Donker et al., 2021). Sources of support show variation throughout the different life periods. Parental support is the most critical support during adolescence (Garipey et al., 2016; van Harmelen et al., 2016). Social support and mental health are closely associated primarily during a catastrophic stressor such as the COVID-19 pandemic (Scanlon et al., 2020; van

Droogenbroeck, 2018). Adolescents who received harsh punishments and no supervision have the highest degree of PIU (Cuong, 2021). A balanced approach to rules and regulations is the best approach.

COVID-19 restrictions have led individuals to feel and report more isolation and feelings of loneliness (Norbury, 2021). For some individuals, social media could alleviate these feelings of loneliness even more (Norbury, 2021). Findings support that Internet use has served as a way to escape stress, provide emotional regulation, and seek social support to deal with the loneliness that isolation triggers (Mota et al., 2021). The coping style is also crucial in these times. Adolescents using active coping strategies used these strategies as a remedy to decreased peer interactions and used these mechanisms to receive support from their parents that would comfort them (Donker et al., 2021). People quickly turn to media sources for entertainment and information when under stress. The relationship between coping strategies and media use under stress is investigated (Nabi et al., 2022). Individuals who employ emotion-focused coping strategies usually watch TV or movies, whereas those with problem-focused coping strategies watch for information and act as a buffer when under stress. Findings suggested that Individuals who employ emotion-focused coping strategies usually turn to watch TV or movies, whereas those with problem-focused coping strategies watching needs for information purposes acts as a buffer when under stress (Nabi et al., 2022). Engagement in online activities is a coping mechanism that helps adolescents cope with COVID-19-related anxiety (Baltacı et al., 2021; Liang et al., 2020).

Individuals with psychological or environmental vulnerabilities are especially vulnerable to developing PIU during the pandemic. Therefore, focusing on emotion regulation, coping strategies, and relational problems with peers and parents is especially important for preventing or eliminating PIU (Ballarotto et al., 2021). Concepts such as self-regulation and coping styles are essential elements of early response to such a crisis (Hussong et al., 2021). Therefore, the role of psychological

processes has been once again emphasized in this period to cope with the stress that COVID-19 has brought (Masaeli & Farhadi, 2021).

2.7. Summary of the Literature Review

The internet is an inevitable reality of modern society and part of every household. In order to have a healthy relationship with the internet first we need to understand individual's motivations for internet use and then to understand what criteria makes the internet use problematic. According to Griffiths (2003), factors such as affordability, accessibility, convenience are important reasons why internet is the optimal choice for many people. Besides, it provides unique cognitive experiences such as online disinhibition effect, social comfort and anonymous communication (Suler, 2004). As for drawing the line between healthy and unhealthy internet use, there have been various criteria set by many researchers. Most commonly agreed on criteria can be summarized as feeling preoccupied with the internet, unsuccessful efforts to control the amount of internet use, tolerance, staying online for longer hours than intended, risking academic or career opportunities to spend more time online, jeopardizing close relationships by behaviors such as lying about actual internet use and using the internet to modify one's mood (Griffiths, 2005; Young, 1999).

Many important theories have been put forward to explain the underlying mechanisms of PIU. Disease model have conceptualized PIU from a biological perspective and categorized it among impulsivity disorders (Beard & Wolf, 2001). Cognitive Behavioral Theory have conceptualized PIU through the presence of maladaptive cognitive distortions (Davis, 2001). Social Cognitive Theory of Bandura (1986), have included the influence of social environment as well and explained a reciprocal causal relationship among individuals, their environments and their behaviors. Although Social Cognitive Theory had not directly aimed to explain PIU as other theories did, it influenced following perspectives such as Media Habit and Self-Control Perspectives (LaRose, 2017). From this perspective, PIU is an automatic behavior called a habit than a pathological condition and the main result is deficient self-control

(La Rose 2010). Finally, the Problem Behavior Theory (PBT) which is the main theoretical framework of the present study, conceptualized behavior as a person-environment interaction. The model consists of five systems (Demographic, socialization, personality, perceived environment and behavior system) and the theory suggests that behavior is best explained as an interaction of these system and attempts to explain it in a single domain is an incomplete attempt.

In the present study, parenting styles were included as the primary variable in the socialization system. Authoritative parenting characterized by clear guidelines and individualized rules, high parental warmth and open communication was found to be the ideal parenting for PIU (Yaffe & Seroussi, 2019). In the personality system, self-regulation success and avoidant coping were included and expectedly, literature suggested that high avoidant coping strategies (Büyükşahin-Çevik & Yıldız, 2017; Seepersad, 2004), low self-regulation skills (Debbarma & Umadevi, 2021; Faghani et al., 2020) was associated with increased levels of PIU. In the perceived environment system, loneliness was a critical variable that high levels were consistently found to be negatively predict PIU (Mohan, 2020; Musetti et al., 2020). Whereas perceived social support from family, being an important source for adolescent mental health as well as PIU (Tomaszek & Muchacka-Cymerman, 2019) was the other variable in the perceived environment system.

Finally, there have been intervention studies from family, individual and school level over time. Since PIU is considered a systemic problem rather than individual, family-focused prevention programs (Cacioppo et al., 2019) or school level programs (Griffin & Botvin, 2010) were highly recommended. It is important to address various risk factors on family, peer, school, and community level (Vondrackova & Gabrhelik, 2016). Although there are various intervention studies conducted so far, studies that offer a solid theoretical background is still not very common. The present study aims to contribute to the future intervention studies by examining personal and family system within a theoretical framework and explore the relational dynamics from both the parent's and the adolescent's perspective.

CHAPTER 3

METHOD

In this chapter, the methodological procedures of this study were presented. The chapter starts with explaining the research design of the study. Secondly, sampling procedures and the sample characteristics for both studies were presented in detail. Then, the data collection instruments along with the information regarding their reliability and validity evidences were presented. Subsequently, data collection and data analysis procedures were explained. Finally, the limitations of the study were addressed at the end of the chapter.

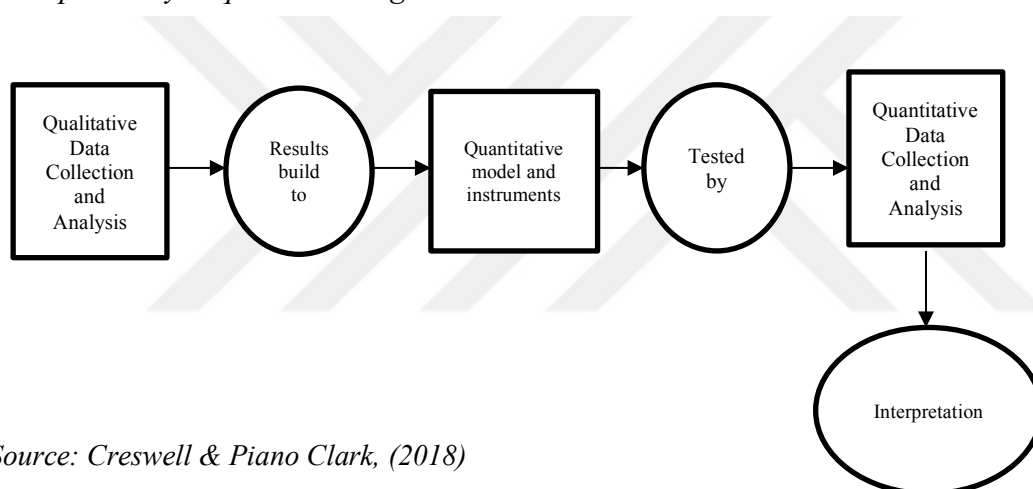
3.1. Research Design

Present study was designed as a mixed methods research, which is defined as *“research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or a program of inquiry”* (Tashakkori & Creswell, 2007, p. 4). In mixed methods research the typology is characterized by the dominance of qualitative or quantitative methodology, the sequence of their use and the section where data and findings are integrated. The design of the present study corresponds to the exploratory sequential design with a quantitative focus (Creswell & Plano-Clark, 2018). In exploratory sequential design, two studies are conducted in a sequence. Although the priority is usually in the qualitative part in exploratory designs (QUAL → quan), it is possible to prioritize the second quantitative part, parallel with the purposes of the study (Creswell & Plano-Clark, 2018). In the present study, the qualitative methods took place in the first order, aiming to explore the phenomenon of problematic internet use and determine the course of the second quantitative phase in the study. Identifying

the variables, stating propositions to be tested in the model in the quantitative part of the study is determined building on the results of the qualitative part of the study (Creswell & Plano Clark, 2018). The quantitative method study followed by the qualitative study, has the greater emphasis (qual → QUAN) since the purpose of the study is to present a model that explains adolescent problematic internet use in the context of family and individual (Creswell & Plano Clark, 2018). The findings from the both study is integrated at the interpretation phase at the end. The flow of the study is presented in the Figure 3.1. below.

Figure 3.1

Exploratory Sequential Design



Source: Creswell & Piano Clark, (2018)

3.2. Sampling and Participants

As the present study is designed as a mixed-methods research, it involved different criteria for sampling strategies in both steps. Sampling procedure and the characteristics of the samples in both study are explained in detail in the present section.

3.2.1. Sampling Procedure in the Qualitative Study

Parents and adolescents were the target sample for the qualitative study. Since parental permission is required to recruit the adolescents to the study, the sampling is

conducted through contacting parents. Sampling strategy was purposive. The study was announced via social media (Facebook, Instagram, Twitter, and WhatsApp) and e-mail groups of educational institutions in Ankara (e.g., tutoring center for high school students). Parents interested in the study filled out an application form that asks for their contact information, the age of their child, and a brief description of their internet-related problems to make sure that they meet the criteria for participating to the study. A total of 51 parents applied to participate in the study. Six participants were eliminated since their children were not in the required age range. The remaining 45 parents were contacted via phone or e-mail and informed about the scope of the study. In the screening process, participants were asked about their demographic information (age, occupation, city of residency, marital status of the parents, grade level, and school type of the adolescent), the problems they experience, and whether their child accepts to participate in the study. The inclusion criteria was a particular age range for the adolescence (14 to 17) as the target of the present study was middle adolescence period. Secondly, parents who express concerns about their child's problematic internet use and report that they have difficulty dealing with this problem was enough criteria that indicates existence of a problem. Finally, parents have been asked about existence of any psychiatric diagnosis or ongoing treatment to make sure that the problematic internet use is not a consequence of any other situation. The overall inclusion criteria applied to the participants can be summarized as follows;

- Parents who have a child within the age range of 14 to 17,
- Parents who express concerns with their child's internet use and report that they experience difficulties with managing the internet use of their child,
- Parents and adolescents both agree to participate in the study,
- Parents or children who have not received any psychiatric diagnosis.

3.2.2. Sample Characteristics in the Qualitative Study

A total of 20 adolescents (Male = 12, Female = 8) participated in the study with their parents (Mother = 18, Father = 2). Demographic characteristics of the adolescents were summarized in Table 3.1. Demographic variables regarding parents include their marital status (Married = 16, Divorced = 3, Widowed = 1) and education level. The majority of mothers in the study were educated at a high school level or less ($n = 12$), and the majority of the fathers were educated at a university level or more ($n = 11$). The majority of the parents in the study, except for six non-working mothers, were working at a full-time job.

Table 3.1

Demographics of the Adolescent Participants in the Study

Age	<i>n</i>	Grade Level*	<i>n</i>	School Type	<i>n</i>	City	<i>n</i>	Online Behavior	<i>f</i>
14	3	9 th	3	Public	13	İstanbul	6	Gaming	13
15	6	10 th	6	Private	7	Ankara	10	Video	10
16	6	11 th	7			Aydın	1	SNS	11
17	5	12 th	4			Bursa	1	Other	14
						Kütahya	1		
						Balıkesir	1		

3.2.3. Sampling Procedure in the Quantitative Study

The target sample in the quantitative part of the study was high school students in Ankara. To keep the sample homogenous and similar to that of the qualitative study, only Anatolian and Science high schools were included in the study. Three most centralized districts of Ankara (Çankaya, Etimesgut and Yenimahalle) were chosen due to convenience. All public and private Anatolian high schools in each district were listed in an excel form. Public and private schools were chosen randomly from the list. School principals were visited in order to get permission to gather data in their school. Due to COVID-19 restrictions, some schools, especially private schools, did

not allow the researcher to gather data from students. Finally, 21 schools from each district were visited with permission (see Table 3.2.). Total of 1693 participants filled out the questionnaires.

Table 3.2

List of Schools According to the Districts

District	School	<i>n</i> (students)
Çankaya	Çiğdem Anadolu Lisesi	58
	Evrensel Fen Lisesi	53
	Ömer Seyfettin Anadolu Lisesi	62
	Mutlukent Anadolu Lisesi	52
	Ayrancı Aysel Yücetürk Anadolu Lisesi	28
	Kırami Refia Alemdaroğlu Anadolu Lisesi	36
	Ayrancı Anadolu Lisesi	96
	Betül Can Anadolu Lisesi	83
	Ümitköy Anadolu Lisesi	81
	Ankara Fen Lisesi	151
Yenimahalle	Nermin Mehmet Çekiç Anadolu Lisesi	61
	Kaya Bayazıtıoğlu Anadolu Lisesi	35
	Selçuklu Anadolu Lisesi	113
	Yahya Kemal Beyatlı Anadolu Lisesi	99
	Mehmet Akif Ersoy Anadolu Lisesi	66
Etimesgut	Eryaman Şehit Ertan Akgül Anadolu Lisesi	86
	Mehmetçik Anadolu Lisesi	69
	Şehit Oğuzhan Yaşar Anadolu Lisesi	48
	Şehit Aytekin Kuru Anadolu Lisesi	131
	Şehit Ömer Halisdemir Anadolu Lisesi	56
	Bağlıca Anadolu Lisesi	118

3.2.4. Sample Characteristics in the Quantitative Study

After the data cleaning procedures, the final sample consisted of 1582 students ($F = 853$, $M = 718$, 11 unidentified). The distribution of the sample according to age and grade level is shown in Table 3.3. The majority of the sample had parents who are

married ($n = 122$), followed by divorced or separated ($n = 148$), mother passed away ($n = 13$), father passed away ($n = 26$), and non-reported ($n = 28$).

Table 3.3

Descriptive Statistics Regarding Age and Grade Level

Age	n	Grade Level	n
14	484	9 th	424
15	521	10 th	620
16	500	11 th	523
17	77	12 th	15

One thousand two hundred one students reported they spent 1 to 5 hours a day online, 315 students reported they spent 5 to 10 hours, and 66 students reported they spent more than 10 hours a day online. The most frequently reported activity was social media use ($n = 1128$) followed by watching movies/series ($n = 730$), gaming ($n = 515$), listening music ($n = 43$), reading e-books ($n = 11$), research ($n = 9$), and other activities ($n = 27$). Some of the frequently reported other activities by the participants were reading manga, cryptocurrency, watching football matches, and learning a new language.

3.3. Data Collection Instruments

In this section, information regarding the data collection instruments in both studies are presented. For the qualitative part, detailed information provided regarding how the trustworthiness of the study is ensured. Then, for the quantitative part, reliability and validity analyses are presented for each instrument used in the study.

3.3.1. Interview Protocol in Qualitative Study

A semi structured interview protocol including guiding questions and probes was prepared by the researcher and reviewed by the external audits. These external audits were two professors from Psychological Counseling and Guidance department and a third professor from Early Childhood Education department. As the parents have been invited to the interviews via a screening process, demographic information were

gathered in the initial brief interview. This part had completed with a phone interview which also was the start of the relationship with the researcher and the participant. During the phone interview, the researcher tried to answer as many questions as possible to gain the parent's trust. At the end, the researcher and the parent scheduled and agreed date for the interview.

The first part of the interview starts with less personal questions and the main concern of the study, the internet use. Participants were asked to describe the 'problem' as they perceive it and discuss their feelings about the situation and how they handle the situation. The same interview protocol applied for both adolescents and parents except for the wording of the questions and minor differences. For example, in the first part parents were asked "*What is your concerns regarding your child's internet use?*" and "*How do you communicate your child about it?*"; while the same question is directed to adolescents as "*It is very common that families and young individuals think differently on internet related topics. What kind of reactions you receive from your parents regarding your internet use?*" In the second part of the interview, it was aimed to gather more information about the personal characteristics of the adolescent such as what do they like, how do they define themselves, their social support system, their way of coping with unwanted feelings and so on. Parents were asked about their observations of their child whereas adolescents answered questions that directly covers their own behavior. Finally, the last part of the protocol included questions about their family environment, within family relationships, conflicts and their solutions. This was the last part because by so far it was expected to be a rapport between the researcher and the participants and that they can more easily answer family related questions. At the end, all participants were asked about their general ideas, needs and comments regarding the issue in general. Both interview protocols are available at the appendices section (Appendices F and G).

3.3.2. Instruments used in the Quantitative Study

In the quantitative part of the study, total of six standardized scales were used to gather data from adolescents. Detailed information of these scales along with their reliability and validity evidences for the present sample were presented in the section below.

3.3.2.1. Problematic Internet Use Scale (PIU)

The scale was first developed by Ceyhan et al., (2007) to measure problematic internet use of university students. Then, the scale was adapted to the adolescent population by Ceyhan and Ceyhan (2014). The adolescent form has a total of 27 items consisting of three subscales. The subscales are called negative consequences of internet use, excessive internet use, and social benefit/social comfort. The negative consequences of internet use subscale consists of 14 items (items 12,13,14,15,16,17,18,19,20,21,22,23,24,26). Items in the subscale can be exemplified with '*I neglect my daily routines to spend more time online*' and '*The Internet causes me to experience problems with the people I love*'. The excessive internet use subscale consists of 6 items (items 1, 2, 6, 7, 10, 25). Items 7 and 10 are reverse coded. Sample items of the subscale are '*Every time I decide to go offline, I always say 'couple of minutes more' to myself*' and '*I don't understand how time passes when I'm online*'. Finally, the social benefit subscale has 7 items (items 3, 4, 5, 8, 9, 11, 27). Sample items of the subscale are '*I can connect more easily on the internet compared to other contexts*' and '*I cannot find the respect I have online in my daily life*'. The scale was scored on a 5 point Likert type scale ranging from 1 (not likely) to 5 (very likely). The scores that can be obtained from the questionnaire differs between the range 27 and 135. The validity of the three factor structure was tested with 571 public high school students by Ceyhan and Ceyhan (2014) and the fit indices were found to be acceptable ($\chi^2 = 876.66$, $p=0.00$, $RMSEA = .052$ [90% CI = .047, .056], $SRMR = 0.042$, $CFI = 0.92$). The Cronbach alpha coefficient in the original article reported as .93, .76, and .78 respectively for the subscales, and .93 for the entire scale (Ceyhan & Ceyhan, 2014).

3.3.2.1.1. The Reliability and Validity of PIU for the Present Study

To test for the three-factor structure of Problematic Internet Use Scale - Adolescent for the present sample, a confirmatory factor analysis (CFA) was conducted using the Mplus software (Muthen & Muthen, 2009). The original study sample ($N=1582$) was used for CFA of all instruments in the study. Since the assumption of multivariate normality was violated according to Mardia's (1975) test, robust Maximum Likelihood (ML) estimation method was used (Satorra & Bentler, 1994). To evaluate the model fit, indices of Chi-square value, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root mean square error of approximation (RMSEA), and Standardized root mean square residual (SRMR) were reported as suggested by Kleine (2016).

The results of CFA for PIU Scale indicated acceptable model fit for the three factor structure of the PIU scale ($\chi^2_{(318)} = 1193.935$, $p < .05$, SRMR = .05, RMSEA = .042 [90% CI = .039, .044] $p > .05$, CFI = .91, TLI = .90). Standardized factor loadings ranged between .37 and .75, which is above the acceptable cut-off value of .30 (Hair et al., 2014). R^2 values ranged from .14 to .56 and significant for all items. The Cronbach's alpha coefficient was calculated as an indicator of internal validity of the scale. The alpha value of the subscales were .87, .74 and .76 and .90 for the entire scale. The standardized and unstandardized factor loadings, standard errors and squared multiple regression coefficients regarding the scale items can be found in the Table 3.4.

Table 3.4*Factor Loadings, Standard Errors and R² of PIU*

Construct	Item	Unstandardized factor loadings	Standardized factor loadings	SE	Est/SE	R ²
Excessive use	PIU1	1.00	.64	.02	31.09	.40
	PIU2	.93	.56	.02	25.34	.31
	PIU6	1.11	.68	.02	33.11	.46
	PIU7	.61	.41	.03	16.17	.17
	PIU10	.48	.37	.03	13.17	.14
	PIU25	.99	.62	.02	31.45	.38
Social benefit	PIU3	1.00	.64	.02	30.79	.41
	PIU4	1.38	.75	.02	44.20	.56
	PIU5	.62	.33	.03	12.13	.11
	PIU8	1.03	.57	.02	25.36	.33
	PIU9	.58	.34	.03	12.33	.12
	PIU11	1.25	.73	.02	40.40	.53
	PIU27	.97	.58	.02	24.85	.33
Negative Consequence	PIU12	1.00	.52	.02	21.26	.27
	PIU13	.71	.45	.02	18.31	.20
	PIU14	1.37	.69	.02	38.44	.47
	PIU15	.69	.37	.03	14.32	.14
	PIU16	1.24	.59	.02	28.26	.34
	PIU17	1.18	.60	.02	19.04	.36
	PIU18	1.35	.61	.02	31.42	.37
	PIU19	1.41	.63	.02	34.20	.40
	PIU20	1.01	.52	.02	23.83	.27
	PIU21	1.19	.55	.02	25.69	.30
	PIU22	1.34	.66	.02	35.66	.43
	PIU23	.66	.47	.02	19.73	.22
	PIU24	1.38	.61	.02	31.97	.37
	PIU26	1.50	.71	.02	42.41	.50

3.3.2.2. UCLA Loneliness Scale Short Form (ULS)

The original scale was developed by Russel et al., (1978) and later revised by Russel et al. (1980). The first Turkish reliability and validity study was conducted by Demir

(1989). The Turkish version of the original long form was found to be a reliable and valid measurement tool among university students with an internal consistency value of .94 (Demir, 1989). The original long form is first revised by Hays and Dimatteo (1978) to be adapted for adolescent population. The 8-item short form (ULS-8) is created for adolescents, which consists of the items 2, 3, 9, 11, 14,15,17 and 18 of the original scale. Example items can be given as '*there is no one I can turn to*' and '*I lack companionship*'. Similar to the long form, it is evaluated on a 4 point Likert scale ranging from 1 (never) to 4 (always). The 8 item short form was then adapted to Turkish by Yıldız and Duy (2014). The reliability and validity of the short form is tested with a sample of high schools students ($n = 293$). According to the results of the CFA, one item ('*I am an extroverted person*') was removed due to non-significant loading. Thus, the final version of the Turkish adaptation consisted of 7 items. The Turkish version of the short form includes items number 2,3,11,14,15,17, and 18 of the original item with the 15th item coded reverse. The maximum score that can be obtained from the scale is 28 and the minimum is 7. The model fit indices good fit ($\chi^2_{(14)} = 27.12$, $p < .05$, SRMR = .03, RMSEA = .06 CFI = .98). Yıldız and Duy (2014) pointed out that the reason the third item of the 8-item short form is not working in a Turkish sample may be the fact that the western concept of extraversion is not easily understandable by adolescents raised in an eastern culture such as Turkey. The Cronbach alpha was reported as .74 by (Yıldız & Duy, 2014).

3.3.2.2.1. The Reliability and Validity of ULS for the Present Study

To test the reliability and validity of the ULS for the present sample, a CFA was conducted. The 7 item short form had perfect model fit ($\chi^2_{(14)} = 93.842$, $p < .05$, SRMR = .03, RMSEA = .060 [90% CI = .049, .072], CFI = .97, TLI = .95). Standardized factor loadings ranged between .46 and .72, which are all in the acceptable range (Hair et al., 2014). R^2 values ranged from .21 to .52 and significant for all items. The standardized and unstandardized factor loadings, standard errors and squared multiple regression coefficients regarding the scale items can be found in the Table 3.5. The Cronbach's alpha value of internal consistency was .83 for the current sample.

Table 3.5*Factor Loadings, Standard Errors and R^2 of ULS*

Construct	Item	Unstandardized factor loadings	Standardized factor loadings	SE	Est/Se	R^2
Loneliness						
	Ucla1	1.00	.71	.02	38.71	.50
	Ucla2	.93	.61	.02	26.39	.37
	Ucla3	1.10	.71	.02	36.03	.50
	Ucla4	1.16	.72	.02	42.71	.52
	Ucla5	.78	.46	.02	18.82	.21
	Ucla6	1.01	.59	.02	25.80	.35
	Ucla7	1.19	.72	.02	40.66	.52

3.3.2.3. Social Support for Children and Adolescents (SSCA)

The social support scale for children and adolescents was originally developed by Dubow and Ullman (1989), then adapted to Turkish by Gökler (2007). The scale consists of three subscales which are social support from peers (19 items), social support from teachers (10 items), and social support from family (12 items). The internal validity coefficient for each subscale was reported as .89, .88, and .86, respectively and .92 for the entire scale by Gökler (2007). The reliability and validity study was conducted with children and adolescents ($n = 358$) aged between 9 and 17. The SSSCA was found to be valid and reliable measurement tool. Only the social support from family subscale was used in the present study. A sample item of the subscale can be presented as '*Some children share a lot with their family but some children don't. Do you share a lot with your family?*' Each item is evaluated on a 5 point Likert scale ranging from 1 (never) to 5 (always). Scores range between 12 and 60. Items 3, 5, 8 and 12 were reverse coded.

3.3.2.3.1. The Reliability and Validity of SSCA for the Present Study

Only the 12 item social support from family subscale was used in the present study. Therefore only the one factor structure of the subscale was tested with a CFA. The results of the CFA indicates good fit for the data ($\chi^2_{(51)} = 387.434$, $p < .05$, SRMR = .04, RMSEA = .060 [90% CI = .059, .071], CFI = .94, TLI = .93). Standardized factor loadings were acceptable and ranged between .55 and .80 (Hair et al., 2014). R^2 values ranged from .31 to .64 and significant for all items. The Cronbach alpha coefficient of the subscale was .92 for the current sample. Table 3.6. displays factor loadings, standard errors, squared multiple regression coefficients of the items in the scale.

Table 3.6

Factor Loadings, Standard Errors and R^2 of SSCA

Construct	Item	Unstandardized factor loadings	Standardized factor loadings	SE	Est/Se	R^2
Family Support	Sup1	1.00	.71	.02	41.28	.51
	Sup2	.89	.72	.02	46.04	.52
	Sup3	.89	.65	.02	32.88	.42
	Sup4	.81	.55	.02	26.64	.31
	Sup5	.80	.55	.02	24.97	.31
	Sup6	1.07	.78	.02	48.89	.60
	Sup7	.85	.66	.02	31.96	.44
	Sup8	.93	.68	.02	39.06	.47
	Sup9	.90	.74	.02	44.04	.55
	Sup10	.90	.78	.02	51.70	.61
	Sup11	.99	.80	.01	62.38	.64
	Sup12	.86	.66	.02	33.15	.44

3.3.2.4. Self-Regulation for Adolescents Inventory (SRI)

The original scale was developed by Moilanen (2005) and adapted to Turkish by Harma (2008). The scale consists of 32 items with two factors called self-regulation

success (18 items) and failure (14 items). The alpha coefficient was reported as .80 and .84 for the subscales, respectively. The scale is evaluated on a 4 point Likert scale ranging from 1 (not like me) to 4 (very much like me). A sample item from the self-regulation success subscale is '*I can find a way to stick with my plans and goals, even when it's tough.*' and an example from the self-regulation failure subscale is '*During a dull class, I have trouble forcing myself to start paying attention.*'. There are no reverse coded items in the scale. Only self-regulation success subscale was used in the present study. The internal consistency score was reported as .85 for the subscale (Harma, 2008). The maximum score that can be obtained from the subscale is 72 while the minimum is 18. A CFA was conducted with a sample of high school students to see the model fit of the two-factor model consisting of self-regulation success and failure. The results indicate an acceptable fit with all significant item loadings ($\chi^2_{(404)} = 664.63$, SRMR = .04, RMSEA = .05 $p > .05$, CFI = .86).

3.3.2.4.1. The Reliability and Validity of SRI for the Present Study

The self-regulation success subscale (18 items) used in the present study. The one factor structure of the subscale was tested with a CFA. The results of the CFA indicates good fit for the data ($\chi^2_{(112)} = 522.909$, $p < .05$, SRMR = .04, RMSEA = .048 [90% CI = .044, .052], CFI = .90, TLI = .88). Standardized factor loadings are acceptable and ranged between .30 and .60 (Hair et al., 2014). R^2 values ranged from .10 to .36 and significant for all items. The Cronbach alpha coefficient of the subscale was .82 for the current sample. Table 3.7. displays factor loadings, standard errors, squared multiple regression coefficients of the items in the scale.

Table 3.7*Factor Loadings, Standard Errors and R² of SRI*

Construct	Item	Unstandardized factor loadings	Standardized factor loadings	SE	Est/Se	R ²
Self-Regulation						
	Sreg1	1.00	.30	.03	10.83	.10
	Sreg3	1.47	.36	.03	13.01	.13
	Sreg4	1.64	.40	.03	14.26	.16
	Sreg5	2.13	.53	.02	21.83	.28
	Sreg9	2.00	.54	.02	23.84	.30
	Sreg13	1.38	.34	.03	12.18	.12
	Sreg15	1.58	.41	.03	15.79	.17
	Sreg18	1.49	.38	.03	14.42	.15
	Sreg19	2.18	.60	.02	27.40	.36
	Sreg20	1.49	.35	.03	12.82	.12
	Sreg21	1.87	.54	.02	23.18	.29
	Sreg22	1.00	.31	.03	11.68	.10
	Sreg23	1.81	.49	.02	20.11	.24
	Sreg24	1.71	.47	.02	19.70	.22
	Sreg25	1.72	.51	.02	21.59	.26
	Sreg26	1.82	.51	.02	20.49	.26
	Sreg27	1.69	.48	.02	19.86	.23

3.3.2.5. Coping with Stress Inventory (CSI)

The coping with stress inventory was originally developed by Amirkhan (1990) and translated into Turkish by Aysan (1994). The scale consists of three subscales called problem-solving, seeking social support, and avoidance. Each subscale consists of 11 items. The scale is evaluated on a 3 point Likert scale ranging from 1 (never) to 3 (always). The Cronbach alpha internal consistency coefficient was calculated as .92 for the entire scale. Only the avoidance type subscale was used in the present study. The maximum score that can be obtained from the inventory is 33 while the minimum is 11. None of the items were reverse coded.

3.3.2.5.1. The Reliability and Validity of CSI for the Present Study

A CFA was conducted to test the factorial validity of the CSI Inventory for the current sample. One factor structure has poor model fit ($\chi^2_{(44)} = 481.201$, $p < .05$, SRMR = .06, RMSEA = .079 [90% CI = .073, .086], CFI = .77, TLI = .72). The factor loadings for items 1,3,7 was not significant. Additionally, although items 9 and 10 are significantly loaded, their factor loadings were below .30. When the items were examined, it was revealed that they share content of imaginary situations which may have caused complexities for the adolescents in the current sample. The internal consistency value is .65 for the scale which is below the acceptable cut-off value of .70 (Nunnally, 1978). The items eliminated and CFA was run again. The results indicate a good fit ($\chi^2_{(9)} = 50.242$, $p < .05$, SRMR = .03, RMSEA = .054 [90% CI = .040, .069], CFI = .97, TLI = .95). When the non-significant item loadings were removed, the alpha value increased to .71. Factor loadings, standard errors and squared multiple regression coefficients of the scale are presented in Table 3.8.

Table 3.8

Factor Loadings, Standard Errors and R² of CSI

Construct	Item	Unstandardized factor loadings	Standardized factor loadings	SE	Est/Se	R ²
Cope	Cope2	1.00	.33	.03	12.02	.11
	Cope4	2.22	.67	.02	32.02	.46
	Cope5	1.08	.32	.03	11.62	.10
	Cope6	1.60	.77	.02	39.26	.60
	Cope8	1.28	.35	.03	12.56	.12
	Cope11	1.02	.63	.02	27.71	.40

3.3.2.6. Parenting Styles Inventory (PSI)

Parenting style scale was developed by Steinber et al. (1991) depending on the classification by Maccoby and Martin (1983) and translated to Turkish by Sümer and

Güngör (1999). The scale consists of 22 items with two 11-item subscales of acceptance/affectionate and controlling/strict type parenting styles. The perceived acceptance/affectionate subscale significantly correlated with secure attachment styles and high self-esteem compared to controlling/strict subscale which is correlated with anxiety and low self-esteem. The scale is evaluated separately for mother and father considering the different parental roles attributed to mother and father in our culture. The perceived acceptance/affectionate subscale consists of items 1,3,5,7,9,11,13,15,17,19,21 and an example item from the subscale is '*She/he often speaks to me in a calming manner*'. Items 15, 17 and 21 were reverse coded. The perceived controlling/strict subscale consists of items 2,4,6,8,10,12,14,16,18,20,22 and an example item can be given as '*She/he wants to strictly control my every move*'. The scale was evaluated in a 5 point Likert range between 1 (never true) to 5 (always true). The scores of the scale ranged between 11 and 55 for both subscales. The Cronbach alpha internal consistency value for each subscale ranged between .94 and .70 tested for mothers and fathers separately (Sümer & Güngör, 1999).

3.3.2.6.1. The Reliability and Validity of PSI for the Present Study

To test the factorial validity of PSI for the present study, separate CFA's were conducted for the mother and father scales. There are 5 participants who did not fill out the mother scale due to parent loss or parents being separated were coded as missing and excluded from the analysis. The PSI mother scale reveals a good model fit ($\chi^2_{(201)} = 1256.353$, $p < .05$, SRMR = .07, RMSEA = .058 [90% CI = .055, .061], CFI = .91, TLI = .90). All standardized factor loadings were above .30 (ranging between .40 to .84) and significant. R^2 values ranged between .10 to .70 for the present sample. Finally, the Cronbach alpha internal validity coefficient was .91 for the accept subscale and .82 for the control subscale. For the father subscale there are 42 missing cases which were excluded. The factorial validity for the father subscale also shows an acceptable fit ($\chi^2_{(201)} = 1459.623$, $p < .05$, SRMR = .07, RMSEA = .062 [90% CI = .061, .067], CFI = .90, TLI = .88). Standardized factor loadings range between .36 and .84 and R^2 values were between .13 to .70. The alpha coefficient was .91 for the

accept and .82 for the control subscale. The unstandardized and standardized factor loadings, standard errors and squared multiple regression coefficients are for both the mother and the father scales are presented in the Table 3.9.

Table 3.9

Factor Loadings, Standard Errors and R^2 of PSI

Construct	Item	Unstandardized factor loadings	Standardized factor loadings	SE	Est/Se	R^2
Accept_father						
	Father1	1.000	.77	.01	59.38	.59
	Father3	0.867	.73	.02	46.48	.54
	Father5	1.046	.80	.01	63.35	.63
	Father7	1.048	.84	.01	71.39	.70
	Father9	0.828	.74	.02	47.08	.54
	Father11	0.829	.66	.02	35.02	.44
	Father13	0.777	.54	.02	23.55	.29
	Father15	0.913	.73	.02	45.98	.54
	Father17	0.582	.45	.02	18.37	.20
	Father19	0.915	.69	.02	43.08	.48
	Father21	0.865	.67	.02	33.27	.46
Control_father						
	Father2	1.000	.56	.02	24.19	.31
	Father4	1.253	.63	.02	28.13	.40
	Father6	1.168	.65	.02	30.96	.43
	Father8	1.141	.57	.03	23.16	.33
	Father10	1.019	.58	.02	24.39	.34
	Father12	0.910	.51	.02	20.92	.26
	Father14	0.924	.45	.03	17.99	.21
	Father16	0.738	.37	.03	14.85	.14
	Father18	1.103	.57	.02	25.47	.33
	Father20	0.672	.36	.03	13.46	.13
	Father 22	0.895	.52	.03	20.39	.27
Accept_mother						
	Mother1	1.00	.78	.01	58.61	.62
	Mother 3	.79	.69	.02	35.30	.48
	Mother 5	1.09	.78	.01	57.24	.61
	Mother 7	1.06	.83	.01	67.24	.69
	Mother 9	.76	.71	.02	40.25	.51
	Mother 11	.72	.59	.02	25.72	.36
	Mother 13	.99	.60	.02	32.64	.37

Table 3.9 (continued)

	Mother 15	.88	.71	.02	42.05	.52
	Mother 17	.67	.47	.02	20.66	.22
	Mother 19	.89	.65	.02	32.02	.43
	Mother 21	.85	.65	.02	29.97	.43
Control_mother						
	Mother 2	1.00	.54	.02	22.87	.30
	Mother 4	1.40	.65	.02	33.06	.43
	Mother 6	1.35	.66	.02	34.02	.43
	Mother 8	1.32	.64	.02	29.51	.42
	Mother 10	1.11	.60	.02	28.09	.36
	Mother 12	.93	.49	.02	21.07	.24
	Mother 14	.85	.39	.03	15.09	.15
	Mother 16	.83	.40	.03	15.88	.16
	Mother 18	1.24	.58	.02	27.91	.34
	Mother 20	.53	.30	.03	11.91	.10
	Mother 22	.92	.50	.02	20.58	.25

3.3.2.7. Demographic Information Form

Participants were asked about some personal and familial information in the demographic form. Firstly, age, grade level, and the name of the school was obtained. These information followed by questions regarding their parents (marital status, education level and working status of their parents). Finally, average of time they spend online besides online courses (if any) and the activities they mostly do online were asked in the demographic form.

3.4. Data Collection Procedure

Data collection procedures are described separately for qualitative and quantitative study. In the first part, trustworthiness of the study as well as the reflections of the researcher were also detailed. In the second part, data collection procedure of the quantitative study was explained in detail.

3.4.1. Data Collection Procedure in Qualitative Study

Firstly, approval from Middle East Technical University Human Subjects Ethics Committee (see Appendix) was obtained. Data was gathered between October 14th to November 16th 2020. Semi-structured interviews were conducted via the Zoom platform. Both the audio and video features were allowed by both the interviewer and interviewee so that the experience would be as close as possible to a face-to-face interview. In the majority of the cases, the parent was interviewed first. The adolescent interviewed either immediately after the parent or scheduled an interview for another date. Interviews were recorded and took about 45 minutes to 1 hour on average.

