

BEN- GURION UNIVERSITY OF THE NEGEV
FACULTY OF HUMANITIES AND SOCIAL SCIENCES
DEPARTMENT OF COMMUNICATION

**THE SOCIAL EFFECT OF CMC ON THE TRUE SELF OF
REJECTED & NEGLECTED ADOLESCENTS**

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF ARTS
(MA)

BY: TOMER HENDL

I.D: 29482734

UNDER THE SUPERVISION OF: YAEL KAYNAN, Ph.D.

AUGUST 2010

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Summary

Over the past decade, the number of individuals connected to the Internet has increased exponentially. The most common use of the Internet has shifted from serving as a source of information and knowledge, a function that attracts mostly individuals with a high cognitive need to learn and understand (Katz et al., 1992), towards serving as a prime venue for social interaction (Moore, 2000; Kraut, Mukopadhyay, Szczypula, Kiesler, & Scherlis, 1998).

Through a variety of means of computer mediated communication (CMC), such as e-mail, social networks, chat rooms, instant messaging, and other means, people are sharing aspects and details regarding their daily lives, keeping in touch with family and friends, exchanging thoughts, feelings and opinions with others and so on. In many ways, social interaction via CMC resembles the traditional interpersonal face-to-face communication. Thus, people are increasingly turning to the Internet to fulfill important social and psychological needs.

The Internet offers many social contexts for the individual connected to the Internet, and thus introduces many new possibilities for exerting a significant psychological effect on the individual. Social interactions on the Internet have been characterized as having specific qualities, different from those of traditional face-to-face interaction, such as greater anonymity. Increased anonymity is known to produce greater intimacy and closeness, which in turn increases self-disclosure (Laurenceau, Barrett, & Pietromonaco, 1998; Reis & Shaver, 1988), and produces a greater sense of safety and control over the interaction, because of the ability to terminate the interaction at any time. The Internet also facilitates social interaction: it is easy to use and provides easy-to-find and accessible meeting places for sharing specialized interests, interactions in which one can participate at any time of the day or night (Byrne, 1971).

Due to this particular combination of extraordinary characteristics of social interaction on the Web and the abundance of possibilities for social and interpersonal interactions, the Internet offers users unique ways to play with their identity, investigate their “real me,” and let their “real me” come forth (Turkle, 1995). This process of

individual experimentation with role-related behaviors and the discovery of the "true self" has been emphasized as highly important in shaping one's identity and mental health, regardless of the means of interaction (Hogg et al, 1995; Rogers, 1951).

The causes and the effects of individuals exposing their "real me" on the Internet have been examined from several different perspectives over the last two decades. Thus, for example, it has been suggested that CMC increases isolation, loneliness, weaker social relationships and depression (Kraut, Patterson, & Lundmark, 1998), while other studies have suggested the opposite effects, such as improved relationships (Lenhart, Rainie, & Lewis, 2001), and increased social inclusion, self esteem (Harter, 1999), psychological well-being and satisfaction with life (Bargh, McKenna, & Fitzsimons, 2002; Helliwell & Putnam, 2004; Bargh & McKenna, 2004; McKenna & Bargh, 2000).

To date, the majority of published studies focus on adults and not on adolescents. Research has shown that there is a big difference between the utilization of the Internet by adults and adolescence; Adults tend to adopt new technologies in a more detailed and comprehensive manner than do adolescents and then incorporate them into their social lives (Madden & Rainie, 2003). By contrast, for adolescents, it is critically important to belong and to gain acceptance in a group of peers, in order to consolidate their identity and place in the world. This period in their lives is typically characterized by uncertainty and insecurity. During this period, adolescents acquire crucial social abilities through their interactions with the people closest to them (i.e., parents and peers).

For adolescents who have been subjected to rejection or neglect, this aspect of psychological development is even more important, since they lack strong bonds with their school peers. During adolescence, it is critical to be surrounded by people who know, accept and validate the real self, yet neglected and rejected adolescents are typically barred from expressing important aspects of the self with peers and with others. This is of particular concern, since alienation and the inability to express and validate crucial aspects of the self can have negative effects on school performance and achievements as well as on a variety of broader areas later in life.

However, the ability to compensate for these missing aspects by using Internet-based interpersonal interactions to express important aspects of self, forge friendships and

strengthen peer relationships could have critical implications for the well being of these neglected and rejected adolescents. This study aims to provide valuable insight into the potential of online communication to ameliorate the daily life experiences of these children and their school performance and achievements.

In order to examine the research questions posed herein, I conducted a large scale survey of 155 students, boys and girls, ages 12 to 17 years old. The survey consisted of 56 questions relating to their Internet usage habits, and questions that are taken from existing psychological scales. According to the literature review, three predicting indices and four outcome indices were found.

The research assumptions are as follows: the more time that rejected and neglected adolescents spend using CMC, they more likely they are to express their real self with their peers from school. This, in turn, will increase their sense of group belonging, through their interactions online, and through their interactions online they will experience a greater sense of social inclusion, an increase in self esteem, a strengthening of existing peer relationships, and reduced loneliness.

Results show that adolescents who are lonely, socially anxious and rejection sensitive are more likely to express their real self on the Internet, and those who do so are more likely to feel a greater sense of group belonging and this in turn will lead to an increased sense of self esteem, a greater sense of social inclusion, stronger friendships, reduced feelings of loneliness and feeling less shy.

Interestingly enough, although there was a strong indication of group belonging functioning as a mediator to all of the predicted outcomes, in parallel there was also a very strong direct connection between the real self as a mediator to all of predicted outcomes with the exception of reduced sense of loneliness in a crowd.

This research is likely to be a point of departure for further research on the social aspects of CMC usage and on the importance of the concept of *the real self* among adolescents. In addition, this research can serve as a basis for longer-term studies, in order to analyze whether these findings here are specific to this day and culture or valid over time.

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It is with great pleasure that I hand in this study, since it is the end of a journey that began many years ago, bent on accomplishing the impossible. Having been born deaf, with ADHD and dyslexia, it became an obsession for me to learn and to be able to communicate.

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1. Introduction

This study focuses on the social aspects of Internet use, which highly characterizes the lives of adolescents in the 21 century. Combined with an examination of psychological measures, such as adolescents' levels of feeling lonely, feeling rejected and feeling socially anxious, I aim to determine whether CMC exerts a psychological effect on adolescents, especially neglected and rejected adolescents, and if so, what kind of effect?

First, I will start with the different aspect of self and the special importance that self has in adolescent's development. Second, I will examine the importance of role playing and experimenting with identity, and the significant function that self disclosure fills in this process. Then I will continue with adolescents' psychological development and focus specifically on neglected and rejected adolescents, characterizing their peer relations, group belonging, self esteem, loneliness, social anxiousness, and social rejection. Finally, I will explain the important possibilities that CMC holds for adolescents, especially the neglected and rejected adolescents, in the psychological process of growing up and discovering their "true self," a discovery which is highly important for one's future mental health and psychological well being.

The idea that people possess multiple senses of self is not a new one in psychology and sociology. Both Goffman (1959) and Jung (1953) distinguished between the public self and the individual's inner self. Sherry Turkle (1995) noted how the Internet, with its relative anonymity and multiple venues for social interaction, affords individuals a kind of virtual laboratory for exploring and experimenting with different versions of self. Turkle's view of the Internet in relation to the self is most similar to what Carl Rogers (1951) called the "true self." Carl Rogers viewed the "true self" as actually existing psychologically, but not fully expressed in social life. For Rogers, the "true self" is an outcome of a process aimed at its discovery.

Regarding the importance of the process of discovering the "true self" (Rogers, 1951) and the function of the Internet in providing a tool for self-exploration (Turkle,

1995), McKenna and colleagues' work has furthered our understanding, by identifying that adults who are lonely and socially anxious are able to better express their "true selves" on the Internet than in face-to-face interactions, and are thus more likely to form close relationships with people they met on the Internet (McKenna, Green, & Gleason, 2002).

Research, however, has shown that there is a big difference in the utilization of the Internet between adults and adolescents; adults tend to adopt new technologies in a more detailed and comprehensive manner than do adolescents and to then incorporate their use into their social lives (Brown, Mounts, Lamborn, & Steinberg, 1993; Madden & Rainie, 2003). For adolescents, by comparison, it is critically important to belong and to gain acceptance in a group of peers in order to consolidate their identity and place in the world. This period in their lives is typically characterized by uncertainty and insecurity. During this time, crucial social abilities are acquired through interactions with the people closest to them (e.g., parents and peers); yet for those adolescents who experience rejection at school and by peers, the acquisition of necessary social skills can be difficult at best and the failure to acquire them can have lifelong implications.

Indeed, research has found that rejected and neglected children more often than their more popular peers participate in destructive interpersonal relationships, get less support from their teachers, more often become objects of peer aggression, have higher levels of social stress, tend towards delinquent behavior, have academic problems and higher rates of school withdrawal, and experience stronger feelings of loneliness. Importantly, adolescents not only need to acquire social skills but also to receive validation and acceptance as the person they feel themselves to be, in order to avoid serious damage to their self-esteem (Harter, Waters, & Whitesell, 1997). This is of particular concern, since feelings of alienation and the inability to express and have validated crucial aspects of self often have a direct effect on adolescents' subsequent success in school and in a variety of broader areas of life later on.

Harter and colleagues found that adolescents who were unable to gain acceptance for their authentic self, or who felt compelled to present a false-self in order to be accepted, suffered low self-esteem and were significantly more at risk for depression, which, in turn, leads to thoughts of suicide.

However, should these neglected and rejected adolescents be able to compensate for their social constraints through the Internet, using it to express important aspects of self and to forge friendships and strengthen peer relationships on that basis, this experience and its implications would most likely have a positive and critical effect on their well being.

This study uses the former model of "Demarginalization," presented by McKenna & Bargh (1998), and the model "Real Me Online," presented by McKenna, Green & Gleason (2002). In this manner, the model used herein combines the essential aspect of each of the previous models, i.e., the ability to express the "real me" and the greater sense of group belonging, as mediators of positive outcomes.

I suggest that adolescents in general, and especially those adolescents who feel lonely, rejected and socially anxious, while communicating via CMC, will express their "real me" with their peers online, thus leading to a greater sense of belonging to the group and feeling more valued as they see themselves as accepted members of that group (Brewer, 1991; McKenna, 2002). These developments should lead to positive outcomes for the individual, such as a greater sense of inclusion, increased self confidence, strengthening of existing peer relationships and reduced loneliness and social anxiety.

No such research has been done to date on this issue, and thus this study should provide valuable insight into the potential of online communication to ameliorate the daily life experiences of these children in and consequently boost their chances of succeeding in school.

2. Theoretical Background

2.1. The Self; Different Aspects

The idea that people possess multiple senses of self is not new in psychology and sociology. This notion appears in the literature in different forms and different aspects; James (1910) distinguished between the "potential social me" and the "me of the past." Both Goffman (1959) and Jung (1953) distinguished between the public self and the individual's inner self. For Jung (1953), one's real individuality resided in the unconscious self (similar to Freud's "ego ideal," 1930) as opposed to the conscious ego.

2.1.1. True self, actual self and ideal self.

Carl Rogers (1951) claimed that self perception depends on the discrepancy between the "actual self" and the "ideal self." Carl Rogers viewed the "true self" as actually existing psychologically, but not fully expressed in social life. For Rogers, the "true self" is an outcome of a process towards its discovery. Higgins (1987) distinguished between ideal, ought, and actual self-concepts: the ideal self contains those qualities one strives someday to possess, the ought-self contains those qualities one feels obligated to possess, and the actual self contains those one actually expresses to others in the present.

Baumeister and Tice (1995) identified four selves; the public self, the self-concept, the actual self and the ideal self. The public self is how one is known to others and the three remaining selves are components of the private self. The self-concept is the version of ourselves that we tend to hold most often privately. It differs from the public self in that many things remain undisclosed or secret, it encompasses the way we see ourselves, which is often quite different from the way others see us. The actual self is the reality of the sense of behaviors and traits and is the individual core of personality. The ideal self is the goal state, the person we would like to be, and the person we tend to try to present ourselves as whenever possible. Tice et al. (1995) found that when strangers met for the first time they engaged in greater presentation of their ideal self qualities than was the case if someone known to the participants was also present during the interaction. They also found that in

situations where the information provided by a participant had little chance of being called into question by another, the tendency was to present an idealized version of self. When a friend was present during the interaction, the participants presented actual self qualities rather than ideal self qualities. The presence of a friend motivated the participants to behave more modestly and checked the tendency to present their qualities to the stranger with whom they were interacting.

2.1.2. Identity and possible selves.

Identity is multiple, that is, there are many faces and sides to an individual; Markus and Nurius (1986) referred to this as "possible selves." However, until recently, many of these faces were unable to be expressed or explored, because of social disapproval (Tesses & Moore, 1986). Erving Goffman, the father of impression management theory, believed that everyone uses tactics to present themselves in whatever light they think appropriate for the context, "an information game, a potentially infinite cycle of concealment, discovery, false revelation and rediscovery" (Goffman, 1959).

Further work shows that the way individuals perceive how they are seen by others greatly influences the way they think about themselves. Additionally, this perception has an effect upon an individual's actions (Higgins, 1997; Wicklund & Gollwitzer, 1982).

The question that emerges in light of these theories is: is there a single authentic self, which is the essence of the person, or is the self a collection of masks each tied to a particular set of social circumstances (Gergen, 1972)? Regardless of the answer to this question, we may assume that there is a link between these variations on the theme of self-concept and the individual's development in the future. Accordingly, the self is conceived of as an organizer of behavior, and while its components are not yet uniformly integrated, it changes, grows and evolves, due to the developmental process (Lindesmith & Strauss, 1956; Stryker, 1980; Markus & Nurius, 1986; McKenna, Green & Gleason, 2002).

Emde (1983) describes the existence of the inner self and defines it as the effective core of an individual. This part of the self may gain in complexity and in depth over time, and yet, regardless of the many life changes that may occur, it does not "go away." Reis and Shaver note that the "possible self" discussed by Markus and Nurius (1986) is not

incompatible with this core inner self. Markus and Nurius suggested that a person's self-knowledge includes not only who one is currently but also who one may become, would like to become and who one may be afraid of becoming; the hopes, fears, threats, and goals a person may have are considered components of this inner core. Higgins (1987) also argues for the inclusion of the ideal and ought self, among other kinds of possible selves. These possible selves are contained within, and are a part of the inner self (Reis & Shaver, 1988).

2.1.3. The Internet & the process of discovering the "true self."

The concept of the *inner self* is similar to Carl Rogers' notion of the "true self" (Rogers, 1951), which was informed by Jung's (1953) distinction between the unconscious self and its public mask, the persona. For Rogers, the "true self" was a therapeutic notion: much of what happens in therapy has to do with the client feeling that "he was not being his real self, often he did not know what his real self was, and felt satisfaction when he had become more truly himself" (p. 136). For Rogers, an important feature of the process of therapy was working towards discovery of the "true self," so that the client could express it more freely in personal interactions with others. Thus, Rogers' "true self" is conceptually distinct from the "ideal self" and the "possible selves," as well as from the "actual self," because Rogers (1951) viewed the "true self" of his clients as an existing psychological entity (a present --not a future-- version of self), which is, nevertheless, not fully expressed in social life (and thus distinct from the "actual self").

Sherry Turkle (1995) discussed the way in which individuals cycle through several identities in life. According to Turkle, the emergence of the Internet, with its relative anonymity and multiple venues for social interaction, affords individuals a kind of virtual laboratory for exploring and experimenting with different versions of self. Turkle's vision of the Internet regarding the self is similar to Carl Rogers' (1951) concept of the "true self." Given the significance of discovering the "true self" (according to Rogers, 1951), and the importance of the Internet (according to Turkle, 1995), in providing a unique tool for exploring and expressing the self, it may be expected that an individual would use the Internet to express those aspects of self that one most needs to express, namely, "the true self," i.e., those identity-important and phenomenally real aspects of self that are not often nor easily revealed to others.

2.2. Identity Theories & Self Disclosure: The Importance of Experimenting with Identities and Self Disclosure

Experimenting with identities constitutes an important part of lifespan development, and identity crises, particularly those experienced during youth, are valuable to the individual's personal growth. If we don't try things out we never know what fits best. Both identity theory (Stryker 1968, R. H. Turner 1978) and social identity theory (Hogg and Abrams 1988, Tajfel and Turner 1979, Turner 1982, 1985) provide a perspective regarding the social basis of the self and the nature of normative behavior. Both address the social aspects of the self as influenced by society and both see the self as existing independently of and prior to society (Hogg et al., 1995). As these theories suggest, people's perception of how they are seen by others influences the way they think about themselves; consequently, individuals are highly motivated to change their behavior in front of an audience in order to make a good impression (Snyder, 1979).

According to Stryker, identity theory sets out to explain the individual's role-related behaviors, (Stryker, 1968; Hogg et al, 1995) and, as such, it emphasizes the importance of the social roles that one plays and their contribution to the identity shaping process. Thus, who may by refraining from playing and participating in such roles, shy kids may grow up to have identity issues. While Stryker's identity theory is rooted in sociology, Tajfel's social identity theory is rooted in psychology, and emphasizes group process and intergroup relations.

2.2.1. Group belonging and peer relations.

Tajfel and Turner (1986) describe two main types of identity needs; the need of an individual to be a person seen to have unique qualities, and the need to be a person who belong(s) to a group, that is, accepted and liked by others. Therefore, individuals have, as part of their self-concepts, a group level identity. Brewer (1991) stresses the importance of group membership to one's sense of identity and self esteem. Brewer argued that an individual needs to feel connected to others, to experience a sense of group belonging, and to feel that one is a special and valued member of that group. In Tajfel's (1982) original model of social identity, the central motivational impetus for identifying with a social group was the gain in self-esteem (Deaux, 1996; Hogg & Abrams, 1990). A person continued to

be a group member as long as the group added positive features to the person's social identity.

Hogg and Abrams (1990, 1993) argued that self-esteem is not the only motivation possible for group identification: uncertainty reduction, power, self-efficacy, and greater self-knowledge are others. Other researchers have since pointed to still another motivational basis, a basic need to belong (Baumeister & Leary, 1995; Brewer, 1991). Social identity theory (Tajfel 1982) and contemporary studies on social movements use *identity* to refer to the identification with a social collectivity or social category, whereby a shared aspect of individuals' identities creates a common culture among participants. Finally, some use the term, as I do in the current study, to refer to the parts of the self that are composed of the meanings that the individual attaches to the multiple roles that one typically plays in highly differentiated contemporary societies (Stryker & Burke, 2000).