3.4.1.1. Trustworthiness of the Study

Credibility. The credibility of an inquiry depends mainly on adopting rigorous techniques for gathering high-quality data and careful analysis of the data (Patton, 1999). Audio and video recordings of the interviews provided evidence for credibility. Expert review and triangulation are other methods that support the credibility of the study. Similar information gathered from both the parent and the adolescent on internet use constitutes a triangulation of sources. Triangulation of data sources may not lead to a single, totally consistent picture. The point was to study and understand when and why these differences appear. The difference in sources does not suggest that the data is invalid; instead, the researcher tries to understand the reasons for the differences, which was partly the aim of this study (Patton, 2002). Also, the data were analyzed with at least one other researcher to minimize the bias from a single person doing all the data collection, which provides triangulation of analyst (Patton, 1999).

Negative case analysis is another method that was used to enhance the credibility of the study. Analyzing and discussing negative cases provided a strong argument for credibility (Patton, 2002). No specific guidelines are described regarding finding negative cases (Patton, 2002). The four cases in the study, which can be evaluated as

negative cases, applied with their own will because they perceived the internet as a problematic issue regarding today's youth; however, they did not report any out-of-control use or unmanageable situations with their child. Adolescents, in this case, reported that they were more aware and able to control their use. Since these cases contradict others in the study, results provided an alternative argument as negative cases that supported the credibility of the study.

Transferability. Transferability refers to the degree that findings are applicable in other contexts. The purposive sampling method was used to support the transferability of the results. Besides, a thick description of the interviews included details such as location setting, atmosphere, climate, attitudes of the participants, and the bond established between participants and researcher (Lincoln & Guba, 1985).

Dependability. Dependability assures that findings are consistent and can be repeated (Amankwaa, 2016). An inquiry audit supervised the research process without being involved in the study. The inquiry audit (three professors in Educational Sciences that are competent in qualitative and quantitative data analysis) evaluated whether data supported the findings, interpretations, and conclusions to ensure the dependability of the study (Lincoln & Guba, 1985).

Confirmability. Confirmability is a degree of neutrality such that the findings of the study are shaped by data and not by researcher bias (Amankwaa, 2016). The transparent description of the research steps taken from the start of a study to the development and reporting of findings was audited by experts (Lincoln & Guba, 1985). An audit trail was maintained such that study materials, including interview transcripts, data analysis, process notes, and drafts of the report, were examined by other researchers who were doctoral students in psychological counseling and guidance program

3.4.1.2. Researcher's Reflections

The researcher is an essential instrument in qualitative studies, and therefore, the researcher's credibility is vital to the credibility of the study (Patton, 2014). Therefore this section will describe the researcher's background, reflexivity, and potential inquirer bias as suggested by Patton (2014). The researcher is a doctoral student in psychological counseling and guidance program. She has a master's degree in the same field and a Bachelor's degree in psychology. She had years of training and experience in qualitative and quantitative research methods. Also, being a psychological counselor, the researcher has professional training in interviewing and active listening skills that was helpful to the data collection part of the study. The researcher has been studying online behavior and consequences of internet use since the beginning of her Master's Thesis. Since then, she has participated in studies and published papers on cyberpsychology. Thus, the researcher was familiar with the basic problems, gaps in the literature.

The researcher directly observed a communication problem between parents and adolescents starting from the data gathering procedure of the study. First it needs to be stated that lots of parents thanked the researcher to conduct a research on this issue. There were parents whose child was not in the required age range but particularly wanted to participate in the study anyway. This shows the great amount of need to talk about this issue and need for guidance. As parents contacted the researcher to talk about the study majority of them was concerned about how to convince their child to participate. Some of them were not speaking to each other during that time because of the internet-related conflicts between them. Some parents have particularly asked the researcher for suggestions of how to ask their child whether they want to participate or not. In those cases, researcher always made the same suggestion to parents that *"a doctoral student needs your help and wants to learn about your ideas and experiences about the internet"*. Although it did not result positively in all of them, in the cases that it did, parents were highly surprised that their child accepted to be a part of the study. The excitement the parents expressed as a result and the fact

that this happened in more than one case might be telling a lot about the nature of the problem and the solution as well. Parents find it hard to communicate with their child in a healthy way when the issue is the internet. Also, as parents phrase the request in the right way, their child can cooperate.

During the interviews, researchers age, research background and knowledge on psychology literature had important influence. Firstly, the age of the participant was a particular advantage that eased the understanding of both sides. The parent's in the study were around 40 years old and adolescents were between aged between 14 to 17. So the researcher being 30 years old, felt equally distant to both sides. In terms of generational characteristics, the researcher was not a stranger to the technological developments as majority of the parents in the study; neither was she born into the technology as the adolescent participants did. During the interviews, it enabled researcher to have genuine empathy for both sides of the interviewees. Adolescents started interview more distantly compared to the parents. As researcher showed interest in the games they play or the videos they watch, they started talking more openly. It was obvious that they felt excitement when the researcher also knows that particular video that they talk about. They open up more easily and more willingly to someone who shares their interest.

Parents on the other hand are more ready to open up because they need advise and guidance from some professional on how to solve their problems. More than one parents have cried during the interviews when describing how helpless they feel and how all they want is for their child to be happy and healthy. Several mothers had mentioned genuine interest in getting professional help for themselves because they cannot deal with this problem by themselves. The issue of problematic internet use seemed to represents so much for parents. It represents a roadblock in their child's academic and professional careers, in their child's mental and physical health and it represents a rupture in their family ties. Therefore, parents' reactions to the internet needs to be evaluated with these representations in mind.

3.4.2. Data Collection Procedure in Quantitative Study

Prior to data collection, the required approval from Middle East Technical University Human Subjects Ethics Committee was renewed and legal permission for data collection from Ankara Provincial Directorate of National Education were obtained. Data gathering was completed between September 20th and October 25th of 2021. Filling out the scales in the classroom lasted approximately 30 minutes. Mostly, the researcher herself explained and applied the scales to the students. However, due to the COVID-19 pandemic, few school principals did not physically allow the researcher to be in the classes. In those cases, the researcher handed written instructions to the teachers who applied the scales.

3.5. Data Analysis

As the present study involves both qualitative and quantitative data, different analyses softwares have been utilized to assist the management and the analyses of the data. Basically, three softwares have been used: MAXQDA 2020 (VERBI Software, 2019), SPSS v.28 (IBM Corp, 2021) and Mplus v.7 (Muthen & Muthen, 2009). The details of the data analyses procedure in the study is described below.

3.5.1. Data Analysis in Qualitative Study

The researcher verbatim transcribes all interviews to maintain familiarization with the data. Then the transcriptions are made ready for analysis. MAXQDA 2020 (VERBI Software, 2019) was used to manage the data. All interviews are read, and key points were highlighted before coding. The data coding was an iterative process in which the researcher moved forth and back between the codes and research questions before arriving at a final decision. The codes were mainly formed inductively. Three different researchers were asked to code the data concurrently with the researcher to support the trustworthiness of the analysis. Each analyst coded different interviews. The researcher has met with each one to reach a consensus on the final form of the codes. The intercoder agreement with all coders is higher than 80%, which is deemed

acceptable (Miles & Huberman 1994). An expert review was taken as the final form of the codebook was formed.

3.5.2. Data Analysis in Quantitative Study

Upon completing the data entering procedure, data screening and preparation were conducted via SPSS v.28 (IBM Corp, 2021). Data screening procedures controlled whether all the data was entered correctly, analyzed and imputed mainly missing values, and detected univariate and multivariate outliers. Following the screening procedure, assumptions of the structural equation modeling were controlled. Before moving on to the model testing, preliminary analyses (e.g., bivariate correlations, gender difference) were conducted using SPSS v.28 (IBM Corp, 2021). The researcher used Mplus v.7 (Muthen & Muthen, 2009) to test the measurement and structural model.

3.6. Limitations

Alongside the theoretical contributions offered, the present study also has some limitations that should be taken into account. To begin with, the planning and data collection phases of this study was completed in 2020 and 2021 during which COVID-19 pandemic was still highly influential. Restrictions in social and professional lives had inevitably shaped the way data were collected. For instance, in the qualitative study, the interviews were conducted online rather than face-to-face settings. Although conducting interviews in an online platform provides a greater level of flexibility, comfort, and opportunity to reach out to various people, it has certain disadvantages that could influence the quality of the data. Studies suggest that building rapport and intimacy in online interactions can be more challenging compared to face-to-face interviews (Seitz, 2015). To eliminate this disadvantage, the time set for the warm-up was extended, especially for adolescent interviews. Parents were contacted via phone before the actual interview. This interaction prior to the interview provided support, to some extent, to the rapport and the intimacy built in the actual interview (Deakin & Wake, 2014). Another possible disadvantage of online

interviews was the distractions such as connection losses and other possible distractions in the home environment. All the participants were asked to find a quiet and private place to participate in the study and schedule at least 1 hour of their time for the interview. Despite all the warnings, the participant's environment was beyond the interviewer's control in the online interview. Finally, sampling had to be done via online resources since the schools were operating remotely as the qualitative data were being gathered. The study was announced online, thus excluding parents who experience such a problem but do not use social media. Although some parents who participated in the study have referred their acquaintances who share similar issues, most of the cases are limited to those who have social media accounts.

As the quantitative data was being gathered, schools were in their first semester of face-to-face teaching, thus, there were too many restrictions being implemented by the school principles. For example, almost no private schools allowed the researcher to gather data in their school. Some schools limited the time the researcher can be in the school facilities or did not allow the researcher to directly contact the students. Although very minor, this created a limitation in the random sampling of the school included in the data collection procedure. Finally, the questionnaires were based on self-report evaluations of the adolescents. Although there were no personal data requested and it was highly stressed that their answers would not match their classes or schools, the self-reports still could have been affected by social desirability.

Since the data was collected during a crisis period of pandemic and the schools were teaching remotely, school related variables could not be included in the model. School is one of the immediate surroundings that adolescents spend majority of their time in. Therefore, variables such as school climate, teacher rapport would be important variables in the person-environment model that creates an important limitation for the study. Besides, although mothers and fathers were both invited to participate in the qualitative study, majority of the parents who agreed to participate was mothers. Fathers were still under-represented in the qualitative data. Likewise, in the quantitative part, 12th grade students which corresponds to age 17 were relatively

lower in number because the school principals did not want to interrupt their classes for data gathering as they were preparing for the university entrance exam. Therefore, not all age groups were represented equally which creates another limitation for the generalizability. As a final limitation, avoidant coping subscale of the coping inventory had a relatively low reliability. Others scales with better psychometric properties could be preferred in later studies.



CHAPTER 4

RESULTS

Results of the study was presented in this chapter. Firstly, the results of the qualitative study is reported along with codes, superordinate and subordinate themes. Secondly, the results of the quantitative study was presented starting with the data screening procedures, preliminary analysis, and assumptions of Structural Equation Modeling (SEM) was reported. Finally, the measurement model and item parceling procedure was explained and the structural model was reported.

4.1. Results of the Qualitative Study

Findings from the superordinate themes and sub-ordinate themes was presented in this section in relation with research questions. Each theme corresponds to a research question in the qualitative study. The general categorization of subordinate themes, superordinate themes and codes can be seen at the Table 4.1. below.

Table 4.1

Subordinate Themes, Superordinate Themes and Codes in the Study

EXPERIENCE OF ADOLESCENTS		EXPERIENCE OF PARENTS	
Online Behavior	Skills & Strategies	Parental Concerns	Parental Feelings
<u>Time of use</u>	<u>'elf-Regulation Strategies</u>	academic	guilt/self-blaming
screen time	removing the attraction	decreased family time	upset
at night	focusing applications	health	angry
free time	planning	social	helpless
<u>Purpose of Use</u>	no attempt to reduce	access to inappropriate content	unneded/left out
education	voluntary quitting	safety	Parental Challenges
entertainment	<u>Coping Strategies</u>	Parental Control Strategies	age related boundaries
information	using internet to change mood	rules	guidance
shopping	problem focused coping	monitoring	communication
socializing	other activities	limitation	Attitude Toward the Internet
to kill time	socialize		ambivalence
<u>Feelings When Online</u>			acceptance
belonging	Relational Dynamics		negative
excitement	<u>Family Relationship</u>	FACILITATORS & SOLUTIONS	
feeling good	father's role	Perceived Source Of The Problem	Perceived Element Of Change
feeling of achievement	distant/criticism parenting	family factors	cultivating self-regulation
angry	close/supportive parenting	social isolation	cultivating intrinsic motivation
fun	<u>Peer Relationships</u>	media sector	supporting conscious use
happy	virtual friends	pandemic	family involvement
superiority	good peer relations	lack of alternatives	
<u>Attractive Qualities</u>	peer problems	generation difference	
accessibility	<u>Response To Criticism</u>	PROBLEM DEFINITION	
changing identity	compromise	<u>Definition of parent</u>	
easy socializing	protest	Time spent online, other life areas, fear of missing out, content, unable to replace	
unlimited	unresponsive	<u>Definition of adolescent</u>	
		Time spent online, social life, unable to replace, responsibilities	

4.1.1. Superordinate Theme 1: Problem Definition

The problem definition theme has been divided into two sub-themes which were definition of the parent and definition of the adolescent. This theme provided an answer to the first research question of the study. Findings emerged from each topic are presented respectively.

Definition of Parents

Parents have been asked to define the extent to which they think the internet use can be called 'normal' or 'problematic'. Some common answers parents provide to define problematic use was time spent online, followed by how other areas of life was affected, fear of missing out and the online content in which adolescents are involved. Most of the parents have mentioned a screen time limitation to define whether the behavior is problematic or not. Although they were not able to decide on a specific time limitation, they talked about spending all of the free time online, staying up late to spend time online and not leaving the screen for long consecutive hours.

If they use it in their actual free time I guess it is normal. But it I don't think it is normal to be online in all of your free time. When you can't let the phone go it is too much. Or spending 10-11 hours with the phone is not normal. They should spend some time doing other things as well (Mother#15).

Besides establishing an ideal time spent online, parents had also frequently talked about how internet use affected other areas of adolescents' life and daily self-care routines. For example Mother #19 highlights that "If other things are not negatively affected he can play. If he is not ignoring his responsibilities, to help me, to do homework, to shower.."

Most common subject of concern among parents was the effect on academic responsibilities as well as social communication:

What is problem for me is when he turns to his phone, tablet or computer without even saying good morning or good night. Well this is a huge problem. Or it is a problem if he does not leave his room for anything but to eat (Father #5).

Some parents talked about children's reactions when they were told to quit or when they have no access to social media or games, as a criteria to distinguish the problem and the normal. They called it a problem if the child did not know what else to do and unable to replace the online activity:

I think the reaction when they lose it is important in order to call it an addiction. Those who try to stay online for any cost, those who argue with their family for it... I think this is addiction (Mother#22).

Finally, two parents talked about the content in which the adolescents were involved with as a criteria for problematic use. The main criteria was the age inappropriate sexual content:

The content of the websites you surf through is very important. If you are looking for sexual content or interested in things that are far from real it is problematic (Mother #21).

If the child is going into age inappropriate sites and exposed to contents that are beyond his age it is problematic. I think things that are normal for is age are normal and others are wrong (Mother #22).

Definition of Adolescents

Adolescents defined the problem both similarly and differently compared to their parents. The most common topics emerged as a criteria for defining the problem were time spent online, deprivation of social relationships and inability to replace the behavior. Although adolescents talked about time spent online as well, the way they discussed time was different than that of adults. Instead of talking about time as a criteria by itself, they talk about the consequences of time spent online. Also, they highlight that excessive internet use is not different than any other excessive behavior.

If you read a book for 6 hours a day and that hinders your other responsibilities it is also a problem. Playing games for 6 hours a day is exactly the same. I think it is the same thing as wandering outside all day long. Eating too much food or playing too much game is not different (Male#14, age 17).

I don't think there is a screen time limitation for a person. Especially for a teenager. There is no limit. The thing is you have some responsibilities to do and if you miss them, it becomes a problem. If you do not do your homework, it bothers you in school. I actually don't like it when I do. So I try to control myself but sometimes I just can't (Male#3, age 14).

Another emphasis adolescents made was the social relationships of the individual. Several interviewees declared a problem if the person had no social relationships in real life or cannot maintain the existing social life because of the excessive internet use: "The internet is not a problem by itself. The problem starts when people isolate themselves and bond with the internet alone." (Male#23, age 16).

Similar to the definition of adults, adolescents have mentioned the inability to replace the online activity as a problematic aspect. A notable difference was, when adolescents talked about inability to quit, they gave more details about 'normal amount' of the inability to replace:

Some people act as the game is the purpose. It is problematic if they feel a whole in their lives when they are kept away from the computer. But we need to differentiate something important here. For instance, I would feel a whole in my life if I didn't have my phone because I am communicating through it or reading from it. Of course I'd miss it. I'm not talking about this kind of deprivation. This is how the world works now. There isn't an encyclopedia for me to read at home, everything is online (Male#9, age 17).

4.1.2. Superordinate Theme 2: Experience of Adolescents

The experience of adolescents, in the most general sense, involved how and why they spent time online. Under this theme, the individual experiences of the adolescents are summarized under the topics of the attractive qualities of the internet, how they feel when spending time online, for what purposes they use the internet and when they usually use the internet were reported by adolescents. In addition to individual

experiences, how they feel and react against their parents' criticism about their time spent online was also mentioned as a sub-theme.

Online Behavior

One of the reasons adolescents use internet for educational purposes such as watching videos to study or finding study materials online. As the data collection was at a period in which schools were closed due to pandemic, educational use was quite frequent. They also use internet to obtain information and keep up with the news. Another way they use internet is to socialize and communicate with their friends. They also use it to have fun, to kill time or to shop. When they were asked when they usually go online, except for the online courses, they usually preferred to spend time online in their leisure times. The leisure time usually corresponds to the night time, as at day time they have responsibilities such as school work.

As adolescents talked about their online experiences, they talked about some qualities of the internet that are attractive. These attractive qualities make them spend more time online or prefer spending time online over other activities. One of the most frequently mentioned quality was the accessibility. Since the applications on a cell-phone or reaching out to play a game on the computer or surf on the internet was much easier, effortless and cheap compared to other activities, they usually prefer to spend time on the internet at their leisure times:

The phone is too accessible. I can also play when I am bored but you need a preparation for it paintings, water, paper... But the phone is a small square that is easily accessible. It is very tempting (Male#19, age 17).

Another emphasis was on the unlimited nature of the internet. The internet offers variety of applications, sources of information, games, videos to watch, means of communication to adolescents that never becomes old. This unlimited opportunities to discover is described as an important attractive quality of the internet.

When you spend time at home whatever you do, the things you can do are limited and they have a limit. Tidying your room has an end, reading a book has an end, studying has an end but the things you can do on your phone never ends. There are millions of similar video suggestions to the one you watch. Each one is different. It is very tempting and the time passes more quickly because it never ends (Female#3, age 14).

As an important purpose of the internet use was socializing, an important quality of the internet was that it makes forming social relationships and communication so easy compared to face-to-face communication. The usually found it easier to communicate online compared to face-to-face which made the internet an important means of socializing for especially those who cannot form social relationships easily in real world. Another important thing that makes social relationships so easy described as the ability to change or create an identity online. They did not have to present themselves as they were, they can hide the personal aspects that they did not like and present themselves as they wish:

You can present yourself in ways that you cannot in the real life. Like you were born again as another person. Extremely free, you can do anything you want there. That is what people love. The freedom, the unlimited nature. You can do anything you want (Male#23, age 16).

Adolescents' have mentioned variety of feelings as they talk about their online experience. Some of the feelings were quite traditional ones such as feeling good with themselves as they spent time online, having fun or excitement as they play games. On the other hand, there were also more distinct feelings that accompany their online experiences. For those who play online games, the most distinct feeling was the feeling of achievement:

The reason I feel good when I play games is because I play better than most people. Seeing that I play good, that I achieve successful scores feels good. I like presenting my skills. I do not play games I am not good at. Seeing that I am successful makes me happy. The games do not have any other entertainment than that (Female#25, age 17).

As feeling of achievement was a distinguished feeling, they were also asked how they felt when they lose at a game. Majority of them described anger, frustration and feeling as they wasted their time.

Another feeling described as they learn how to play and perform better was the superiority: “You get better as you play and teach new players how to play. This is a good feeling who wouldn’t love feeling superior. It is cool.” (Female#15, age 15).

Feeling of superiority was not specific to gamers. One of the participants who was involved in mass WhatsApp groups described feeling of superiority as:

I feel superior. The moment I click on WhatsApp, I feel good, I feel superior. I feel like a normal person in real life. An ordinary person. Yet in virtual world I feel I am the king or something I don’t know I feel superior. Anybody would love to feel that (Male#23, age 16).

Finally, those who spent more time on social media, communicating or watching video contents, described a distinct feeling of belonging:

Watching people making friends in there.. there is a new game called Among Us, when you watch them communicate with each other making jokes, you feel like you are a part of their group. Especially when you understand inside jokes it really makes you feel like you are a part of the group. There are some jokes that no one else would get (Female#6, age17).

I am a member of this WhatsApp group since 2015. I was young then, now in 2020 I am well known by others in the group. This makes it hard to let go it makes you want to spend more time there. Everyone has developed a sense of belonging to this community. They spent most of their time there day and night (Male#23, age 16).

Skills and Strategies

Adolescents adopted some strategies to manage their internet use from time to time. They usually involve, planning, asking for help, using some applications or removing the attraction. They remove the attraction as they took the computer out

of their room, deleted games and distracting applications. Used concentration apps on the phone that helped manage time spent on the phone and on certain applications. Making a study plan, finishing the responsibilities first, having reminder notes on what to do in a day. There were also some adolescents which do not have an attempt to quit at all because they did not think it affects them negatively. Most common answer was voluntarily quitting without any special effort.

Another important factor that influences adolescents' problematic internet use is how they cope with unpleasant feelings or stressful situations. "Honestly, as I watch these videos, I forgot the things that make me sad in normal life. They keep my mind away from the real life." (Female#3, age 14). For example an adolescent clearly states that playing games is highly correlated with having a bad day: "I usually play a lot when I had bad scores from an exam or had a bad day" (Male#9, age 16).

Vast majority of the participants use the internet to cope with stressful situations. As an adolescent says: "The more stressed I am the more I play. If I am not stressed, I don't need to play." (Male#14, age 17). There were also those who try different methods such as socializing with friends, distracting oneself with a book or playing with their pet.

Some adolescents describe the problem focused coping which included thinking about the problem and possible solutions. Notice that these adolescents were the ones which are named as negative case: "I usually I talk with my best friend or if it is something that I can tell my mother I ask for her help to find solutions" (Female#24, age 17).

When I feel sad, I usually think about the thing that made me sad. I can solve some of the problems when I think about them for a long time. This is the most effective method I have tried so far (Male#22, age 16).

Relational Dynamics

Family Relationships

In order to understand the family dynamics adolescents relationships with their parents is important. Some adolescents described a distant and critical environment at home. Others have described more supportive and close relationship with their parents. An interesting think that can distinctly be observed was the different roles of parents. The behavior or mother and father differs and it had different effects on the adolescents' behavior:

My father is really complaining. He isn't living with us but he knows somehow. He says I play too much. ... I don't prefer to talk to him if I don't have to. He is always preaching and I am really sick of that. My mother only interferes I have an exam the next day. She understands that the games make me feel better (Female#25, age 17).

Parents also described a similar situation in which they think or behave differently and that children's reactions are different to their mother and father:

Their father is more strict. They listen to him. Should I be like that as well? He gets angry when they spent time on their phones or tablets too much, when they are not doing their homework. I spent more time with them he only sees them 2 or 3 hours at night but he gets really angry (Mother #12).

He doesn't much care for what I say, he cares more about his father. He never wants him to play. He is strict like that. If he gets mad, he bans the internet use immediately for days or a week. But the game is a place where he goes to relief and when he doesn't play he gets stressed. I don't want him to experience that so I intervene and bargain. We usually get permission for like 1 hour he plays and gets relief (Mother#21).

Peer Relationships

Adolescents reported regular relationships with their friends such as talking, going to cafes or places. Some reported problematic relationships which are quite chronic. "I

can't make many friends that lasts. People usually don't get me. I am mostly misunderstood." (Female#25, age 17).

I usually have problems with my friends. I have a tendency to lie when I am stressed. They blame me for it when we have arguments. I knew that I was lying but I didn't know that they are influenced by those lies that much (Female#6, age 17).

An interesting aspect was that most of the adolescents have friends that they only communicated through online media:

I have online friends that I don't have their numbers. Some of them are from Instagram and some of them are from tiktok. ... When you have a problem with your classmates you have to see them every day. But when they are online you just block and it's done. Likewise, I don't have to respond to their messages immediately because there is no physical aspect of the relationships. That is why I have much more comfortable in my relationships online (Female#6, age 17).

I believe virtual friendships have a stronger bond than the real ones. Because you are constantly on call. I can cook, travel, do everything as I talk with my friends. That is why it is stronger than real friendships. We spent more time together (Male#23, age 17).

Response to Criticism

An important part of adolescents online experience includes how their parents reacted to their time spent online. All adolescents reported that their parents intervened and criticized on how much time they spent online. Although none of the participants receive their criticisms positively, the way they respond differs. Three common ways of responding to parental criticism emerged. The most common reaction was to protest. They usually get angry because someone had told them what to do in their own time and do not engage in the wanted activity. They complain that the parents were exaggerating and not being reasonable in their criticisms:

Sometimes they are right. But my parents don't know everything. There are somethings that I should know that are in my responsibility. I don't like when they interfere with everything and when tell me to quit looking at my phone. I don't think it is right. This is my responsibility I know what I'll do and when I'll do it. I get really mad. I feels like what they call the teenage temper. I get really angry because they are meddling. I am old enough to know my own responsibilities (Female#16, age 15).

I think they are overreacting. They tell me that I am a phone addict. It is not true they are overreacting. They never see someone who is a true addict this can't be it. I can decide what is wrong and what is right and I don't think this is wrong. It is not affecting me in a bad way. Having fun is my priority. They think I should study more but having fun is more tempting (Female#15, age 15).

The second most common reaction was to stay unresponsive. Adolescents mentioned that they usually memorized what their parents would say and they perceived no way of effective communication so they wait until the criticism was over without saying or doing anything.

It has become a routine. They always say the same things when they get angry. I listen, inevitably. Since I memorized the lines I know what they will say next (Male#7, age14).

I get really irritated. I close my ears with my hands when my mother starts to talk about this. I actually do this. Because I know the exact sentences. I memorized them. That is why I don't listen anymore. At first I was trying to explain so that she'll understand but now I just say yeah yeah ok (Female#8, age 16).

Sometimes, they stay unresponsive since they simply did not agree that what they do was abnormal.

I am not really bothered by their reactions because I am aware of what is wrong and what is right. They get mad and I just stay unresponsive. Because I think it is normal (Male#5, age 15).

Finally, in some cases, adolescents compromised and listened to their parents. Interviews revealed that they either compromise because they think the parents are right or because they do not want to make them more angry.

They say something when I spend my who time online. That is why I try to do something else in between. I know If I only play games it won't be good for me, I don't think this would be enough. I agree with them a little so I try to listen as well instead of only protesting what they say (Male#13, age 15).

I usually quit unwillingly because I don't want to make them even more mad. If I really had to do something else I go and do it but if I am free I really think it is unnecessary for them to warn me (Female, 16, age 15).

4.1.3. Superordinate Theme 3: Experience of Parents

In this theme, parents' experiences regarding their children's internet use was examined. Answers of the following questions are summarized below: What are parents' attitudes towards the Internet? What are their concerns about their children's internet use? How do they feel about it? What are they trying to do to control or manage the situation and what are the challenges they face? Findings regarding each question is presented under a sub-theme below.

Parents' Attitude Towards the Internet

As parents who participated in the interviews are concerned about their children's internet use, they have different attitudes toward the internet itself. As they observed the adverse effects of the internet on their daily life, they tend to blame the internet or believe that the problems will cease to exist without it. One parent called it the "the biggest enemy of our children and family" (Mother, 7). As a consequence, they developed a strictly negative attitude towards the internet and try to fight against it to protect their children and families and said that "This is my biggest problem. I would break it all or have it closed if I could" (Mother, #14)

Not all parents have hostile attitude against the internet. Some parents have accepted that the internet is a necessity in daily life. Although they did not find the amount of their child's internet use normal, they tried to adopt an accepting attitude towards it. They accepted that there is nothing they can do to change or control it and that it a part of life even though they did not fully understand it.

It is not important whether I think it is too much, a problem or not. This is the reality of our time now. It is definitely too much, but it is not for me to judge it. I sometimes warn her, I used to anyway, I don't anymore (Father #6).

Besides parents who have an openly accepting or negative attitude towards the Internet, most of the parents reported a rather ambivalent attitude. Parents who are ambivalent about the internet are aware that it is a necessity of the daily life, yet they were concerned about protecting or guiding their child. They are usually unsure whether they make the right decision and say that they cannot decide how to react: "I can't decide. Maybe I should set more boundaries, but on the other hand it makes them even more unhappy" (Mother, #25)

I am not as strict as his mother. I usually say, what else can he do at home all the time, let him play. But maybe mine is not the right attitude. Maybe that is why it has come to this degree (Father, #5).

Parental Concerns

Although all parents were concerned about their child's excessive internet use, what the concern was directed at differs among families. They usually talk about different areas of life that could negatively influence as a result of the Internet use. The most common concern is educational and relatedly, future career. Almost all parents reported that they were fine with the internet as long as it did not interfere with their studies. They usually complained that they were not making their academic responsibilities a priority. Parents constantly state that they preferred if their child reads a book instead of playing games or spending time on social media. As a

consequence, they also fear that this situation will negatively affect their career in the future.

The other most frequently mentioned concern is the decreased family time. Parents think the fact that their child and also other members of the family is spending too much time online was the primary reason why they did not spend much time together. Especially in adolescence, children preferred to spend time apart from their parents and the Internet provides an easy escape. Parents feared that eventually family relationship will be damaged and disappeared as a result of the excessive internet use:

I feel the family ties are weakening. We don't even speak anymore we don't share anything meaningful as a family. Everyone grabs a phone, tablet or a computer and we just sit there (Mother #18).

She stops communicating with us at some point. She is fulfilling her daily social needs with her friends on WhatsApp and won't speak to us. It bothers me. When she is doing something on her phone and her younger sister wants something she is not even making eye contact with her. These are the kind of things that I worry about, that our bond with our family is weakens (Mother #16).

Another frequently mentioned concern for parents was about their children's social and physical health. Parents were concerned that spending too much online will negatively affect their children's social skills and they eventually will become more withdrawn. Additionally, parents were concerned about their children's physical health thinking that the online time they spent will cause them to damage their eyes, gain weight, muscular health, brain development or weaken their immune system. Besides, several parents have expressed concern about their child's language development. Since most of the content on the Internet is in English, parents observed a deterioration in their mother language and ability to communicate effectively. Also, they mostly complained about the bad language (swearing etc.) their child was exposed to and use on the online games.

An important area of concern for parents was their child's safety. Parents were worried when they cannot keep track of to whom their child was communicating with. Especially parents who had teenage daughters reported genuine concern regarding whether they were being tricked by adult strangers on risky behaviors such as meeting, were concerned about the availability of inappropriate sexual content on the Internet. As parents were aware that, especially on adolescence, their children will start to discover their own sexuality, they fear that the content they were exposed to would negatively influence their healthy sexual development. Some of the parents described prior experiences on the subject:

Well... he is a teenage boy after all... he watched some inappropriate videos earlier than he should. We were not monitoring because we didn't know that sexual awareness or curiosity would be developed at that age. It was 3 or 4 years ago. Of course when he was exposed to some inappropriate sexual videos it triggered some obsessive thoughts. We had professional help to deal with that. He is fine now but I wish we knew better and none of this would happen (Mother #21).

Parents' Feelings

Behind all the different attitudes they hold and concerns they had to their child's excessive internet use, parents expressed variety of feelings in the interviews. Most of the parents did not have one specific concern or feeling regarding the subject, yet, some feelings seemed to strongly shaped the motivation to interfere with the child's internet use. A common and expected feeling against their children's excessive use of the internet is feeling angry and upset. They were upset that their children was not listening to them or spending more time with them. They also got angry because they think they are wasting time on screen instead of doing something productive.

I feel angry. I also feel sad but mostly angry. There is another life out there, I get angry because he is not living that life. Go out with your friends, have fun, spend time outside. But when the is at home online all the time I feel like he is wasting time. That is what makes me angry (Mother #22).

Another parent expressed her unhappiness in connection with motherhood:

I am not happy. I can't feel like a mother. I want them to hug and kiss me. I am a sensitive mother, I'd like to express my love. Let alone kissing or hugging, he is not even talking to me when he is online. He only says, shut my door, do not come in, leave me alone! (Mother #10).

As children prefer to spend more time online than with their parents, some parents expressed that they felt as their children do not need them anymore, they feel left out by the internet:

My oldest son is spending so good time with what he watches or reads on the internet, I feel kind of offended. I can't make him entertain like that I am not that fun. I really wonder what he is doing but he won't share with me (Mother #14).

They talk to people they love, play the game they want, watch the movie they want. Everything is so accessible now maybe they don't need us anymore (Mother#3).

Finally, as parents tried to fight against it and keep their child away from the internet, they faced constant failure. This inability to change or control anything creates a feeling of helplessness: "We are not in control. Whatever we do, we cannot keep them away. It is exhausting" (Mother #1)

The hardest thing is inability to do something, to get results. When you try different things and none of them give results... It starts to feel helpless (Mother, #13).

Parents' Control Strategies

In addition to parents' subjective experience, the strategies they follow to control the child's internet use was asked to parents. The strategies they follow can be categorized under three main topics which were monitoring, setting rules and limitations. The most basic strategy parents follow was controlling the browser history and secretly checking the messages on the phone. Some families use safe internet applications, however almost all of them reported that these applications were useful when they were younger and not effective in adolescence.

Some families had no rules at home regarding individual responsibilities or things that would be done together, some parents set specific rules. Most common ones was dinner time and bed time. The family always ate dinner together and no one was allowed to look at their phones unless there was an emergency. Likewise, some parents do not allow the child to take the phone to their room when they were going to sleep. Some parents preferred to give certain responsibilities at home (setting the table, feeding the dog etc.) to limit the hours they spend online.

Another thing they frequently did was setting screen time limitations such as no phone or computer after 10:00 p.m. or taking a break after 30 minutes, banning the internet use on certain days of the week. While some parents reported success when there were clear boundaries they were able to maintain them, most of them expressed that limitations did not work:

I carried the computer to the kitchen so that she won't be able to play the game because I am always there. She'd waited for me to sleep to go online to play in the kitchen. Whatever you do, she finds a way to do what she wants anyway (Mother #25).

I didn't want any games downloaded in his phone. If I'd see one I'd make him delete it, limit the hours he can spend on the computer. Whatever I did to prevent him play, he had found a way out (Mother #9).

Parents' Challenges

Parents have consistently expressed that trying to deal with the excessive internet use with their children was a challenging work. They face many challenges and failures throughout the day. One important challenge was the age related boundaries. Almost all parents expressed that it was much easier to control when their child was much younger and the old strategies that work in the past was useless in the adolescence. As they get older, it became harder to keep track of what they do:

They are grown up now. A boy aged 15 can make his own decisions, take responsibility. When he was 10 or 11, there were strict rules about screen time.

As they grow up, we have to withdraw ourselves. When I tell him give me your phone, there is a grown man in front of me he is taller than me what can I do? (Mother #1).

Another thing which also came with the age was the communication difficulties. Adolescence by itself is a harsh period for the parent and the child. The digital generational divide also makes it more difficult to communicate about this subject which often results in conflict:

I wish to strengthen my communication with him and fulfill his wishes but I am not enough. I wish to enter his world and do things that he loves. I feel inadequate. I behave in an ignorant and a vulgar manner, I break his heart. Maybe I should be the one who should get help. Maybe I should learn to control my temper (Mother #7).

All parents' wishes was to protect their child against danger and teach them how to develop and grow. However, parents express a genuine need for guidance on how to teach their children certain skills (time management, responsibilities etc.), healthy communication or safe internet use:

I need help with how to teach the children that there is a different life out there, everything is not easy as it seems on those videos. He should experience different things to learn. I also speak with other moms and dads, this is a problem for everyone (Mother #1).

4.1.4. Superordinate Theme 4: Facilitators & Solutions

Both adolescents and parents had some opinions on what fosters and hinders the problematic internet use and its adverse consequences. Interestingly enough, mothers and adolescents seemed to mostly agree on what should be done or what makes it worse even though they cannot communicate or handle very effectively in their lives.

Perceived Sources of the Problem

For both parents and adolescents family was a determinant factor on how an individual uses or is affected by the internet. As one of the fathers (#6) in the study stated “It is not possible to think of the problem independent from the family. But I don’t think the family alone is the cause of the problem entirely.” Participants mostly mentioned that, when the family had clear and strict rules, the child had no chance but to obey them. Also, the lack of attention the family provided to the child was another topic that was mentioned in some interviews. A parent distinctively mention the academic competition that parents put their child in:

There is an academic competition among families. This competition affects the kids. They are going to school, tutoring, additional lessons.... They don’t have time to play to socialize with their friends. When they can’t do it they spend more time online. ... this competition is an important factor that pushed the kids hard. Parents’ academic concerns (Mother #1).

An adolescent mentioned the strict parenting could be a cause of the problematic internet use:

It depends on the family. If the child is raised in an environment with strict restrictions, not allowing the child to express herself, that problematic internet use begins. It comes from the family, the environment (Female #6, age 17).

When participants talked about periods where the problematic use was out of hand, or extreme time periods they often described a period of social isolation. When the individual had no quality social environment or necessary social skills to form relationships it was more likely that they will turn on to online environments to compensate. An adolescents who got into different mass WhatsApp groups that had a negative influence on him described how he started to be a part of those groups:

In secondary school was completely asocial, I almost never leave the home... I tried to compensate for that online. How can I say, I was feeling lonely so I was spending more time online. It was really tempting to be recognized to be loved (Male #23, age 16).

Two other adolescents who played online games for long hours described how they start to play at the first place:

I didn't go out much back then. There wasn't a lot of people around where we live, nowhere to go so I preferred the computer. It was fun (Male #22, age 16).