As noted, the healthy development of identity, according to Tajfel and Turner (1986), demands that two basic needs be met: the need to belong to a group, which relates to group level identity, and the need to be perceived as having unique qualities, which relates to personal level identity. Both aspects of identity are important to one's self esteem (Tajfel, 1982; Brewer, 1991; Deaux, 1996; Hogg & Abrams, 1990). Self disclosure plays an important role in ensuring that these needs are met.

2.2.2. Self disclosure (SD) and psychological well-being.

Self disclosure plays an important role in validating self worth and personal identity, depending on the reaction of the relationship partners. Self disclosure also has been viewed as central to the development of close relationships and a key factor in determining the quality and type of relationship that develops among individuals (Altman & Taylor, 1973; Reis & Shaver, 1988). The basic parameters of self-disclosure are (a) breadth or amount of information disclosed, (b) depth or intimacy of information disclosed, and (c) duration or time spent describing each item of information (Cozby, 1972).

The term "self-disclosure" has been used also by Jourard (1964), who suggested that accurate portrayal of the self to others is an identifying criterion of a healthy personality, while neurosis is related to the inability to know one's "real self" and to make it known to

others. Self-disclosure allows for one's feelings and thoughts to become more concrete, which ultimately results in greater self-knowledge (Jourard, 1959). Jourard's early work (1964, 1971) highlighted the importance of self disclosure for maintaining psychological well-being. Jourard also found (1959) a positive association between affection for another person and disclosure to that person. Since then, a number of studies have confirmed that we tend to like those who disclose personal information to us (Archer, Berg & Runge, 1980). However, Collins and Miller (1994) indicated little or no association between self disclosure (SD) and liking. A meta-analytic review found that we do like others who disclose to us, and we do like people as a result of our disclosing to them. Alan Chaikin and Valerian Derlega focused many of their early studies on disclosure reciprocity and on the social norms influencing the appropriateness of self disclosure (Chaikin & Derlega, 1974, 1976). Chaikin & Derlega's studies have contributed to the notion that SD has consequences for the development and maintenance of close relationships, the development of intimacy in a relationship, the development of self worth and for mental health (Derlega).

2.2.3. CMC as an important tool enabling self disclosure.

When considering the implications of Internet usage, important notions were added. Both experimental and anecdotal evidence suggests that CMC and general Internet-based behavior can be characterized as containing high levels of self-disclosure. Joinson found that self-disclosure is higher in CMC than in face to face encounters, and that both visual anonymity and heightened private or reduced public self-awareness may be involved in instigating increased self-disclosure (Joinson, 2001). McKenna and Bargh (1998) argue that participation in online newsgroups gives people the benefit of "disclosing a long secret part of one's self" (p. 682). McKenna and Bargh also found that online self-disclosure had powerful repercussions for real life. Joseph Walther's work suggests the positive impact of CMC on relational communication, and his work mainly focuses on group interactions.

As Turkle (1995) compellingly argued, CMC also allows for the exploration of identity aspects that were previously closed to the individual, thus leading to a more multifaceted and richer self-concept. As explained in her analysis, the Internet allows individuals to be removed from the public consequences of their statements, opinions and

behavior while to trying out different personae and experiencing how others react to such personae in real life.

2.3. Adolescents Psychological Development

Most of the knowledge mentioned until this point was pertinent to adults. There is still much to learn about the concept and the development of self, and even more so in the context of adolescents, about which even less is known. The road to becoming an adult passes through several stages. For most people, there are four or five stages of personal growth and learning: infancy (birth to age two), early childhood (ages 3 to 8 years), later childhood (ages 9 to 12) and adolescence (ages 13 to 18). As adolescents develop, they better understand how others view their skills and can better distinguish between their efforts and abilities. As a result, their self-perceptions become increasingly accurate (Harter, 1999). James (1893) work assumed that self-esteem reflected competence in areas where success was deemed important. For Cooley (1902) self-esteem was the incorporation of the attitudes that significant others held toward the self.

2.3.1. False self verses "true self."

Harter's research in this area of socio-emotional development described self-esteem as a direct function of competence in domains of importance as well as the approval of significant others. According to Harter, "multiple selves" are created as individuals move into adolescence. During adolescence, there are an increasing number of roles in a social context, among them the individual's relationships with parents, siblings, teachers, peers, close friends, romantic interests, etc. Adolescents construct multiple selves for these roles and relationships (Harter, Bresnick, Bouchey, and Whitesell, 1997). Seemingly, contradictory attributes can and do cause perceived conflicts within the adolescent's self-portrait. The presence of opposing attributes also ushers in concern over which attributes reflect the "true self" versus "false self" behavior. Adolescents have been found to define "true self" behavior as "saying what you really think," and "expressing your opinion." False self-behavior is defined as "being phony," or "not stating your true opinion."

Studies show that the highest levels of false self-behavior are exhibited with one's father, and for females, with boys their age in social situations. Lower levels of false self-behavior are displayed with classmates, teachers, and one's mother. The lowest levels

of false self-behavior are exhibited with close friends. False behavior breeds low-self esteem (Harter, Bresnick, Bouchey, and Whitesell, 1997). According to Dr. Harter, false self-behavior is predicted by low levels of perceived support, conditional support, and hopelessness about obtaining support from peers and parents. Consequently, when adolescents exhibit false self-behavior they compromise their "true self," in an effort to obtain the desired support that has not been forthcoming. A primary manifestation of false self-behavior involves not saying what you think. Dr. Harter's research found that both male and female adolescents who lack voice also report low levels of support for voice.

2.3.2. Loneliness and rejection.

Loneliness first emerges as an intense, recognizable phenomenon during the period of adolescence (Brennan, 1982). It can be empirically identified, using sociometric instruments which are usually administered in a school environment (Larson, 1999), since in this context it is easier to both conduct the assessment and compare findings. The majority of research in this field of loneliness in adolescence has focused on aspects of peer relationships, examining the factors that lead to loneliness. One of the main aspects of adolescent loneliness relates to whether one is accepted by one's peers or sensitive to their rejection (Asher and Gazelle, 1999; Asher and Paquette, 2003; Pedersen, Vitaro, Barker and Borge, 2007). The self reports of adolescents who were mostly not accepted by their peers indicate that they experienced higher levels of loneliness and felt more rejected and neglected over time than did their socially accepted peers (Boivin, Hymel and Buqowski, 1995).

Experiencing rejection increases the probability that one is the recipient of negative behaviors from others, including peers (Coie and Dodge, 1982). Regarding the connection to friendship formation and the quality of relationships with friends, those who report having no friends are more likely to experience loneliness than those with friends (Parker and Asher, 1993).

An important parameter regarding loneliness and friendship formation is whether adolescents' friendly relationships are mutually valued, meaningful and lasting. Consequently, loneliness may result when one experiences low quality friendships, which may be characterized by limited companionship and lack of emotional support, affection

and loyalty (Asher and Gazelle, 1999). However, the factor of the quality of friendships contributes to loneliness independently: research indicates that poorly accepted children may still have friends, while well accepted children nonetheless lack friends. In addition, adolescents who are accepted by their peers and have friends and strong peer relationships are protected from victimization.

The adolescents who lack peer acceptance and friendships are more vulnerable in general and therefore more vulnerable to peer victimization, which leads to feelings of distrust, insecurity or lack of safety. Furthermore, mistrust and fearfulness of peers may cause neglected and rejected adolescents to further isolate themselves, and thus increase their feelings of alienation (Burgess, Ladd, Kochenderfer, Lambert and Birch, 1999). Indeed, the victimized and lonely adolescents have been defined as more disconnected, and consequently more anxious, insecure and unappreciative of school than their non-victimized peers (Kochenderfer and Ladd, 1996).

2.3.3. Social anxiety.

Loneliness can be associated with social anxiety (Rao et al., 2007), and social anxiety is also known as social phobia, a disorder caricaturized by strong feelings of humiliation, embarrassment, and the perception that one may be negatively evaluated by others in social situations (American Psychiatric Association, 1994). These emotions suggest that a socially anxious individual is typically afraid of failure, particularly when exposed to unfamiliar people, and therefore fears also exposure and self disclosure in general (Velting and Albano, 2001). This expectation of a negative evaluation has been associated with low self esteem and the lack of peer acceptance (LaGreca and Stone, 1993) as well as with more frequent negative peer interactions, which in turn results in increased deficits in assertiveness and responsibility (Ginsburg, LaGreca and Silverman, 1998).

Adolescents who are socially anxious are also typically afraid of informal social interactions, which usually take place via face to face communication, such as attending parties, after school activities, etc. (Hofman Et Al, 1999). Fear may also invoke avoidance of social situations in which the adolescent has to speak to an authority figure or to perform in front of an audience, initiate or join a conversation and sometimes it even extends to communication through writing, or to eating in the presence of others (Velting and Albano,

2001). The description and findings regarding loneliness also pertain to social anxiety (as mentioned, they are interconnected). Adolescents who are socially anxious experience high levels of depression and loneliness, require more frequent interventions, exhibit patterns of social avoidance, all of which intensify the deficits in social skills and, as described in regard to social loneliness, in severe cases social anxiety may result in suicide (Francis, Last and Strauss, 1992).