Since I started playing games, my self-confidence is improved. I started to communicate with people when I started online gaming. I used to be a person who can never communicate with others who couldn't even form a proper sentence. As I played, my social skills have improved, I started to feel more confident. I had no self-confidence before I started to play games (Female #25, age 17).

Maybe the most commonly agreed reason was the lack of alternatives. Adolescents turned to the internet when they fail to answer the question "what else can I do instead?" whereas the parents gave up on protesting when they failed to answer the question "what else can they do instead?" One of the mothers (no 13) summarized the topic by saying: "This is the only way they know to have fun". Adolescents also agreed that lack of alternatives was an important determinant:

I sometimes draw which is an alternative to the computer. Listening to music can be another. Finding alternatives is important and only the person itself can find one (Male #19, age 17).

I don't have a hobby, I think this is the reason. I don't play an instrument or play any sports, do handcrafts... That is why I spent time online all the time because there is nothing else I could do (Female#8, age16).

A situational factor that described as making things worse was the pandemic. Due to the COVID-19 restrictions students were at home all day and have limited opportunities to go outside. Therefore, this created an even less variety of alternatives available over internet use. Another external factor described by the participants was the gaming and social media sector. They stated that since they created the games or other media to keep the users engaged, this successful engineering that targets the adolescents is partly responsible for the problematic behaviors related to the internet.

Finally, although not described as the source of excessive use, but as the source of conflict between the parent and children was the generational difference. Parents have a hard time understanding why their children enjoyed spending time online so much and did not see it as a problem.

I am two generations behind. I was born on 1970. We didn't even have phones at home, we were so happy we had strong relationship with our friends we enjoyed going to school. The technology had introduced into our lives after we have lived a whole different life and I cannot accept it entirely (Mother #14).

Adolescents were also aware that their parents were from a different generation and that was why they cannot understand them entirely:

They didn't have it back then, that's why they cannot fully comprehend that it is a part of our lives now. They think the internet is a burden (Male #5, age 15).

Perceived Element of Change

Both parents and adolescents were aware that nobody can make the other change their behavior, especially about the internet, which provides so much pleasure. The most common answer was cultivating self-regulation. The ability to self-regulate was the most obvious wish of the parents. Both parents and adolescents stress the importance of self-regulation skills and the importance of intrinsic motivation to change:

If he' tell me that I will play for 2 to 3 hours after dinner and then will go to bed at this hour I would be the happiest mom in the world. But they have no limit (Mother #12).

In the quotation above, the mother expresses her wished to see her child with developed self-regulation abilities. Below is an adolescent explaining why parent interference wouldn't work.

It never works when the family tries to intervene. In fact, I use my phone for longer hours when they get angry. I get angry and cannot angrily respond to them because it will make things worse, so it is easy to stay quiet and scroll down in Instagram to spent time. That is why no one can do anything the person itself should do it. The person should stop at own will. I don't think an outer factor will be useful (Female#3, age 14).

An important factor was ability to use the internet in beneficial ways. When the individual learned how to use the internet in an healthy way, it no longer posed a threat to anybody.

Almost all participants thought that family has an important role in prevention and cultivation of healthy development and internet use:

First, parents need to comprehend what is internet use. It should starts with what is internet and what can you do online. Then, it should go into what are harmful and what are beneficial to do online. ... Especially for younger children the time and content should be monitored (Male #22, age 16).

It is primarily the family's responsibility. They need to teach children that they don't need these to be happy. They should teach how to be happy with small things in life. When the only thing that makes you happy is social media, it is dangerous (Female#6, age 17).

Several adolescent interviewees mentioned that having a goal was important to regulate the behavior. They try to remind themselves of their goals in life when they tried to manage with excessive use: "My goal is to get into a good university in İzmir. I want to study in a sea side city. This is how I distance myself from my phone" (Female#3, age 14).

I think it depends on how much you want certain things in life. If we have a goal in life, the person tries to live the day to the fullest. ... I think those without a plan or a goal are the ones who use the internet more problematically (Female#24, age 17).

An important thing both the parents and the adolescents mentioned was that an idea or an advice coming from a peer was more effective in behavior change of the

adolescent than that of an adult. “Their peers provide the strongest motivation. A behavior they see from a peer corresponds to our 3-year long efforts to make them do something.” (Father #5)

I don’t think anyone would care too much when their parents say something. There are friends whom I warned about the internet and I believe they got better. Advice from peers is more effective (Female#8, age 16).

Besides peers, advice from those who never played games in their lives was also not cared by adolescents:

No one told me why the games are harmful. Of course there were seminars in school but I am not talking about those... I don’t think they are very realistic. They are prepared by people who never played. They don’t know the world they don’t know how it Works. They always say that gaming is a waste of time, it affects the friendships and environment in a bad way, you’ll be more prone to murder someone. It is always the same things. It is really meaningless (Female, #25).

An important aspect that derived from the parents interviews is that although they suggested various factors regarding the family and the individual, none of them was enough on its own. There need to be a systemic solution that parents, school, children and the community work together to prevent problematic use:

My explanations alone is not working. The computer games is entertaining so he does not want to give up. His friends whom he plays with are the same as well. Therefore us struggling alone is meaningless. The parents of those children should also do something. Maybe the school should do something (Mother #13).

Mothers, fathers, teachers, everybody should be aware of it. Everyone should learn something from each other. The public service advertisements shouldn’t only be for smoking it should be for online gaming as well. They should do something to prevent children’s access. I don’t know how it’ll work it seems too hard. We are all at fault so we should all do something (Mother #7).

Getting professional help from psychologists and school counselors are rarely mentioned by parents and not once mentioned by the adolescents. Although some

parents considered seeking professional help regarding the internet related issues they didn't take action. None of them discussed this issue with the school counselors. They talked with close-relatives or acquaintances. Only one parent had referred her child to a professional with the advice of her school counselor:

I cannot differentiate whether this anger comes from being a teenager or the games. I doesn't make sense, my brother also plays the same game he is a very calm person. I suspect that games makes her more angry but I cannot be sure. That is why she started seeing a psychologist (Mother#25).

4.2. Building to the Quantitative Study

As stated previously, a theoretical model that relies on Problem Behavior Theory was planned to be tested in the second quantitative part of the study. The variables that could be included in each system of the model was selected deriving from the data gathered from interviews and the theory.

Demographic system: Considering their distal influence on the behavior, the demographic variables were decided to be examined as preliminary rather than being included in the model to keep the model simple. In this part, variables such as gender, age, parental education were thought to be an important demographic variable for this study based on the interviews and related literature.

Socialization system: In the interviews, adolescents described their relationships with their parents either in a close and supportive or strict and cold manner. Supported by the literature and the qualitative findings parenting style was thought to be the important variable to be included in the socialization system. Using the categorization of parenting styles done by Maccoby and Martin (1983) warm/accepting and strict/controlling parenting styles for both parents separately were used as socialization system variables. Negative case analyses supports that those who have more controlled use of internet describes a warm and close relationship with their

mothers but not necessarily with fathers. As fathers have different role in the family and in the adolescents' life, it was important to see the parenting style of the both parent.

Personality system: Two distinct variables that seem important in personality system was the ability to self-regulate and the way adolescents cope with the problems in life. Both parents and adolescents had emphasized the importance of these skills in adolescents. Especially, using technology to keep oneself distracted from the stressful situations, also known as the avoidant coping style, was the most common strategy that seem to be in relation to the problematic internet use. The negative cases again showed that those who have more controlled internet use describe problem focused coping strategies instead of suppressing emotions or avoidance. Therefore, coping style was thought to be an important factor. Another variable was the self-regulation skills. Likewise, both parents and adolescents stressed that, the change and the control over the behavior should be intrinsically motivated rather than extrinsic rules and regulations. Therefore, the degree to which a person can self-regulate was thought to be an important factor. Both variables in this study were also thought to be influenced by the parenting styles as suggested by the Problem Behavior Theory.

Person-environment system: Perceived environment system covers the immediate environment of the individual such as family, friends, work or school environment. As a result of the interviews majority of the participants as well as their parents have described a period of loneliness or lack of quality social interactions as a trigger to their excessive internet use. Therefore, loneliness was decided to be an important variable that can measure whether the person has a satisfying social peer relations. Another important variable was the social support. Since the loneliness scale also measure the support from peers indirectly, perceived family support needs to be measured. The feeling that the family will be there to support them when they have a problem, that they understand them is important for the adolescents.

Behavior system: The behavior was already determined from the beginning of the study. However, the exact measure of the behavior was determined as a result of the

interviews. Rather than including a diagnostic oriented addiction scale, a scale adopting a more psychosocial conceptualization of problematic internet use measure was preferred.

4.3. Results of the Quantitative Study

In this section, results of the quantitative study were presented. Besides the main findings of the study, preliminary analyses, and descriptive statistics regarding the sample were also presented in this section.

4.3.1. Preliminary Analysis

Prior to testing the proposed model, data screening, missing variable analysis, outlier analyses and testing of the assumptions of Structural Equation Modeling were carried out. Each step was explained in detail in the present section.

4.3.1.1. Data Screening

Prior to data cleaning and data analysis procedures, the appropriateness of sample size is examined. Suggestions for appropriate sample size usually depend on ratio of cases to free parameters of at least 5 to 1 (Hair et al., 2014) or 10 to 1 and 20 to 1 (Kline, 2016). There are 135 free parameters to be estimated in the model of the present study. So the sample size of 1582 is decided to be adequate before moving on the data screening in terms of missing values and outliers. Possible errors and mis-entries in the data set were checked and few errors were corrected.

4.3.1.2. Missing Variables

There were 1693 cases who filled out the survey at the beginning of data screening procedures. Missing values in each item in the scales were analyzed prior to any statistical analysis. Among 1693 cases, 81 cases have failed to complete the entire survey and left out more than 20% of the questionnaires unanswered. After eliminating those 81 cases, none of the remaining missing data points were more than

5% as suggested by Tabachnick and Fidell, (2013). Only those who did not fill one of the parenting practice scale ($N_{\text{missing\_mother}} = 5$ and $N_{\text{missing\_father}} = 42$) because their parents are divorced, separated or one of them is deceased, was not eliminated from the study because eliminating them would create a biased sample. Therefore, 1612 scales were left and missing values except for the cases who miss either one of the parenting practice scales was prepared for further analysis.

Missing values were analyzed to understand whether they are Missing Completely at Random (MCAR), Missing at Random (MAR) or Missing Not at Random (MNAR). Little's MCAR test was significant indicating that values are not MCAR (Little & Rubin, 1987). Patterns were examined in the Missing Value Analysis option in SPSS which did not reveal any pattern in the distribution of missing values. Several chi-square and t-tests were conducted to further analyze the possible pattern in the missing values. There was no association between missing values of age, gender, and grade level or school district. Therefore, it was decided that the data are at least MAR. Data were imputed using the Expectation Maximization (EM) method as suggested in case the data are at least MAR (Bennett, 2001).

4.3.1.3. Univariate and Multivariate Outliers

Univariate Outliers were examined with z-scores. Scores which has z scores beyond the range +3.29 and -3.29 were marked as univariate outliers (Tabachnick & Fidell, 2013). Multivariate outliers were examined using Mahalanobis Distance, Cook's distance, Leverage value and DfBeta's. 11 cases were above the critical ratio of both Mahalanobis Distance and Leverage value and 19 were outliers according to merely Mahalanobis Distance critical value (Tabachnick & Fidell, 2013). Therefore, total of 30 cases were detected as multivariate outliers and removed from the data set.

4.3.1.4. Assumptions of Structural Equation Modeling

After establishing the preliminary data screening procedures, assumptions regarding SEM analysis was checked. These assumptions are univariate and multivariate normality, linearity, homoscedasticity, normality of residuals, multicollinearity, and homoscedasticity (Tabachnick & Fidell, 2013).

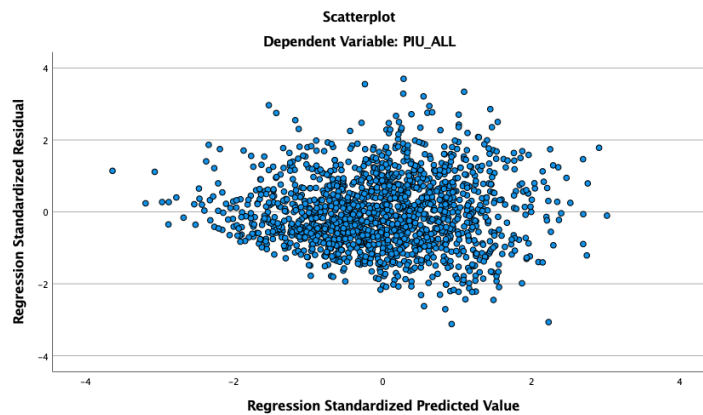
4.3.1.4.1. Univariate and Multivariate Normality

To test for the univariate normality of the data Skewness and Kurtosis values, Kolmogorov-Smirnov and Shapiro Wilk tests and histograms were examined. Skewness values range between -1.00 and .76 whereas Kurtosis values range between .549 and -.550 which are all in the acceptable range of -3 and +3 (Stevens, 2009; Tabachnick & Fidell, 2013). However, Kolmogorov- Smirnov and Shapiro Wilk's test were significant for all variables which indicate non-normal distribution. Finally, histograms indicate a mainly positively skewed distribution for problematic internet use and loneliness variables and negatively skewed distribution for family support and parenting practices variables. All these information indicate that the univariate normality of the data is not ensured. To test for the multivariate normality of the data, Mardia's (1975) test were run. Mardia's multivariate Kurtosis test was significant indicating a multivariate non-normal distribution. To sum up, both univariate and multivariate normality assumption were not met for the present study.

4.3.1.4.2. Linearity and Homoscedasticity

The assumption of linearity indicates that a linear relationship should exists between each variable and it is examined through scatterplots (Tabachnick & Fidell, 2013). Examination of scatterplots between variables indicated that the linearity assumption was met. The assumption of homoscedasticity of residuals was also checked through scatterplots. In order to meet the assumption of homoscedasticity, an absence of pattern is required in the distribution of plot points (Tabachnick & Fidell, 2013). As can be observed in the Figure 4.1. there was no pattern meaning that the assumption of homoscedasticity was not violated.

Figure 4.1 Assumption of Homoscedasticity



4.3.1.4.3. Multicollinearity

Assumption of multicollinearity requires that the correlations between variables no higher than .90 (Kleine, 2016). Bivariate correlations were check and correlations ranged between .09 and .76. Three correlation values point out between Mother acceptance and father acceptance ($r = .70$), family support and mother acceptance ($r = .76$) and father acceptance ($r = .73$). Although they can be considered quite high correlations compared to others, the statistical problems created by multicollinearity occur at correlations above .90. Therefore, the correlation of .76 in the present study was decided to be in the normal range (Kleine, 2016; Tabachnick & Fidell, 2013,).

Additionally, Tolerance and VIF values were examined to detect multicollinearity. Tolerance values smaller than .10 indicate extreme multivariate collinearity. The lowest tolerance value in this study was .312 which is acceptable (Kleine, 2016). VIF values greater than 10.0 indicate multivariate collinearity and for the present study highest VIF value was 3.21 which also indicated that the assumption is not violated. The smallest tolerance value is .312 and greatest VIF value was 3.21 both indicate no violation in the assumption of multicollinearity (Kline, 2016).

4.3.1.4.4. Residuals

Normality of residuals were checked through histogram and normal probability plots (P-P plot). The histogram clearly indicates a normal distribution of residuals (see Figure 4.2). The P-P plots also indicate a normality since there is no significant deviation of the normality line (Figure 4.3). Both figures indicates no violation of normality of residuals (Tabachnick & Fidell, 2013).

Figure 4.2

Histogram Distribution of Residuals

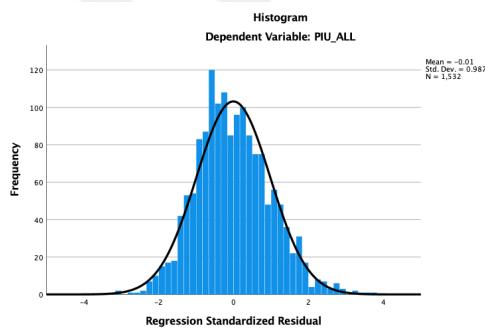
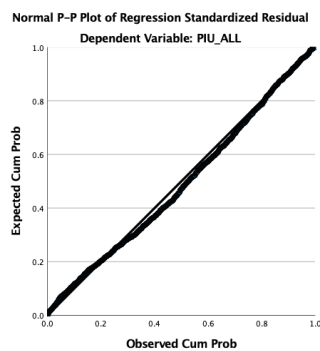


Figure 4.3

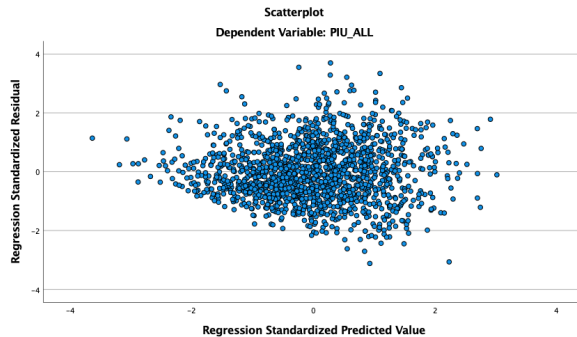
P-plot of Residuals



Finally, as indicated in Figure 4.4 the linearity of residuals assumption was also met.

Figure 4.4

Linearity of Residuals



4.3.2. Descriptive Statistics

As part of descriptive statistics, the means and standard deviations of all variables in the study were computed. Then, bivariate correlations among variables were calculated. Finally, descriptive analyses was presented based on the information presented to participants in the demographic form. Specifically, the variables in the study were checked for how they differ according to gender, age, parental variables, and time spent online.

4.3.2.1. Means and Standard Deviation

Among all the subscales in PIU the highest mean value was in the negative consequences subscale ($M = 28.46$, $SD = 10.52$) compared to excessive use ($M = 20.23$, $SD = 4.93$) and social benefit ($M = 15.81$, $SD = 6.23$). Self-regulation success have the highest mean value ($M = 48.81$, $SD = 8.68$) in the sample followed by perceived social support from the family variable ($M = 47.21$, $SD = 10.17$). Among the perceived parenting styles acceptance/affectionate parenting seems to have the highest value ($M = 43.07$, $SD = 9.65$) followed by controlling strict parenting perceived from father ($M = 39.45$, $SD = 10.67$). Controlling parenting from mother

($M = 31.66$, $SD = 8.94$) still have higher mean value than accepting/affectionate parenting perceived from the father ($M = 30.02$, $SD = 9.06$). Results presented in the Table 4.2.

Table 4.2

The Means and Standard Deviations of Variables in the Study

Variable	<i>M</i>	<i>SD</i>	<i>Possible Range</i>
PIU_excessive	20.23	4.93	6-30
PIU_social	15.81	6.23	7-35
PIU_negative	28.46	10.52	14-70
Self-regulation	48.81	8.68	18-72
Loneliness	13.15	4.97	7-28
Avoidant Coping	23.89	3.97	11-33
Family Support	47.21	10.17	12-60
Accepting/warm_mother	43.07	9.65	11-55
Controlling/strict_mother	31.66	8.94	11-55
Accepting/warm_father	30.02	9.06	11-55
Controlling/strict_father	39.45	10.67	11-55

4.3.2.2. Gender Difference

Each variable was tested against gender differences. Independent sample's t-test was conducted for each study variable to see whether they differ by gender. Prior to analyses, Levene's test for equality of variances was checked. Results of the t-tests indicate that self-regulation ($t_{(1569)} = -3.358$, $p < .05$), excessive use ($t_{(1569)} = 4.181$, $p < .05$), loneliness ($t_{(1558.606)} = 7.640$, $p < .05$), coping ($t_{(1569)} = 9.190$, $p < .05$), social support from family ($t_{(1567.987)} = -2.827$, $p < .05$), accepting parenting perceived from mother ($t_{(1551.465)} = -3.659$, $p < .05$) and father ($t_{(1527.735)} = -6.843$, $p < .05$) variables shown to significantly differ by gender. Supporting the results of the t-test analyses, descriptive statistics indicate that males ($M = 49.62$, $SD = 8.35$) are significantly more successful in self-regulation compared to females ($M = 48.15$, $SD = 8.89$). Besides, females significantly use internet more excessively ($M = 20.71$, $SD = 4.90$) compared to males ($M = 19.68$, $SD = 4.88$). Females experience more loneliness ($M = 14.00$, $SD = 5.07$), utilize avoidant coping strategies more ($M = 24.71$, $SD = 3.82$) compared to males ($M = 12.12$, $SD = 4.63$; $M = 22.91$, $SD = 3.94$). Finally, males perceive mothers

($M = 44.05$, $SD = 8.31$) and fathers ($M = 41.45$, $SD = 9.42$) more acceptance/affectionate styles compared to females ($M = 42.29$, $SD = 10.62$; $M = 37.81$, $SD = 11.35$).

4.3.2.3. Age and Grade Level Difference

A series of one way ANOVA was conducted to see whether study variables significantly differ by grade level, district. Social benefit subscale of the problematic internet use scale ($F_{(3,1581)} = 3.949$, $p < .05$) and mother control subscale ($F_{(3,1576)} = 4.695$, $p < .05$) significantly differs by grade level. Participants in the 9th grade had scored significantly higher on social benefit subscale ($M = 16.33$, $SD = 6.60$) of PIU scale compared to 11th grade participants ($M = 15.13$, $SD = 5.91$). None of the other groups displayed significant difference. Similarly, 9th grade participants had scored higher on perceived mother control ($M = 32.86$, $SD = 9.28$) compared to 11th grade students ($M = 30.95$, $SD = 8.80$). Social benefit ($F_{(3,1581)} = 4.165$, $p < .05$), control from mother ($F_{(3,1581)} = 4.165$, $p < .05$) differ significantly by age. 14 year old participants ($M = 16.51$, $SD = 6.56$) scored higher than 16 year old participants ($M = 15.86$, $SD = 6.17$) on social benefit subscale. Controlling parenting style perceived from mother decrease as age increases. It is the highest for 14 years old ($M = 33.10$, $SD = 9.34$) and lowest for 17 years old ($M = 29.31$, $SD = 8.20$).

4.3.2.4. Difference by Parents' Marital Status and Education Level

Another one-way ANOVA was conducted to see whether study variables differ by their parents' marital status. Results of the ANOVA indicates that parenting style of the father both acceptance ($F_{(3,1576)} = 4.695$, $p < .05$) and control subscale ($F_{(3,1576)} = 4.695$, $p < .05$) differs significantly by marital status. Both father control ($M = 30.29$, $SD = 9.11$) and acceptance ($M = 39.76$, $SD = 10.43$) was higher when parents are together compared to when they are divorced ($M = 27.03$, $SD = 8.93$; $M = 36.13$, $SD = 12.50$).

Mother control is higher when the education level of the mother is lower ($F_{(4,1554)} = 5.526, p < .05$). Mothers who are university graduates had lowest control ($M = 30.68, SD = 9.07$) compared to primary school graduates ($M = 33.16, SD = 8.51$) and secondary school graduates ($M = 33.47, SD = 8.57$).

4.3.2.5. Time Spent Online

Finally, one way ANOVA was conducted to see whether study variables differ by the average time spent online. In order to conduct the ANOVA, the time spent online were transformed to three categories which are spending 1 to 5 hours a day, 6 to 10 hours a day and 11 hours or more. Results of the ANOVA suggests that all subscales of PIU namely negative consequences ($F_{(2,1581)} = 72.998, p < .05$), excessive use ($F_{(2,1581)} = 75.088, p < .05$) and social benefit ($F_{(2,1581)} = 32.518, p < .05$), avoidant coping ($F_{(2,1581)} = 4.793, p < .05$), self-regulation ($F_{(2,1581)} = 30.932, p < .05$) family support ($F_{(2,1581)} = 5.325, p < .05$), mother control ($F_{(3,1576)} = 7.141, p < .05$) and father acceptance ($F_{(3,1539)} = 4.901, p < .05$) differs significantly by time spent online. More specifically, as time spent online increases the scores obtained from negative consequences, excessive use and social benefit subscales increase. Those who use the internet for 1 to 5 hours a day significantly experience less negative consequences ($M = 26.74, SD = 9.69$) compared to those who spent time 6 to 10 hours a day ($M = 33.78, SD = 10.75$) and 11 hours or more ($M = 34.42, SD = 13.21$). Similarly, those who spent 1 to 5 hours a day scored significantly less on social benefit subscale ($M = 15.11, SD = 5.91$) than others ($M = 18.02, SD = 6.61; M = 17.93, SD = 7.20$). Additionally, self-regulation success is higher for those who spent 1 to 5 hours a day online ($M = 49.74, SD = 8.53$), than those who spend 6 to 10 hours ($M = 46.23, SD = 8.39$) and 11 hours or more ($M = 44.29, SD = 8.91$). For avoidant coping variable those who spent 1 to 5 hours a day online scored lower ($M = 23.71, SD = 4.01$) compared to those who spent 5 to 10 hours a day ($M = 24.43, SD = 3.76$). Similarly those who spent 1 to 5 hours a day scored higher on perceived family support scale ($M = 47.68, SD = 10.03$) compared to those who spend 5 to 10 hours a day online ($M = 45.72, SD = 10.56$). Controlling parenting style from mother is higher for those who

spent 10 hours or more ($M = 35.60$, $SD = 9.89$) time online compared to 5 to hours a day ($M = 31.95$, $SD = 9.48$) and event lower for those who spent 1 to 5 hours a day ($M = 31.37$, $SD = 8.69$). Accepting attitude from father is higher for those who spent 1 to 5 hours a day ($M = 39.88$, $SD = 10.59$) compared to 6 to 10 hours a day ($M = 37.72$, $SD = 10.85$).

4.3.2.6. Bivariate Correlations

Bivariate correlations among all variables were examined (See Table 4.3). Correlations between .10 to .29 are considered weak, correlations .30 to .49 are considered moderate and correlations .50 to 1.00 are considered strong (Cohen, 1998). All variables have significant correlations with each other. Majority of the variables are moderately correlated with each other. Only highly correlated variables are accepting/warm parenting from mother and father ($r = .70$, $p < .001$), controlling/strict parenting from mother and father ($r = .69$, $p < .001$), perceived support from family and accepting/warm parenting from father ($r = .73$, $p < .001$) and mother ($r = .76$, $p < .001$). Additionally, three subscales of the problematic internet use scale have strong correlations with each other ($r = .55$, $p < .001$; $r = .63$, $p < .001$; $r = .55$, $p < .001$).

Table 4.3

Intercorrelations among All Variables in the Study

	piu_e	piu_s	piu_n	sreg	ucla	cope	sup	mom_a	mom_c	dad_c	dad_a
piu_e	1	.55*	.63*	-.33*	.15*	.29*	-	-.09*	.12*	.11*	-.14*
							.13*				
piu_s		1	.55*	-.24*	.41*	.34*	-	-.25*	.22*	.23*	-.23*
							.31*				
piu_n			1	-.35	.29*	.31*	-	-.18*	.21*	.22*	-.23*
							.26*				
sreg				1	-.21*	-	.28*	.24*	-.16*	-.18*	.26
							.09*				
ucla					1	.33*	-	-.37*	.24*	.22*	-.36*
							.40*				
cope						1	-	-.17*	.24*	.20*	-.22*
							.22*				

Table 4.3 (continued)

sup	1	.76*	-.36*	-.36*	.73*
mom_a		1	-.32*	-.25*	.70*
mom_c			1	.69*	-.21*
dad_c				1	-.27*
dad_a					1

* $p < .001$, two-tailed. Note. *piu_e*: Excessive use subscale of PIU; *piu_s*: Social benefit subscale of PIU; *piu_n*: negative consequences subscale of PIU; *sreg*: self-regulation success subscale; *ucla*: loneliness scale; *cope*: avoidant coping subscale; *sup*: social support perceived from family subscale; *mom_a*: accepting/warm parenting from mother; *mom_c*:controlling/strict parenting from mother; *dad_c*: controlling/strict parenting from father; *dad_a*: accepting/warm parenting from father.

As their relationship with other variables were examined, excessive internet use showed weak correlations with accepting/warm parenting from mother ($r = -.09$, $p < .001$) and father ($r = -.14$, $p < .001$) controlling/strict parenting from father ($r = .11$, $p < .001$) and mother ($r = .12$, $p < .001$), family support ($r = -.13$, $p < .001$), loneliness ($r = .15$, $p < .001$). Moderate relationship with self-regulation ($r = -.33$, $p < .001$), avoidant coping ($r = .29$, $p < .001$). Negative consequences of internet use similarly showed weak correlations with family support ($r = -.26$, $p < .001$), accepting/warm parenting from mother ($r = -.18$, $p < .001$), and father ($r = -.23$, $p < .001$), controlling/strict parenting from mother ($r = .21$, $p < .001$), and father ($r = .22$, $p < .001$) whereas it displays moderate correlations with self-regulation ($r = -.35$, $p < .001$), loneliness ($r = .29$, $p < .001$) and avoidant coping ($r = .31$, $p < .001$). Finally, social benefit subscale shows mostly weak correlations with parenting styles scales ($r_{max} = .23$, $p < .001$; ($r_{min} = .22$, $p < .001$) and self-regulation ($r = -.24$, $p < .001$). Its correlation with loneliness ($r = .41$, $p < .001$), avoidant coping ($r = .34$, $p < .001$), family support ($r = -.31$, $p < .001$).

4.3.3. Model Testing

After completing the data screening and preliminary analyses, data was prepared for the model testing. Prior to model testing, item parceling procedure was followed. Then, measurement model was tested. Finally, the structural model was tested. All procedures were described in detail in the section below.

4.3.3.1. Item Parceling

Item parceling procedure was followed as a remedy to the multivariate non-normality of the data. The most important assumption of item parceling procedure is the unidimensionality of the items to be put in the same parcel (Little et al., 2002). Therefore, to ensure that the unidimensionality assumption is not violated, exploratory factor analysis (EFA) with a principle axis factoring estimation method was conducted. Results of the EFA indicated that all items significantly loaded on the same factor, thus ensuring that the parcels are unidimensional. Minimum and maximum factor loadings, eigenvalues, variances explained and Cronbach alpha coefficient of the items in the same factor is displayed on Table 4.4.

Table 4.4

Factor Loadings and Cronbach Alpha Coefficients of Items

Construct	Item #	Eigenvalue	Variance %	Factor Loadings		α
				Min	Max	
Excessive Use	6	1.93	32.18	.48	.68	.76
Negative Conseq.	14	4.67	33.83	.52	.70	.87
Social benefit	7	2.38	34.12	.35	.77	.74
Self-regulation	18	2.96	25.37	.31	.55	.82
Avoidant Coping	7	1.95	17.78	.35	.70	.71
Loneliness	7	2.96	42.23	.46	.72	.83
Family Support	12	5.91	49.26	.57	.79	.92
M_Acp	11	5.35	48.67	.40	.84	.91
M_Con	11	3.38	29.83	.42	.67	.82
F_Acp	11	5.51	50.11	.40	.83	.91
F_Con	11	3.23	29.36	.41	.67	.82

Note. M_acp: accepting/warm parenting style from mother, M_con: controlling/strict parenting style from mother; F_acp: accepting/warm parenting style from father; F_con: controlling/strict parenting style from father.

After ensuring the unidimensionality assumption, several decisions were made regarding how the parcels should be created. Following the suggestions of Matsunaga (2008), three parcels for each latent construct was prepared. Items were averaged rather than summed (Kleine, 2016). Parcels were created in a manner to preserve item

to construct balance (Little et al., 2002). Number of the items that are included in the parcels can be found in Table 4.5.

Table 4.5

Names and Items of Each Parcel

Name of the parcel	Items summed
Problematic Internet Use Scale	
Excessive_1	item10R + item6
Excessive_2	item1 + item25
Excessive_3	item7R + item2
Social_1	item4 + item5
Social_2	item11 + item8
Social_3	item3 + item27 + item9
Negative_1	item14 + item21 + item17 + item22 + item20
Negative_2	item26 + item18 + item13 + item19 + item15
Negative_3	item23 + item16 + item12 + item24
Self-Regulation Scale	
Reg_1	item25 + item20 + item26 + item23 + item1 + item13
Reg_2	item15 + item27 + item19 + item24 + item4 + item3
Reg_3	item18 + item5 + item14 + item9 + item21 + item22
Coping with Stress Scale	
Cope_1	item6 + item2
Cope_2	item4 + item5
Cope_3	item8 + item11
UCLA Loneliness Scale	
Ucla_1	item18 + item17 + item15
Ucla_2	item14 + item3
Ucla_3	item2 + item11
Social Support Scale	
Sup_1	item11 + item7R + item 8R + item5R
Sup_2	item10 + item4 + item2 + item 3R
Sup_3	item6 + item 9 + item1 + item12R
Parenting Styles Scale	
M_Acp_1	item7 + item21R + item11R + item13R
M_Acp_2	item15 + item19 + item3 + item17
M_Acp_3	item9 + item1 + item5
M_Con_1	item2 + item14 + item6 + item16
M_Con_2	item18 + item12 + item22 + item20
M_Con_3	item4 + item10 + item8
F_Acp_1	item7 + item21R + item5 + item17

Table 4.5 (Continued)

F_Acp_2	item15 + item11R + item9 + item13R
F_Acp_3	item3 + item1 + item19
F_Con_1	item2 + item8 + item6 + item20
F_Con_2	item18 + item10 + item12 + item16
F_Con_3	item4 + item14 + item22

Subsequently, parcels were examined in detail in order to ensure that they are reliable. Normality assumption was checked again with Mardia's tests and skewness and kurtosis values. Mardia's test suggested a significant value which indicates a non-normality is still an issue. Although the skewness and kurtosis values have highly improved, there is still some deviation from normality (See Table 4.6.). Therefore robust estimation method was used in the analysis. Finally, internal consistency coefficients are all in the expected range except for coping was .68 which is just below the required cut-off of .70 (Nunnally, 1978).

Table 4.6

Normality Values After Item Parceling

Parcels	<i>M</i>	<i>SD</i>	<i>Skewness</i>	<i>Kurtosis</i>	<i>Cronbach α</i>
Excessive_1	3.46	.93	-.21	-.38	.76
Excessive_2	3.38	1.06	-.24	-.70	
Excessive_3	3.26	.99	-.16	-.50	
Negative_1	2.10	.86	.77	.06	.87
Negative_2	2.11	.90	.68	-.23	
Negative_3	1.92	.82	.96	.49	
Social_1	2.48	1.18	.68	-.73	.77
Social_2	2.27	1.16	.68	-.49	
Social_3	1.98	1.05	1.03	.34	
Reg_1	2.76	.55	-.19	-.19	.83
Reg_2	2.60	.57	-.04	-.29	
Reg_3	2.76	.54	-.12	-.22	
Cope_1	2.16	.59	-.14	-.88	.68
Cope_2	2.17	.61	-.26	-.91	
Cope_3	2.14	.63	-.17	-1.02	
Ucla_1	2.01	.81	.53	-.62	.83
Ucla_2	1.83	.84	.87	-.06	
Ucla_3	1.72	.81	1.04	.25	
Sup_1	4.02	.91	-.96	.28	.92

Table 4.6 (Continued)

Sup_2	3.77	.88	-.61	-.23	
Sup_3	3.99	.94	-.86	.01	
M_Acp_1	3.92	.99	-.93	.20	.91
M_Acp_2	3.83	.89	-.88	.43	
M_Acp_3	4.01	.98	-1.09	.70	
M_Con_1	3.07	.96	.01	-.66	.79
M_Con_2	3.03	.85	.13	-.36	
M_Con_3	2.41	1.10	.61	-.45	
F_Acp_1	3.57	1.04	-.67	-.34	.90
F_Acp_2	3.71	1.04	-.79	-.18	
F_Acp_3	3.43	1.10	-.43	-.65	
F_Con_1	2.81	.93	.38	-.39	.84
F_Con_2	2.88	.91	.19	-.42	
F_Con_3	2.41	1.00	.50	-.37	

4.3.3.2. Measurement Model

A CFA was run to examine the relationships among latent variables in the model and to see whether the parcels load on the variables properly. The results of the CFA indicated that Chi-square statistic was statistically significant ($\chi^2_{(440)} = 1362.14, p = .000$). Model fit indices values SRMR = .04, RMSEA = .036 (90% CI = .034, .039), CFI = .96 and TLI = .95 values indicated good fit of measurement model to the data.

Local fit indices showed that all indicators loaded significantly on the corresponding latent variables. The standardized factor loadings ranging from .53 to .88 indicating parcels were identified properly with a large effect size (Kline, 2016). The standardized estimates of measurement model were displayed in Figure 4.5. Furthermore, the squared multiple correlation values (R^2), which corresponds to the explained variance by each variable, ranged between 28% and 78%. Unstandardized and unstandardized parameter estimates of measurement model were presented in Table 4.8.

Figure 4.5

The Measurement Model

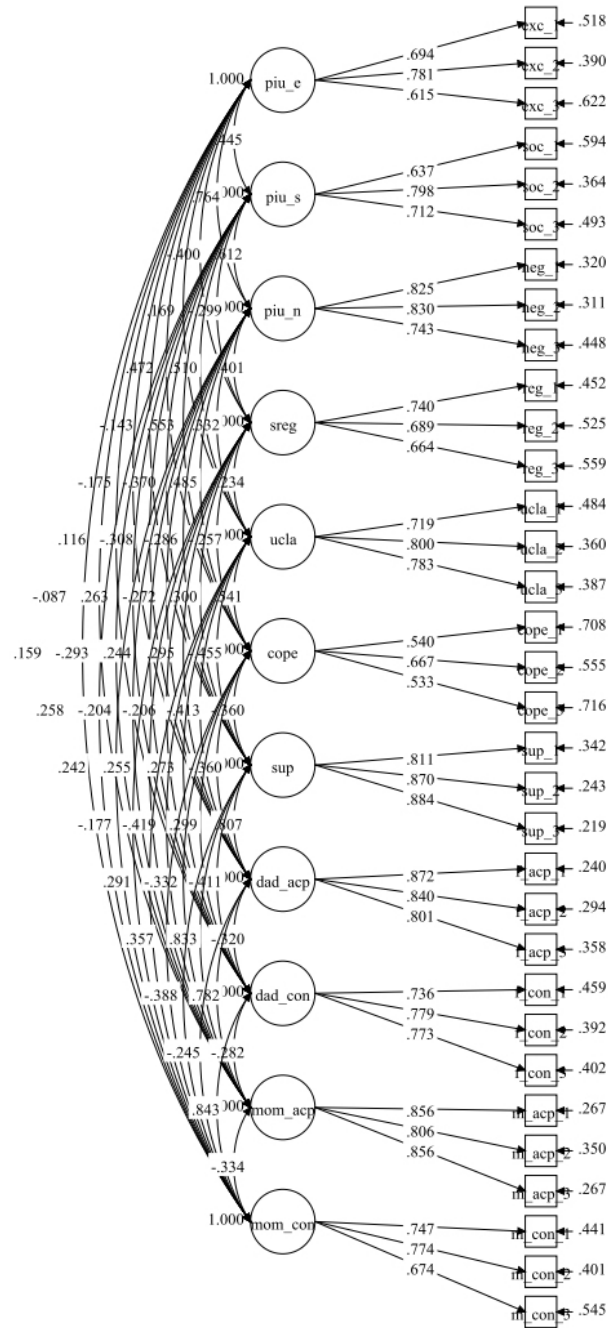


Table 4.7*Parameter Estimates of the Measurement Model*

Latent variables and indicators	Unstandardized factor loadings	Standardized factor loadings	SE	Est/SE	R^2
Negative PIU					
Neg1	1.00	0.83	0.01	67.19	.68
Neg2	1.05	0.83	0.01	72.02	.69
Neg3	0.87	0.74	0.01	53.28	.55
Social PIU					
Soc1	1.00	0.64	0.02	32.27	.41
Soc2	1.25	0.80	0.02	50.07	.64
Soc3	1.02	0.71	0.02	38.34	.51
Excessive PIU					
Excessive1	1.00	0.69	0.02	38.32	.48
Excessive2	1.29	0.78	0.02	49.53	.61
Excessive3	0.96	0.62	0.02	30.65	.38
Self Regulation					
Reg1	1.00	0.74	0.02	35.69	.55
Reg2	0.98	0.69	0.02	32.69	.48
Reg3	0.89	0.66	0.02	32.38	.44
Loneliness					
Uls1	1.00	0.72	0.02	41.64	.52
Uls2	1.17	0.80	0.02	51.12	.64
Uls3	1.12	0.78	0.02	51.84	.61
Avoidant Coping					
Cope1	1.00	0.54	0.03	21.11	.29
Cope2	1.30	0.67	0.02	30.54	.45
Cope3	1.05	0.53	0.03	20.49	.28
Family Support					
Sup1	1.00	0.81	0.01	72.33	.66
Sup2	1.07	0.87	0.01	92.54	.76
Sup3	1.12	0.88	0.01	110.29	.78
Accepting Parenting					
Acp_mom1	1.00	0.86	0.01	76.16	.73
Acp_mom2	0.86	0.81	0.01	69.05	.65
Acp_mom3	1.01	0.86	0.01	81.18	.73
Acp_dad1	1.00	0.87	0.01	101.69	.76
Acp_dad2	0.96	0.84	0.01	78.45	.71
Acp_dad3	0.96	0.80	0.01	67.26	.64
Controlling Parenting					
Con_mom1	1.00	0.75	0.02	49.34	.56
Con_mom2	0.91	0.77	0.02	52.16	.60
Con_mom3	1.04	0.67	0.02	32.36	.46
Con_dad1	1.00	0.74	0.02	47.26	.54
Con_dad2	1.03	0.78	0.01	54.66	.61
Con_dad3	1.13	0.77	0.01	54.89	.60

Intercorrelations among latent variables was examined to evaluate the results of the measurement model. All correlations among latent variables were statistically significant. However, the correlations were mostly moderate according to the criteria of Cohen (1998). The only distinctly large correlation was between accepting/warm parenting from mother and accepting/warm parenting from father ($r = .78, p < .05$) and controlling/strict parenting from mother and father ($r = .83, p < .05$). This was expected since it was the questionnaire used to measure accepting and controlling parenting style for mother and father. Although this is a quite high correlations, according to Tabachnick and Fidell (2013) and Kline (2016), the statistical problems created by multicollinearity occur at correlations above .90. Therefore, the current level of correlation does not indicate multicollinearity.

Table 4.8

Intercorrelations among Latent Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1.Piu_n	1	.76*	.59*	.39*	.49*	.29*	.26*	-.20*	.22*	-.27*	-.23*	.94*
2.Piu_e		1	.50*	.33*	.41*	.24*	.22*	-.17*	.19*	-.23*	.20*	.80*
3.Piu_s			1	.27*	.46*	.52*	.30*	-.26*	-.21*	-.30*	.23*	.63*
4.Sreg				1	-.14*	.15*	.28*	.26*	-.16*	.30*	-.21*	-.41*
5.Cope					1	.55*	.35*	-.34*	.33*	-.37*	.30*	.52*
6.Ucla						1	.42*	-.43*	.25*	-.43*	.28*	.30*
7.Sup							1	.84*	-.30*	.82*	-.41*	-.28*
8.Mom_a								1	-.22*	.78*	-.28*	-.21*
9.Mom_c									1	-.16*	.83*	.23*
10.Dad_a										1	-.32*	-.28*
11.Dad_c											1	.24*
12.Pint												1

Note. *piu_e*: Excessive use subscale of PIU; *piu_s*: Social benefit subscale of PIU; *piu_n*: negative consequences subscale of PIU; *sreg*: self-regulation success subscale; *ucla*: loneliness scale; *cope*: avoidant coping subscale; *sup*: social support perceived from family subscale; *mom_a*: accepting/warm parenting from mother; *mom_c*:controlling/strict parenting from mother; *dad_c*: controlling/strict parenting from father; *dad_a*: accepting/warm parenting from father; *Pint*: Problematic internet use scale

4.3.3.3. Structural Model

After completing all the preliminary steps, the structural model was tested and the main findings were presented in line with the hypothesized paths in the study.

4.3.3.3.1. Hypothesized Model

After confirming the measurement model, the structural model was tested using Mplus version 7. The initial results of the hypothesized model showed good fit. Although chi-square statistic was statistically significant ($\chi^2_{(462)} = 1708.754$, $p = .000$), other global model fit indices were within their acceptable ranges. Firstly, SRMR is required to be smaller than .05 (Steiger, 1990) or .08 (Browne & Cudeck, 1993; Hu & Bentler, 1999). In the present model, SRMR = .05 is an acceptable value. Secondly, RMSEA smaller than .05 indicates close fit/close approximate fit (Browne & Cudeck, 1993), a RMSEA value smaller than .08 is considered reasonable fit (Bryne, 2001; Kleine, 2016). Therefore, RMSEA = .041 (90% CI = .039, .043), in the present study can be considered a close fit. Finally, CFI and TLI values were examined. CFI value is expected to be over and equal to .95 (Hu & Bentler, 1999) or .90 (Schumacker & Lomax, 2004). For the hypothesized model, CFI = .95 and TLI = .94 indicates good fit. Overall, examination of global model fit indices suggested good/close fit. However, in order to evaluate the model fit to the data, individual parameter indices should also be examined besides global fit indices (Bryne, 2001).

To assess the individual parameter estimates, their appropriateness, theoretical soundness and statistical significance was evaluated (Bryne, 2001). Firstly, standard errors were examined. Although there is no certain criterion of what the range of standard errors should be (Jöreskog & Sörbom, 1999), there are no extreme small or large standard errors among the estimates of the model. After clearing the standard errors, examination of regression paths showed that among 23 hypothesized regression paths, 14 paths were non-significant. In order to find the most parsimonious and theoretically sound model, decision to pursue with post hoc analyses was made to explore the possible problems and solutions suggested by the Mplus software.

4.3.3.3.2. Post hoc analyses

In the hypothesized model, the regression path from loneliness to problematic internet use was non-significant. However, modification indices have suggested a path from loneliness to *piu_S*, (MI = 141.397). Considering that the social comfort subscale of the problematic internet use is theoretically relevant with loneliness the regression path from loneliness to *piu* was changed to *piu_s* and the model was run again. In the output of the second model, the value of TLI is improved from .94 to .95, SRMR improved to .05 to .04, and RMSEA improved to .039 to .041 suggesting that the second model is a better model. An improvement for the regression paths have also been observed. Additionally, 4 regression paths (*pint* on *cope*, *ucla* on *dad_con*, *mom_acp* and *dad_con* on *cope*), have become significant. Since there are still non-significant paths, modification indices are examined one more time to see whether there are any reasonable suggestions that could improve the model.

The next considerable modification indices suggests two possible cross-loading on the parcel *m_con_3*. The three suggestions is that the *m_con_3* parcel also loads on the *sup* (MI = 154.375), and *mom_acp* (MI = 192.769). All the suggestions are theoretically explainable since the control perceived from mother can also be used to define perceived family support, and acceptance perceived by mother. Since both make sense, the modification indices with the greater parameter change was preferred and added to the model. Global fit indices and regression paths suggest that the model was improved. Modification indices were examined one more time to ensure whether there are theoretically sound solutions existed.

Finally, modification indices suggested a covariance between loneliness and coping (MI = 125.283) which makes theoretical sense and therefore included in the model. The fourth and final model was examined and saw that global fit indices indicated improvement. Modification indices were examined and values did not suggest any further considerable modifications to improve the model. Therefore the final version

of the model was obtained. The global fit indices of all models tested can be seen in Table 4.10. Final version of the model is presented in the Figure 4.6.

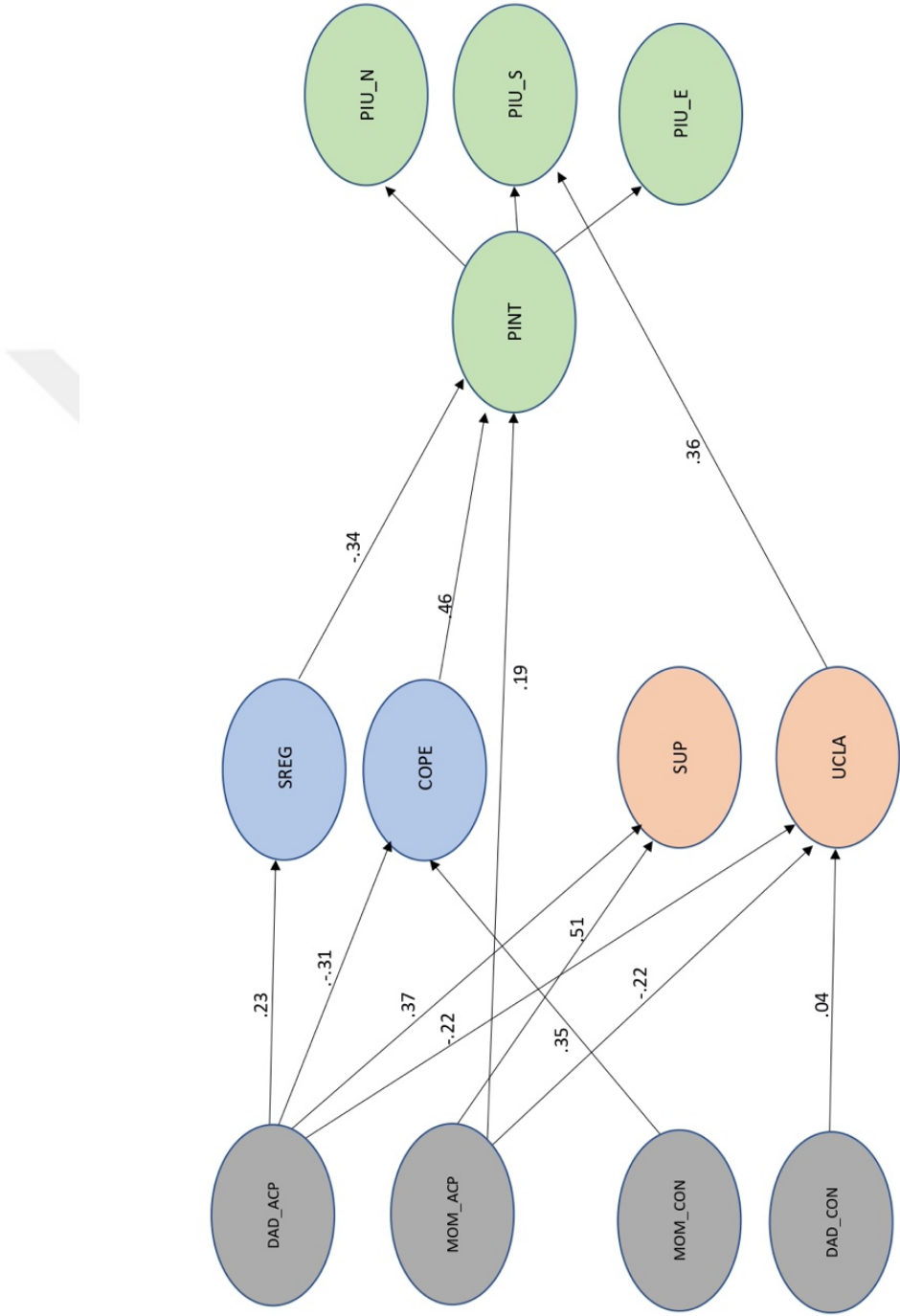
Table 4.9

Global Fit Indices of Structural Models Tested

	χ^2	<i>df</i>	<i>SRMR</i>	<i>RMSEA</i>	<i>CFI</i>	<i>TLI</i>
Model 1	1708.754	462	.05	.041	.95	.94
Model 2	1567.184	462	.04	.039	.95	.95
Model 3	1423.751	461	.04	.036	.96	.95
Model 4	1258.478	460	.03	.033	.96	.96

Figure 4.6

The Structural Model



4.3.3.3. Direct and Indirect Relationships

The standardized significant path coefficients in the structural model ranged between .08 to .51. Kline (2016) suggested that standardized path coefficient (β) values less than .10 are small, those around .30 are medium, and those over .50 are large effect size. Majority of the direct and indirect relationships among variables in the study had medium effect size. To examine direct and indirect effects and their statistical significance, bootstrapping (set at 2000) was used since it is a robust to non-normality (Zhao et al., 2010). Bias corrected (BC) percentile intervals with 95% confidence were reported as well (Bollen & Stine, 1990). The results of direct, indirect, and total estimates were presented in Table 4.11.

Table 4.10

Direct, Indirect, and Total Estimates of Direct Paths

Path	β	p	BC interval
Direct effects			
Mom_acp $\rightarrow$ sreg	.045	.47	(-.060, .151)
Mom_con $\rightarrow$ sreg	-.039	.66	(-.197, .119)
Dad_acp $\rightarrow$ sreg	.234	.00	(.120, .347)
Dad_con $\rightarrow$ sreg	-.087	.34	(-.251, .077)
Mom_acp $\rightarrow$ cope	-.046	.48	(-.158, .066)
Mom_con $\rightarrow$ cope	.348	.00	(.185, .512)
Dad_acp $\rightarrow$ cope	-.306	.00	(-.430, -.183)
Dad_con $\rightarrow$ cope	-.098	.31	(-.268, .073)
Mom_con $\rightarrow$ sup	-.009	.86	(-.105, .086)
Mom_acp $\rightarrow$ sup	.508	.00	(.439, .577)
Dad_acp $\rightarrow$ sup	.365	.00	(.290, .441)
Dad_con $\rightarrow$ sup	-.142	.00	(-.238, -.046)
Mom_acp $\rightarrow$ ucla	-.219	.00	(-.328, -.111)
Mom_con $\rightarrow$ ucla	.134	.12	(-.015, .283)
Dad_acp $\rightarrow$ ucla	-.221	.00	(-.337, -.105)

Table 4.11 (Continued)

Dad_con → ucla	.041	.65	(-.111, -.193)
Mom_acp → pint	.191	.01	(.046, .191)
Mom_con → pint	.023	.77	(-.114, .160)
Dad_acp → pint	-.044	.53	(-.163, .075)
Dad_con → pint	-.002	.98	(-.141, .137)
Sreg → pint	-.340	.00	(-.393, -.287)
Cope → pint	.460	.00	(.399, .522)
Sup → pint	-.139	.06	(-.265, .012)
Ucla → piu_s	.357	.00	(.309, .405)
Indirect effects			
Mom_acp→sreg →pint	-.015	.48	(-.52, .021)
Mom_acp→cope →pint	-.021	.50	(-.07, .031)
Mom_acp→ sup→ pint	-.070	.08	(-.13, .01)
Mom_acp→ ucla→ piu_s	-.078	.00	(-.119, -.038)
Mom con→ sreg→ pint	.013	.68	(-.040, .067)
Mom_con→ cope→ pint	.160	.00	(.081, .240)
Mom_con→ sup→ pint	.001	.89	(-.014, .017)
Mom_con→ ucla→ piu_s	.048	.13	(-.005, .101)
Dad_acp→ sreg→ pint	-.080	.00	(-.119, -.040)
Dad_acp→ cope→ pint	-.141	.00	(-.201, -.081)
Dad_acp→ sup→ pint	-.051	.07	(-.097, -.004)
Dad_acp→ ucla→ piu_s	-.079	.00	(-.122, -.036)
Dad_con→ sreg→ pint	.030	.39	(-.027, .087)
Dad_con→ cope →pint	-.045	.35	(-.124, .034)
Dad_con→ sup→ pint	.020	.19	(-.005, .045)
Dad_con→ ucla→ piu_s	.015	.66	(-.040, .069)
Total effects			
Mom_acp → pint	.084	.20	(-.025, .194)
Mom_con → pint	.198	.03	(.040, .356)
Dad_acp → pint	-.315	.00	(-.430, -.201)

Table 4.11(Continued)

Dad_con → pint	.002	.95	(-.159, .163)

Note. piu_e: Excessive use subscale of PIU; piu_s: Social benefit subscale of PIU; piu_n: negative consequences subscale of PIU; sreg: self-regulation success subscale; ucla: loneliness scale; cope: avoidant coping subscale; sup: social support perceived from family subscale; mom_a: accepting/warm parenting from mother; mom_c:controlling/strict parenting from mother; dad_c: controlling/strict parenting from father; dad_a: accepting/warm parenting from father.

The only significant direct effect by socialization system variables (parenting styles) to the outcome variable was the path to accepting/warm parenting from mother to PIU with a small to moderate effect size ($\beta = .19, p = .01$). Problematic internet use significantly and directly associated with self-regulation ($\beta = -.34, p = .00$) and avoidant coping style ($\beta = .46, p = .00$) both of them displaying a medium effect size. The social comfort dimension of the PIU was significantly and positively associated with loneliness with a medium effect size ($\beta = .36, p = .00$). Among the personality system variables, self-regulation was significantly and positively associated with accepting/warm parenting from father with a medium effect size ($\beta = .23, p = .00$). The other variable in the personality system, the avoidant coping style has a direct negative relationship with accepting/warm parenting from father ($\beta = -.31, p = .00$) and controlling/strict parenting from mother ($\beta = .35, p = .00$). Both of them are medium in effect size. Finally among the perceived environment system variables perceived family support has a direct and positive relationship with accepting/warm parenting from father ($\beta = .37, p = .00$), controlling/strict parenting from father ($\beta = .14, p = .00$) and accepting/warm parenting from mother ($\beta = .51, p = .00$). While accepting/warm parenting from father and controlling/strict parenting from father displays a medium effect size, accepting/warm parenting from mother has a large effect size. Additionally, accepting/warm parenting from mother ($\beta = -.22, p = .00$) and accepting/warm parenting from father ($\beta = -.22, p = .00$) has significant and negative relationship with loneliness both are in a negative direction and indicating a medium effect size.

Indirect relationships in the model display a rather small effect size in general. The path from accepting/warm parenting from mother to loneliness to PIU ($\beta = -.08, p = .00$) and accepting/warm parenting from father to self-regulation to PIU ($\beta = -.08, p = .00$)

= .00) are significant yet small in effect size. The other two significant indirect paths are controlling/strict parenting from mother to avoidant coping to PIU ($\beta = .16, p = .00$) and accepting/warm parenting from father to avoidant coping to PIU ($\beta = -.14, p = .00$) are small to medium in effect size. Finally among total effects, accepting/warm parenting from father to PIU ($\beta = -.32, p = .00$) and controlling/strict parenting from mother to PIU ($\beta = .20, p = .03$) are significant and medium in effect size.

4.3.3.3.4. Squared Multiple Correlation Coefficients (R^2) for Latent Variables

To find out how much variance in each latent variable in the model was explained, squared multiple correlation coefficients (R^2) were examined. The R^2 values for the mediator and endogenous variables in the model were listed in Table 4.12 with their standard errors. Exogenous variables explain 21% of the variance in cope, 11% of the variance in self-regulation, 23% in loneliness, and 78% in family support. Together with the mediator variables, the overall model explained 89% of the variance in negative consequences subscale of PIU 64% of the variance in excessive use subscale of PIU and 51% of the variance in social benefit subscale of PIU.

Table 4.11

Squared Multiple Correlation Coefficients for Latent Variables

	R^2	SE
Mediators		
Avoidant Coping	.21*	.02
Self-Regulation	.11*	.02
Loneliness	.23*	.03
Family Support	.78*	.02
Endogenous		
PIU_Excessive	.64*	.04
PIU_Negative Consequence	.89*	.03
PIU_Social Benefit	.51*	.03

* $p < .05$,

4.3.3.4. Hypothesis Testing

Hypotheses of the study that was stated earlier in the first chapter was discussed specifically in this section.

4.3.3.4.1. Hypotheses for the Direct Effects in the Structural Model

Hypothesis 1 predicted that socialization variables (strict/controlling and accepting/warm parenting styles) will significantly and directly be related to problematic internet use. The hypothesis was supported only for accepting/warm parenting from mother. The direct effect was significant and positive ($\beta = .19$ $p = .01$, CI [0.046, 0.191]). The hypothesis was not supported for accepting/warm parenting from father ($\beta = -.04$, $p = .53$, CI [-0.163, 0.075]), controlling/strict parenting from mother ($\beta = .02$, $p = .77$, CI [-0.114, 0.160]) and controlling/strict parenting from father ($\beta = -.00$, $p = .98$, CI [-0.141, 0.137]).

Hypothesis 2 predicted that socialization variables (strict/controlling and accepting/warm parenting styles) will significantly and directly be related to personality system variables (self-regulation and avoidant coping style).

The hypothesis was rejected for accepting/warm parenting from mother and self-regulation ($\beta = .05$, $p = .47$, CI [-0.060, .151]) yet supported accepting/warm parenting from father and self-regulation. The relationship was significant and positive ($\beta = .23$, $p = .00$, CI [.120, .347]). The hypothesis was rejected for self regulation and both the controlling/strict parenting from mother ($\beta = -.04$, $p = .66$, CI [-.197, .119]) and from father ($\beta = -.09$, $p = .34$, CI [-.251, .077]).

The hypothesis was rejected for accepting/warm parenting from mother and avoidant coping ($\beta = -.46$, $p = .48$, CI [-.158, .066]) yet supported for accepting/warm parenting from father and avoidant coping. The relationship for father was significant in a negative direction ($\beta = -.31$, $p = .00$, CI [-.430, -.183]). The hypothesis was confirmed

for the controlling/strict parenting from the mother and avoidant coping. The relationship was significant and positive ($\beta = .35$, $p = .00$, CI [.185, .512]). The hypothesis was not significant for the controlling/strict parenting from father and avoidant coping ($\beta = -.10$, $p = .31$, CI [-.268, .073]).

Hypothesis 3 assumes that that socialization variables (strict/controlling and accepting/warm parenting styles) will significantly and directly be related to perceived environment system variables (perceived loneliness and perceived family support).

The hypothesis was confirmed for the accepting/warm parenting and perceived family support. The relationship both for mother ($\beta = .51$, $p = .00$, CI [.439, .577]) and father was positive and significant ($\beta = .37$, $p = .00$, CI [.290, .441]). The hypothesis was rejected for controlling/strict parenting and perceived family support for the mother ($\beta = -.01$, $p = .86$, CI [-.105, .086]) yet supported for the father. The relationship was negative and significant ($\beta = -.14$, $p = .00$, CI [-.238, -.046]).

The hypothesis was supported for accepting/warm parenting and perceived loneliness. The relationship was negative and significant for the mother ($\beta = -.22$, $p = .00$, CI [-.328, -.111]) and significant in a negative direction for the father ($\beta = -.22$, $p = .00$, CI [-.337, -.105]). The hypothesis was rejected for controlling/strict parenting style and perceived loneliness. The relationship was not significant both for the mother ($\beta = .13$, $p = .12$, CI [-.015, .283]) and the father ($\beta = .04$, $p = .65$, CI [-.111, -.193]).

Hypothesis 4 assumes that personality system variables (self-regulation and coping styles) will significantly and directly be related to problematic internet use. The hypothesis was supported. for self-regulation and PIU. The relationship between self-regulation and PIU was significant and negative ($\beta = -.34$, $p = .00$, CI [-.393, -.287]). The relationship between avoidant coping and PIU was also negative ($\beta = .46$, $p = .00$, CI [.399, .522]).

Hypothesis 5 predicted that perceived environment system variables (perceived loneliness and perceived family support) will significantly and directly be related to problematic internet use. The hypothesis was rejected for perceived family support and PIU. The relationship was not significant ($\beta = -.14$, $p = .06$, CI [-.265, .012]). The hypothesis was not also not supported for loneliness. However, a significant relationship was found between loneliness and social comfort factor of the problematic internet use in a positive direction ($\beta = .36$, $p = .00$, CI [.309, .405]). Therefore the hypotheses was partly supported.

4.3.3.4.2. Hypotheses for the Indirect Effects in the Structural Model

Hypothesis 6 predicted that socialization variables (strict/controlling and accepting/warm parenting styles) will significantly and indirectly be related to problematic internet use through personality variables (self-regulation and coping styles). Under the sixth hypothesis, four sub-hypothesis are formulated.

Hypothesis 6a: Acceptance/warm parenting style would be significantly and indirectly be related to problematic internet use through self-regulation skills. The hypothesis was not confirmed for mother. The relationship was not significant ($\beta = -.02$, $p = .48$, CI [-.52, .021]). The hypothesis for father was confirmed. The relationship was significant and negative ($\beta = -.08$, $p = .00$, CI [-0.119, -0.040]).

Hypothesis 6b: Strict/controlling parenting style would be significantly and indirectly be related to problematic internet use through self-regulation skills. The hypothesis was rejected. The relationship was not significant for both mother ($\beta = .01$, $p = .68$, CI [-.040, .067]) and father ($\beta = .30$, $p = .39$, CI [-0.027, 0.087]).

Hypothesis 6c: Acceptance/warm parenting style would be significantly and indirectly be related to problematic internet use through coping responses. The hypothesis was not confirmed for mother ($\beta = -.02$, $p = .50$, CI [-.07, .031]). The

hypothesis was confirmed for father. The relationship was negative and significant ($\beta = -.14$, $p = .00$, CI [-0.201, -0.081]).

Hypothesis 6d: Strict/controlling parenting style would be significantly and indirectly be related to problematic internet use through coping responses. The hypothesis was supported for the mother. The relationship was positive and significant ($\beta = .16$, $p = .00$, CI [.081, .240]). The hypothesis not confirmed for the father ($\beta = -.05$, $p = .35$, CI [-0.124, 0.034]).

Hypothesis 7 predicted that socialization variables (strict/controlling and accepting/warm parenting styles) will be significantly and indirectly related to problematic internet use through perceived environment variables (perceived loneliness and family support). Under the seventh hypothesis, four sub-hypothesis are formulated.

Hypothesis 7a: Strict/controlling parenting style will significantly and indirectly be related to problematic internet use through perceived family support. The hypothesis was rejected. The relationship for mother ($\beta = .00$, $p = .89$, CI [-0.014, .017]) and father is not significant ($\beta = .02$, $p = .19$, CI [-0.005, 0.045]).

Hypothesis 7b: Strict/controlling parenting style will significantly and indirectly be related to problematic internet use through perceived loneliness. The hypothesis was changed to social comfort subscale from piu. The hypothesis was rejected for social comfort subscale. The relationship was not significant for mother ($\beta = .05$, $p = .13$, CI [-0.005, 0.101]) and father ($\beta = .02$, $p = .66$, CI [-0.040, 0.069]).

Hypothesis 7c: Acceptances/warm parenting style will significantly and indirectly be related to problematic internet use through perceived loneliness. The hypothesis was confirmed. The relationship for mother ($\beta = -.08$, $p = .00$, CI [-0.119, -0.038]) and father ($\beta = -.08$, $p = .00$, CI [-0.122, -0.036]) both negative and significant.

Hypothesis 7d: Acceptance /warm parenting style will significantly and indirectly be related to problematic internet use through perceived family support. The hypothesis was not significant and therefore rejected for mother ($\beta = .02$, $p = .66$, CI [-0.040, 0.069]) and father ($\beta = .02$, $p = .66$, CI [-0.040, 0.069])



CHAPTER 5

DISCUSSION

The present chapter aims to discuss the findings of the study under five main sections. In the first section, the results of the qualitative study are discussed in relation to the relevant literature. Secondly, the direct and indirect relationships in the hypothesized model are summarized and discussed in light of PBT and recent studies. In the third section, implications for counseling practice are outlined. Finally, the last chapter highlights the recommendations for further research.

5.1. Discussion of Qualitative Findings

The overall aim of the present study was to provide a comprehensive explanation of adolescent PIU adopting the multi-system perspective suggested by PBT (Jessor, 2017). In PBT, the behavior system is predicted by an interaction of the demographic, socialization, personality, and perceived environment systems. First, an exploratory qualitative study was planned to better explore the dynamics within each system and determine the critical predictors that would be included in the model. Semi-structured in-depth interviews were conducted with parents and adolescents to better understand the phenomenon of PIU. Then, based on the analyses of the interviews, the hypothesized model was formed and tested with a sample of adolescents.

In the semi-structured interviews conducted with parents and adolescents, questions regarding adolescents' experiences of internet use, how and when adolescents spend time online, how it affects other areas of life, and relationships with other people in their lives, were elaborated. Additionally, parents' feelings regarding their child's PIU and strategies followed to monitor and cope with the issue were also covered in the

interviews with parents. As a result of interviews, four superordinate themes emerged from the qualitative study: the definition of the problem, the experience of adolescents, the experience of parents and facilitators and solutions. Each superordinate theme has been discussed in the sections below.

5.1.1. Discussion of Problem Definition

Several attempts have been made to define problematic internet use (Beard & Wolf, 2001; Griffiths, 2005; Shapira et al., 2003; Young, 1996). However, it is not possible to talk about a consensus upon definition regarding what is problematic and what is not. The confusion in the definition of problematic internet use creates an obstacle in understanding the underlying mechanisms and intervening with the problem (King et al., 2018; Lai, 2016). Due to the generational divide, parents and adolescents have different perspectives on their concerns regarding the appropriateness of internet use (Eşgi, 2013; Herr, 2006; Herring, 2008; Vadeboncoeur, 2005), which leads to parent-child conflicts. To our knowledge, no study has focused on defining PIU from the parent's and adolescents' perspectives.

The first research question of the present study aims to find an answer to where adolescents and parents draw the line between problematic and non-problematic internet use. Findings based on the interviews with parents suggested time spent online is one of the most popular criteria for parents to think that their child is suffering from PIU. Spending long hours online, preferring to spend time online in all their free time, and staying up late to be online are all signs of a problem from parents' perspectives. Parents mostly believed, there should be a time limit to keep internet use within the boundaries of healthy behavior. Although adolescents also argued that spending too much time online is problematic, their perspective has a different emphasis. As adolescents talk about the time spent online as an indicator of a problem, they focus on the consequences of too much time spent online rather than discussing specific time limits as parents do. Parents conceptualized internet use as something that should be limited due to its possible harms. Unlike parents, adolescents argued

that since any excessive behavior would be problematic, spending excessive amounts of time online would also be problematic and eventually lead to personal and relational problems.

Numerous studies have emphasized time spent online, and many researchers have suggested different criteria over time, yet, there is no conclusive finding regarding the ultimate time limit. Some researchers suggested spending 5 hours a day or more on the internet indicated high levels of PIU (Eldeleklioğlu & Vural-Baltık, 2013; Odacı & Kalkan, 2010), whereas others have failed to find an association between PIU and time spent online (Yıldız-Durak, 2020). Similar to the different opinions in literature, difference in parents and adolescents opinions was also expected. Parental estimates of how much time their children spent online generally failed to reflect the truth and also failed to predict adolescent PIU (Bleakley et al., 2016). Adults tend to blame technology for any unpleasant outcomes associated with internet use. However, as they focus on how much time spent online, they fail to acknowledge other cultural, personal, and social factors in their surroundings (Boyd, 2014). This leads to an oversimplification of the problem (O'Reilly et al., 2018). Rather than the screen time, how we interact with the internet during that time is the crucial factor that shapes the consequences of internet use (Livingstone, 2008; O'Reilly et al., 2018). To summarize, focusing on time spent online as a criterion has become obsolete (Odgers & Jensen 2020). Therefore, research has shifted from focusing on time spent online as a criterion for addiction or problem to more relational and psychosocial dynamics associated with internet use (Throuvala et al., 2018). Regardless of the purpose of use and the activity, time spent online alone cannot be held responsible for academic and social problems typically associated with PIU (Tokunaga, 2016).

Besides time spent online, perspectives of adolescents and parents mostly overlap regarding how they conceptualize PIU. When deciding whether it is problematic, parents have considered how internet use affects other aspects of adolescents' life, such as academic responsibilities, social communication, and daily self-care routines. Similarly, adolescents in the present study strongly emphasized that to have a healthy

relationship with the internet, the individual should be attentive to their responsibilities, have quality social relationships in real life, and be able to find alternatives to online activities. In other words, having the internet replace real-life activities, relationships and responsibilities are problematic. This perspective of adolescents is in line with previous research, which suggested that risking academic and social opportunities over spending more time online signals a problematic relationship with the internet (Beard & Wolf, 2001; Young, 1996a).

In addition, parents have mentioned two other criteria that adolescents have not. To start with, parents think that the behavior is problematic if the child reacts in an aggressive and irritable manner when they are told to quit or do not have access to the internet. This irritable behavior is defined as withdrawal symptoms in PIU research such that individuals who have a problematic relationship with the internet feel restless and moody when they have no access or trying to stop using the internet (Beard & Wolf, 2001; Griffiths, 2005). Another major criterion of interest by parents is the content exposed. They believe being exposed to age-inappropriate sexual content online directly indicates problematic behavior. Another study investigating problematic internet use from the perspective of parents of adolescents suggests that parents are concerned about the content they are exposed to that will eventually adversely affect their moral values and cause them to be disrespectful. In other words, they are afraid of media influence on their children (Boor Boor et al., 2021). This concern of the parents can be discussed in parallel with Davis (2001)'s definition of general problematic internet use and specific problematic internet use. While general problematic internet use indicates a multidimensional issue and is most often associated with social reinforcements, specific internet use is associated with a particular function of the internet. Therefore, the findings in the study indicated that whereas parents are concerned about the consequences of generalized problematic internet use, they also express concerns regarding specific problematic internet use.

5.1.2. Discussion of Adolescent Experience

The second RQ of the qualitative study aimed to understand the key motives of adolescents. More specifically, the RQ focused on how they spent time online, what skills and strategies they adopted to control their internet use, and the relational dynamics associated with their internet use that arose in their immediate environment from their perspective. The findings regarding the general experience of adolescents' internet use are in line with the existing literature. Findings support the common knowledge that adolescents prefer to use the internet in their free time and usually at nighttime due to time restrictions of school and school-related activities (Akar, 2017). Besides, parallel with the previous studies, the most commonly observed purposes of use as reported by adolescents in the present sample are entertainment and socialization (Akar, 2017, Akar, 2015; Wang et al., 2012), followed by obtaining information or education purposes (Tahiroglu et al., 2008) and sometimes merely to kill time (Ling et al., 2011). As also highlighted by Griffiths (2005), the most attractive qualities reported by adolescents is that the internet provides an easily accessible, convenient way to spend their time and offers unlimited opportunities. Especially in lockdown days during the COVID-19 pandemic, it was an essential source of socialization for adolescents (Mota et al., 2021; Norbury, 2021). Meeting friends online during the pandemic had a protective role in regarding the adverse outcomes of the pandemic (Branje & Morris 2021). Therefore, the internet was one of the most attractive and preferred ways to spend time for various purposes.

Adolescents have often used the internet to experience catharsis (Wang et al., 2012). The internet environment offers the chance to experience various emotions, some of which can only be so intensely experienced online. At the most basic level, as adolescents use the internet for entertainment, they report experiencing fun, happiness, excitement, and anger associated with their online activities. Findings also supported previous research in which internet use was found to be related to fulfilling the vital developmental need of adolescents, namely, the need for autonomy (Borca et al., 2015), feeling of belongingness (Smith et al., 2021; Ozimek & Förster, 2021)

and identity exploration (Borca et al., 2015; Valkenburg et al., 2005). Motives such as the need to belong and the need to compare self with others to feel better are among the common motives of SNS use (Ozimek & Förster 2021). Primarily when the internet is used for social communication purposes, being able to communicate regardless of the physical location contributes to the feeling of belongingness (Prinstein et al., 2011; Davis, 2013).

Adolescence is a period for individuals to explore and test different aspects of themselves while forming a unique identity. Prior generations have explored their identity via interactions with peers in schools or neighborhoods. Now, technologies such as the Internet or mobile phones offer countless ways to explore for today's adolescents (Borca et al., 2015; Shifflet-Chila et al., 2016). Therefore, the Internet is a social context like any other environment, such as school, where adolescents engage in social interaction and peer relationships that include adaptive and maladaptive relations (Sipal et al., 2011). Adolescents spend long hours online to explore their different aspects and characteristics (Davis, 2013; Israelashvili et al., 2012). Inevitably, the motive of reaching an idea of a more explicit self is associated with long hours of internet use (Israelashvili et al., 2012). However, this is not necessarily associated with negative consequences such as PIU. The Internet-Affected Social Competence Hypothesis suggests that these attempts to reach a perspective of self-clarity through engagement in online activities positively relate to adolescents' social competence in real life (Valkenburg & Peter 2008). Adolescents' primary motivations to engage in identity experimentations online are associated with self-exploration, social compensation, and social facilitation (Valkenburg et al., 2005). Through these experimentations, teens develop their interests and obtain information about others and themselves (Borca et al., 2015). On the other hand, the availability of the online environment to learn about themselves and the world results in forming identities that are less similar to their families and more similar to the community members they interact with online (Shifflet-Chila et al., 2016). Thus possibly contributing to the generational gap that already exists between adolescents and their parents.