It is important to note that the phenomenon of social phobia in adolescence is described as connected to environmental influences such as the behavior of parents, or family members at home (Spence Et Al., 2000: Velting and Albano, 2001). It has been found that parents of adolescents who are socially anxious are also likely to meet the criteria for anxiety disorders or social anxiety themselves (Last, Hersen, Kazdin, Francis and Grubb, 1987). Albano (2001) found in these cases that socially anxious parents usually behave in over controlling and over protective manners towards their children, and as a result, they are most likely to demoralize children with the regards to the acquisition of social skills and actually discourage their children from engaging in social interactions (Dadds, Barrett, 1996). This emphasizes the importance of CMC for adolescents with their peers, as a means to socially interact with others outside the family and to possibly weaken the socially anxious parents' influence.

Social anxiety is regarded as a long-term problem, rather than a temporary condition (Spence at al., 2000), a state that is exacerbated by the fact that socially anxious adolescents in general do not seek help for their problems. Socially anxious adolescents and individuals in general are so fixed on what others might think of them that usually they tend to make themselves invisible, not wanting to stand out or to be different, in case someone might notice them (Kashdan and Herbert, 2001). This, in turn, can further intensify their social anxiousness (Kashdan and Herbert, 2001); consequently, it is presumed that social anxiety interferes in the normal process of peer socialization and in the process of socially experimenting with role behaviors, thus detracting from the process of acquiring social skills (Inderbitzen, Walters and Bukowski (1997). Above all, this leads to long-term problems with education, social relationships and employment, damaging the adolescent's future ability to function independently as a mature adult (Velting and Albano, 2001).

2.3.4. Adolescents and self-esteem: The importance of peer relations.

Self-esteem is a subjective state. Self-esteem refers to how much a person likes (esteems) herself or himself. Adolescents have varying levels of self-esteem, which appears to be influenced by such factors as gender, ethnicity, and social class. Self-esteem can also vary within an individual, as an adolescent may have different levels of self-esteem in different domains such as social, scholastics, athletics, appearance, family and general conduct and actions. Since self-esteem is described as the adolescent's overall evaluation of herself or himself, including feelings of general happiness and satisfaction (Harter, 1999), the significance of self-esteem to adolescents is often overly emphasized, so that low self-esteem is viewed as the cause of all evil and high self-esteem as the cause of all good (Manning, Bear, & Minke, 2006). For adolescents, the differences between self and others become salient. Information from social comparisons has great importance on adolescents' efforts to evaluate themselves (Harter, 1983).

Increased freedom allows adolescents greater opportunities to participate in activities in which they are competent, and thus increases their perspective-using abilities, which in turn enables them to garner more support from others by behaving in more socially acceptable ways (Harter, 1999). Support from parents and peers is particularly important to a student's self-esteem. The influence of peers increases over the course of one's development, but the influence of parents does not decline. Students do not have to experience success in every domain to develop adequate or high self-esteem (Harter, 1999). They simply must experience success in a few domains that they value. Teachers also can promote self-esteem, by fostering supportive relationships among their students. Students' perceptions of their classroom as a caring community is positively related to their academic, social, and global self-concepts (Battistich, Solomon, Kim, Watson, & Schaps, 1995).

The relationship between sense of community and academic self-esteem is particularly pronounced in high-poverty schools (Battistich, Solomon, Kim, Watson, & Schaps, 1995). School wide interventions that develop students' sense of belonging, eliminate bullying, and promote prosocial values and self-discipline can be effective. Many studies have demonstrated that during middle and late adolescence, and into early

adulthood, self-esteem stabilizes or even increases (Savin-Williams & Demo, 1983; Harter, 1990).

2.3.4.1. Negative outcomes of low self-esteem.

Studies have found that one-third to one-half of adolescents struggle with low self-esteem, especially in early adolescence (Harter, 1990; Hirsch & DuBois, 1991). The safest generalization to make regarding adolescents and self-esteem is that some --but not all-- adolescents experience low self-esteem, and that for some --but not all-- who experience it, low self-esteem is associated with serious problems. Rejection among peers, or a lack of strong friendship connection with peers, are among the most significant predictors of an individual adolescent's potential to develop low self esteem (Boivin, Poulin and Vitaro, 1994; Hartup, 1996; Rubin, Bukowski and Parker, 1998).

It is already known that rejection and the lack of strong friendships with peers are strong predictors of later emotional and psychological problems of different kinds, such as depression, anxiety, shyness and low self esteem (Boivin, Poulin and Vitaro, 1994; Crick and Ladd, 1993). Furthermore, additional research shows that lack of peer friendships is associated also with a range of problems such as forging relationships, low peer social status, and even language impairments and low school achievements (Asher and Gazelle, 1999). Likewise, loneliness is associated with other mental health related issues, such as dropping out of school, alcoholism, drug use, aggression, and in severe cases even suicide (Goossens and Marcoen, 1999).

The results of low self-esteem can be temporary, but in serious cases they can lead to depression, anorexia nervosa, delinquency, self-inflicted injuries and even suicide. (Harter, 1998). Low self-esteem is often considered a defining characteristic of depression, but the evidence supporting this claim is weak. Similarly, although some evidence suggests that low self-esteem may be a weak risk factor for smoking among girls, the relationship between self-esteem and the use of alcohol and illegal drugs has found little support (Baumeister et al., 2003). Self-esteem is related to school performance and delinquency. Adolescents with low self-esteem are more likely to do poorly in school (Baumeister et al., 2003), to become pregnant, or to impregnate a partner. Another popular assumption is that aggressive students have low self-esteem and use aggression as a means of raising self-

esteem. Substantial research contradicts this assumption, showing that many aggressive students express adequate, if not inflated, self-esteem (Baumeister et al., 2003).

Nevertheless, it is important to keep in mind that the causal direction is unclear; that is, researchers are not sure if having low self-esteem causes youth to engage in problem behaviors or the other way around. Gang members, for example, report higher than average self-esteem. Adolescents feel better about themselves if they experience success in domains they care about and are praised by people they respect. Relationships with parents and relationships with peers are two important sources of social support that contribute to adolescents' self-esteem (Harter, 1990; Savin-Williams & Demo, 1983).

2.4. Adolescents' Internet Use and Its Effect on Their Mental Health

Extraverted adolescents' online self-disclosure practice suggests that they communicate online more frequently, which in turn, facilitates the formation of online friendships, while introverted adolescents' online communication compensates for the lack of social skills. Among introverted adolescents, a stronger motive for social compensation also led to more frequent online communication and online self-disclosure, resulting in more online friendships (Peter, Valkenburg, & Schouten, 2005).

Adolescents do not necessarily feel that using the CMC in order to communicate with their peers takes time away from their friendships. According to several studies, most adolescents feel that the use of CMC improves their relationships with friends, and even some of them use the Internet to make new friends (Lenhart, Rainie, & Lewis, 2001). On the one hand, this supports the optimistic view that online communication promotes social support and expands social interaction (Cole & Robinson, 2002; Katz & Rice, 2002; Kavanaugh, et al., 2005; Kestnbaum, Robinson, Neustadt, & Alvarez, 2002) rather than isolation and depression (Kraut, Patterson, & Lundmark, 1998; Nie, Hillygus, & Erbring, 2002). On the other hand, it may also support the argument that adolescents are substituting poorer quality social relationships for better ones (Kraut, Patterson, & Lundmark, 1998).

While most interpersonal communications skills are acquired through face to face communication, this research focuses on CMC. An adolescent communicates with peers online using two distinct modes: one-to-one and one-to-many. These modes are associated

with two different types of relationships: forming and maintaining individual friendships and belonging to peer groups. It is important to analytically distinguish between these two types of connectedness: first, because they fulfill different functions in an adolescent's development; and second, because each is supported by a different type of communication technology. Person-to-person communication with another peer provides vital information for the adolescent to compare to similar others and to receive verification for his or her own feelings, thoughts and actions, and is crucial to self identity formation. In one-to-many communication, an adolescent's connectedness to a group creates a feeling of group belonging, which is crucial to one's social identity formation (Bonka, Boneva, Quinn, Kraut, Kiesler & Shklovski, 2005).

Researchers have found that various forms of social support, including ties with friends and neighbors, are related to indices of psychological well-being, such as self-esteem and satisfaction with life (Bargh, McKenna, & Fitzsimons, 2002; Helliwell & Putnam, 2004; Bargh & McKenna, 2004; McKenna & Bargh, 2000; Shaw & Gant, 2002).

Bargh and McKenna (2004) attribute a beneficial effect also to the increase in online interactions, which compensate for any potential communication loss in which might be attributable to the online activity. Shaw and Gant (2002) found decreases in perceived loneliness and depression, as well as increases in perceived social support and self-esteem following engagement in online chat sessions.

In related research, Valkenburg and Peter (2007) found that socially anxious adolescents perceived the Internet to be more valuable for intimate self-disclosure than did non-socially anxious respondents, leading to more online communication. Valkenburg also found that the more people used social network sites, the greater the frequency of interaction with friends, which had a positive effect on respondents' self-esteem and ultimately on their reported satisfaction with life (Valkenburg, Peter, & Schouten, 2006).

Emerging adults are using Facebook to maintain large, diffuse networks of friends, with a positive impact on their accumulation of bridging social support. Although it is tempting to consider these large networks of acquaintances as shallow, in reality these connections have true potential for generating benefits for Facebook users. Moreover, online social network services appear to offer important connections, especially for those

who otherwise face difficulties in forming and maintaining the large and heterogeneous networks of contacts that are sources of social capital (Steinfeld, Ellison, & Lampe, 2008).

In conclusion

The interaction of adolescents with peers is important for the development of identity, adolescents' self perception and the process of discovering the "true self" as described by Rogers (Kagan, 1998).

Adolescents at this stage of development are supposed to learn to cooperate and communicate with peers, to build and maintain relationships, and to express intimacy and belonging (Crosnoe, 2000). As mentioned previously, early adolescence in particular is a time for experimenting with one's role taking abilities, a period of self consciousness and exploration of one's social values and self presentation (Parkhurst and Hopneyer, 1999). As a result of these changes, the early adolescence interpersonal self is typically disrupted, until a point at which the self regains its status, accompanied by the stabilization of the adolescent relationships (Goossens and Marcoen, 1999).

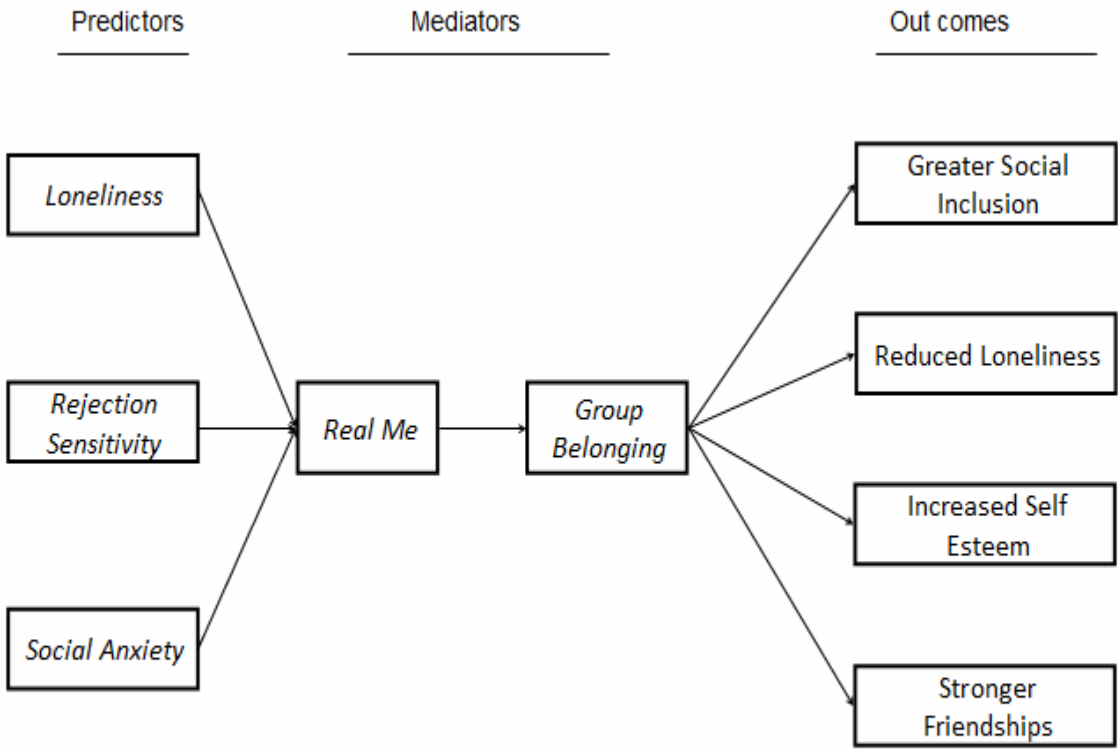
As parents are a key agent of socialization (Shaffer, 2002), it is important for them to teach their children (Adolescence) to be able to resolve problems that appear naturally in peer interactions, at this stage of development. Otherwise the adolescence might develop feelings of loneliness (Hay, Payne, Chadwick, 2004). Therefore, loneliness is a predictor in this model, together with rejection sensitivity and social anxiety.

This process, which happens at the development stage of adolescence, is of vital importance for the adolescent individual's cognitive emotional and social development and health (Newcomb and Bagwell, 1995). Compared to young individuals without strong peer friendships, individuals who have friends are more likely to have increased confidence, to be less aggressive, to be more engaged and connected to their peers at school (Hartup and Stevens, 1997). Moreover, above and beyond all of these benefits, adolescents who have successfully complete this stage of development report higher self esteem and higher levels of wellbeing (Bearman and Moody, 2004).

3. Methodology

3.1. The Study Model

The presented research model is based on the model "Demarginalization" presented by McKenna & Bargh (1998) and the model "Real Me Online" presented by McKenna, Green & Gleason (2002).



*p<.05, **p<.01, ***p<.001

Figure 1 – The Study Model

I suggest in my model, as described in Figure 1, that adolescents in general, and especially those adolescents who feel lonely, rejected and socially anxious, who communicate via CMC, will better express their "real me" with their peers online. Thus, they will feel a greater sense of belonging to the group and feel more valued as members in that group, because they were accepted (Brewer, 1991; McKenna, 2002). That should lead to positive outcomes for the individual, such as a greater sense of social inclusion, increased self confidence, strengthening of existing peer relationships, reduced loneliness and social anxiety. The difference between the original models and the presented model is that the current research focuses on adolescents instead of adults (since it is the case with adults, it should be equally important for adolescents), and additionally, the current model includes a second mediator, "group belonging," in addition to the adjusted mediator "Real Me Online," which is presented via CMC.

3.1.1. Data collection method.

To obtain a large number of surveys, there was a need to approach potential participants from within an educational framework in which adolescents met, in locations such as schools, youth movements or youth clubs (such as in kibbutzim). Due to the participants' ages, formal approval was needed from their parents and from other formal educators responsible for the adolescents on a daily basis, depending on the relevant organization.

After locating the relevant frameworks that made it possible to reach a large number of participants and after receiving the required approvals, the data gathering was carried out: the printed questionnaires were distributed personally by me at schools during school time and while a teacher was present, and at the kibbutzim during official activities of youth clubs and in the presence of a youth coordinator.

While the adolescents were all concentrated in one place I was introduced to them and then I started with a short explanation (provided in the text of the printed questionnaire). Next, the questionnaires were distributed to the adolescents and were filled by them while the teacher or the youth coordinator and I stayed nearby, in order to be able to answer questions and provide clarifications if needed, as well as to prevent participants

from engaging in a comparison with their friends' responses. Immediately upon completion, questionnaires were collected by me for the following stage of analysis.

3.1.2. The sampling size.

A total of 155 properly filled questionnaires were collected, of which 107 were from the school in Nazareth Illit, and the remaining 46 questionnaires were from schools belonging to Hof HaCarmel Regional Council and Menashe Regional Council.. Due to a previous research experience with adolescents, I took into account various possible problems such as refusal, technical and administrative problems and questionnaires that participants "tired of" completing. Indeed, out of 140 questionnaires distributed in Nazareth school, only 107 were properly filled, probably due to participants "fatigue."

Administrative problems arose in an additional school which was supposed to participate in this study ("Mekif Vav" School in Ashdod); The Psychological counselor of the school had been replaced, and unlike her predecessor, she did not approve of the distribution of the questionnaires, due to her concern that questions about loneliness and social anxiety could arouse issues among the participant adolescents that they had never felt or thought about previously.

3.2.Sampling Methodology

To examine the research questions (delineated in following section), a large scale survey was conducted, which included 155 male and female students, of ages 12 to 17 years old. The survey consisted of 56 questions relating to their Internet use habits, including questions that were taken from existing psychological scales. The participating adolescents were from the "Ort Moshe-Sharet" High School, located in Nazareth-Illit and from various Kibbutzim, Ma'agan Michael, Sdot Yam, Metzger, Ma'anit and Ein Shemer, which are affiliated with either Hof HaCarmel Regional Council or the Menashe Regional Council. Prior to conducting the study, I obtained approval from the schools involved, the school counselors and the parents of all potential participants.

To ensure that the survey included adolescents from various and different socio-economic backgrounds, the participating adolescents were chosen randomly; the participants from the high school "Ort Moshe Sharet" in Nazareth Illit were chosen

randomly from the total number of approximately 900 students. Likewise, the different Kibbutzim from Hof HaCarmel Regional Council and the Menashe Regional Council were chosen randomly from a list of the 46 communities within the regional councils' territory.

3.2.1. Research method.

The survey consisted of 56 questions (18 main questions which contain sub-questions, for a total of 56) relating to their Internet usage habits, and questions that were taken from existing psychological scales. In all the components of the model I used standard scales that have been reliably used in previous research, from which I composed indices and used them in the structural equation modeling analysis.