An essential aspect of the adolescent experience was understanding the skills and strategies associated with internet use that could be flourished, developed, and practiced. Findings suggested that self-regulation and coping strategies are found to be the most relevant skills that are closely associated with PIU. Existing literature on PIU consistently argues that self-regulation is one of the most important skills for individuals to develop a healthy relationship with technology (Hefner et al., 2019; Mikulincer et al., 2003). The findings of the present study suggested that adolescents try to balance their internet use and other responsibilities by using several different self-regulation strategies, such as removing the attraction away (e.g., the computer or the mobile phone), planning their schedule, or using applications that facilitate focusing and studying. While some adolescents just quit voluntarily without adopting any particular strategy, there are also others have no intention to stop or reduce their time spent online. This suggests that the motivation of adolescents play a key role in the strategies adopted. In other words, when adolescents wish to control their behavior, they try to use different methods or in some cases, they control without having any unique strategies. However, not all adolescents try these strategies. A considerable amount of adolescents report that they have no intention of controlling or reducing their internet use. Therefore, findings suggest that for self-regulation strategies to operate against PIU, adolescent needs to have an intrinsically motivated goal to cut back or control their behavior (Galla et al., 2021; Woolley & Fishbach, 2016).

How individuals cope with daily life stress is another important personal component of healthy internet use. Research strongly emphasizes that most of the problematic cases stem from the use of the internet to change the mood and escape from facing reality (King & Delfabbro, 2018; Melodia et al., 2020; Tang et al., 2014; Whang et al., 2003). Similarly, most of the adolescents interviewed for the present study reported that they use the internet to change their unpleasant moods, distract themselves from negative feelings and thoughts, and relieve stress. These strategies of wishful thinking, ignoring problems, and self-blaming are among avoidant coping strategies (Ataşalar & Michou, 2019) commonly associated with PIU (Brand et al.,

2014; Estevez et al., 2019; Milani et al., 2018). Other strategies mentioned by adolescents, such as seeking social support and problem-focused coping, do not indicate as high risk as avoidant coping strategies (Ebata & Moos, 1991; Zimmer-Gembeck & Skinner, 2011). Studies support that individuals who have a problematic relationship with the internet are more likely to adopt dysfunctional coping strategies compared to problem-focused strategies (Gentina & Chen, 2019; Lin et al., 2021). Problem-focused coping strategies were found to be a significant moderator between basic psychological needs and PIU (Zare et al., 2021). Parallel to these findings, negative cases interviewed in the present study openly mentioned problem-focused coping strategies, indicating that coping skills are critical in differentiating healthy and unhealthy use of the internet.

As another dimension, relational dynamics that are associated with their experience of internet use were covered in the interviews with adolescents. In adolescents' lives, peers and parents are the most important sources of social relationships (Günüç & Doğan, 2013; Zimmerman et al., 2000). Peers, in particular, are an important part of adolescents' relational dynamics (Steinberg & Silk, 2002). Most adolescents have mentioned a period of social isolation and loneliness in their lives, which triggered an unbalanced relationship with the internet. Previous findings commonly support that having poor peer relationships and feelings of loneliness is a critical determinants of PIU (Mohan, 2020; Musetti et al., 2020). Adolescents distinctly remember and mention that the first time they sought a solution in playing online games, becoming a member of a social media group, or using the internet to meet with strangers corresponds to a period in their lives in which they feel that they have no peer relationships, feel lonely and isolated and that they do not believe that they are able to form quality social relationships. As previous studies indicate, adolescents who engage in an increased amount of SNS use to deal with their loneliness are associated with problematic use (Gentina & Chen, 2019).

Findings regarding adolescents' relationship with parents and PIU are in line with general research findings such that close and supportive relationships with parents are

associated with healthier internet use (Günüç & Doğan, 2013; Moazedian et al., 2014). Poor parent-child relationships have been repeatedly referred to be a risk factor for PIU (Boniel-Nissim & Sasson, 2018; Wu et al., 2016; Li et al., 2018; Shek & Yu, 2016). On the other hand, a good parent-adolescent relationship, both mother-child and father-child, is negatively associated with PIU (Schneider et al., 2017; Lam, 2014; Liu & Kuo, 2007; Park et al., 2008; Wang et al., 2011; Wang et al., 2018; van den Eijnden et al., 2010; Venkatesh et al., 2019). Moreover, the findings of the present study indicated that fathers and mothers have different roles in internet-related parenting attitudes. Results showed that fathers and mothers have different roles in internet-related parenting attitudes. Fathers appear to have a more substantial influence on the mental health of adolescents, both directly and indirectly (Lukacs, 2021; Liu et al., 2013). How parenting practices of mothers and fathers are associated with adolescent behavior might differ depending on the culture or the family structure (Lei & Wu, 2007; Yang et al., 2013). The diversity is apparent even within the present sample. While in some families, fathers are the rule setters, dominant and strict, in others, fathers are hardly involved with the rules and limitations at home. Therefore, the adolescents' perception regarding their father's parenting style and how it affects them differs for each family. The important result derived from the interviews was that fathers and mothers need to be investigated separately.

As the relational dynamics between parents and adolescents are investigated on a deeper level, PIU is often found as a matter of conflict in parent-adolescent relationships (Borca et al., 2015). These conflicts often result from the disagreement in the standards of internet use between adolescents and parents, which is an indicator of generational difference (Ball et al., 2019). Interviews aimed to understand how adolescents experience these conflicts. Although some adolescents eventually compromised and obeyed, others thought their parents were trying to preach or intervene with their internet use. As a result, they either protest by spending even more time online, or they filter out what their parents have said and stay unresponsive.

This dynamic reflects the adolescents' fight for the need for autonomy. By invading rules of internet use set by parents, having a private experience online serve to fulfill adolescents' need for autonomy (Bonino et al., 2005). Undoubtedly, what strategies parents follow is important; however, how the children feel about them is just as critical and maybe even more critical (Steinberg, 2000). Although adolescents are aware of the possible dangers and express the wish to learn about the issue, they may ignore lecture-type instructions on how to use social media and what are the negative consequences associated with it (Rice & Fuller, 2013). Instead, establishing good communication with a solid relational foundation about this issue is considered more useful (O'Reilly et al., 2018). Although parental mediation and control are important, the quality of the relationship between parents and adolescents is the most important protective factor for PIU (Hefner et al., 2019; van den Eijnden et al., 2010). Findings support that preaching or setting strict limits by parents constitutes a threat to adolescents' autonomy, resulting in responses such as protesting or ignoring the parent and the rules. Let alone being helpful. These could lead to ruptures in the parent-child relationship and open communication regarding internet use, which led to even more significant problems (Boniel-Nissim & Sasson, 2018; van den Eijnden et al., 2010).

5.1.3. Discussion of Parent Experience

The third research question aims to address the areas of concern, strategies applied to intervene, and challenges experienced regarding dealing with the perceived problem, which is the child's internet use in the present study. Findings indicate that majority of the parents in the present study had an ambivalent or hostile attitude towards the internet. More specifically, although they accept that the internet is a valuable tool that facilitates many different areas of daily life, they perceive the internet as harmful. They think that it creates a threat to their children's health and well-being. As indicated in the interviews, the parent's attitudes shaped the nature of their communication with their child about internet issues. However, as the attitudes are primarily negative, it leads to restrictive behaviors and increased conflicts between adults and adolescents.

Understanding the generational difference would be helpful in understanding the roots of these negative attitudes. Due to the generation difference, digital natives and digital immigrants have a different understanding regarding the necessity of internet use (Prensky, 2009). Unlike digital natives, adults tend less likely to consider Internet use an intrinsic way of life (Weng, Sigerson, Cheng, 2019) and require the need to form internet-free spaces in their homes as their safety zones (Ball et al., 2019). Although differentiating the perspectives of digital natives and digital immigrants tells quite a lot about one's relationship with technology, this categorization only divides the population by age. More specifically, Zur and Zur (2011) have used different categories based on the attitudes of digital immigrants: reluctant adopters, enthusiastic adopters, and avoiders. According to these categories, reluctant adopters refer to users who feel alienated from the internet yet accept the idea that it is a part of today's way of living, therefore trying to engage with it. In the present study, this category was represented by the attitude of 'ambivalent.' Secondly, there are enthusiastic adopters who understand the importance of technology use and actively involve the internet and related technologies in their personal and work life, as suggested by the acceptance attitude in the present sample. Finally, avoiders have a distinctly negative attitude toward the internet. They aim to engage in the minimum amount of technology in their lives and do not wish their child to do so. These categories help us understand the different users of the internet and how they feel. As a result, this categorization appeared in the present study in parallel with the other categories in the literature (Zur and Zur, 2011).

Findings suggest parents' concerns regarding their child's internet use habits are mainly about their academic career, social development, physical and psychological health, safety issues, the content being exposed online, and decreased family time spent with their child. Most generally, parents are primarily concerned that spending too much time online will harm their child's academic success, keep them from engaging in real-world social activities and risk their physiological and psychological health. These parents' concerns were not completely unreasonable, considering that studies suggested that adolescents with PIU experience problems such as headaches,

forgetfulness, and various gastrointestinal issues, as well as problems with the musculoskeletal system (Koca & Berk, 2019). Academically, on the other hand, PIU was associated with decreased participation in extracurricular activities and decreased academic success (Koca & Berk, 2019), as well as lowered educational aspirations and purpose (Mo et al., 2020).

Another important point for parents, reported explicitly by the ones who have daughters, was concerns regarding their child's safety and sexuality. Adolescence is a period in which they are curious about sexuality and trying to learn about sexual aspects of themselves (Springate & Omar, 2013). The internet offers many opportunities to explore and express their sexuality. However, they rarely discuss these issues with their parents and friends (Widman et al., 2021). Uncontrolled use of SNSs is associated with hazards such as cyber-dating violence, image-based sexual abuse, online deception, and exploitation (Zilka, 2018; Paat & Markham, 2021). These acts are almost exclusively male dominant in which women are the target (Smith, Thompson, Davidson, 2014). Therefore, parents, especially those with daughters in this study, are concerned and seeking ways to protect their children by limiting or controlling their internet use.

Although adolescents spending less time with their families is one of the key characteristics of this developmental period, the internet creates an even better alternative to spend their leisure time, eventually decreasing the time shared with parents. It provides an easy and accessible opportunity for seeking empowerment, autonomy, and control over parents. Therefore, parents in this study are expressing concerns as if internet use is the primary reason family time spent together decreases. As stated earlier, adults tend to blame technology, yet seeing the whole picture will help us better comprehend the problem (Boyd, 2014). The internet is only providing adolescents an opportunity, an accessible and cheap opportunity, to fulfill their developmental psychosocial needs (Griffiths, 2005). Therefore, the issue should not be evaluated separately from the characteristics of the developmental period. The concern over family time may also have a cultural explanation. In a study conducted

with an Iranian sample, parents were concerned about their children becoming over-involved with a foreign culture that is a threat to their attention to moral issues (Boor Boor et al., 2021). Consequently, the internet may be perceived as a threat to family cohesion in more collectivistic cultures, or at least in families in which collectivistic values are praised.

In association with the negative attitudes towards the internet and concerns mentioned above, parents seek strategies to monitor and limit their child's internet use for protective purposes. These strategies could be setting rules such as 'no phone at dinner' or 'no phone in the bed.' Besides, they usually impose limitations that allow internet use for specific days or hours, such as allowing them to play games on weekends or spend time online only for one hour a day. The strategies parents followed in the present sample corresponded to restrictive mediation strategies in which a strict limitation is applied. Yet, research supports that active mediation is associated with more favorable outcomes, with a supportive attitude toward internet use that lacks criticism and rules regarding media (Nielsen, Favez, Liddle, Rigter, 2019). As indicated in the interviews, defining the time limit was never a consensus between the parent and the child. Therefore, results showed that restrictive mediation failed to provide desirable outcomes in setting boundaries at home and helping the child establish a healthy relationship with the internet.

Parents have mentioned challenges in different areas as they deal with their child's internet use and concerns. Firstly, they reported that they experience trouble communicating with their children about internet-related issues. Communication is the core of the problem and solution (Alt & Boniel-Nissim, 2018; Ang et al., 2012; Nielsen et al., 2019). One of the main reasons why parents experience communication challenge is the age-related characteristics of middle adolescence period. Parents reported that it was easier to intervene and control their child's behavior in early adolescence and before. However, the middle adolescence period comes with some boundaries and privacy (Ahunovna, 2021). Therefore, parents, expectedly, face challenges when trying to monitor their children's activities while also trying to give

them space concerning their increased needs for autonomy and connectedness with peers (Lionetti et al., 2019).

Besides communication, parents are faced with the challenging task of monitoring their children's online activities effectively. The parental mediation practices should also be appropriately planned concerning the characteristics of the developmental periods and be age specific (Derevensky, 2019). For instance, in the middle adolescence period, overriding adolescents' critical needs of privacy and autonomy for the sake of controlling and limiting adolescents' online behavior would result in increased conflict, exacerbating the problem. Therefore, parents need guidance on effectively communicating and mediating their children's internet use. This need for guidance and the conflict is partly derived from the generational difference (Gilbo et al., 2014; Lim et al., 2005; Nock & Kazdin, 2005). The generational divide lead the parent and the adolescents to perceive the problem differently. Therefore, they hardly agree on the standards of internet use at home and experience conflict when trying to communicate about the issue of internet use (Bleakley et al., 2016). Although this gap is not the source of the PIU, it creates many side problems that make it harder for parents to deal with. Having a better understanding of the both sides would help us improve the intergenerational communication before it gets even wider (Ball et al., 2019).

Finally, findings indicated that many emotions accompany the challenges they experience regarding problems related to their children's internet use. As parents feel adverse about their child's internet use and fail to communicate and control it, they panic. They feel angry, frustrated, upset, and helpless as they keep trying. Besides, they feel left out as their children prefer to spend time online instead of spending time with them. And as they see that their child can find any information or any opportunity online they feel experience resentment and feel that their parental guidance is unneeded. Present findings also support that these feelings aggravate the conflict and panic the parents experience, and their impulsive attempts to control or protect their child internet use. Very few studies explored the parents inner experiences regartding

this issue. A study indirectly supports the findings by suggesting that smartphone engagement disrupts the level of connectedness parents feel when spending time with their children (Kushlev & Dunn, 2019). Another study emphasized the importance of focusing on parents' feelings such as desperation, guilt and disappointment (Bonnaire et al., 2019). Therefore, the findings of the present study contributed to the limited amount of literature that aims to understand the parental side of the problem and their inner experience.

5.1.4. Discussion of the Risks and Protective Factors

The fourth and final research question in the qualitative part of the study aims to address the potential risk and protective factors required to foster change as perceived by parents and adolescents. Although not the source of the main problem of PIU, the generational difference is a significant part of the problem. The generational gap leveled up by the digital gap plays an essential role in the conflict between parents and adolescents regarding internet use as well as the panic and concerns that parents experience (Kwon, 2011). As parents fail to understand why the internet is an integral part of their children's lives and are concerned for their mental and physical health, they become more restrictive and argumentative regarding internet use. On the other hand, adolescents who think there is nothing to be alarmed about and see that their parents do not genuinely comprehend their relationship with the internet do not comply with their requests, which in turn creates and augments the conflict. Therefore, as supported by the interviews, both parents and adolescents agree that although the generation difference does not create the PIU, it exacerbates the conflict regarding PIU, making it a more complex problem for both sides.

Despite this generational gap, parents and adolescents agree on most of the sources of the problem and the solutions offered. As the most obvious target, the media sector is held accountable by parents and adolescents in the study. Especially digital games and SNSs are designed in a way to keep the user engaged, and strategies are developed to maintain higher rates of user engagement (O'Brian & Toms, 2008). Therefore, one

of the answers to why some individuals develop unhealthy relationships with the internet partly relies on the objectives of the media sector. Although parents were the ones who were mainly concerned with the objectives of the industry, the knowledge and belief that social media and gaming companies aim to manipulate users in an addictive fashion were also well-known by adolescents (Rideout & Robb, 2018). The acknowledgment of this issue supports that adolescents are not blind media users. They are aware that they need to question the integrity of the platforms they are engaged in, and they treat it carefully (Bone et al., 2015; O'Reilly et al., 2018). This knowledge of the true objectives of online gaming platforms and SNSs has recently been used as an effective way to help them change their internet-related behaviors (Galla et al., 2021).

Besides the sector, family factors, social isolation, the pandemic, and the lack of alternatives are considered the primary sources of the PIU. Undoubtedly, PIU has a relational aspect that triggers or augments the problem. Therefore, in line with PBT, the perceived environment of adolescents influences how the person relates to technology. The findings of the present study indicate that a supportive family environment creates a healthy foundation for preventing problems, including PIU. In line with previous studies, interviewees denote that a restrictive family environment characterized by a strict parenting style, limitations, and pressure regarding their academic and social life are closely associated with the development of PIU (Boniel-Nissim & Sasson, 2018; Chung et al., 2019; Sun & Wilkinson, 2020). Accordingly, feeling isolated from their environment has a distinct influence on their problematic or excessive behavior online (Büyükhahin-Çevik & Yıldız, 2017; Koyuncu et al., 2014; Prieara et al., 2019). In the present study, a period in one's life in which the adolescent felt isolated from peers has been described as the onset of the problematic behavior.

Finally, experiencing trouble finding alternative activities to spending time online is another important source of the PIU as perceived by adolescents and their parents. The critical question that acted as a roadblock for both parties was, *'what else can I*

do instead?’. When adolescents cannot find an alternative, and the parent cannot offer one, there isn’t any choice but to spend time online. This highlights the importance of participating in extracurricular activities and cultivating hobbies for the youth (Hopper-Losenicky, 2010; Tomczyk & Solecki, 2019). Of course, part of this problem of finding alternatives was associated with the conditions in which we live during the COVID-19 pandemic. As a part of the living conditions that have changed with the pandemic, we as individuals have trouble socializing and finding activities to do in our spare time, and everything, including work and education, has been completed through online platforms. Therefore, the conditions of the day were undoubtedly a factor that alleviated the existing problem of PIU (Dubey et al., 2020; Kamaşak et al., 2021; Kiraly et al., 2020; Teng et al., 2021).

The same research question also aimed to explore the perspective of participants’ suggested solutions to the problem. The findings of the study indicate that, in order to create a change, self-regulation skills of adolescents must be cultivated, intrinsic motivation should be imposed, conscious use of the internet should be taught, and families should be included in the process. Self-regulation has been continuously emphasized as the primary element of change throughout the present study and in the previous literature (Hefner et al., 2019; Mikulincer et al., 2003). An essential factor that needs to be evaluated together with self-regulation is the importance of intrinsic motivation. Both parents and adolescents argued that the individual with the problematic use to change the behavior, the individual should want to do so; no one else can make them do it. This highlights the importance of adolescent-focused applications, maybe motivational interviewing (Özcan & Balcı-Çelik, 2021).

Although self-regulation, intrinsic motivation, and a supportive environment are necessary for the individual to develop a healthy relationship with technology, the solution for adolescents is not entirely personal. The involvement of the family is an important aspect, as perceived by both parties (Cash et al., 2012; Greenfield, 2018). Parents should guide their children in setting life goals, pursuing a goal, determining

sources of motivation, setting an example, and teaching them conscious internet use (Berber-Çelik, 2016; De Lepeleere et al., 2015).

As the present study is designed as a mixed methods research, the final research question aims to integrate the results emerging from the exploratory interviews with adolescents and their parents, and the structural model that aims to explain adolescent PIU. In conclusion, the findings of the qualitative study have served two different purposes. First, it facilitated understanding parents' and adolescents' personal and relational experiences regarding PIU as a phenomenon. Secondly, as outlined by the 5th RQ, it helped to determine essential variables that precipitate the hypothesized model in the following quantitative study. Consequently, parenting practices and family environment were critical for adolescent PIU. In line with the previous findings, a warm and supportive relationship with parents acts as a protective factor whereas controlling, restrictive parenting contributes to PIU (Chung et al., 2019). Besides, analysis of the interviews depicted that mothers and fathers had different roles within each family; therefore, their effect on PIU can also differ. Thus, results indicated it is essential to examine parents separately. Additionally, among the personal skills associated with PIU, the importance of self-regulation skills and coping strategies significantly stand out. More specifically, using the internet to change their unpleasant moods was related to developing an unhealthy relationship with PIU (Griffiths, 2005; Longstreet et al., 2019; Musetti et al., 2020). As adolescents' relationship with their immediate environment was examined, a supportive environment was a protective factor for PIU, whereas perceived loneliness was a vital trigger for PIU (Nowland et al., 2018; Moretta & Buodo, 2020). In light of this information, the multi-system model based on PBT was established.

5.2. Discussion of Quantitative Findings

The hypothesized model aimed to explain adolescent PIU within the systemic structure of the PBT. According to the PBT, the demographic and socialization systems include antecedent variables that contribute to the development of the

outcome variable. To keep the model simple, demographic variables were examined separately in the preliminary analysis without being included in the model. As for the antecedent variables in the socialization system, parenting styles (accepting/warm vs. controlling/strict) as perceived by the adolescent both from mother and father were examined. Psychosocial variables in the perceived environment and personality systems included four variables. The perceived social support from the family and the perceived level of loneliness were the two elements of the perceived environment system. As for the personality system, self-regulation success and avoidant coping style were measured. Finally, in the behavior system, the outcome variable in the hypothesized model, problematic internet use, is defined by its three subdomains: social benefit, negative consequences, and excessive use.

To start with, the preliminary examinations prior to the model testing, the gender difference was examined. There are studies indicating females have higher levels of PIU (Beşaltı, 2016; Jiang & Zhao, 2017) or suggest inconclusive results regarding gender differences (Debbarna & Umadevi, 2021; Seyrek et al., 2017). However, most studies indicate being male as a risk factor for PIU (Aydemir et al., 2021; Chi et al., 2020; Chung et al., 2019). In other words, most studies suggested that males use the internet for long hours and have more problematic relationships with the internet (Li & Kirkup, 2007; Sipal & Bayhan, 2010; Wang et al., 2012). However, the findings of the present study are not in line with the dominant literature, as it was found that females were associated with higher levels of PIU.

In some studies, gender is merely considered as a difference in the purpose of internet use rather than being evaluated as a risk factor (Yang et al., 2014). More specifically, males usually use the Internet for entertainment and leisure, whereas females mostly use it for communication and seeking information (Macharia & Nyakwende, 2011; Wang et al., 2012). However, over time, adolescent boys' and girls' online activities (i.e., emailing, chatting, and networking) have become more similar than different (Sipal et al., 2011). The Internet is not as male-dominated as before; therefore, findings merely based on gender differences have become less popular and effective

(Wang et al., 2012). Nowadays, as the availability of the Internet is widely increased, gender differences in PIU can no longer be considered a compelling risk factor (McNicol & Thorsteinsson, 2017). Considering the low effect sizes of the gender difference, the distal influence of the demographics, and the literature suggesting that gender difference is becoming less critical, contradictory findings regarding females having a higher level of PIU in the current study were not considered critical.

Besides gender, none of the other demographic variables such as age, grade level, parents' marital status and education level have not found to be significantly associated with PIU in general. Only social benefit subscale was found to differ mildly by age and grade level for two groups: age 14 to 16 and 9th grade to 11th. Research suggested that PIU levels tend to decrease as the adolescents pass to late adolescence period from the middle adolescents (Toth-Kiraly et al., 2021). As the age 17 and the corresponding grade level, is closer to the late adolescence period, it is understandable that the PIU levels mildly decrease by age in the present study.

Another major issue of debate in PIU research is time spent online. As time spent online increases, the scores obtained from negative consequences, excessive use, and social benefit subscales increase. More specifically, those who use the internet for 1 to 5 hours a day significantly experience less PIU than those who spend 5 to 10 hours a day and 10 hours or more. Similar findings have been indicated by previous studies proposing that adolescents spending more than 5 hours online tend to score higher on PIU compared to those who spend 1 to 5 hours or less than one hour a day (Eldeleklioğlu & Vural-Baltık, 201). However, studies recently suggested that the time spent online has been less popular and the nature of the online activity and the underlying motivation of internet use suggested to be more critical (Tokunaga, 2016). Moreover, interventions must focus on alleviating the negative consequences rather than the time spent online (Throuvala et al., 2019). Therefore, although findings suggest a difference, the time spent online was not the main focus of the present study.

The findings of the present study suggested that self-regulation, avoidant coping skills, loneliness, and accepting parenting styles from the mother directly and significantly predicted adolescent PIU. The proposed model suggested indirect paths from the socialization system to PIU as well. More specifically, the perceived warm parenting style from the father had significant indirect paths to PIU through self-regulation, coping, and loneliness. Also, perceived controlling parenting from the mother had a significant influence on PIU through avoidant coping mechanisms. Controlling parenting from the father and perceived family support were not significantly associated with PIU. Each of these associations was discussed below in relation to the PBT system they are associated with and the hypotheses of the study.

5.2.1. Socialization System: Parenting and PIU

The first hypothesis of the study was that there would be a significant direct relationship between socialization system variables and PIU. Among antecedent variables in the socialization system, only the accepting parenting style perceived from the mother has a significant direct effect on adolescent PIU. Accepting parenting style from the father and controlling parenting style both from mother and father failed to display a significant direct relationship with PIU. Therefore, the hypothesis of the study in which accepting parenting style from both parents argued to directly predict PIU was only partly supported. However, contrary to our expectations, accepting the parenting style perceived from the mother had a positive relationship with PIU. In other words, accepting the mother's parenting style was found to be associated with increased levels of PIU in adolescents in the present study.

Parenting styles have been found to have an essential role in the psychological well-being of adolescents (Francis et al., 2020). There are lots of studies indicating direct associations between parenting and PIU as well. Specifically, the authoritative parenting style, which is a balance of control and affection, is associated with decreased levels of PIU (Horzum & Bektaş, 2014; Ihmeideh & Shawareb, 2014; Lou et al., 2010; Özgür, 2016; Valcke et al., 2010). On the other hand, parenting styles in

which a more strict, controlling, and distant attitude was observed are associated with increased levels of PIU (Chung et al., 2019; Sun & Wilkinson, 2020; Xian et al., 2013; Xiuqin et al., 2010;). Similar findings have been suggested with different cultures as well. For example, adolescents showing symptoms of mediocre and high levels of PIU perceived their parents as more protective and demanding compared to adolescents who are healthy internet users in Turkey (Doğan et al., 2015). Also, in Asian countries such as Japan and China, lack of perceived support from mothers, and adolescents who perceive their mothers as less caring and warm tend to score higher on PIU (Yang et al., 2013).

Deriving from the literature above, a positive direction in the association between accepting mothering and PIU in the present study was unexpected. However, there are also findings in the literature suggesting that a positive mother-and-child relationship is directly associated with a minor increase in PIU. In contrast, a positive father-child had no significant relationship (Boniel-Nissim & Sasson, 2018). In contrast to the Western family structure, where a more balanced demonstration of love and tolerance is dominant, the parent-child relationship revolves around extreme love and control in traditional Turkish family culture (Kağıtçıbaşı, 1996). As suggested by Özgür (2016), this extreme love in the parent-child relationship might shift to a more permissive or laissez-faire parenting style. Therefore, mothers who have a close, supportive and affectionate relationship with their children might be less certain about controlling and restricting internet usage, which contributes to increased levels of PIU (Boniel-Nissim & Sasson, 2018). Therefore, in the context of the present study, this cultural aspect of the family structure might have blurred the lines between an accepting and permissive parenting attitude. Therefore, the present study provides a possible explanation for the positive relationship between accepting mother attitudes and PIU.

Although only one direct path from the socialization system has significantly predicted adolescent PIU, both parenting style has various indirect paths that significantly predicted PIU as hypothesized (e.g. hypotheses 6 & 7). Especially

accepting attitude from the father was found to have an effect through diverse paths. Previous studies have also supported that fathers have greater influence and more predictive power on adolescent PIU compared to mothers (Lin et al., 2013; Lukacs, 2021). Besides, controlling attitude from the mother has a significant indirect path to PIU over avoidant coping. Detailed discussion of these indirect paths are provided in the sections below together with the discussion of the other systems.

5.2.2. Personality System: Self-Regulation and Coping

The findings of the present study indicated both variables in the personality system have a significant and direct effect on PIU, in support of the 4th hypothesis of the present study. Firstly, in line with previous research, self-regulation success was directly and significantly associated with adolescent PIU (Osatuyi & Turel, 2018; Reinecke et al., 2022; Billieux & Van der Linden, 2012; Yıldız-Durak, 2020). Self-regulation has been critical in describing and predicting PIU and its effect on mental health (Reinecke et al., 2022). Additionally, cultivating self-regulation was consistently found to be one of the central elements of establishing a healthy relationship with technology (Hefner et al., 2019; Mikulincer et al., 2003). Therefore, the present study adds to the vast amount of data indicating the importance of self-regulation skills as a critical protective factor for adolescent PIU.

Secondly, higher avoidant coping strategies were positively associated with PIU. Numerous studies in the previous literature have displayed a similar relationship between avoidant coping strategies and PIU (Ataşalar & Michou, 2019; Brand et al., 2014; Melodia et al., 2022; Estevez et al., 2019; Milani et al., 2018; Moge & Romano, 2020). As the studies examining the relationship between adolescents' online activities and avoidant coping strategies were examined, it is possible to observe a vicious circle. More specifically, the frustration experienced with basic psychological needs increases the adolescents' tendency to engage in avoidant coping strategies through online activities (Gu, 2022). Consequently, the needs satisfied online act as a positive reinforcement that maintains and strengthens the use of avoidant coping

strategies (Ataşalar & Michou, 2019). As adolescents adopt an avoidant coping strategy, they switch to a more automatic mode of existence, which compromises their awareness of the immediate environment, resulting in a loss of cognitive control (Brand et al., 2014). Eventually, avoidant coping strategies through online engagement lead to lower life satisfaction levels and contribute to poorer mental health in general (Ataşalar & Michou, 2019; Melodia et al., 2022; Moge & Romano, 2020). Self-distraction (von der Heiden et al., 2019), behavioral disengagement (Schneider et al., 2018), and denial (Dreier et al., 2017) were some examples of avoidance coping strategies. These tendencies are associated with low levels of self-esteem, social support, achievement at school, and self-efficacy, followed by self-blame and social withdrawal, known to be significant critical contributors to PIU (Estevez, 2019; Melodia et al., 2022).

The personality system was suggested to be one of the most proximal systems influencing adolescent behavior in the PBT (Jessor et al., 1968). However, it also has a mediating role in PBT and the present study. Therefore in the present study, direct paths (e.g. hypothesis 2) and indirect paths (hypothesis 6) had also been proposed from socialization system to the personality system.

Positive parenting styles, such as being warm and understanding, are closely associated with developing adaptive coping strategies that play a significant protective role for PIU (Visconti et al., 2013). Research highlights the mediating role of coping strategies. It suggests that the coping strategies that an individual adopts make the difference and contribute to behavioral addictions such as PIU rather than antecedent variables such as parenting (Hosseini-fard & Kaviani, 2015). The findings of the present study suggested that accepting parenting from the father and controlling parenting from the mother has a significant indirect effect on PIU through avoidant coping. Perceiving an accepting and warm parenting style from the father is negatively associated with adopting avoidant coping strategies, which is negatively associated with developing PIU. On the other hand, perceiving a controlling parenting from the mother is positively associated with adopting avoidant coping strategy,

which contributes to PIU. In addition, accepting parenting from the father has an indirect effect on PIU through self-regulation, whereas other parenting style does not include any significant indirect paths. Therefore, the present study supports the mediating role of avoidant coping strategies and self-regulation skills in line with previous research (Fowler et al., 2020; Zhou et al., 2017).

Findings also suggested that perceived controlling parenting style from the mother is associated with avoidant coping strategies reported by adolescents. When adolescents have a sense of autonomy, competence, and connectedness, they are more likely to use healthier coping strategies, such as problem-solving and seeking social support (Ataşalar & Michou, 2019). However, controlling parenting style is known to be associated with high levels of restrictions and monitoring of behavior (Li et al., 2013) and a more distant parenting attitude (Sun & Wilkinson, 2020). Thus, this controlling style hinders the development of autonomy, competence, and connectedness, which is associated with adverse mental health outcomes (Gugliandolo et al., 2019). Therefore the negative effect of controlling parenting style on healthy coping mechanisms was an expected outcome.

Although it is possible to develop self-regulation skills later in life, the basis of self-regulation is learned through interaction with parents from birth through young adulthood (Murray & Rosenbalm, 2017). Similarly, individuals learn how to deal with the stressors and threats in their immediate environment by looking up to their parents as they grow up (Frydenber, 2018). The findings of the present study indicated that, as adolescents perceive a more warm and accepting parenting style from their fathers, they develop less unhealthy coping strategies and better self-regulation skills. Although the same path from parenting to personal skills was also expected for mothers, findings are in line with previous research that highlighted the importance of fathers in teaching their children self-regulation skills (Dunbar et al., 2018; Young, 2011; Zimmerman, 2011). Similar studies also support that perceived trust from the father has a greater impact directly and indirectly on adolescent PIU (Lei & Wu,

2007). Therefore, results favoring the effect of the father's accepting parenting style can be supported by the previous research.

5.2.3. Perceived Environment System: Loneliness and Support

The fifth hypothesis of the study suggested that perceived environment system variables had a direct effect on the PIU. The findings partly supported the hypotheses. As hypothesized, loneliness was found to be a significant positive predictor of PIU in the present study. Previous research addressed loneliness as a well-acknowledged significant predictor and risk factor of PIU (Büyüksahin-Çevik & Yıldız, 2017; Ceyhan & Ceyhan, 2008; Esen & Siyez, 2011; Hussain & Griffiths 2009; Koyuncu et al., 2014; Lukacs 2021; Odacı & Kalkan 2010; Özdemir, Kuzucu, Ak, 2014; Prievara et al., 2019; Young 2009). Moreover, it is one of the differentiative factors that help to explain why some people develop a healthy relationship with technology and some cannot (Jeong et al., 2017). The findings of the present study uniquely suggested that the path from loneliness to PIU was found to be only significant for a certain subfactor of PIU, which is the social benefit subscale. In other words, an increased amount of perceived loneliness is associated with higher amounts of problematic internet use that involves a specific purpose of seeking social benefits online. However, perceived loneliness has not necessarily indicated significant predictions in other subdomains of PIU, such as excessive use or experiencing negative consequences in the present study.

There are sufficient support in the literature to suggest that loneliness has a determinant effect on the purpose of internet use. More specifically, individuals who experience higher levels of loneliness, are known to seek online social interactions to compensate for the lack of emotional and social support (Morahan-Martin & Schumacher, 2003; Teppers et al., 2014; Ye & Lin, 2015). Whereas individuals with higher levels of loneliness tend to use the internet for socialization and entertainment purposes, informative purposes of internet use are not associated with individuals' levels of loneliness (Seepersad, 2004). Especially for online gaming, two primary

motives are defined as social interaction and escapism (Maroney et al., 2019). When individuals carry a primary motive of social interaction, gaming can serve the purpose of fulfilling social needs. However, with a primary motive of escapism, where individuals turn to online gaming to distract themselves from their daily problems, it could result in increased isolation and a problematic relationship with the internet (Maroney et al., 2019). Therefore, present findings suggest that increased levels of perceived loneliness direct individuals use the internet, hoping for more socially beneficial outcomes. In other words, it sets the stage for a specific purpose of internet use. However, whether this direction will lead to more problematic results in different aspects was also not possible to infer from the findings of the present study. Thus, other factors involved need to be further examined.

Apart from the direct effect, loneliness and perceived social support had also hypothesized to be a mediator between the socialization system and PIU (e.g., hypothesis 7). Loneliness was found to be a mediator in the relationship between the perceived accepting parenting style from both parents and PIU. The closeness between parents and the adolescent has a significant effect on the loneliness of the adolescent (Cooper et al., 2021; Musetti et al., 2020). Similarly, in the present study, adolescents who perceived a more accepting parenting style from their parents experienced lower levels of loneliness (hypothesis 3), which in turn influence PIU. It is important to establish how parenting can be effective in the relationship between loneliness and PIU. A recent study suggested that when adolescents' PIU is due to loneliness-related reasons, parents' mediation attempts to reduce internet use are not effective (Stevic & Matthes, 2021). In that case, rather than trying to control internet use, providing supportive communication, a warm and welcoming relationship is one of the most apparent ways parents can help their children (Stevic & Matthes, 2021). In other words, present results indicated that an accepting parenting attitude would help adolescents to engage in healthier internet use by decreasing the perceived levels of loneliness.

Findings failed to support the hypothesis suggesting a significant direct or indirect relationship between perceived social support from family and PIU. Social support from friends and family is known to be an important protective factor in adolescents that helps them to maintain physical and psychological well-being (Mukhtar & Mahmood, 2018; Ngo et al., 2021). Studies investigating different sources of perceived social support found that perceived social support from family was found to significantly predict PIU (Chen et al., 2007; Huang et al., 2009; Işık & Ergün 2018; Moge & Romano, 2020; Tudorel & Vintila 2018). Few studies conducted with a Turkish sample indicate that the strength of the relationship between perceived social support from family and PIU was found to be higher than social support perceived from friends (Esen & Siyez 2011; Günüş & Doğan 2013). However, although the relationship was significant, Günüş and Doğan (2013) have pointed out the low levels of effect size between the relationship with perceived social support from family and PIU. Therefore, low effect sizes may provide a possible explanation for non-significant relationship in the present study.

Additionally, Günüş and Doğan (2013) have suggested that any experience or time spent with parents has an indirect effect on PIU rather than a direct effect. In other words, any experience that contributes positively to the perceived social support from family did not by itself have an influence on PIU. Though it could indirectly act as a protective factor (Günüş & Dogan 2013). Therefore, another possible explanation for an insignificant path from family support to PIU could be the potential mediating variables that require further investigation in different studies.

Controlling the father's parenting style significantly decreased perceived social support from the family, whereas controlling the mother's parenting style was not a significant predictor of perceived family support. Perceived social support and parenting are two intertwined variables closely associated with adolescents' healthy functioning (Mukhtar & Mahmood, 2018). In other studies, the most important source of support for adolescents was found to be their mothers (Günüş & Dogan 2013; Hombrados-Mendieta et al. 2012), as having more active parenting role and engage

in more quality time or activities with their children (Snyder, 2007). Therefore, the parenting style of the mother was expected to be associated with the perceived support from the family. However, some findings indicate that authoritarian parenting may not necessarily be associated with adverse psychological effects in collectivistic cultures such as Turkish (Sümer et al., 2010). In other words, a reasonable amount of controlling attitude may not be perceived as different from acceptance. Therefore, the present study failed to display a significant association between controlling parenting from the mother and perceived family support. However, perceived social support from family failed to predict PIU significantly and was not found to be a significant mediator in the present study.