Five open-ended questions dealt with *habits* related to Computer Mediated Communication (CMC), e.g., "How many hours a day, on average, do you use the Internet (for example, Facebook, Messenger, Skype, ICQ, etc.) to communicate with your peers from school?". Four additional questions all started "Please mark the sentence that is most true for you," followed by "I use instant messaging software, for example Skype, Messenger, ICQ, etc., to communicate with peers from school," "I communicate with peers from school through the Internet," "I communicate with peers from school via email," "I communicate with peers from school via social networks such as Facebook, MySpace, etc." In these questions, I used a scale of 1 to 5 (1= do not agree at all, and 5= completely agree).

The last measure regarding loneliness, which is based on the UCLA scale as explained, was "As a result of communicating with people via CMC I feel alone even when I am with other people." Responses were provided on a scale of 1 to 5.

There were five questions for the mediator "*group belonging*," which were taken from McKenna and Bargh's model of "Demarginalization" (1998): "How important is it for you to be in touch with your friends from school?", "how important is what your friends from school think about your online behavior?", "How important is it that your friends from school don't ignore you online?", "how important is it for you if your peers from school exclude you from online conversation?" and "how many hours a day, on average, do you spend using the Internet (for example, Facebook, Messenger, Skype, ICQ, etc.) to

communicate with your peers from school ?". These questions were answered using a Likert-like scale from 1 to 7, except for the last one, which was an open-ended question.

For the "real me," I asked six questions taken from McKenna, Green & Gleason "real me" model (2002). The statements were "When you talk with your peers from school via CMC you tell them more about yourself than when you talk to them face to face," "there are things that peers from school with whom you communicate via CMC know about you that friends who do not communicate with you via CMC do not know?" (These two were yes/no questions), "while communicating with peers from school via CMC I tell them things that I wouldn't tell them face to face," "my friends were surprised by some of the things I told them about myself while communicating via CMC (for example, feelings, dreams, opinions, etc.)," "my peers from school understand me better and understand who am I as a person because of the things they learned about me while communicating with me via CMC" and "when using CMC, there are things I tell only strangers." The last four questions use a 7 point scale (Likert scale).

The UCLA loneliness scale is a self report scale designed to measure subjective feelings of loneliness or social isolation. This scale also indicates the intensity of an individual's perception of loneliness (Robinson, Shaver and Wrightsman, 1991). Participants indicate their responses to these questions on a four point scale: "how often do you feel lonely?", "how often do you feel you have no one close to you?", "how often do you feel left out?", "how often do you feel no one really knows you?". For the outcome of loneliness I used the same questions inverted according to McKenna, Green & Gleason (2002) adaptation of UCLA loneliness to online interactions.

Social anxiety questions included three questions from Leary's Interaction Anxiousness Scale (1983): "when I am with unfamiliar people I do not feel comfortable," "I would like to be more confident in social situations," "generally speaking I am a shy person," "I feel confident in the presence of people who are different from me. For the outcome of loneliness I used the same questions inverted according to McKenna, Green & Gleason (2002) adaptation of UCLA loneliness to online interactions.

Rejection sensitivity questions were taken from Rejection Sensitivity Questionnaire by Downey & Feldman (1996). I used five situations (the questions presented to the

participants as situations and for each situation two questions are asked); the first situation is "You ask someone in class if you can borrow his/her notes" followed by the questions: "How concerned or anxious would you be over whether or not the person would want to lend you his/her notes?" and "I would expect that the person would willingly give me his/her notes." The second situation is; "You ask someone who you don't know well out on a date" followed by the questions; "How concerned or anxious would you be over whether or not the person would want to go out with you?" and "I would expect that the person would want to go out with me". the third situation is " "After doing or saying something that seriously upset a close friend, you approach him/her to talk," followed by the questions: "How concerned or anxious would you be over whether or not your friend would want to talk to you?" and "I would expect that the person would want to talk with me to try to work things out." The fourth situation is "You ask a friend if you can borrow something of his/hers" followed by the questions; "How concerned or anxious would you be over whether or not your friend would want to lend it to you?" and "I would expect that he/she would willingly lend it to me." The last situation is "You ask a friend to do you a big favor" followed by the questions: "How concerned or anxious would you be over whether or not your friend would do this favor?" and "I would expect that he/she would willingly do me this favor." All of these questions were answered using a 6 point scale.

3.2.1. Procedure

As stated, following my previous experience with distributing questionnaires in schools and in educational frameworks, I am familiar with the various difficulties of distributing questionnaires to adolescents: obtaining parental consent, school counselors concern for children's wellbeing, lengthy bureaucratic procedures of approval, etc. Therefore, an effort was made to pre-approve the questionnaires and their distribution by appealing to the appropriate authorities in advance.

At schools, an appeal was made to the school principal and/or the vice principal who then provided guidance regarding the needed requirements. I issued a letter (see Appendix 1) explaining the essence of the study and the questionnaires, and included my personal contact details and the questionnaire, to enable early reading and clarifications in an attempt to facilitate approval.

The two regional councils provided data regarding the number of settlements, communities (total of 46) and residents there. Arab settlements were excluded from the study due to the cultural differences, and I randomly chose five of the remaining settlements. All five were Kibbutz communities. At each, I approached the Kibbutz secretary, who directed me to the educational coordinator and then to the youth coordinator of the relevant age group. In the Kibbutz framework, the age groups are divided in such way that there are two groups of adolescents: 7th to 9th graders, and 10th to 12th graders. The youth coordinators on Kibbutz conduct extensive activities with the children after school hours, and thus have strong and comprehensive relationships with the adolescents.

Once the relevant youth coordinators were located, I sent them an official request via email, detailing the request and essence of the research, so that they could convey the request to the educational counselors and to the psychologists who work with them (see Appendix 1).

Furthermore, after the professionals approved the procedure and the questionnaires, youth coordinators notified the parents of the intention to distribute questionnaires to the adolescents and included an option for parents to object to the participation of their children. No objections were received.

I coordinated with the youth instructor in deciding on a time and place when they would be gathered together for a planned activity. I arrived with the questionnaires, which were then distributed and filled out on the spot.

Filling out the questionnaires took an average of 20 minutes. At this point I added the variable of the framework, namely, Kibbutz or city, which was marked by coding the questionnaires. This added variable would enable me to analyze whether there any differences arose from the Kibbutz being a closed community.

3.3. Research Questions and Assumptions

3.3.1. Research question.

Does CMC among adolescents --and especially among neglected and rejected adolescents-- affect them socially and psychologically? If so, what is the nature of these effects?

3.3.2. Research assumptions.

1. Adolescents and especially neglected and rejected adolescents will be more likely to express their real self with their peers from school and increase their sense of group belonging through their online interactions.
2. Adolescents and especially neglected and rejected adolescents who express their real self with peers from school during CMC and who gain an increased sense of group belonging through their interactions online, will experience:
 - a. A greater sense of social inclusion,
 - b. An increase in self esteem,
 - c. Strengthening of existing peer relationships, and
 - d. Reduced loneliness

3.4. Problems Considered

I was concerned that habits of Internet use for social purposes would be lower among Kibbutz youth, due to the assumption that unlike urban adolescent communities, the adolescent community on kibbutz would be tight-knit, and that close relationships among adolescents who grew up together in a small community would preclude the need to use the Internet for social purposes. In order to monitor this assumption, the first question in the questionnaire examines the adolescents' social habits of Internet use, while the next four cross-referencing questions, are then used to filter out the non relevant respondents.

Social comparison – The questionnaire included questions from available and structured psychological scales about loneliness, social anxiety and social rejection. Some of the questions are direct and cannot be changed without affecting their reliability scores. It is plausible that while filling the questionnaires, the adolescents might consider

the “socially appropriate answer” and, wishing to conform to their peers, would provide unreliable answers.

The presence of the youth coordinator and of the researcher during the filling out of the questionnaires helped the adolescents focus on the task at hand, without mentally comparing themselves with their peers. Our presence and intervention, requesting in each pertinent case that they refrain from looking at their friends’ forms, (usually heard and internalized by all) sufficed to prevent this unwanted development.

Reading comprehension – due to the usage of available psychological scales, there was the limitation of adhering to the original phrasing, in order not to affect the scale’s reliability. The original phrasing uses high language and long sentences. The participants occasionally encountered reading comprehension difficulties, especially due to the fact they use slang extensively. Here, my presence helped, as I was able to “translate” problematic words, and provide explanations.

"Fatigue" - sometimes adolescents found it difficult to stay focused, and some of them tired of the task of completing an anonymous questionnaire. In these cases, the youth coordinator and I were present and able to serve as authority figures. Nonetheless, there were those who tired of the task to an extent that required the questionnaire to be disqualified.

4. Results

4.1. Patterns of online communication

Descriptive statistics were employed to examine patterns of online communication. There were 155 adolescents who participated in the study, whose ages ranged from 12 to 17 years old ($N=13.71$, $SD=1.33$). Participants were 43% males ($N=67$) and 56% females ($N=86$). Significant differences were found between male and females. Urban participants constituted 69% ($N=107$) and the remaining 31% were kibbutz adolescents ($N=48$). Here too significant differences were found. The average adolescent in this study spent 3.25 hours a day communicating with peers from school via CMC ($M=3.25$, $SD=2.64$). Twelve of the participants noted that they do not spend any time at all doing so (7.7% of the total questionnaires).

The other 143 adolescents composed the following relevant statistics: the minimal time spent on CMC was 15 minutes a day, while the maximum time reported was 10 hours a day. A total of 9 adolescents (5.8 %) reported that they spend 10 hours a day, while the most common answer was 1 hour a day ($N=40$, 25.8%), followed by 33 participants (21.3 %) reporting 2 hours a day, and 16 participants (10.3%) reporting 3 hours of online CMC a day. These 3 groups, of 1 hour a day, 2 hours a day, and 3 hours a day, compose a total of 57.4 %, which is the majority of this study's population.

Interestingly, urban kids spent significantly more time using CMC. They ($N=107$) spent an average of 3.5 hours a day communicating with school friends via CMC ($SD=1.2$), while Kibbutz adolescents ($N=48$) spent an average of 2.3 hours a day ($SD=0.9$). When looking at gender, males spent on average 2.89 hours a day communicating with friends from school via the Internet ($N=67$, $SD=1.23$) while females spent on average of 3.5 hours a day communicating socially via CMC ($N=86$, $SD=1.21$).

Table 1 - How many hours a day do you use CMC with school friends

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.25	1	1.2	1.2	1.2
	.50	3	3.5	3.7	4.9
	1.00	18	20.9	22.0	26.8
	2.00	18	20.9	22.0	48.8
	3.00	10	11.6	12.2	61.0
	4.00	4	4.7	4.9	65.9
	5.00	11	12.8	13.4	79.3
	6.00	6	7.0	7.3	86.6
	7.00	3	3.5	3.7	90.2
	8.00	2	2.3	2.4	92.7
	10.00	6	7.0	7.3	100.0
	Total	82	95.3	100.0	
Missing	.00	4	4.7		
Total		86	100.0		

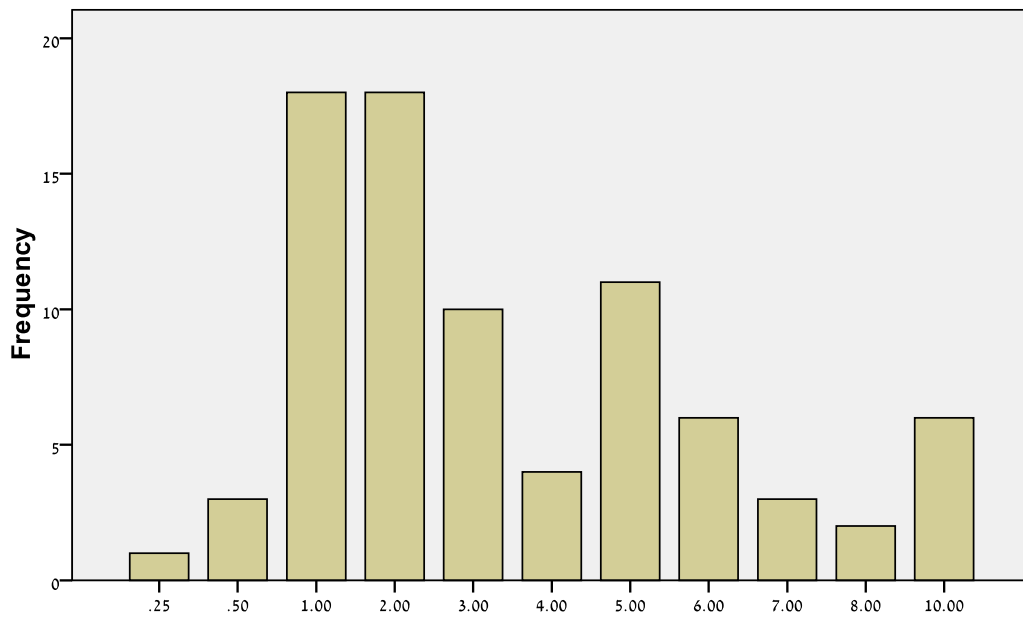


Figure 2 - How many hours a day do you use CMC with school friends

When you look at the importance the participants see regarding communicating with their peers via CMC, significant results appear; $N=153$, $M=4.53$, $SD=1.87$. 2 of the 155 participants feel lonely all the time (1.3%, $N=2$, $M=1.95$, $SD=0.73$) and 32 of the 155 participants feel lonely some times (20.6%, $N=32$, $M=1.95$, $SD=0.73$).

For 18.7% of the participants it is highly important to stay in touch via CMC with their peers ($N=29$, $M=4.72$, $SD=1.74$). For 15.7% of the participants it is highly important not to be ignored via CMC by their peers ($N=24$, $M=4.72$, $SD=1.74$). 32.5% of the participants feel alone when with other people ($N=50$, $M=3.44$, $SD=1.12$). While communicating via CMC with strangers, 12.5% of the participants "share things" they would not share with people they know ($N=19$, $M=3.46$, $SD=2.12$).

22.9% of the participants feel that sometimes they are not sure "who I really am" ($N=35$, $M=3.07$, $SD=0.88$). 19% of the participants feel they are not close to their family as they want it to be ($N=29$, $M=3.28$, $SD=0.92$). Only 3.3% of the participants feel describe themselves as extremely shy ($N=5$, $M=2.4$, $SD=1.118$).

While 4.1% of the participants believe that CMC makes people more lonely ($N=6$, $M=2.26$, $SD=0.602$), their reflection regarding their actual usage of CMC are; 10.3% feel closer to their friends ($N=15$, $M=2.77$, $SD=0.632$), 6.2% say that they have significantly more friends ($N=9$, $M=3.16$, $SD=0.708$), 19.4% say that they know more about their friends ($N=27$, $M=3.26$, $SD=0.997$), and 8.3% believe that they are invited by their friends much more ($N=12$, $M=3.27$, $SD=0.902$).

4.2. Structural Equation Modeling Analysis (SEM)

The survey data were analyzed using SPSS for descriptive statistics and subsidiary analysis. To test the hypothesized mediational model, I conducted a structural equation modeling analysis (with EQS version 6.1) of the relations between adolescents who are lonely, socially anxious and neglected & rejected, self disclosure of the "real me," sense of group belonging and the outcomes of greater social inclusion, reduced loneliness as a result of Internet use, increased self esteem and outcomes for friendships. The tested model and all correlations are shown in Figure 2.

It is important to note that the saturated model was estimated such that all possible paths were included (paths not shown were non-significant at $p > .05$) and the disturbances in the outcomes were free to co-vary. In other words, my estimation procedure permitted any direct effects of participation (i.e., those not mediated by the "real me" or group belonging) to emerge. Second, the "real me" and group belonging are included as index variables instead of as latent variables, because those items were related to the outcome variables in unique ways as well as through the variance the items share.

4.2.1. Indices creation.

The next step was to create indices for each and every part of the model. Each index was composed of the several questions taken from the standard scales, as described in the Measures section. I discuss the creation of each index below.

4.2.1.1. Habits of Internet usage index.

Five questions were asked regarding usage habits of Computer Mediated Communication (CMC). Medians mode, means and standard deviations were first examined to detect trends regarding amount of time spent communicating on the Internet for social purposes with peers from school ("How many hours a day, on average, do you use the Internet, for example, using Facebook, Messenger, Skype, ICQ, etc., to communicate with your peers from school?"). A correlation analysis was then run comparing this question and the additional 4 questions relating to Internet usage (e.g., "I use instant messaging software, for example, Skype, Messenger, ICQ, etc., to communicate with peers from school," "I communicate with peers from school via the Internet," "I

communicate with peers from school via e-mail," "I communicate with peers from school via social networks, for example Facebook, MySpace, etc."). These four items used a scale of 1 to 5 (1= does not characterize me at all, and 5= highly characterizes me). Of these four questions, the question regarding usage of e-mails, had a very low mean ($M=1.64$, $SD=0.94$) and correlated very little (average $r=0.15$) with the other items. Based on previous studies, we know that adolescents generally do not use e-mail to communicate with friends, so this result was not surprising. This question was thus excluded from the index. The other 3 questions highly correlated (all r 's $> .48$, Cronbach's Alpha= 0.805). The items that correlated sufficiently were first scale-standardized and then averaged to form the index.

4.2.1.2. Group belonging index.

Five questions were intended to measure group belonging ("how important is it for you to be in touch with your school friends?", "how important is what your school friends think about your online behavior?", "how important is it for you that your school friends do not ignore you online?", "how important is it for you that your school friends do not exclude you from online conversations?" and "how many hours a day, on average, do you use the Internet to communicate with your peers from school?"). These questions used a Likert scale of 1 to 7, except the last question which is an open-ended question. Based on the distribution of responses, I recoded the responses on this final variable to a 5-point scale (1 = up to half an hour; 2 = 1/2-1 hour, 3 = 1-2 hours, 4 = 3-5 hours, and 5 = 5- 10 hours a day). All questions were standardized, found to be significantly inter-correlated (all r 's > 0.39 , Cronbach's Alpha= 0.774), and were averaged to compile the group belonging index.

4.2.1.3. UCLA loneliness index.

The relevant questions were "how often do you feel lonely?", "how often do you feel you have no one close to you?", "how often do you feel left out?", "how often do you feel no one really knows you?". The loneliness questions correlated highly. $r>0.46$, Cronbach's Alpha = 0.82, and thus were averaged to form the Loneliness Index.