5.3. Implications for Practice and Theory

The present study examined the associations between individual and environmental variables that lead to PIU in adolescents by employing qualitative and quantitative investigation methods. Therefore, the study produced helpful information to understand adolescent PIU, and the results of the study offer essential insights for future attempts to prevent or intervene in PIU and related problems, such as parent-child conflict regarding internet use. The present section presents the implications of the findings in terms of practice and theory.

The PBT has rarely used with PIU so the present study has some important implications for the theory. Present study provided supported the multi-system structure of PBT in an adolescent sample. It could be concluded that PBT is a theory that can be used to explain adolescent PIU. Besides, one of the purposes of the study was to provide empirical data to support and guide future studies that would aim to intervene with the adolescent PIU. The findings of the present study offered fruitful data regarding the risk factors and protective factors in the socialization system, personality system, and perceived environment system in the PBT framework that explained PIU. Furthermore, the qualitative part of the study included an in-depth investigation of the personal and relational dynamics perceived to accompany PIU as

described by parents and adolescents. Existing studies in PIU have been criticized in the sense that it lacks the investigation of the environmental dynamics of PIU (King et al., 2018; Kuss et al., 2014) and also lack a theoretical base to guide further interventions (Bonnaire et al., 2019; Derevensky, 2019). Therefore, the theoretical base and the empirical support provided in the present study can act as a guide for researchers and practitioners who wish to implement future interventions.

The findings of the present study offer valuable implications for psychological counselors and educators. As the most common provider of mental health services to students in the school setting, school counselors serve as facilitators to support their students' change efforts (Hagedorn & Young, 2011). The PBT perspective encouraged to focus on cultivating the appropriate skills that would act as a protective factor and sustain the well-being of the individual rather than focusing on eliminating risk factors (Jessor, 1991). Integrated findings from both qualitative and quantitative studies suggested that, in the personality system, self-regulation skills and avoidant coping style are two major predictors of PIU. Therefore, practitioners could focus on designing programs or activities that foster healthy coping mechanisms rather than the stressful outcome itself, which produces a more optimistic and productive point of view on the problem (Frydenber, 2018).

Additionally, an important contribution of the present study is that it also examined the relational aspect of PIU from both qualitative and quantitative perspectives. Therefore, with the emphasis on the person-environment interaction to explain the PIU, future empirical studies could integrate present findings into their research. Besides, rather than interventions that focus on the individual aspect, designing and testing the effectiveness of intervention programs that focus on social factors related to the PIU could also be designed. To be more specific, as loneliness is shown to be an essential trigger, programs could also focus on social skills development that could support social competence and forming secure relationships, which in turn lead to a healthy relationship with technology (Groh et al., 2014; Hefner et al., 2019).

Understanding adolescents' perspective and their inner experiences have a lot of implications for practice and interventions as well. To start with, the qualitative findings of the present study argued that the intrinsic motivation of adolescents has a vital role in changing their behavior. Similarly, they report taking into account their peers' suggestions rather than listening to an adult giving a seminar on the possible harms of internet use. These findings lead to two important pieces of information for creating an effective change: intrinsic motivation and peer influence. Therefore, when adolescents are the target of the interventions, it is important to consider different strategies to reach them, such as motivational interviewing or peer-to-peer support, rather than merely focusing on psycho-education programs. In fact, in their commentary (Naslund et al., 2016) argued that online peer networks and peer-to-peer support may be one of the very limited ways to reach out to those who are socially isolated for a variety of reasons.

Besides, understanding the emotional experience of adolescents could act as a guide for practitioners working with adolescents. Findings revealed that adolescents use the internet to fulfilling their unmet needs, such as feeling superiority, achievement, and a sense of belongingness or connectedness with others. Therefore, when the problem is recognized by the counselor or the parent, investigation of these basic needs guiding the adolescents in alternative and healthy ways to fulfill their unmet needs requires further consideration. Understanding these issues would help practitioners to navigate adolescents in a healthier way.

The findings of the present study also highlighted the importance of parenting practices and parent engagement in the problem, with an emphasis on the role of the father. Firstly, positive parenting practices influence adolescents' on self-regulation and coping skills, which is critical in developing healthy relationships with technology (Frydenber, 2018; Dunbar et al., 2018). As the family structure is more closely examined in the qualitative study, it was seen that the parent's monitoring strategies, communication with their children regarding the internet, and the rules and

limitations set at home constitute essential criteria that influence PIU and the severity of the problem.

The need for parental involvement is seen as critical in schools (Karadağ & Kılıç, 2019). Inclusion of parents in the interventions or simply when acknowledging the problem allows adolescents to share the burden of the issue, which they already disagree exists. The inclusion of parents changes the way professionals approach the problem, and the responsibility is equally distributed among family members. One of the important findings of the present study is that fathers have a critical role in adolescent PIU both direct and indirectly. As mentioned in the interviews, parents and adolescents both acknowledge that neither parenting practices nor their relationship is the same for mothers and fathers. Depending on the family structure, the influence of the mother and the father on PIU or other related factors could significantly differ. These narratives about the different roles of the parents, brought together with the significant predictive paths in the model, draw focus on the critical role of the father in the present sample, as also supported by other studies (Lin et al., 2013; Lukacs, 2021). This suggests important implications for practitioners to target fathers more when working with parents. Even if the father cannot be physically included in parent meetings or interventions, knowing the powerful effect of the father, practitioners could guide the family accordingly.

Results also indicated that parent education is an important factor that cannot be overlooked in dealing with adolescent PIU. For prevention programs that target children and adolescents, it is crucial to include parents (Geisel et al., 2021). Even basic things such as fostering media literacy in parents could be effective in dealing with adolescent PIU (Boor Boor et al., 2021). Besides, the parent-adolescent conflict has an important place in internet-related problems. Findings support that parents mostly use restrictive mediation strategies to deal with their child's internet use. However, active mediation strategies produce healthier and more long-lasting outcomes. Therefore, teaching parents effective mediation practices could help

parents to better deal with the problem, decrease the conflict and help parents protect adolescents as well.

When parents seek professional help, they mainly complain about failing to regulate their child's internet use and seek practical methods to cope with the problem (Bonnaire et al., 2019). However, as parents' experiences are explored in depth in the present study, it is apparent that various attitudes and feelings accompany the problem. For parents, the internet is an endangered area, and their child needs to be protected. Therefore, they experience vulnerable emotions that make them act with panic and anger to protect their children. Consequently, as they fail to intervene with the problem, they feel disappointed and left out and question their ability to be a good parent. Therefore, as they feel adverse about the phenomenon, they express more concern and panic, eventually leading to increased speculation regarding the consequences of media use (Dunkels et al., 2011; Eşgi, 2013). The present study suggested that the source of these speculations, panic, and concern may lie in the emotions explored in the interviews. Therefore, the problem may seem like the internet; however, it has many important aspects. Practitioners working with such adults could guide them through these emotions and experiences and show them the issue is more than the internet use itself. For example, group counseling sessions that involve parents could help them share their concerns with other individuals that struggle with similar problems and relieve them from the feeling that they are struggling with the problem alone and failing. The goal should be to interrupt the cycle of defeat that parents repeatedly experience, work through the feelings of desperation, guilt, and disappointment and revitalize their hopes and dreams and foster their connection with their children (Bonnaire et al., 2019).

5.4. Recommendations for Future Research

The current study added a valuable perspective to the existing studies in PIU by adopting a multi-system PBT framework and integrating qualitative and quantitative methods. Although the subject of PIU has been studied since the beginning of the

2000s, PIU research is still in its infancy (Throuvala et al., 2018; Tokunaga, 2017). Therefore, there remain crucial areas that future research should address.

PBT conceptualizes behavior as a consequence of person-environment interaction (Jessor, 1987). Therefore, the present study aimed to examine variables from different systems in PBT and their interactions that lead to the outcome behavior. However, variables that could be included in the model are not limited to those in the present study. Future studies could explore the role of other mediating or moderating variables in the same theoretical framework that help get a more comprehensive examination of PIU. More specifically, the present study failed to include school-related variables in the perceived environment system since the planning of the study and data gathering in the first part coincided with the distant education period due to the pandemic restrictions. However, the school has a critical place in an adolescent's life and is a crucial context within the perceived environment system in the PBT (Jessor, 1991, Romano & Hage, 2016). Future studies should examine variables such as school climate, teacher rapport, and attendance of extracurricular activities in school. As environmental variables lack sufficient data to provide support (Kuss et al., 2014), future research could focus on qualitative studies that target sampling of teachers and school counselors to gain a better insight into the school-related variables and establish the needs for the school environment and get a better understanding of how to increase parent-school cooperation by an in-depth examination of both sides of the school and parents.

Another area that requires more attention in future studies appears to be the father's role due to the present findings. Fathers are represented far less in research studies and practice compared to mothers. However, current results also indicated that they have strong predictive power on adolescent behavior and mental health (Lukacs, 2021). Parenting practices of the fathers and how they influence the children and adolescents should be included in studies more often. Especially there are studies indicating that the gender of the parent is an issue. Future studies could conduct a

more in-depth examination of the role of the father or the gender match between parent-and adolescents (Liu et al., 2013).

The present study focused on the middle adolescence period in which the problematic behaviors, including PIU, reach their highest degree (Karacic & Oveskovic, 2017). Future studies need to apply the PBT framework that includes a person-environment perspective to the other periods of adolescence. Especially early adolescence, or pre-adolescence, is considered a crucial period that has an important place in guiding the child in the direction that flourishes psychological needs such as competence and autonomy (Steinberg, 2000). Besides, strategies required to intervene with the behavior significantly differ for different periods of adolescence and, therefore, should be age-specific (Derevensky, 2019). As parents in the present study indicated, preventive strategies may work better when started in earlier periods of adolescents. Therefore, a comprehensive understanding of environmental and relational dynamics associated with PIU in earlier periods of adolescence requires further attention.

The methodology of the present sample has some drawbacks as well. First of all, the study is based on the self-report of adolescents. Social desirability is always a possible threat to the validity of self-report studies. Future studies could use other data-gathering methods to support self-reports. Additionally, the cross-sectional and correlational nature of the study does not allow us to infer causality. Future studies could focus on experimental and longitudinal designs that better examine the consequences of PIU. Longitudinal studies could also help examine the effect of risk and protective factors regarding PIU. Also, the study sample only focused on the most centralized parts of Ankara and only on the adolescents from Anatolian high schools. This provides a limitation for the ecological generalizability of the study. Future studies could widen their samples to different regions, since socio-economic determinants are also shown to have a determinant effect on PIU (Lai & Kwan, 2017). Moreover, the number of cross-cultural studies could also be increased to make comparisons regarding the different underlying mechanisms of PIU in individualistic and collectivistic cultures. The present finding indicated several areas where cultural

differences can have a different effect, such as parenting practices. Studies have also stressed the need for more cross-cultural comparisons to widen the perspective of the phenomenon (Panova et al., 2021)

Finally, the present study focused on generalized problematic internet use (GPIU), defined as an overuse of the internet without a specific objective (Davis, 2001). However, restricting the focus to one type of problematic behavior, such as online gaming, could help researchers get a clearer understanding of that specific behavior. Parents who participated in the present study mentioned their concerns regarding online sexual content and pornography. Internet is already an area where adults cannot easily communicate with their children. Sexuality is also hard to discuss for parents to their children (Grossman et al., 2018), yet it is a vital topic for parents to handle (Kaestle et al., 2021). Adolescents and online sexuality are also crucial since the age is all about discovering sexuality, and the internet provides endless sources that, if used uncontrollably, could harm their healthy development (Binnie & Reavey, 2020). Therefore, rather than GPIU, Specific PIU such as online sexuality or pornography are major needs future studies need to study.

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APPENDICES

APPENDIX A: APPROVAL OF ETHICS COMMITTEE-QUALITATIVE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER



ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

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Sayı: 28620816 /

29 Eylül 2020

Konu: Değerlendirme Sonucu

— Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof.Dr. Ayhan DEMİR

— Danışmanlığını yaptığınız Selin MISIR'ın "*15-17 Yaş Arası Gençlerin Problemlü İnternet Kullanımının Aile, Okul ve Birey Bağlamında İncelenmesi* " başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve **260-ODTU-2020** protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.

Prof.Dr. Mine MISIRLIŞOY
İAEK Başkanı

APPENDIX B: APPROVAL OF ETHICS COMMITTEE-QUANTITATIVE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER



ORTA DOĞU TEKNİK ÜNİVERSİTESİ
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Sayı: 28620816 /

02 NİSAN 2021

Konu : Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi : İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof. Dr. Ayhan DEMİR

Danışmanlığını yürüttüğünüz Selin MISIR'ın "15-17 Yaş Arası Gençlerin Problemleri İnternet Kullanımının Aile, Okul ve Birey Bağlamında İncelenmesi" başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve **260-ODTU-2020** protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.



Dr. Öğretim Üyesi Şerife SEVİNÇ
İAEK Başkan Vekili

APPENDIX C: APPROVAL FORM FROM MONE



T.C.
ANKARA VALİLİĞİ
Milli Eğitim Müdürlüğü

Sayı : E-14588481-605.99-25295960
Konu : Araştırma İzni

20.05.2021

ORTA DOĞU TEKNİK ÜNİVERSİTESİNE
(Öğrenci İşleri Daire Başkanlığı)

İlgi: a) MEB Yenilik ve Eğitim Teknolojileri Genel Müdürlüğünün 2020/2 sayılı Genelgesi.
b) 23.04.2021 tarihli ve 303 sayılı yazınız.

Üniversiteniz Eğitim Bilimleri Anabilim Dalı Rehberlik ve Psikolojik Danışmanlık doktora programı öğrencisi Selin MISIR'ın "**15-17 Yaş Arası Gençlerin Problemleri İnternet Kullanımının Aile, Okul ve Birey bağlamında İncelenmesi**" konulu çalışması kapsamında İlimize bağlı ekli listedeki kurumlarda uygulama yapma talebi ilgi (a) Genelge çerçevesinde incelenmiştir.

Yapılan inceleme sonucunda, söz konusu araştırmanın Müdürlüğümüzde muhafaza edilen ölçme araçlarının; Türkiye Cumhuriyeti Anayasası, Milli Eğitim Temel Kanunu ile Türk Milli Eğitiminin genel amaçlarına uygun olarak, ilgili yasal düzenlemelerde belirtilen ilke, esas ve amaçlara aykırılık teşkil etmeyecek, eğitim-öğretim faaliyetlerini aksatmayacak şekilde okul ve kurum yöneticilerinin sorumluluğunda, gönüllülük esasına göre uygulanması Müdürlüğümüzce uygun görülmüştür.

Bilgilerinizi ve gereğini rica ederim.

Turan AKPINAR
Vali a.
Milli Eğitim Müdürü

Ekler:
Uygulama Araçları
Kurum Listesi

Dağıtım:
Gereği:
ODTÜ

Bilgi:
Çankaya, Yenimahalle, Etimesgut İlçe MEM

Bu belge güvenli elektronik imza ile imzalanmıştır.

Adres : Emniyet Mah. Alparslan Türkeş Cad. 4/A Yenimahalle/ANKARA

Belge Doğrulama Adresi : <https://www.turkiye.gov.tr/meb-ebys>

Bilgi için: D. KARAGÜZEL

Unvan : Memur

İnternet Adresi: www.meb.gov.tr

Faks:

Bu evrak güvenli elektronik imza ile imzalanmıştır. <https://evraksorgu.meb.gov.tr> adresinden 8fed-e770-3a6a-b505-b1d4 kodu ile teyit edilebilir.

APPENDIX D: INFORMED CONSENT FORM FOR FIRST STUDY

Bu çalışma ODTÜ Psikolojik Danışmanlık ve Rehberlik Bölümü doktora öğrencileri Selin Ayas'ın doktora tezi kapsamında Prof. Dr. Ayhan DEMİR danışmanlığında yürütülmektedir. Bu form sizi araştırma koşulları hakkında bilgilendirmek için hazırlanmıştır.

Çalışmanın Amacı Nedir?

Çalışmanın amacı, 14-17 yaş arası gençlerin internet kullanımlarını birey aile ve okul bağlamında incelemek.

Bize Nasıl Yardımcı Olmanızı İsteyeceğiz?

Sizden, görüşmemiz sırasında yönelteceğimiz sorulara olabildiğince dürüstlikle cevap vermenizi rica edeceğiz. Çalışma sırasında, yanıtlarınızı sonradan inceleyebilmek amacıyla kayıt alınacaktır. Bu kayıtlar sadece araştırmacılar tarafından izlenecek olup kesinlikle üçüncü bir kişi ile paylaşılmayacaktır.

Katılımınızla ilgili bilmeniz gerekenler:

Bu çalışmaya katılmak tamamen gönüllülük esasına dayalıdır. Sorular rahatsızlık hissetmenize yol açacak herhangi bir unsur içermemektedir. Ancak yine de herhangi bir sebepten ötürü rahatsızlık hissederseniz çalışmayı istediğiniz anda sonlandırabilirsiniz.

Araştırmaya katılanlardan toplanan veriler tamamen gizli tutulacak, veriler ve kimlik bilgileri herhangi bir şekilde eşleştirilmeyecektir. Toplanan verilere sadece araştırmacılar ulaşabilecektir. Bu araştırmanın sonuçları bilimsel ve profesyonel yayınlarda veya eğitim amaçlı kullanılabilir, fakat katılımcıların kimliği gizli tutulacaktır.

Bu çalışmayla ilgili daha fazla bilgi almak isterseniz:

Çalışmaya katılımınızın sonrasında, bu çalışmayla ilgili sorularınız yazılı biçimde cevaplandırılacaktır. Çalışma hakkında daha fazla bilgi almak için araştırmacı Selin Mısır ile (e-posta: XXXXXXXX) ile iletişim kurabilirsiniz. Bu çalışmaya katılımınız için şimdiden teşekkür ederiz.

Yukarıdaki bilgileri okudum ve bu çalışmaya tamamen gönüllü olarak katılıyorum.

İsim Soyad

Tarih

İmza

APPENDIX E: PARENT CONSENT FORM FOR FIRST STUDY

Sevgili Anne/Baba

Bu çalışma Orta Doğu Teknik Üniversitesi Psikolojik Danışmanlık ve Rehberlik doktora öğrencisi Selin AYAS tarafından Prof. Dr. Ayhan DEMİR danışmanlığında yürütülmektedir.

Bu çalışmanın amacı nedir? Çalışmanın amacı, 14-17 yaş arası gençlerin internet kullanımlarını okul, birey ve aile bağlamında incelemek.

Çocuğunuzun katılımcı olarak ne yapmasını istiyoruz? Bu amaç doğrultusunda, siz ve çocuğunuz ile ayrı olarak yüz yüze veya çevrimiçi bir görüşme gerçekleştirmeyi planlıyoruz. Bu görüşmeler ortalama 1 saat sürecek olup görüşme sırasında ses/görüntü kaydı alınacaktır. Sizden çocuğunuzun katılımcı olmasıyla ilgili izin istediğimiz gibi, çalışmaya başlamadan çocuğunuzdan da sözlü olarak katılımıyla ilgili rızası mutlaka alınacaktır.

Sizden ve çocuğunuzdan alınan bilgiler ne amaçla ve nasıl kullanılacak? Çocuğunuzdan alacağımız cevaplar tamamen gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Elde edilecek bilgiler sadece bilimsel amaçla (yayın, konferans sunumu, vb.) kullanılacak, çocuğunuzun ya da sizin ismi ve kimlik bilgileriniz, hiçbir şekilde kimseyle paylaşılmayacaktır.

Çocuğunuz ya da siz çalışmayı yarıda kesmek isterseniz ne yapmalısınız? Katılım sırasında sorulan sorulardan ya da herhangi bir uygulama ile ilgili başka bir nedenden ötürü çocuğunuz kendisini rahatsız hissettiğini belirtirse, ya da kendi belirtmese de araştırmacı çocuğun rahatsız olduğunu öngörürse, çalışmaya sorular tamamlanmadan ve derhal son verilecektir. Aynı şekilde siz de herhangi bir sebepten ötürü rahatsızlık hissederseniz çalışmaya sorular tamamlanmadan son verilebilir.

Bu çalışmayla ilgili daha fazla bilgi almak isterseniz: Çalışmaya katılımınızın sonrasında, bu çalışmayla ilgili sorularınız yazılı biçimde cevaplandırılacaktır. Çalışma hakkında daha fazla bilgi almak için araştırmacı Selin Mısır ile (e-posta: XXXXXXXX) ile iletişim kurabilirsiniz. Bu çalışmaya katılımınız için şimdiden teşekkür ederiz.

“Yukarıdaki bilgileri okudum, bu çalışmaya katılmayı kabul ediyor ve çocuğumun bu çalışmada yer almasını onaylıyorum”

Evet onaylıyorum _____

Hayır, onaylamıyorum _____

APPENDIX F: INTERVIEW PROTOCOL FOR PARENTS

Yer:

Tarih ve Saat:

Görüşmeci: Selin Ayas

Merhaba, ismim Selin. Psikolojik danışmanım ve Orta Doğu Teknik Üniversitesinde doktora eğitimime devam ediyorum. Doktora tezim kapsamında, 14-17 yaş arası gençlerin internet kullanımını farklı yönlerden incelemeyi amaçlayan bir çalışma yürütüyorum ve hem gençler hem de ebeveynleri ile görüşmeler gerçekleştiriyorum. Görüşmelerin amacı internet kullanımını yaşamın birçok farklı alanıyla bir bütünlük içinde ele almak. Bu sebeple görüşmelerde size internet kullanımı ile ilgili soruların yanı sıra, aileniz, kişilik özellikleriniz ve okul/iş hayatınız ile ilgili sorular da yönlendireceğim. Soruların herhangi bir doğru ya da yanlış cevabı yoktur. Tamamen sizin bakış açınızı, deneyimlerinizi anlamak amacı taşımaktadır. Sizi, ailenizi değerlendirmek amacıyla değil, internet kullanımı ile ilgili gencin ve ebeveynin gözlem ve deneyimlerini geniş bir bakış açısıyla ele almak amacıyla hazırlanmıştır. Yine de, eğer sorularda anlaşılmayan, sizi rahatsız eden herhangi bir şey olursa lütfen benimle paylaşmaktan çekinmeyin. Görüşmelerimiz sonlandıktan sonra tüm görüşmeyi yazılı hale getireceğim. Bu noktada dilerseniz sizinle kendi görüşmenize dair metni paylaşabilirim. Söylediklerinizi tekrar inceleyip, eklemek veya çıkarmak istediğiniz kısımlar olup olmadığına bakabilirsiniz.

Sizin ve oğlunuz/kızınızın söyledikleriniz de birbiriniz ile görüşmeler sırasında paylaşılmayacak ve görüşme sırasında söyleyeceklerinizin araştırmacıların dışında herhangi bir kimse ile paylaşılması söz konusu olmayacaktır. Ayrıca, araştırma sonuçlarını yazarken, görüştüğüm bireylerin isimlerini kesinlikle rapora yansıtmayacağım. İsim dışında kimliğinizin belli olmasına yol açabilecek herhangi bir bilgi de aynı şekilde rapora yansıtılmayacaktır.

Başlamadan önce, bu söylediklerimle ilgili belirtmek istediğiniz bir düşünce ya da sormak istediğiniz bir soru var mı? Bu görüşmenin yaklaşık bir, bir buçuk saat süreceğini tahmin ediyorum. Siz hazır olduğunuz zaman ses kayıt cihazını açabilir ve sorulara başlayabiliriz.

İnternet Kullanımı ve İletişim

1. İnternet çoğumuzun hayatında oldukça fazla bir yere sahip. İnternetin sunduğu olanaklar da bir hayli fazla. Sizin ailenizde internetin nasıl bir yeri var?
2. Peki, oğlunuz/kızınız internette nasıl zaman geçiriyor, gözlemlerinizi paylaşır mısınız?
 - a. Neler yapıyor?
 - b. Daha çok ne zamanlar internette zaman geçiriyor?
 - c. Ortalama ne kadar süre internette zaman geçiriyor?
3. Oğlunuz/kızınızın internet kullanımı ile alakalı sizi endişelendiren/rahatsız eden şeyler nelerdir?
 - a. En çok ne olabileceğine dair çekinceleriniz var?
4. Bu konu ile ilgili onunla nasıl iletişim kuruyorsunuz?
 - a. Neler yaptığı (oynadığı oyun, izlediği videolar vb.) hakkında paylaşımlarınız oluyor mu? Örnek verebilir misiniz?
 - b. Evde internet kullanımı ile ilgili uyguladığınız kurallarınız var mı?
5. Peki, bir tanım yapacak olursanız sizce problemlili internet kullanımı/internet bağımlılığı nedir?
 - a. “Problem” sizce nerede başlıyor?
 - b. Sizce hangi noktaya kadar internet kullanımı normal kabul edilebilir?
 - c. Bu durumun sebebi sizce nedir? (Hastalık, seçim, düşük irade vb.)

Kişilik ve Çevresel Etkenler

6. İnternet ile ilgili kısımların yanı sıra, biraz da bireysel ve sosyal yönleri tartışmaya devam edelim. Çocuğunuzun kişilik özelliklerini düşündüğünüzde onu nasıl tanımlarsınız?
 - a. Sizce oğlunuzun/kızınızın hangi kişilik özellikleri (çekingenlik, mükemmeliyetçilik vb.) internet kullanımı ile alakalı olabilir? Nasıl?
7. Oğlunuzu/kızınızın okul yaşantısında nasıl tanımlarsınız?
 - b. Akademik olarak sorumluluklarını yerine getirmede nasıldır?
 - c. Öğretmenleri ile ilişkileri nasıldır?
8. Oğlunuzu/kızınızın arkadaşlık ilişkileri nasıldır?
 - a. Arkadaşlarıyla neler yaparlar?
 - d. Sizin arkadaşlarıyla iletişiminiz nasıl?

Ailesel Etmenler

9. Aile ortamınızdan kısaca bahsedebilir misiniz? Genellikle kimleri neler yaparken görebiliriz?
10. Peki, birbirinizle kurduğunuz iletişim olarak düşünürsek, kim kiminle neler hakkında konuşur?
11. Her ailede zaman zaman anlaşmazlıklar/tartışmalar yaşanır. Sizin ailenizde genelde hangi konular hakkında anlaşmazlık yaşanıyor?
 - e. Bunlar nasıl çözülüyor?

Kapanış

12. Peki, siz bireysel olarak oğlunuz/kızınızın fazla internet kullanımı ile başa çıkmak için neler denediniz?
 - f. Nasıl sonuç aldınız?
13. Sizin ebeveyn olarak en zorlandığınız konu nedir?
 - g. Hangi alanda desteğe ihtiyacınız var?
14. Sizce nasıl bir önlem alınmalı? Ne yapılmalı?
15. Değınmediğımız, önemli gördüğünüz herhangi bir şey var mı?

APPENDIX G: INTERVIEW PROTOCOL FOR ADOLESCENTS

Yer:

Tarih ve Saat:

Görüşmeci: Selin Ayas

Merhaba, ismim Selin. Psikolojik danışmanım ve Orta Doğu Teknik Üniversitesinde doktora eğitimime devam ediyorum. Doktora tezim kapsamında, 14-17 yaş arası gençlerin internet kullanımını farklı yönlerden incelemeyi amaçlayan bir çalışma yürütüyorum ve hem gençler hem de ebeveynleri ile görüşmeler gerçekleştiriyorum. Görüşmelerin amacı internet kullanımını yaşamın birçok farklı alanıyla bir bütünlük içinde ele almak. Bu sebeple görüşmelerde size internet kullanımı ile ilgili soruların yanı sıra, aileniz, kişilik özellikleriniz ve okul/iş hayatınız ile ilgili sorular da yönlendireceğim. Soruların herhangi bir doğru ya da yanlış yoktur. Tamamen sizin bakış açınızı, deneyimlerinizi anlamak amacı taşımaktadır. Sizi, ailenizi değerlendirmek amacıyla değil, internet kullanımı ile ilgili gencin ve ebeveynin gözlem ve deneyimlerini geniş bir bakış açısıyla ele almak amacıyla hazırlanmıştır. Yine de, eğer sorularda anlaşılmayan, sizi rahatsız eden herhangi bir şey olursa lütfen benimle paylaşmaktan çekinmeyin. Görüşmelerimiz sonlandıktan sonra tüm görüşmeyi yazılı hale getireceğim. Bu noktada dilerseniz sizinle kendi görüşmenize dair metni paylaşabilirim. Söylediklerinizi tekrar inceleyip, eklemek veya çıkarmak istediğiniz kısımlar olup olmadığına bakabilirsiniz.

Sizin ve söyledikleriniz de ebeveyniniz ile görüşmeler sırasında paylaşılmayacak ve görüşme sırasında söyleyeceklerinizin araştırmacıların dışında herhangi bir kimse ile paylaşılması söz konusu olmayacaktır. Ayrıca, araştırma sonuçlarını yazarken, görüştüğüm bireylerin isimlerini kesinlikle rapora yansıtmayacağım. İsim dışında kimliğinizin belli olmasına yol açabilecek herhangi bir bilgi de aynı şekilde rapora yansıtılmayacaktır.

Başlamadan önce, bu söylediklerimle ilgili belirtmek istediğiniz bir düşünce ya da sormak istediğiniz bir soru var mı? Bu görüşmenin yaklaşık bir, bir buçuk saat süreceğini tahmin ediyorum. Siz hazır olduğunuz zaman ses kayıt cihazını açabilir ve sorulara başlayabiliriz.

İnternet Kullanımı ve İletişim

16. İnternet çoğumuzun hayatında oldukça fazla bir yere sahip. İnternetin sunduğu olanaklar da bir hayli fazla. İnternetin sizin hayatınızdaki yeri nedir?

- Neler yapıyorsunuz?
- Daha çok ne zamanlar internette zaman geçiriyorsunuz?
- Ortalama ne kadar süre internette zaman geçiriyorsunuz?

17. Çoğu zaman aileler ve gençler internet kullanımı hakkında farklı düşünürler. Siz anne ve babanızdan nasıl tepkiler alıyorsunuz internet kullanımınız ile ilgili?
- Siz onların söyledikleri hakkında ne düşünüyorsunuz?
 - Evde bu konuda uygulanan kurallar (varsa) neler?
18. Peki, aileniz ile internet ile ilgili nasıl bir iletişiminiz var?
- Örneğin oynadığınız oyunlar, izlediğiniz videolar vb. hakkında paylaşımlarınız oluyor mu? Örnek verebilir misiniz?
19. Peki, bir tanım yapacak olursanız sizce problemlili internet kullanımı/internet bağımlılığı nedir?
- “Problem” sizce nerede başlıyor?
 - Sizce hangi noktaya kadar internet kullanımı normal kabul edilebilir?
 - Bu durumun sebebi sizce nedir? (Hastalık, seçim, düşük irade vb.)

Kişilik ve Çevresel Etkiler

20. İnternet ile ilgili kısımların yanı sıra, biraz da bireysel ve sosyal yönleri tartışalım. Kendinizi birkaç sıfat ile tanımlamanız gerekse nasıl tanımlarsınız?
- Sizce hangi özellikleriniz (çekingenlik, mükemmeliyetçilik vb.) internet kullanımınız ile alakalı olabilir? Nasıl?
21. Okul yaşantısında nasıl tanımlarsınız?
- Akademik olarak sorumluluklarınızda kendinizi nasıl değerlendirirsiniz?
 - Okul, eğitim ile ilgili stresli hissettiğiniz alanlar var mıdır? Varsa neler?
 - Öğretmenleriniz ile ilişkileriniz nasıldır?
22. Arkadaşlık ilişkileriniz nasıldır?
- Arkadaşlarınızla neler yaparsınız?
 - Ailenizin arkadaşlarınızla iletişimi nasıl?

Ailesel Etkiler

23. Aile ortamınızdan kısaca bahsedebilir misiniz? Genellikle kimleri neler yaparken görebiliriz?
24. Peki, birbirinizle kurduğunuz iletişim olarak düşünürsek, kim kiminle neler hakkında konuşur?
25. Her ailede zaman zaman anlaşmazlıklar/tartışmalar yaşanır. Sizin ailenizde genelde hakkı konular hakkında anlaşmazlık yaşanıyor?
- Bunlar nasıl çözülüyor?

Kapanış

26. Peki, sizlerin bireysel olarak (dönemsel veya kalıcı olarak) internet kullanımınızı azaltmak için çabanız olduysa, bunun için neler denediniz? (örn:

sınav döneminde azaltmaya çalışmak ama başarılı olamamak, derslerde dikkatini vermemek)

o. Nasıl sonuç aldınız?

27. Peki, bu süreçte en çok zorlandığınız konu nedir?

a. Ne alanda desteğe ihtiyacınız olabilir?

28. Sizce nasıl bir önlem alınmalı? Ne yapılmalı?

29. Değınmediğımız, önemli gördüğünüz herhangi bir şey var mı?



APPENDIX H: PARENT CONSENT FORM FOR SECOND STUDY

Sayın Veli,

Bu çalışma Orta Doğu Teknik Üniversitesi Psikolojik Danışmanlık ve Rehberlik doktora öğrencisi Selin AYAS tarafından Prof. Dr. Ayhan DEMİR danışmanlığında yürütülmektedir. Bu çalışma kapsamında, Ankara’da bulunan lise kademesinde eğitim gören öğrencilerden bazı anketlere yanıt vermesini isteyeceğiz ve sizin izniniz almak istiyoruz.

Bu çalışmanın amacı nedir? Çalışmanın amacı, 14-17 yaş arası gençlerin internet kullanımlarını birey, aile ve okul bağlamında incelemek ve daha iyi anlamaya çalışmak.

Çocuğunuzun katılımcı olarak ne yapmasını istiyoruz? Bu amaç doğrultusunda, çocuğunuzdan kendisine okulda ders saatinde dağıttığımız anketlerdeki soruları cevaplamasını isteyeceğiz ve cevaplarını dağıtılan ölçekleri tamamen anonim bir şekilde toplayacağız. Sizden çocuğunuzun katılımcı olmasıyla ilgili izin istediğimiz gibi, çalışmaya başlamadan çocuğunuzdan da sözlü olarak katılımıyla ilgili rızası mutlaka alınacak.

Çocuğunuzdan alınan bilgiler ne amaçla ve nasıl kullanılacak? Çocuğunuzdan alacağımız cevaplar tamamen gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Elde edilecek bilgiler sadece bilimsel amaçla (yayın, konferans sunumu, vb.) kullanılacak, çocuğunuzun ya da sizin ismi ve kimlik bilgileriniz, hiçbir şekilde kimseyle paylaşılmayacaktır.

Çocuğunuz ya da siz çalışmayı yarıda kesmek isterseniz ne yapmalısınız? Çalışma kapsamındaki sorulardan hiçbiri rahatsızlık verici içerikte değildir. Ancak yine de, katılım sırasında sorulan sorulardan ya da herhangi bir nedenden ötürü çocuğunuz kendisini rahatsız hissettiğini belirtirse, çalışmayı istediği zaman son verme hakkına sahiptir.

Bu çalışmayla ilgili daha fazla bilgi almak isterseniz: Eğer çalışma ile ilgili bilgi almak isterseniz, araştırmacı Selin Ayas ile (e-posta: XXXXXXXX) ile iletişim kurabilirsiniz. Bu çalışmaya katılımınız için şimdiden teşekkür ederiz.

Yukarıdaki bilgileri okudum ve çocuğumun bu çalışmada yer almasını:

Evet onaylıyorum_____

Hayır, onaylamıyorum_____

Ebeveynin adı-soyadı:

Çocuğun adı soyadı:

APPENDIX I: INFORMED CONSENT FORM FOR SECOND STUDY

Bu çalışma ODTÜ Psikolojik Danışmanlık ve Rehberlik Bölümü doktora öğrencisi Selin AYAS'ın doktora tezi kapsamında Prof. Dr. Ayhan DEMİR danışmanlığında yürütülmektedir. Bu form sizi araştırma koşulları hakkında bilgilendirmek için hazırlanmıştır.

Çalışmanın Amacı Nedir?

Çalışmanın amacı, 14-17 yaş arası gençlerin internet kullanımlarını birey aile ve okul bağlamında incelemektir.

Bize Nasıl Yardımcı Olmanızı İsteyeceğiz?

Sizden, ölçeklerde yer alan sorulara olabildiğince dürüstlikle yanıt vermenizi istemektedir. Ölçeklere verdiğiniz yanıtlar gruplar halinde analiz edileceğinden kimlik bilgileriniz ile birleştirilmeyecek ve kesinlikle üçüncü bir kişi ile paylaşılmayacaktır.

Katılımınızla ilgili bilmeniz gerekenler:

Bu çalışmaya katılmak tamamen gönüllülük esasına dayalıdır. Sorular rahatsızlık hissetmenize yol açacak herhangi bir unsur içermemektedir. Ancak yine de herhangi bir sebepten ötürü rahatsızlık hissederseniz çalışmayı istediğiniz anda sonlandırabilirsiniz.

Araştırmaya katılanlardan toplanan veriler tamamen gizli tutulacak, veriler ve kimlik bilgileri herhangi bir şekilde eşleştirilmeyecektir. Toplanan verilere sadece araştırmacılar ulaşabilecektir. Bu araştırmanın sonuçları bilimsel yayınlarda veya eğitim amaçlı kullanılabilir, fakat katılımcıların kimliği hep gizli tutulacaktır.

Bu çalışmayla ilgili daha fazla bilgi almak isterseniz:

Çalışmaya katılımınızın sonrasında, bu çalışmayla ilgili sorularınız yazılı biçimde cevaplandırılacaktır. Çalışma hakkında daha fazla bilgi almak için araştırmacı Selin Ayas ile (e-posta: XXXXXXXX) ile iletişim kurabilirsiniz. Bu çalışmaya katılımınız için şimdiden teşekkür ederiz.

Yukarıdaki bilgileri okudum ve bu çalışmaya tamamen gönüllü olarak katılıyorum.

(Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

Çalışmaya katılmayı kabul ediyorum ____

imza ____

APPENDIX J: DEMOGRAPHIC INFORMATION FORM

Sevgili Arkadaşlar,

Bu çalışmada amaç, 14-17 yaş arası bireylerin internet kullanımı alışkanlıklarını ve günlük yaşantıları ile bilgi edinmektir. Aşağıda size ve ailenize yönelik bazı bilgileri içeren sorular bulunmaktadır. Tüm anket boyunca herhangi bir şekilde kimliğinizi belirtecek bilgi istenmemektedir. Tüm soruların yanıtlanması yaklaşık 15-20 dakikanızı alabilmektedir. Soruların herhangi bir doğru veya yanlış yanıtı yoktur. Sizden durumunuzu tam olarak yansıtacak biçimde herhangi bir soruyu boş bırakmadan, tüm soruları ıçtenlikle doldurmanız beklenmektedir.

Katkılarınız için çok şimdiden teşekkür ederim,

Selin Ayas
ODTÜ Psikolojik ve Danışmanlık Programı
Doktora Öğrencisi

DEMOGRAFİK BİLGİLER					
Cinsiyetin:	Kız ☐	Erkek ☐			
Yaşın:					
Sınıfın:	9. Sınıf ☐	10. Sınıf ☐	11. Sınıf ☐	12. Sınıf ☐	
Okulunuzun Adı:			Oturduğunuz Semt:		
Annemin eğitim durumu nedir?	Okuma yazma bilmiyor ☐	İlkokul mezunu ☐	Ortaokul mezunu ☐	Lise mezunu ☐	Üniversite mezunu ☐
Babamın eğitim durumu nedir?	Okuma yazma bilmiyor ☐	İlkokul mezunu ☐	Ortaokul mezunu ☐	Lise mezunu ☐	Üniversite mezunu ☐
Annem:	Çalışıyor ☐	Çalışmıyor ☐	Babam:	Çalışıyor ☐	Çalışmıyor ☐
Anneniz ve Babanızın ilişki durumu	Birlikteler ☐	Boşandılar ☐	Annem vefat etti ☐	Babam vefat etti ☐	Ayrı yaşıyorlar ☐
Ders dışında İnternette günde ortalama ne kadar vakit geçiriyorsun					
			Günde yaklaşık _____ saat		

APPENDIX K: PROBLEMATIC INTERNET USE SCALE SAMPE ITEMS

Bu anket, bireylerin internet kullanım davranışlarını betimlemek için hazırlanmıştır. Sizden istenen, internet kullanırken genellikle gösterdiğiniz davranışları dikkate alarak, aşağıdaki ifadelerden her birinin size uygunluk derecesini belirlemenizdir.		Hiç uygun değil	Nadiren uygun	Biraz uygun	Oldukça uygun	Biraz uygun
1.	İnternet bağlantımı kesmeye her karar verdiğimde kendi kendime “birkaç dakika daha” diyorum.	1	2	3	4	5
2.	İnternette ismimi gizlemek beni daha özgür kılıyor.	1	2	3	4	5
3.	Çok istememe rağmen interneti uzun süre kullanmaktan bir türlü vazgeçemiyorum.	1	2	3	4	5
4.	İnternete gerekmedikçe girmekten kaçınıyorum.	1	2	3	4	5
5.	Yalnızlığımı internetle paylaşıyorum.	1	2	3	4	5
6.	Birisi internette ne yaptığımı sorduğunda savunmacı ve gizleyici oluyorum.	1	2	3	4	5
7.	Planladığımın dışında fazladan bir dakika bile interneti kullanmıyorum.	1	2	3	4	5
8.	İnternette daha fazla vakit geçirmek için günlük işlerimi ihmal ediyorum.	1	2	3	4	5
9.	İnternette, kontrol benden çıkıyor.	1	2	3	4	5
10.	İnternet yüzünden yemek yemeyi unuttuğum zamanlar oluyor.	1	2	3	4	5
11.	İnternet, yapmam gerekenleri ertelemek için vazgeçilmez bir araçtır.	1	2	3	4	5
12.	İnternet kullanırken zamanın nasıl geçtiğini hiç anlamıyorum.	1	2	3	4	5
13.	İnternet beni kendisine esir ediyor.	1	2	3	4	5
14.	İnternet yoluyla iletişim kurmayı, yüz yüze iletişim kurmaya tercih ediyorum.	1	2	3	4	5

APPENDIX L: SELF REGULATION INVENTORY SAMPLE ITEMS

Aşağıda sizinle ilgili bazı ifadeler yer almaktadır. Yanıtlarken kendi davranışlarınızı olduğu gibi yansıtmayınız, sonuçların daha sağlıklı değerlendirilmesine katkıda bulunacaktır. Lütfen, hiçbir maddeyi boş bırakmayınız.	Bana hiç benzemiyor	Bana benzemiyor	Bana biraz benziyor	Bana çok benziyor
1. Üzgün olduğumda kendimi iyi hissettirecek bir şeyler yapabilirim.	1	2	3	4
2. Sıkıldığımda yerimde duramam/oturamam	1	2	3	4
3. Birine kızgın olduğumda bile, etraftaki diğer insanlara normal davranabilirim.	1	2	3	4
4. Stres altındayken yapmam gereken işleri yapmakta iyiyimdir.	1	2	3	4
5. Yorgun olsam bile, yeni bir işe başlayabilirim.	1	2	3	4
6. Küçük sorunlar beni uzun-vadeli planlarımdan alıkoyabilir.	1	2	3	4
7. Meşgul edilerek ve dikkatim dağıtılarak kesilsem bile, yaptığım işe kolayca geri dönebilirim.	1	2	3	4
8. Etrafta başka işler olurken dikkatimi yaptığım işe yoğunlaştırmakta zorlanırım.	1	2	3	4
9. Ne kadar daha çalışmam gerektiğini/gerekeceğini hiçbir zaman bilemem	1	2	3	4
10. Stres altındayken planlar yapmak ve büyük işler yapmaya başlamakta zorlanırım.	1	2	3	4
11. Heyecanlandığımda ya da kızdığımda kolayca sakinleşebilirim.	1	2	3	4
12. Bir şey istediğim gibi gitmediğinde amacıma ulaşmak için davranışlarımı değiştirebilirim.	1	2	3	4
13. Arkadaşlarım dışarı gitmek istediğinde, kendimi çalışmak için tutabilirim.	1	2	3	4
14. İşler istediğim gibi gitmiyorsa, kontrolümü kaybederim.	1	2	3	4
15. Bir şeyi çok istiyorsam, ona hemen sahip olmak isterim.	1	2	3	4
16. Biriyle ciddi bir anlaşmazlığa düştüğümde kontrolümü kaybetmeden sakince konuşabilirim.	1	2	3	4
17. Yapmam gereken çok sıkıcı olsa bile o işe yoğunlaşabilirim.	1	2	3	4
18. Tepem atıp, bir şeyler fırlatmak istediğimde kendimi durdurabilirim.	1	2	3	4
19. Sonu nereye varacağı belli olmasa da dikkatli çalışabilirim.	1	2	3	4
20. Dışarıya belirtmeden de duygularımın ne olduğunun farkındayım.	1	2	3	4
21. Arkadaşlarım konuşurken bile işime konsantre olabilirim.	1	2	3	4
22. Uzun vadeli bir projem olduğunda, üzerinde sabırla çalışabilirim.	1	2	3	4
23. Bir şeyi yapmam gerektiğini biliyorsam, kendimi tutabilirim.	1	2	3	4

APPENDIX M: ULS-8 SCALE SAMPLE ITEMS

Aşağıda çeşitli duygu ve düşünceleri içeren ifadeler verilmektedir. Sizden istenen her ifadeye tanımlanan duygu veya düşünceyi ne sıklıkla hissettiğinizi, ya da düşündüğünüzü her ifade için bir tek rakamı yuvarlak içine alarak işaretlemenizdir.	Hiç Yaşamam	Nadiren Yaşarım	Bazen Yaşarım	Sık sık Yaşarım
1. Arkadaşım yok.	1	2	3	4
2. Kendimi grup dışına itilmiş hissediyorum.	1	2	3	4
3. Beni gerçekten anlayan insanlar var.	1	2	3	4
4. Konuşabileceğim insanlar var.	1	2	3	4
5. Derdimi anlatabileceğim insanlar var.	1	2	3	4

APPENDIX N: COPING WITH STRESS SCALE SAMPLE ITEMS

Yakın süre içerisinde karşılaştığınız problemler ile nasıl başa çıktığınızı sizin için en uygun kutuyu işaretleyerek belirtiniz. Lütfen her maddeyi işaretleyiniz.	Çok	Biraz	Hiç
1. Zamanımı, her zamankinden çok, yalnız olarak geçirdim.	1	2	3
2. Her zamankinden daha fazla tv/bilgisayar/telefon kullandım.	1	2	3
3. Her zamankinden daha fazla uyudum.	1	2	3
4. İnsanların beni kendi başıma bırakmasını istedim.	1	2	3

APPENDIX O: PARENTING STYLES SCALE SAMPLE ITEMS

Bu kısımda **anne ve babanız** ile olan ilişkileriniz hakkında cümleler verilmiştir. Sizden istenen her bir cümlenin ne derece doğru olduğunu ilgili yeri işaretleyerek belirtmenizdir. Bunu anne ve babanız için **ayrı ayrı** yapmanızı istiyoruz. Annenizi/babanızı kaybetmişseniz yetişmenizde en çok katkısı olan kişiyi (teyze, hala, amca, dede vb.) göz önüne alınız.

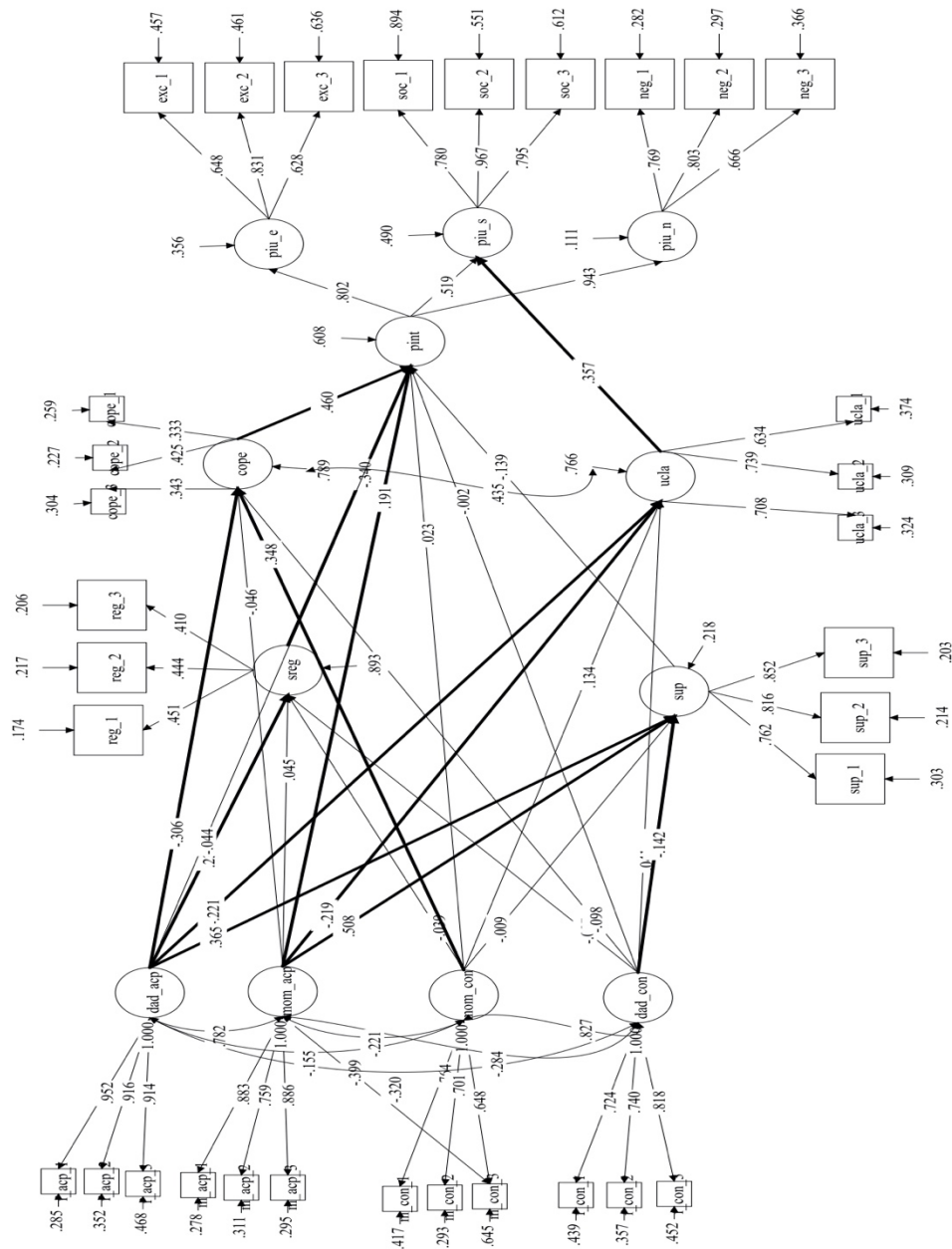
1: Hiç doğru değil 2: Doğru değil 3: Kısmen doğru 4: Doğru 5: Çok doğru

	ANNEM	BABAM
1. Benimle sık sık rahatlatıcı bir şekilde konuşur.	1 2 3 4 5	1 2 3 4 5
2. Ber davranışımı sıkı sıkıya kontrol etmek ister.	1 2 3 4 5	1 2 3 4 5
3. Nasıl davranacağım ya da ne yapacağım konusunda bana hep yararlı fikirler verir.	1 2 3 4 5	1 2 3 4 5
4. Onunkinden farklı bir görüşe sahip olmama genellikle tahammül edemez.	1 2 3 4 5	1 2 3 4 5
5. Sevgi ve yakınlığına her zaman güvenirim.	1 2 3 4 5	1 2 3 4 5
6. Kurallarına ayrkısı davrandığımda beni kolaylıkla affetmez.	1 2 3 4 5	1 2 3 4 5
7. Hiçbir zaman fazla yakın bir ilişkimiz olmadı.	1 2 3 4 5	1 2 3 4 5
8. Geç saatlere kadar oturmama izin vermez.	1 2 3 4 5	1 2 3 4 5
9. Onunla birbirimize çok bağlıyız.	1 2 3 4 5	1 2 3 4 5
10. Bir sorunum olduğunda bunu hemen anlar.	1 2 3 4 5	1 2 3 4 5
11. Hangi saatte hangi arkadaşımı buluşacağımı bilmek ister.	1 2 3 4 5	1 2 3 4 5
12. Hiçbir zaman benim ne hissettiğim veya ne düşündüğümle gerçekten ilgilenmedi.	1 2 3 4 5	1 2 3 4 5
13. Arkadaşlarımla dışarı çıkmama nadiren izin verir.	1 2 3 4 5	1 2 3 4 5

APPENDIX P: PERCEIVED FAMILY SUPPORT SCALE SAMPLE ITEMS

Her ifadeyi dikkatle okumanız ve ifadelerin yanında yer alan seçenekten size en uygun geleni işaretlemeniz beklenmektedir.	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
1. Bazı çocuklar, sorunları olduğunda yardım ya da öneri almak için ailelerine güvenebilir; ama bazı çocuklar ailelerine güvenemez. Sen, sorunların olduğunda yardım ya da öneri almak için ailene güvenebilir misin?	1	2	3	4	5
2. Bazı çocuklar ve aileleri, birbirleri için pek çok şey yaparlar ama bazı çocuklar ve aileleri bunu yapmazlar. Sen ve ailen birbiriniz için çok şey yapar mısınız?	1	2	3	4	5
3. Aileleri, bazı çocukların kendilerini kötü hissetmelerine neden olur; ama bazı çocukların aileleri bunu yapmaz. Senin ailen, kendini kötü hissetmene neden olur mu?	1	2	3	4	5
4. Bazı çocuklar, aileleriyle çok şey paylaşırlar; ama bazı çocuklar paylaşmazlar. Sen ailenle çok şey paylaşırsın mı?	1	2	3	4	5
5. Bazı çocuklar, aileleriyle konuşmakta zorluk çekerler; ama bazı çocuklar zorluk çekmez. Sen, ailenle konuşmakta zorluk çeker misin?	1	2	3	4	5
6. Bazı aileler, çocuklarının düşüncelerini görmezden gelirler; ama bazı aileler böyle yapmaz. Ailen, senin düşüncelerini görmezden gelir mi?	1	2	3	4	5
7. Bazı çocuklar aileleri içinde önemli bir yere sahiptir; ama bazı çocuklar böyle değildir. Sen, kendi ailen içinde önemli bir yere sahip misin?	1	2	3	4	5
8. Bazı çocuklar ailelerinin kendilerine kötü davrandığını düşünürler; ama bazı çocuklar böyle düşünmez. Sen, ailenin sana kötü davrandığını düşünür müsün?	1	2	3	4	5

APPENTIX R: THE OUTPUT OF THE QUANTITATIVE MODEL



APPENDIX S. TÜRKÇE ÖZET/TURKISH SUMMARY

ERGENLERİN İNTERNET KULLANIMININ BİREYSEL, İLİŞKİSEL VE ÇEVRESEL DİNAMİKLERİNİN İNCELENMESİ: KARMA YÖNTEM ÇALIŞMASI

GİRİŞ

İnternet, 1990'lı yıllardan itibaren bireylerin hayatında önemli bir yer tutmaktadır. O günden beri internet, ilişkiler, iş hayatı, eğitim ve alışveriş gibi günlük yaşamın çeşitli alanlarında önemli değişiklikler yaratmıştır (Barak ve Suler, 2008). Güncel istatistikler, 2022 yılında ülkemizde hane halkının %94,1'inin internet erişimine sahip olduğunu, önceki yıl ise bu oranın %92 olduğunu söylemektedir (Türkiye İstatistik Kurumu, [TÜİK] 2021; 2022a). Son altı yılda çocuk ve ergenlerin internete erişim oranı %50'den %82,7'ye yükselmiştir. Tüm kullanıcılar arasında, çocukların ve ergenlerin %90,1'i günlük internet kullandığını bildirmiştir (TÜİK, 2022b). Bu sayılara bakıldığında, internete erişimin ve internet kullanım miktarının arttığını söylemek mümkündür. Elbette bu istatistikler tek başına bir soruna işaret etmemekte, aksine, internete erişimin artması gelişen teknolojinin ve sosyoekonomik durumun düzelmesinin bir işareti olarak görülmektedir (Yoon ve ark., 2020) Ancak günlük rutinlerin çoğu çevrimiçi ortama taşınırken, çevrimiçi ve çevrimdışı yaşamlar arasındaki dengeyi korumak da giderek zorlaşmaktadır (Wiltgen, 2021). Bu nedenle internetin problemli kullanımından kaynaklanabilecek sorunların önüne geçebilmek için, internetle sağlıklı bir ilişki kurmayı öğrenmek ve çevrimiçi dünyanın bilinmezliği içerisinde hayatta kalmaya çalışan genç bireylere rehberlik edebilmek, modern toplumda gittikçe önemli bir yere sahip olmaktadır (Jancke, 2007).

Problemli internet kullanımı, araştırmacılar tarafından bugüne kadar çeşitli farklı konu başlıkları altında çalışılmıştır. Bunlara örnek olarak, çevrimiçi ilişki/buluşma,

çevrimiçi kumar, sosyal ağların kullanımı, çevrimiçi cinsel içerikli siteler gibi alanlar sıralanabilir (Young, 1999). Zaman içerisinde, ‘internet bağımlılığı’, ‘aşırı internet kullanımı’, ‘problemlili internet kullanımı’, ‘kompulsif internet kullanımı’ gibi çeşitli isimler aynı olguyu tanımlamak için kullanılmış, ancak hangi terimin durumu en iyi ifade ettiğine dair bir fikir birliğine varılamamıştır (Widyanto ve Griffiths, 2007). Bu tartışmalar doğrultusunda, ‘problemlili internet kullanımı’ teriminin, hafif düzeydeki rahatsızlıklardan, ciddi derecedeki rahatsızlara kadar geniş bir alanı kaplayan bir durumu ifade ettiği (Ang ve ark., 2021) ve dolayısıyla ‘internet bağımlılığı’ yerine kullanılabilecek daha uygun bir seçenek olduğu öne sürülmektedir (Fernandes ve ark., 2019). Bu nedenle, bu çalışmada ‘problemlili internet kullanımı’ (PİK) terimi kullanılacaktır.

PİK’in en yaygın görünümü, çevrimiçi ortamda amaçlanandan daha uzun süre aktif kalma, internette harcanan bu zamanı yönetmede zorluk çekme ve günlük yaşamdaki zorluklarla baş etmek için internet ortamına yönelmek olarak tanımlanabilir (Beard ve Wolf, 2001; Shapira ve ark., 2003). Düşük sosyal destek seviyesi ve öz-saygı, yüksek yalnızlık seviyesi gibi değişkenler internet kullanımını olumsuz yönde etkilemektedir (Brand ve ark., 2016). Sonuç olarak PİK, bireylerde uykusuzluk, stres, kaygı, depresyon, düşük benlik saygısı ve düşük akademik performans gibi sonuçlarla ilişkilendirilmektedir (Younes ve ark., 2016; Samaha ve Hawi, 2016). Türkiye’de yapılan araştırmalarda da, Batı alanyazınına benzer şekilde, güvensiz bağlanma biçimlerinin (Atalan-Ergin 2018; Uygun ve ark., 2022), düşük sosyal desteğin, aile ile ilişki sorunlarının, depresyonun (Boyacı, 2019) ve düşük akademik başarı düzeylerinin (Derin ve Bilge 2016) PİK için en kritik risk faktörleri olarak gösterilmektedir.

PİK, tüm bireyler için olası bir endişe kaynağı olsa da, bazı yaş grupları, gelişimsel özellikler nedeniyle diğerlerinden daha fazla risk altında olabilmektedir (Cao ve ark., 2011). Bu nedenle, problemin doğasının iyi bir şekilde anlaşılabilmesi için sorun, bireylerin gelişim evresi dikkate alınarak incelenmelidir (Derevensky, 2019). Ergenlik dönemi, 10’lu yaşların başından 20’li yaşların başına kadar olan dönemi

kapsamakta ve PİK gibi birçok problemli davranışların görülebildiği riskli bir dönem olarak kabul edilmektedir (Griffiths ve Kuss, 2011; Leather, 2009). Bu dönemde meydana gelen biyolojik, sosyal ve psikolojik değişimler, ruh sağlığı sorunlarının ve riskli davranışların gelişmesine karşı doğal bir hassasiyet yaratmaktadır (Andrews ve ark., 2021; Griffiths ve Kuss, 2011; Kessler ve ark., 2007; Leather, 2009). Bu dönemde, temel psikolojik ihtiyaçlarının en önemlilerinden olan ilişki kurmak ve sürdürmek için internet, gençlerin hayatında çok önemli bir yer kaplamaktadır (Tsitsika ve ark., 2014; Mittman ve ark., 2022). Özellikle 15-18 yaşlara denk gelen orta ergenlik döneminde, internet ile ilgili sorunların en yüksek düzeyine ulaştığı görülmektedir (Karacic ve Oveskovic, 2017; Wu ve ark., 2016). Sorun yaşayan gençlerde PİK, duygusal düzensizlik (Gioia ve ark., 2021), depresif belirtiler ve madde kullanımı (Kiraly ve ark., 2021), dikkat sorunları (Marin ve ark., 2021) ve uyku bozuklukları (Tereschenko ve ark., 2021) ile yakından ilişkilendirilmektedir.

Araştırmalar, yetişkinlerin, özellikle ebeveyn ve eğitimcilerin, gençlerin teknoloji kullanımına dair ciddi bir panik, endişe ve kaygı deneyimlediklerini göstermektedir (Dunkels ve ark., 2011; Herr, 2006; Herring, 2008). Bu yoğun endişeler ise hem akademide hem de popüler medyada çevrimiçi etkinliklerin risk ve faydaları hakkında önemli tartışmalara yol açmaktadır (Herring, 2008). Bununla bağlantılı olarak, çoğunlukla ebeveynler, gençlerin iyiliği için endişelenerek yardım aramaktadır (Myrick, 2017). Ancak gençler ise, ortada bir problem olduğu konusunda ebeveynleriyle hemfikir olmadıklarını belirtmektelerdir (Kwon, 2011). Bu anlaşmazlık hem yaş, hem de dijital dünyanın yarattığı kuşak farkından kaynaklanmaktadır (Prensky, 2001). Ebeveynler her ne kadar internet kullanımını sorun olarak görseler de, artık yaşamda teknolojinin kalıcı bir aracı rolü olduğunu kabul etmek ve onu akıllıca kullanmayı öğrenerek dijital dünyanın talepleriyle başa çıkmayı öğrenmek ve gençlere öğretmek oldukça önem taşımaktadır (Prensky, 2009). Dolayısıyla da her iki tarafı da anlamak, aradaki bu köprü çok açılmadan kapatabilmek açısından önem taşımaktadır.

Bugüne kadar PİK’i anlamak, önlemek ve sađaltmak için çeřitli kuramsal çerçevelerden faydalanılmıřtır. Bunların arasında Biliřsel Davranıřçı Kuram (Davis, 2001), Bandura’nın (1986) Sosyal Biliřsel Kuramına dayalı medya alışkanlıkları ve yetersiz öz-denetim bakıř açısı (La Rose, 2017) gibi farklı kuramlar yer almaktadır. Her ne kadar etkili açıklamalar sunulsa da, kuramlar, PİK’in kiřilerarası veya sosyal bileřenlerine yeterince odaklanılmaması yönünden eleřtirilmiřtir (Caplan, 2002). Bu açık düřünüldüğünde, Jessor’ın (1987) Problem Davranıř Kuramı (PDK), aynı modelde farklı bileřenlerin arařtırılmasını sađlayan deđerli bir çerçeve sunmaktadır. Kuram, davranıřın oluřumuna katkıda bulunan beř ana sistem olan demografik sistem, sosyal sistem, kiřilik sistemi, algılanan çevre sistemi ve sonuç olarak davranıř sistemi dahil olmak üzere davranıřı çok sistemli bir bakıř açısıyla inceler (Jessor, 1991). Bu çalıřmanın kuramsal çerçevesinin seřimi bir dizi ölçüt ile özetlenebilir. İlk olarak, PDK, davranıřı çok sistemli bir çerçevede kapsamlı bir řekilde incelemeye izin verir. Sadece sađlıksız davranıřları açıklamaya çalıřmakla kalmayan aynı zamanda sađlıklı ergen davranıřlarını anlamayı amaçlayan bir kuramdır (Jessor ve Turbin, 2016). Son olarak PDK, her sistemdeki risk faktörlerine ve koruyucu faktörlere odaklanarak ve hem kiřisel hem de sosyal-çevresel düzeylerde deđerikliklere vurgu yaparak ergen bireylerin davranıřına iliřkin tedavinin önlenmesine yönelik öneriler sunmaktadır (Jessor, 2016).

Özetle, teknoloji ve internetin günlük hayatın ayrılmaz bir parçası haline geldiğini ve çok yakın bir gelecekte çok daha fazla sayıda çocuk, ergen ve yetiřkinin interneti aktif olarak kullanacağını söylemek mümkündür. Her yařtan birey, bir dereceye kadar dijital dünya ile gerçek dünya arasında bir denge bulmaya çalıřsa da, bu mücadele, bazı gelişimsel özellikler nedeniyle, ergenlik dönemindeki bireyler için nispeten daha zordur (Andrews ve ark., 2021; řirin, 2020). Bu nedenle, ergenlerin internetle sađlıksız bir iliřki kurma riski daha da yüksektir. Yetiřkinler ve ergenler arasındaki kuřak farkı, ebeveyn ve ergenlerin, internet kullanımının normal düzeyi üzerinde anlaşmasını zorlařtırmaktadır. Bu durum, ergenler ve yetiřkinler arasındaki anlaşmazlık ve çatıřmanın yanı sıra yetiřkinler için yüksek derecede panik ve endiře ile sonuçlanmaktadır (Özaslan ve ark., 2021). Yetiřkinler, özellikle de ebeveynler,

çocukların ve ergenlerin nasıl yaşadıkları ve öğrendikleri konusunda önemli etkiye sahip olmaları dolayısıyla, çocuk ve ergenlere rehberlik etmeye hazırlıklı olmalıdır (Gani, 2016). Bu nedenle, modern toplumun PİK sorununu çözmek için acilen araştırmacı, eğitimci, ebeveyn ve politika yapıcılarının birlikte çalışması gerekmektedir (Chi ve ark., 2020). Bu amaca ulaşmak için, farklı sistemleri ve bakış açılarını bütünleştiren ergen PİK' inin kapsamlı bir incelemesi gereklidir. PİK'i anlamaya, önlemeye ve tedavi etmeye yönelik çok sayıda araştırma ve teorik bakış açısı mevcut olsa da, hala daha fazla anlamlandırılması gereken bazı alanlar bulunmaktadır.

Araştırmanın Amacı

Bu çalışmanın amacı, ergen PİK'ini, PDK'ya dayalı olarak, birden fazla sistemi içerisinde barındıran bir çerçevede kapsamlı bir şekilde incelemektir. Her ne kadar PDK, sistemlerin içerisindeki genel değişkenleri açıklasa da, PİK'i PDK çerçevesinde inceleyen çalışmalar görece azdır (De Leo ve Wulfert, 2013; Huang ve ark., 2019; Lai ve Kwan, 2017; Shek ve Chai, 2018). Özellikle, ergen PİK'ini yordayan çevresel faktörler yeterince araştırılmamıştır (Kuss ve ark., 2014). Bu nedenle, bu çalışmada, modeli oluşturma aşaması öncesinde her bir sisteme dahil edilecek değişkenlerin kesin olarak belirlenmesi amacıyla nitel bir bölüme yer verilmiştir. Ergen PİK'inin çevresel ve ilişkisel dinamiklerini daha iyi anlamak için hem ergenler hem de ebeveynleri ile görüşmeler planlanmıştır. Her bir sistemde bulunan ve PİK'i yordayan temel değişkenleri belirlemenin yanı sıra, çalışmanın nitel kısmında ergenlerin ve ebeveynlerinin PİK'i nasıl kavramsallaştırdığı, bu konudaki deneyimlerinin, gözlemlerinin ve yaşadıkları zorlukların da daha iyi anlaşılması amaçlanmıştır.

Araştırma Soruları ve Hipotezler

Creswell ve Piano-Clark (2018), karma yöntemli bir çalışmada üç tür araştırma sorusu oluşturmayı önerir: nitel, nicel ve karma yöntem soruları. Bu çalışmaya ilişkin araştırma soruları birbiri üzerine inşa edilen çalışmaların sırasına göre aşağıda sunulmuştur.

Araştırma Soruları

1. Ebeveynler ve ergenler, internet kullanımıyla ilgili olarak "problemli" durumu nasıl tanımlıyor?
2. Ergenlerin internet kullanımına ilişkin kişisel ve çevresel deneyimleri nelerdir?
3. Ebeveynlerin, çocuklarının internet kullanımıyla ilgili endişe duydukları alanlar, başa çıkma stratejileri ve yaşadıkları zorluklar nelerdir?
4. Ebeveynler ve ergenler, ergenlerin problemli internet kullanımına katkıda bulunan potansiyel riskleri ve koruyucu faktörleri nasıl algılıyor?
5. Ergenlerin problemli internet kullanımına katkıda bulunan başlıca kişisel ve çevresel faktörler nelerdir?

Hipotezler

1. Sosyal sistem değişkenlerinin problemli internet kullanımıyla istatistiksel olarak anlamlı ve doğrudan ilişkilidir.
2. Sosyal sistem değişkenlerinin kişilik sistemi değişkenleriyle istatistiksel olarak anlamlı ve doğrudan ilişkilidir.
3. Sosyal sistem değişkenlerinin algılanan çevre sistemi değişkenleriyle istatistiksel olarak anlamlı ve doğrudan ilişkilidir.
4. Kişilik sistemi değişkenlerinin problemli internet kullanımıyla istatistiksel olarak anlamlı ve doğrudan ilişkilidir.
5. Algılanan çevre sistemi değişkenlerinin problemli internet kullanımıyla istatistiksel olarak anlamlı ve doğrudan ilişkilidir.
6. Sosyal sistem değişkenlerinin kişilik değişkenleri aracılığıyla problemli internet kullanımı ile istatistiksel olarak anlamlı ve dolaylı olarak ilişkilidir.
7. Sosyal sistem değişkenlerinin algılanan çevre değişkenleri aracılığıyla problemli internet kullanımıyla istatistiksel olarak anlamlı ve dolaylı olarak ilişkilidir

Araştırmanın Önemi

Bu çalışmanın mevcut alanyazına çeşitli açılardan önemli katkıları bulunmaktadır. Bu katkılar kuramsal boyut, çalışma örnekleminin odağı ve psikolojik danışmanlık boyutu olmak üzere üç ana başlık altında özetlenebilir. Bu nedenle çalışmanın önemi de, bu başlıklar doğrultusunda tartışılmıştır.

Mevcut alanyazının kuramsal eksiklikleri ile başlamak gerekirse, PİK araştırma alanı olarak hala ciddi ihtiyaçları olan bir alan olarak kabul edilmektedir. PİK'in bazı temel alanlarında hala ciddi karışıklıklar bulunmakta ve PİK'in altında yatan mekanizmaların daha detaylı olarak keşfedilmesine hala ihtiyaç duyulmaktadır (Weinstein ve Lejoyeux, 2010). Örneğin, normal internet kullanımı ile aşırı veya problemli kullanım arasındaki ayrıştırıcı çizgi hala kesin değildir ve aralarındaki farkı net bir şekilde göstermek için daha fazla araştırmaya ihtiyaç söz konusudur (Fernandes ve ark., 2019). Ayrıca, mevcut çalışmaların, PİK'i yordayan kişi-çevre etkileşimlerinin kapsamlı bir kuramsal çerçevede inceleyemediği görülmektedir (Lai, 2016). Araştırmacılar PİK'in çok sistemli bir modelde incelenmesi gerekliliği üzerine fikir birliği sağlamışlardır (Jackson ve ark., 2012; Lai 2016; Throuvala ve ark., 2018). Bu nedenle, tanımlama konusundaki karışıklıklar, çoklu sistem bakış açısının ve kuramsal çerçevenin eksikliği, tedavi ve önleme çalışmalarının gelişimi açısından önemli bir dezavantaj oluşturmaktadır (King ve ark., 2017; Tokunaga, 2017).

Çalışmanın bir diğer katkısı ise ergenlere ve ebeveynlere odaklanması ile ilişkilendirilmektedir. Ergenlik döneminin biricik özellikleri, bu dönemin özel olarak çalışılması ve dönemsel risk ve koruyu etkenlerin anlaşılmasını gerektirmektedir (Murray ve Rosenbalm, 2017). Ek olarak, ergenler ve internet kullanımıyla ilgili sorunların önemli bir kısmı, çoğunlukla ebeveynler olmak üzere yetişkinler tarafından tasvir edilmektedir. Bu nedenle, hangisinin gerçek ve hangisinin yetişkinler tarafından oluşturulmuş bir sosyal damga olduğunu anlamak önem taşımaktadır. Mevcut çalışmalar ebeveyn ve eğitimcilere bu araştırmalarda yeterince yer vermemektedir (Lai ve Kwon, 2017). Ayrıca, Ellert ve ark. (2011), ergenlerle yapılan çalışmalarda ebeveynlerin bakış açılarının öz bildirimlerinin yerine geçmeden, destekleyici bilgi olarak kullanılmasını önermektedir. Bu çalışmada da ergenlerin

kendi deneyimlerine ait bilgiler için ergenlerin söylemleri temel alınarak, ebeveynlerin gözlem ve deneyimleri anlamlandırma konusunda destekleyici konumda yer almaktadır.

Son olarak, okul ortamında öğrencilere ruh sağlığı hizmetlerinin en yaygın sağlayıcısı olarak görülen okul psikolojik danışmanları hem ebeveynlere hem de öğrencilerin birincil bilgi ve müdahale kaynağıdır (Chibbaro, 2007; Hagedorn ve Young, 2011). Ancak, okul psikolojik danışmanlarının ve diğer okul personelinin de, PİK konusunda müdahalede bulunabilecekleri yeterli kaynaklar bulunmadığı ve kendilerini hazır hissetmedikleri bilinmektedir (Finn ve ark., 2004; Wells ve ark., 2006).

Yukarıdaki eksiklikler düşünüldüğünde, bu çalışmanın önemli teorik ve uygulamalı alanda çeşitli katkıları vardır. Her şeyden önce mevcut çalışma, bireysel düzeydeki değişkenlere odaklanmak yerine PİK’i çoklu sistem bakış açısıyla incelemeyi, kuramsal temelli açıklamaların eksikliğine ve tanım karmaşalarına katkıda bulunmayı amaçlamaktadır. İkinci olarak, orta ergenlik dönemine odaklanarak, belirli bir dönemin deneyimlerini ve ihtiyaçlarını daha net keşfetmeye yardımcı olunması amaçlanmaktadır. Ayrıca, ebeveynleri tamamlayıcı bir bilgi kaynağı olarak araştırmaya dahil etmek, ilişkisel ve çevresel dinamiklerin daha iyi anlaşılmasını sağlayan ve aynı zamanda ebeveynlerin kişisel deneyimlerini de aydınlatmaya yardımcı olan önemli bir bakış açısı katmaktadır. Üçüncü olarak, psikolojik danışmanlık alanında PİK’in önlenmesi ve tedavi edilmesi, veli, okul ve bireyin işbirliğini gerektirmektedir. Bu göz önüne alındığında çok sistemli kuramsal model ve ergen ve ebeveyn bakış açısının derinlemesine incelenmesinin, ileride kurgulanabilecek çalışmalarda bu işbirliği ilişkisinin temelini oluşturmak adına alana katkı sağlaması amaçlanmaktadır.

YÖNTEM

Araştırmanın Deseni

Mevcut çalışma, karma yöntem araştırması olarak tasarlanmıştır. Daha özelde, çalışmanın deseni nitel çalışmayı takip eden bir nicel çalışmanın yer aldığı, nicel odaklı keşifsel sıralı desen olarak belirtilebilir (Creswell ve Plano-Clark, 2018). Her iki çalışmadan elde edilen bulgular, sonunda yorumlama aşamasında bütünleştirilmektedir.

Örneklem

Nicel çalışma için, 14-17 yaş arası gençler ve ebeveynlerinden veri toplanması hedeflenmiştir. Katılımcıların herhangi bir psikiyatrik tanıya sahip olmamaları, internet kullanımı ile ilgili sorun yaşadıklarını düşünmeleri ve hem çocuk hem ebeveyn olmak üzere her ikisinin de çalışmaya katılmayı kabul etmesi gibi koşullar aranmıştır. Bu kriterler doğrultusunda 12'si kız, 8'i erkek olmak üzere toplam 20 ergen ve ebeveynleri ile görüşülme yapılmıştır. Ebeveynlerden 2'si baba, 18'i ise annedir.

Nitel çalışma için, Yenimahalle, Çankaya ve Etimesgut bölgelerindeki Anadolu ve Fen liseleri'nde öğrenim gören 14-17 yaş arası öğrencilerden veri toplanması hedeflenmiştir. Toplam 21 okuldan, 1584 (Kız = 853. Erkek = 718, 11 belirtilmemiş) çalışmaya katılmıştır.

Veri Toplama Araçları

Nicel çalışmada kullanılmak üzere, yarı yapılandırılmış soruların yer aldığı bir görüşme protokolü hazırlanmıştır. Görüşme protokolünde 3 temel başlık yer almaktadır. İlk kısımda probleme dair genel deneyim ve düşünceler sorulmaktadır. İkinci kısımda kişinin sosyal yaşantısı, çevresi ve kişilik özellikleri ile ilgili sorular yer almaktadır. Üçüncü ve son kısımda ise, kişinin aile yaşantısı ile ilgili sorular

bulunmaktadır. Ufak detaylardaki deęişiklikler dıřında, ebeveyn ve ergenlere temelde aynı sorular yönlendirilmiştir.

Nicel çalışmada ise standardize edilmiş bazı ölçekler kullanılmıştır. Ölçekler aşağıda detaylandırılmaktadır.

Problemli İnternet Kullanım Ölçeęi – Ergen Formu

Ölçek orijinal olarak üniversite öğrencileri için Ceyhan ve ark. (2007) tarafından geliştirilmiştir. Daha sonra, ergen örneklemine uyarlama çalışması Ceyhan ve Ceyhan (2014) tarafından tamamlanmıştır. Ölçek toplamda 27 maddeden ve üç alt boyuttan oluşmaktadır. Bu alt boyutlar olumsuz sonuçlar, aşırı kullanım ve sosyal fayda alt boyutu olarak sıralanabilir. Ölçeęin alt boyutlarının iç tutarlılık katsayıları Ceyhan ve Ceyhan (2014) tarafından .77, .78 ve .93 olarak hesaplanmıştır. Mevcut çalışmada, iç tutarlılık katsayısı 74 ile .87 arasında deęişiklik göstermektedir.

Ergenlerde Öz-Denetim Becerileri Ölçeęi

Orijinal olarak Moilanen (2005) tarafından geliştirilen ölçeęin Türkçe geçerlik ve güvenilirlik çalışması Harma (2008) tarafından yapılmıştır. Ölçek öz-denetim başarısı (18 madde) ve öz-denetim başarısızlığı (14 madde) olmak üzere iki alt başlıktan ve toplam 32 maddeden oluşmaktadır. Bu çalışmada sadece öz denetim başarısı alt boyutu kullanılmıştır. Harma (2008) tarafından .85 olarak belirtilen iç tutarlılık katsayısı bu çalışmada .82 olarak hesaplanmıştır.

Yalnızlık Ölçeęi – Kısa Form

Orijinal ölçek Russel ve ark. (1978) tarafından geliştirilmiştir. Türkçe adaptasyonu Demir (1989) tarafından yapılmıştır ve iç tutarlılık katsayısı .94 olarak bulunmuştur. Orijinali 22 sorudan oluşan ve 4'lü Likert olarak tasarlanan yalnızlık Ölçeęi, daha sonra, Hays ve Dimatteo (1978) gözden geçirilmiş ve 8 maddelik kısa formu oluşturulmuştur. Bu kısa form Yıldız ve Duy (2014) tarafından Türkçeye çevrilmiştir

ve iç tutarlılık katsayısı .74 olarak hesaplanmıştır. Mevcut çalışmada ölçeğin iç tutarlılık katsayısı .83 olarak bulunmuştur.

Stresle Başa Çıkma Ölçeği

Stresle Başa Çıkma Ölçeği Amirkhan (1990) tarafından geliştirilmiş ve Aysan (1994) tarafından Türkçeye adapte edilmiştir. Ölçeğin problem odaklı başa çıkma, sosyal destek arama ve kaçınan başa çıkma olarak üç alt boyutu bulunmaktadır. Bu çalışmada sadece 11 maddeden oluşan kaçınan başa çıkma alt boyutu kullanılmıştır. Mevcut çalışmada alt boyuta ait iç tutarlılık katsayısı .71 olarak hesaplanmaktadır.

Algılanan Ebeveyn Stilleri Envanteri

Ölçek, Maccoby ve Martin'in (1983) sınıflandırmasına dayanarak Steinberg ve arkadaşları (1991) tarafından geliştirilmiştir. Sümer ve Güngör (1999) tarafından Türkçe geçerlik ve güvenilirlik çalışması yapılan ölçek, 22 madde ve 2 alt boyuttan oluşmaktadır. Bu alt boyutlar ılımlı/kabul edici ebeveynlik ve katı/kontrolcü ebeveynlik olarak isimlendirilmektedir. Katılımcıların, ölçeği hem anneleri hem de babaları için doldurmaları istenmiştir. İç tutarlılık katsayıları .91 ve .82 arasında değişmektedir.

Kişisel Bilgi Formu

Bu formda katılımcılardan yaş, cinsiyet, sınıf ve okul bilgileri gibi bazı kişisel bilgiler istenmiştir. Bunlara ek olarak ebeveynlerine dair bazı sorular (örn., evlilik durumu) da yer almaktadır. Son olarak ise katılımcılardan günde ortalama kaç saat internet kullandıkları ve sıklıkla hangi amaçla kullandıklarını da belirtmeleri istenmiştir.

Veri Toplama Süreci ve İşlem

Çalışmanın her iki aşaması için de ODTÜ İnsan Araştırmaları Etik Kurulu'ndan ayrı ayrı izin alınmıştır. Nitel çalışmanın verileri 2020 yılının Ekim ve Kasım aylarında toplanmıştır. Görüşmeler Zoom platformu üzerinden çevrimiçi olarak yapılmıştır. Görüşmeye katılabilecek adayları belirlemek adına telefon ile kısa bir ön görüşme

yapılmıştır. Genellikle önce ebeveyn, sonrasında ergen ile görüşme sağlanmıştır. Görüşmeler ortalama 1 saat kadar sürmüştür.

Nicel çalışmanın verileri ise Milli Eğitim Bakanlığı'ndan izin alınarak, 2021 yılının Eylül ve Ekim aylarında toplanmıştır. Etimesgut, Yenimahalle ve Çankaya olmak üzere Ankara'nın üç ilçesinden toplam 21 okul gezilerek sınıflarda yüz yüze uygulama yapılmıştır. Ölçeklerin tamamlanması ortalama yarım saat sürmüştür.

Veri Analizi

Nitel çalışmanın verilerinin analiz edilebilmesi için öncelikle tüm görüşmeler deşifre edilmiştir. Verilerin analizi için MAXQDA 2020 (VERBI Software, 2019) kullanılmıştır. İçerik analizi 3 ayrı kodlayıcı tarafından kontrol edilmiş ve %80 oranında fikir birliği sağlanmıştır.

Nicel çalışmanın veri girişi, veri temizliği ve ilk analizler SPSS v.28 (IBM Corp, 2021) kullanılarak yapılmıştır. Yapısal Eşitlik Model'inin test edilmesi için ise Mplus v.7 (Muthen ve Muthen, 2009) kullanılmıştır.

Çalışmanın Sınırlılıkları

Çalışmanın alanyazına yaptığı katkıların yanı sıra bazı sınırlılıkları da bulunmaktadır. İlk olarak çalışmanın veri toplama aşamaları COVID-19 pandemisinin sosyal hayata etkilerinin yoğun olarak yaşandığı 2020-2021 yıllarında gerçekleşmiştir. Bu nedenle nitel çalışmadaki görüşmeler çevrimiçi olarak bazı sınırlılıklarla yapılmıştır. Nicel çalışmada da yine, çoğu okulun araştırmacının binaya girmesine izin vermemesi gibi, veri toplama aşamasını zorlaştıran etkileri örneklem seçimini etkilemiştir. Bunun yanı sıra, nicel çalışmada öz-raporlama tekniğine dayanan ölçekler kullanılmıştır. Öz-raporlama tekniği, özellikle ergenlik döneminde, sosyal beğenirlik açısından bir yanlılık riski oluşturmaktadır.

BULGULAR

Nitel çalışmanın içerik analizi sonucunda 4 temel tema ortaya çıkmıştır. Bunlar, Problemin Tanımı, Ergenlerin Deneyimleri, Ebeveynlerin Deneyimleri ve Kolaylaştırıcılar ve Çözümler olarak sıralanabilir. Problemin Tanımı temasında Ebeveynlerin Tanımı ve Ergenlerin Tanımı olmak üzere 2 temel alt tema yer almaktadır. Bu temada ergen ve ebeveynlerinin sorunu nasıl algıladıkları anlaşılmaya çalışılmış ve genellikle verilen cevapların örtüştüğü görülmüştür. Her ne kadar, sosyal hayat, sorumlulukların yerine getirilmesi, öz bakımın aksaması, internetin yerine bir şey koyamama gibi ölçütlerde hemfikir olsalar da, ebeveynlerin ek olarak maruz kalınan içerik ile ilgili ek endişeleri gündeme gelmiştir. En temel ölçüt olan internette geçirilen zaman konusunda ise ergenler ve ebeveynler hem fikir gözükse de, vurgu farklılığı bulunmaktadır. Ebeveynler, internette çok zaman geçirmenin, kendiliğinden olumsuz sonuçlara yol açacağını düşündüğü için zaman limitinden bahsederken, ergenler, herhangi bir şeyi aşırı yapmanın sorun olacağı gibi, internette de aşırı vakit geçirmenin sorunlara yol açabileceğinden bahsetmektedir.

İkinci tema olan Ergenlerin Deneyimi, temasında ise, ergenlerin internette nasıl ve ne zaman daha sıklıkla zaman geçirdikleri, kendilerini internette zaman geçirirken nasıl hissettikleri, internet kullanımını dengelemek için neler denedikleri, internet konusunda aile ve arkadaşları ile ilişkisel dinamiklerine dair bulgular yer almaktadır. Bu temada, ergenlerin internette zaman geçirirken eğlence, heyecan, mutluluk ve gibi bazı beklendik duyguların yanı sıra, kızgınlık, aidiyet ve üstünlük gibi duygular da deneyimledikleri görülmektedir. Kullandıkları beceri ve stratejilere bakıldığında ise, ergenlerin çoğunluğunun ilgi çekici cismi (telefon vb.) kendilerinden uzağa koyma, odaklanma uygulamaları kullanma, plan yapma gibi öz-denetleme becerileri kullandığı görülürken, bazılarının ise herhangi bir dengeleme girişimi içerisinde olmadıkları görülmektedir. Ayrıca, katılımcılar, interneti sıklıkla olumsuz duygularla başa çıkma, rahatlama aracı olarak kullandıklarından bahsetmektedirler. Son olarak, ilişkisel dinamikler alt temasında genel aile ve arkadaşlık ilişkileri hakkında bilgiler edinilmiştir. Yine bu temada, İnternet ile ilgili ebeveynleriyle anlaşmazlık

yaşadıklarında genellikle anlaşma, protesto etme ve cevapsız kalma yöntemlerinden birini kullandıkları anlaşılmıştır.

Ebeveynlerin Deneyimi adlı üçüncü temada ise, ebeveynlerin endişeleri, kontrol stratejileri, zorlukları, tutumları ve konuya dair duyguları incelenmiştir. Bu temada işlenen konulara göre ebeveynler sıklıkla, akademik, sağlık ve sosyallik odaklı endişeler taşımaktadır. Bunun yanı sıra, internet ile birlikte aile ile geçirilen zamanın azalması, güvenlik tehlikeleri yaşama ve cinsel içerikli sitelere maruz kalma ihtimali üzerine endişe dile getirmektedir. Ebeveynler internet ile ilgili sorunlarla başa çıkmak için bazı kurallar belirleme, izleme ve sınırlandırma gibi stratejiler geliştirmiştir. Ebeveynlerin internete karşı tutumu genel olarak olumsuz olmakla birlikte, olumlu veya arada kalmış tutumda olan ebeveynler de bulunmaktadır. Bu endişe ve tutumlarla birlikte ebeveynler özellikle çocuklarına rehberlik etme, internet ile ilgili konularda iletişim kurma, ve bunu yaşa göre belirlenen sınırlara sadık kalarak yapma konusunda zorluk yaşadıklarını belirtmişlerdir. Çocuklarının internet kullanımı ile ilgili zorluklar, ebeveynlerde suçluluk, üzüntü, öfke, çaresizlik, dışarda kalmışlık gibi birçok farklı duyguya yol açmaktadır.

Son olarak sorunun kolaylaştırıcılar ve çözüm önerileri temasında ergen ve ebeveynlerin hem fikir olduğu iki alt tema bulunmaktadır. İlk olarak sorunun algılanan kaynağı alt temasında, ailenin tutumu, ilişkileri ve kişinin hissettiği yalnızlık derecesinin ön plana çıkan etkenler olarak bahsedilmiştir. Bunun yanı sıra, alternatif bulunamaması, pandemi, medya sektörünün amaçları da internet kullanımının olumsuz etkilerini artıran sebepler arasında gösterilmiştir. Son olarak nesil farkı, internet kullanımı ile ilgili bir soruna yol açmasa da, bu konu hakkında çatışma yaşanması ile doğrudan bağlantılı olarak gösterilmiştir. Olası çözüm önerileri alt temasında ise hem ebeveyn hem ergenler tarafından öz-denetimin ve içsel motivasyonun önemi vurgulanmıştır. Bunun yanı sıra katılımcılar, internetin bilinçli kullanımının desteklenmesi ve internet ile ilgili etkinliklere ailenin dahil edilmesi gibi önerilerde bulunmuştur.

Nitel çalışmada öne çıkan belli başlı değişkenler ile PDK'ye dayanan kuramsal model oluşturulmuştur. Bu modelin test edilmesi için Yapısal Eşitlik Modeli (YEM) kullanılmıştır. Öncesinde verilerin temizlenmesi aşamasında, kayıp veri analizi, aykırı veri analizi yapılmış ve YEM'in ön koşulu olan varsayımlar test edilmiştir. Veri setindeki aykırı değerlerin hesaplamasında Mahalanobis uzaklığı kullanılmıştır ve kritik değerin üzerinde kalan veriler veri setinden temizlenmiştir (Tabachnick ve Fidell, 2013). Kalan veri setindeki kayıp değerler incelendiğinde bu kayıp değerlerin oranlarının %5'i geçmediği ve rastgele olarak dağıldığı görülmesi nedeniyle beklenti-maksimizasyonu (EM) yöntemi ile kayıp veriler tamamlanmıştır (Tabachnick ve Fidell, 2013). Varsayım testlerinde ise çok değişkenli normallik varsayımı ihlal edildiği için, analizlerde yorumlamalar buna uygun şekilde yapılacaktır.

YEM analizi öncesinde, gözlenen ve gizil değişkenler arasındaki ilişkiyi tam olarak inceleyebilmek için ölçüm modeli test edilmiştir. Mevcut ölçüm modelinde bulunan uyum indekslerinin alanyazında kabul gören uyum indeks değer aralıklarına uygun olduğu görülmüştür ($\chi^2_{(440)} = 1362.14, p = .000$, SRMR = .04, RMSEA = .036, CFI = .96, TLI = .95). Yani, gizil değişkenlerin gözlenen değişkenler tarafından uygun bir şekilde ölçtüğü doğrulanmıştır. Ölçüm modelinin doğrulanmasından sonra ise yapısal model test edilmiştir. YEM bulgularına ilk olarak bakıldığında, önerilen modelin iyi uyum gösterdiği görülmektedir. Her ne kadar Ki Kare değeri anlamlı çıksa da ($\chi^2_{(462)} = 1708.754, p = .000$), diğer evrensel uyum indeksleri alanyazında önerilen ölçütlere uygun kriterlerde bulunmuştur (SRMR = .05, RMSEA = .041, CFI = .95, TLI = .94). Model, PİK'in olumsuz sonuçlar alt boyutundaki varyansın %89'unu, aşırı kullanım alt boyutu varyansının %64'ünü ve sosyal amaçlı kullanım alt boyutundaki varyansın %51'ini açıklayabilmektedir.

Değişkenler arasındaki doğrudan etkiler incelendiğinde sosyal sistemden PİK'e giden yollardan sadece anneden algılanan kabul edici ebeveynlik anlamlı ve orta düzey etkiye sahiptir ($\beta = .19, p = .01$). Bunun yanı sıra öz-denetim becerileri ($\beta = -.34, p = .00$) ve kaçından başa çıkma becerilerinin ($\beta = .46, p = .00$) PİK üzerindeki etkisi doğrudan ve orta düzeyde anlamlıdır. Yalnızlık ise, sosyal fayda alt boyutu ile

doğrudan ve orta düzey bir ilişki göstermektedir ($\beta = .36, p = .00$). Modeldeki dolaylı ilişkiler genellikle daha küçük etkiye sahiptir. Kabul edici anne ebeveynliği PİK ile yalnızlık üzerinden ($\beta = -.08, p = .00$), kontrolcü anne ebeveynlik tutumu başa çıkma üzerinden ($\beta = .16, p = .00$), kabul edici baba tutumu öz-denetim ($\beta = -.08, p = .00$) ve başa çıkma ($\beta = -.14, p = .00$) üzerinden dolaylı etki göstermektedir.



TARTIŞMA

Bu çalışmanın genel amacı, ergenlerde PİK'i ve ilgili davranışları PDK bakış açısından inceleyerek çok sistemli bir inceleme yapmaktır (Jessor, 2017). PDK'nın temeli davranış sistemi, demografik sistem, sosyal sistem, kişilik sistemi ve algılanan çevre sistemi'ne ve bu sistemlerin birbiriyle etkileşimine dayanmaktadır. Karma yöntem olarak tasarlanan mevcut çalışmada, öncelikle her bir sistem içindeki dinamikleri daha iyi değerlendirmek ve modele dahil edilecek kritik yordayıcıları belirlemek için bir keşifsel nitel çalışma planlanmıştır. Öznel deneyimleri daha iyi anlamak için hem ebeveynler hem de ergenlerle yarı yapılandırılmış derinlemesine görüşmeler yapılmıştır. Daha sonra, görüşmelerin analizlerine dayalı olarak, bir model önerilmiş ve test edilmiştir.

Ebeveynler ve ergenlerle yapılan yarı yapılandırılmış görüşmelerde, ergenlerin internet kullanım deneyimleri, ergenlerin çevrimiçi ortamda nasıl ve ne zaman vakit geçirdikleri, internetin yaşamın diğer alanlarını ve başka insanlarla ilişkilerini nasıl etkilediğine dair sorular yöneltmiştir. Ergenlerin kişilik özelliklerine, aile ve arkadaşlarla olan ilişkilerine, okul ve ev ortamına ilişkin kapsamlı bir bakış açısı edinilmeye çalışılmıştır. Ayrıca, velilerle yapılan görüşmelerde, ebeveynlerin çocuklarının PİK'i ile ilgili duyguları, sorunu kontrol etme ve başa çıkma stratejileri de ele alınmıştır. Görüşmeler sonucunda, nitel araştırmadan problemin tanımı, ergenlerin deneyimleri, ebeveynlerin deneyimleri ve çözüm önerileri olmak üzere dört üst tema ortaya çıkmıştır.

Ebeveynlerle yapılan görüşmelere dayanan bulgular, çevrimiçi olarak geçirilen sürenin, çocuklarının PİK'i tanımlamak için önemli gördüğü en popüler kriterlerinden biridir. Ebeveynler çoğunlukla internet kullanımının sağlıklı sınırlar içinde kalması için bir zaman sınırı olması gerektiğine inanmaktadır. Buna ek olarak, ergenler de internette çok fazla zaman geçirmenin sorunlu olduğunu iddia etseler de, onların bakış açısının farklı bir vurguya sahip olduğu görülmektedir. Ebeveynler, internet kullanımını olası zararları nedeniyle doğal olarak sınırlandırılması gereken bir şey

olarak kavramsallaştırmaktadır. Ebeveynlerden farklı olarak, ergenler, herhangi bir aşırı davranışın sorun yaratacağından, çevrimiçi olarak aşırı miktarda zaman harcamanın da sorunlu olacağını ve nihayetinde kişisel ve ilişkisel sorunlara yol açacağını savunmaktadır. Ekran başında geçirilen sürenin yanı sıra, PİK'i tanımlarken ebeveyn ve ergenler sıklıkla, akademik sorumlulukları aksatma, sosyal iletişimlerinde bozukluk, öz-bakımı aksatma, internet yerine başka bir şey koyamama gibi durumları da problem göstergesi olarak dile getirmektedirler. Ebeveynler tarafından dile getirilen önemli kriterler ise internette maruz kalınan içeriğin güveni ve yaşa uygunluğu ile, ergenin internete erişimi olmadığında gösterilen saldırgan davranışlar da bulunmaktadır.

Ergenlerin deneyimlerini inceleyen ikinci araştırma sorusunda ise ergenlerin sıklıkla eğlence, sosyalleşme (Akar, 2017, Akar 2015; Wang ve ark., 2012), bilgi edinme ve eğitim (Yolga Tahiroglu ve ark., 2008) ve zaman öldürme (Ling ve ark., 2011; Watson, 2005) amacıyla kullandıkları görülmüştür. İnterneti cazip kılan en önemli özellik ise kolay ve hızlı ulaşılabilirlik olarak tanımlanmıştır (Griffiths, 2005). Bunun yanı sıra ergenlerin internet üzerindeki deneyimlerine birçok farklı duygunun eşlik ettiği görülmüştür. Bunlara, aidiyet, benlik keşfi (Smith ve ark., 2021; Ozimek ve Förster, 2021) ve özerklik (Borca ve ark., 2015) gibi temel gelişimsel duygular da eşlik etmektedir.

İnternet kullanımı sıklıkla öz-denetim becerileri ve başa çıkma becerileri ile yakından ilişkili olarak tarif edilmiştir. Ergenlerin çoğunluğu interneti hoş olmayan duygu durumlarını değiştirmek, olumsuz duygu ve düşüncelerden uzaklaşmak ve stresi azaltmak amacıyla kullandıklarını belirtmişlerdir. Araştırmalar, duygu durumunu değiştirmek ve gerçeklerle yüzleşmekten kaçmak için internet kullanımından ciddi sorunlarla ilişkili olduğunu göstermektedir (King ve Delfabbro, 2018; Melodia ve ark., 2022; Tang ve ark., 2014). Bunun yanı sıra, interneti kullanmak konusunda kendilerini kontrol etmekte zorlandıklarından bahsederek, öz denetim becerilerinin önemini de vurgulamışlardır.

Çevresel faktörler incelendiğinde, ergenlerin çoğu hayatlarının bir döneminde kendilerini sosyal çevrelerinden fazlasıyla izole hissettikleri bir dönemi tetikleyici olarak tarif etmiştir. Dolayısıyla, geçmiş çalışmaların da gösterdiği gibi, yalnızlık duygusu PİK konusunda belirleyici olan önemli duygulardan biridir (Mohan, 2020; Musetti ve ark., 2020). Bunun yanı sıra, bulgular geçmiş araştırmalarla paralel olarak ebeveynleriyle olan destekleyici ilişkinin koruyucu (Moazedian ve ark., 2014)., kısıtlayıcı ilişkinin ise risk faktörü (Boniel-Nissim ve Sasson, 2018; Shek ve Yu, 2016) olarak yer aldığını göstermektedir. Ayrıca sonuçlar, anne ve babaların aile içlerinde farklı roller alabildiği ve dolayısıyla ebeveyn olarak birlikte incelenmek yerine anne ve baba olarak ayrı ayrı incelenmesinin önemini göstermektedir.

Üçüncü araştırma sorusu ebeveynlerin deneyimlerini incelemektedir. Öncelikle, ebeveynlerin her ne kadar kabullenmiş olanlar olsa da, internete karşı çoğunlukla arada kalmış veya olumsuz bir tutum içerisinde olduğu görülmektedir. Bu sınıflandırma, Zur ve Zur'un (2011) yapmış olduğu isteksiz sahipleniciler, hevesli sahipleniciler ve kaçınanlar kategorileri ile paralellik göstermektedir. Ebeveynlerin olumsuz tutumları, bazı endişeleri de beraberinde getirmektedir. Mevcut çalışmada ebeveynler sıklıkla çocuklarının akademik geleceği, sosyal ve fiziksel sağlığı ve güvenliği açısından endişe etmektedir. İnternetin, kas ve iskelet sisteminde bazı bozukluklar (Koca ve Berk, 2019) ve akademik zorluklar (Mo ve ark., 2020) ile ilişkili olduğu düşünülürse, bulguların beklendik endişeleri yansıttığı söylenebilir.

Bahsedilen olumsuz tutumlar ve endişeler doğrultusunda ebeveynler genellikle bazı kısıtlama yolları ve kontrol yöntemleri uygulamaya çalışmaktadırlar. Bunlar arasında bazı kurallar belirleme (örn., yemek masasında telefon yasağı), zaman sınırı belirleme veya internet kullanımını belirli günlerle kısıtlama gibi yöntemler uygulamaktadır. Bu yöntemler kısıtlayıcı denetim yöntemleri kategorisinde değerlendirilmekte olup, daha yapıcı olarak bilinen aktif denetim yöntemlerine göre daha olumsuz sonuçlarla ilişkilendirilmiştir (Nielsen ve ark., 2019).

Nitel çalışmanın son araştırma sorusunda ise, ebeveyn ve ergenlerin çözüm önerileri ve risk faktörü olarak neyi algıladıkları incelenmiştir. PİK'in esas sorunu olmasa da, nesil farkı sorunun yaşanış şeklini tetikleyen önemli etkenlerden biridir. Nesil farkından kaynaklanan teknoloji ve internete farklı bakış, ebeveyn ve ergenlerin bu konuda anlaşmazlık yaşamalarına neden olmaktadır (Kwon, 2011). Bu doğrultuda, nesil farkı tek başına bir sorun yaratmasa da, her iki taraf için de çözülmesi zor bir anlaşmazlık yaratmaktadır. Buna ek olarak, aile etkeni, yalnızlık, pandemi ve alternatiflerin eksikliği de sorunun olası kaynakları arasında gösterilmiştir. Daha detaylı olarak, katı ve özgürlüklerin kısıtlandığı bir aile ortamının PİK gelişimine katkı sağladığı bilinmektedir ve bu çalışmada da desteklenmektedir (Chung ve ark., 2019; Sun ve Wilkinson, 2020). Benzer şekilde yoğun şekilde hissedilen yalnızlık hissi önemli bir tetikleyici olarak ele alınmaktadır. Son olarak, hem ebeveyn, hem ergen için 'internet yerine nasıl vakit geçirebilirim' sorusunun yanıtsız kalması, önemli bir çıkmaz yaratmaktadır. Dolayısıyla, boş zamanlarını değerlendirecek etkinlikleri çeşitlendirmek, ilgi alanları yaratmak PİK'i önlemek için önem taşımaktadır (Hopper-Losenicky, 2010; Tomczyk ve Solecki, 2019).

Bütün bunların yanı sıra, sonuçlara göre hem ebeveynler hem de ergenler PİK ile önleyici olarak başa çıkmanın en önemli yolunun öz-denetim becerilerinin ve içsel motivasyonun sağlanması olduğu konusunda hemfikirdir. Ayrıca, önleyici müdahalelere mutlaka ailelerin de dahil edilmesinin gerekliliği vurgulanmaktadır (Cash ve ark. 2012; Greenfield, 2018).

Nitel çalışmayı takiben, çalışmada vurgulanan önemli değişkenleri dahil ederek PDK temelli model oluşturulmuş ve test edilmiştir. Bu modelde, sosyal sistem içerisinde algılanan ebeveynlik stili değişkeni hem anne hem baba için dahil edilmiştir. Kişilik sistemi içerisinde öz-denetim becerileri ve kaçınan başa çıkma, algılanan çevre sisteminde yalnızlık ve aileden algılanan destek ve son olarak davranış sisteminde de problemlerli internet kullanımı üç alt boyut ile tanımlanmıştır. Bu alt boyutlar aşırı kullanım, olumsuz sonuçlar ve sosyal fayda olarak sıralanmaktadır.

Model test edilmeden önce deęişkenler cinsiyete göre incelenmiştir. Geçmiş çalışmalar incelendiğinde çoğunluğun erkeklerin daha sıklıkla PİK sorunu yaşadıkları görülmektedir (Aydemir ve ark., 2021; Chi ve ark., 2020). Ancak bu çalışmada kadınların PİK puanları erkeklere göre daha yüksek çıkmaktadır. Cinsiyet, çalışmalarda sıklıkla test edilse de, bir risk faktörü olarak değerlendirilmektense, internet kullanım şeklini etkilediği bilinmektedir (Wang ve ark., 2012; Macharia ve Nyakwende, 2011). Ancak son zamanlarda internete erişimin artmasıyla birlikte cinsiyetler arası eşitsizlik de giderek azalmakta, ve cinsiyet farkı önemini yitirmektedir.

Sonuçlara göre, sosyal sistem içerisindeki deęişkenler arasından anneden algılanan kabul edici ebeveynlik tarzı, kişilik sisteminden öz-denetim becerileri ve kaçınan başa çıkma, çevre sisteminden ise yalnızlık deęişkenlerinin PİK ile direkt ve anlamlı bir ilişki gösterdiği görülmektedir. Beklenenin aksine, anneden algılanan kabul edici ebeveynlik tarzının PİK ile olumlu yönde bir ilişki içerisinde olduğu görülmüştür. Bu duruma kültürel bazı açıklamalar getirmek mümkündür. Batı kültüründe yapılan çalışmaların aksine, daha toplumcu değerlerin baskın olduğu kültürlerde ebeveyn-çocuk ilişkisi aşırı sevgi ve tolerans olarak göstermek olarak şekillenmiştir (Kağıtçıbaşı, 1996). Dolayısıyla, ebeveynin bu aşırı sevgi gösterimi, daha izin verici bir ebeveynlik tutumuna benzerlik göstermektedir (Özgür, 2016). Fazla izin verici ebeveynliğin ise artan PİK ile yakından ilişkili olduğu bilinmektedir (Boniel-Nissim ve Sasson, 2018). Dolayısıyla, beklenmedik yöndeki ilişkinin, Türk ailelerindeki ebeveyn-çocuk ilişkisinden kaynaklanıyor olabileceği düşünülmektedir. Bunun dışında öz-denetim becerileri (Reinecke ve ark., 2022), kaçınan başa çıkma (Moge ve Romano, 2020, Melodia ve ark., 2022) ve yalnızlığın (Prievara ve ark., 2019) PİK üzerindeki doğrudan yordayıcı etkisi alanyazın tarafından desteklenmektedir.

Sosyal sistem içerisindeki deęişkenlerin PİK ile dolaylı ilişki içerisinde oldukları da görülmektedir. Baba tarafından algılanan kabul edici ebeveynlik tarzı, öz-denetim, kaçınan başa çıkma ve yalnızlık üzerinden PİK'i yordamaktadır. Bir diğer deęişle bu deęişkenler Baba tarafından algılanan kabul edici ebeveynlik tarzı ve PİK arasında

aracı deęiřken rolü oynamaktadır. Ek olarak, anne tarafından algılanan kontrolcü ebeveynlik tarzı, kaçınan başa çıkma stratejileri üzerinden dolaylı olarak PİK'i yordamaktadır. Daha yoğun kontrol ve kuralcılıkla tanımlanan bu ebeveynlik tarzı, ergenlik dönemindeki bireylerin özerklik duygularını olumsuz etkilemekte ve daha sağlıklı baş etme mekanizmaları geliřtirmelerinde etkili olmaktadır (Gugliandolo ve ark., 2019; Sun ve Wilkinson, 2020). Bu sonuçlara göre, kabul edici ebeveynlik tarzı direkt ve dolaylı olarak PİK ile anlamlı bir iliřki içerisindedir. Özellikle baba tarafından algılanan kabul edici ebeveynlięin, bir çok farklı yoldan PİK'i olumlu yönde etkiledięi görölmektedir. Babanın, bireyin geliřimi üzerinde daha kuvvetli bir etkisi olduęu başka çalışmalar tarafından da desteklenmektedir (Lukacs, 2021)

Mevcut çalışmanın bulguları, okullarda ve alanda çalışan ruh saęlığı uzmanları için uygulamaya dair önemli bilgiler içermektedir. Öncelikle, PİK üzerine program geliřtirmeyi amaçlayan uzmanlar için nerelere odaklanılması gerektięini temelleri bir kurama dayanan bulgularla göstermiřtir. Sosyal, çevresel ve kiřilik sistemlerindeki risk faktörlerini azaltmayı veya koruyucu faktörleri artırmayı hedefleyen çok kapsamlı çalışmalar yapılabilir. Ayrıca, nitel çalışmada vurgulandıęı gibi, ebeveynlerin ve ergenlerin duygusal yařantıları keřfedilmesi, uzmanlar için bir çalışma alanı oluřturmaktadır. Ergenlik dönemindeki gençlerin hangi ihtiyaçlarının bu davranıřla iliřkili olduęunu görmek ve nelere tepkili olduklarını keřfetmek, onlar ile çalışmalar yapacak kiřiler için önemli bilgiler içermektedir. Örneęin, seminer veya psiko-eęitim çalışmaları yerine akran-destek sistemlerinin üzerine çalışmalar yapılabilir. Ebeveynler içinse, kendi duygusal yařantılarının internet ile ilgili sorunlara ve çocuklarına yaklařımlarını nasıl etkiledięini keřfetme süreçlerinde destek olunması açısından önem tařımaktadır.

Bu çalışma sıklıkla PİK ile ilgili süreçlere ailenin dahil olmasının önemini vurgulamaktadır. Daha da önemlisi, babanın rolüne de dikkat çekmektedir. Bu nedenle bu alanda çalışmalar yapan uzmanların ve okulların, ebeveynlerle ve özellikle babalarla iřbirlięi yapmaya aęırlık vermesinin önemli olduęunu göstermektedir. Bulgulara göre, ebeveynlerin dahil olması kadar bu konuda bilinçlenmesi de önem

taşımaktadır. Dolayısıyla kapsamlı ebeveyn programları da çalışmanın uygulama alanına dair önerileri arasında yer almaktadır.



APPENDIX T. CURRICULUM VITAE

PERSONAL INFORMATION

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Nationality:

Data and Place of Birth:

Marital Status:

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EDUCATION

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Bachelor of Arts (B.A.)	Yeditepe University	2013
High School	Ataşehir Mustafa Kemal Anadolu	2009

WORK EXPERIENCE

Year	Place	Enrollment
2017 - 2022	METU Disability Support Office	Research Assistant
2015 - 2016	Humanayz Ltd. Şti.	Research Assistant
2013 - 2014	Duyusal Akademi Child Development Center	Psychologist

PUBLICATIONS

Journal Articles

Ayas, S., & Hatipoğlu-Sümer, Z. (2021). Addiction prevention studies based on individual psychology (Adlerian approach): The significance of social interest practices in schools. *The Journal of School Counseling*, 4(2), 1 - 22.

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Koydemir, S. & **Mısır**, S. (2015). Self-construals and happiness: An experimental priming study. *Turkish Psychological Counseling and Guidance Journal*, 5(44), 49-60.

Book Chapter

Ayas, S. (2021). Cultural history of counseling with children and adolescents in Turkey and in the world. In B. Serim-Yıldız & B. Özgülük-Üçok (Eds.). *Psychological counseling techniques with children and adolescents*. Ankara, Turkey, Nobel Akademi Publishing.

Conference Papers

Capa-Aydın, Y., Erer, S., E., Uzuntiryaki-Kondakci, E, Vardal-Ocaklı, S., Gezer, E.T., **Mısır**, S. (September 2021). *University and department belonging of students in a newly established university: A case study*. European Conference on Educational Research - ECER 2021.

Mısır, S. & Demir, A. (July 2021). *Defining the 'problem': Parental concerns beyond screen time*. Cyberpsychology Virtual Conference.

Mısır, S. Çapa - Aydın, Y. (November, 2018). *Disinhibition effect in online communication: Findings of the pilot study*. 20th National Psychology Congress, Ankara, Turkey.

Mısır, S., Koydemir, S. & Durhan, S. (June, 2016). *Unraveling the relationship between religion and life satisfaction: A cross-cultural study*. 8th European Positive Psychology Congress, Angers, France.

Koydemir, S., & **Mısır**, S. (September, 2013). *Interpersonal self-construal and emotional expression promotes well-being*. 12th National Psychological Counseling Congress, Istanbul, Turkey.

Koydemir, S., Schütz, A., & **Mısır**, S. (July, 2013). *Happy and satisfied: Basic psychological needs, the Big Five and well-being*. 13th European Psychology Congress, Stockholm, Sweden.

Mısır, S., Mercan, M. N., & Koydemir, S. (June, 2018). *More tweets more wellbeing? A one week microblogging intervention study*. 9th European Positive Psychology Budapest, Hungary.

Mısır, S., Ceylan, M., Doğan, H., & Altan-Atalay, A. (April, 2014). *The distinctive role of intolerance of uncertainty and dysfunctional attitudes between depression and anxiety*. 18th National Psychology Congress, Bursa, Turkey.

APPENDIX U: THESIS PERMISSION FORM / TEZ İZİN FORMU

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- Sosyal Bilimler Enstitüsü** / Graduate School of Social Sciences ☒
- Uygulamalı Matematik Enstitüsü** / Graduate School of Applied Mathematics ☐
- Enformatik Enstitüsü** / Graduate School of Informatics ☐
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TEZİN ADI / TITLE OF THE THESIS (İngilizce / English): Examining Individual, Relational And Environmental Dynamics Of Adolescent Internet Use: A Mixed Methods Study

TEZİN TÜRÜ / DEGREE: Yüksek Lisans / Master ☐ Doktora / PhD ☒

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