4.2.1.4. Social anxiety index.

The social anxiety index included three questions from Leary's (1989) social anxiety scale. These questions correlated significantly (all r 's > 0.38, Cronbach's Alpha = 0.66) enough to justify the creation of the interaction anxiousness index. However, the fourth item ("feeling calm") from the scale did not correlate significantly (all r 's > 0.25) enough to justify inclusion in the index.

4.2.1.5. Rejection sensitivity index.

For the creation of this index, I followed Downey & Feldman's (1996) instructions: first, I calculated a score of rejection sensitivity for each situation, by multiplying the level of rejection concern (the response to question a.) by the reverse of the level of acceptance expectancy (the response to question b.). The formula is: rejection sensitivity = (rejection concern) * (7-acceptance expectancy). Then, I took the mean of the resulting 8 scores to obtain the overall rejection sensitivity score for the 8 item questionnaire.

4.2.1.6. "Real Me" index.

The "real me" index ultimately included 4 of the 6 "real me" questions. First I scale standardized the 6 items, as 2 questions are on a yes or no scale, while the other questions use a 7 point Likert-like scale. A correlation analysis indicated that 4 of the 6 items that comprised the "real me" scale were significantly inter-correlated (all r 's > 0.38, Cronbach's Alpha = 0.79). The included questions were: "when you talk with your peers from school via CMC you tell them more about yourself than when you talk to them face to face", "while communicating with my school peers via CMC, I tell them things I would not tell them face to face", "my friends were surprised about some of the things I told them about myself while communicating via CMC (for example, feelings, dreams, opinions, etc.)", "my friends understand better who am I as a person because of the things they learned about me while communicating with me via CMC".

The two questions, "when using CMC there are things I tell only to strangers" and "there are things that peers from school with whom I communicate via CMC know about me while other friends who do not communicate with me via CMC do not know" were

excluded, since they did not correlate sufficiently. Furthermore, previous studies have shown that adolescents communicate via CMC almost solely with their peers from school (communications with strangers only rarely occur).

4.2.2. Running EQS.

After creating the indices, the next step was to examine the model with EQS. In general, the proposed model was largely confirmed (the tested model, the values and all correlations are shown in Figure 3).

The first stage of the model was to enter loneliness, rejection sensitivity and social anxiety as predictors for the "real me." As is shown in Figure /3, adolescents who were lonely, socially anxious and felt neglected and rejected were more likely to express the "real me" on the Internet, rather than in face to face communications. In addition, I found that rejection sensitivity was the strongest predictor, followed by loneliness, with social anxiety emerging as the weakest predictor of the three, indicating that rejection sensitivity accounts for the most variance of the three.

The next step of the model calls for examining whether these predictors as well as the mediator "real me" are predictors of a heightened sense of group belonging. As you can see from Figure 3, greater expression of the "real me" does lead to a greater sense of group belonging, with the initial three predictors entirely mediated through the "real me." This is the case also for anyone who is expressing the "real me" online, regardless of whether they are lonely, socially anxious or feel rejected, but it is so especially for adolescents who are lonely, socially anxious and feeling neglected and rejected.

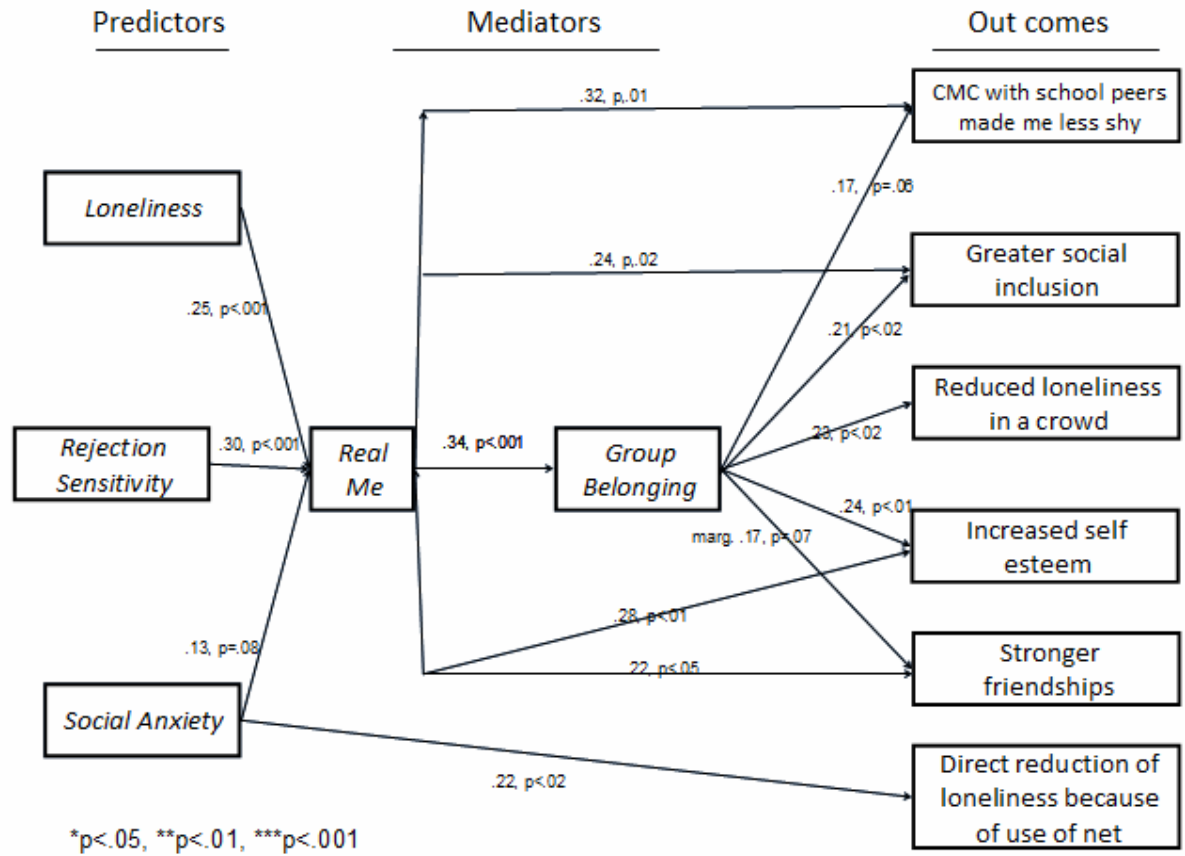


Figure 3 - The Study Model - Results

The final step of the model was to enter the predictors as well as the mediators as predictors of greater social inclusion, reduced loneliness, increased self esteem and stronger friendships. The results of the analysis show that the predictors and the outcomes are largely mediated by the expression of the "real me" online and by a sense of group belonging. While the hypothesized model was largely confirmed, there were unexpected deviations and these are discussed in greater detail below, for each individual outcome.

4.2.3. Outcomes and direct effects

Contrary to predictions, there is a direct and unmediated link between the first mediator (the “real me”) and the outcome variable assessing how friendships were changed (or not) by online interactions: greater expression of the “real me” online leads to stronger friendships. However the predicted link between a stronger sense of group belonging and stronger friendships was only marginally significant.

Regarding greater social inclusion, both mediated and direct effects were found for the two mediators. The “real me” was found to have a strong direct effect, unmediated by group belonging, on sense of greater social inclusion. This direct effect accounts for a significant amount of variance, in addition to the effects of the “real me” that *are* mediated through a heightened sense of group belonging. That is, greater expression of the “real me” online (as compared to in person) strengthens the importance of belonging to the peer group, which in turns fosters a sense of greater social inclusion by peers. However, expression of the “real me” online also has an independent effect on the sense of social inclusion. This suggests that adolescents for whom the importance of the group increases as a result of expressing the “real me,” as well as for those for whom it does not, will feel more socially included by their peers as long as they are expressing important aspects of their real self online.

Examining the result regarding the expected effect on self esteem, we can again see that expressing the “real me” online affects self esteem both directly and through the mediation of group belonging. Increased self-esteem thus can be attained both through the predicted mediational path and, independent of group belonging, solely through the expression of the “real me” online. This suggests that attributing greater importance to a sense of belonging is a sufficient --but not a necessary—condition for producing an increase in self-esteem. In contrast, expressing the “real me” is crucial to this process.

Two questions were included in the survey to assess whether or not participants felt less lonely as a result of communicating with peers online. One question asked directly whether communication online had changed their feelings of loneliness: "I think communication with people via CMC makes me feel more lonely/the same/less lonely." While the predicted mediated effect was found for this variable, social anxiety was found to

have a direct, unmediated (by either mediator) effect on reduced loneliness. This suggests that socially anxious adolescents who opt to communicate with others online will reap the benefits of reduced loneliness. A second question addressing loneliness was treated as a separate outcome variable, as it addressed a slightly different aspect of feeling lonely, namely, loneliness even when surrounded by and involved with others. For this outcome variable, the predicted mediational path to a decreased sense of "feeling lonely in the crowd" was borne out.

Shyness as an outcome was also assessed by the question "as a result of online CMC with school friends I feel less/more shy" Group belonging was again found to have the expected mediational effect, but the expression of the "real me" was found to have a direct and unmediated effect on feelings of shyness. Those for whom the importance of belonging to the peer group was strengthened as a result of communicating with friends from school online were likely to experience a decrease in feelings of shyness. Shyness was also independently decreased through the mere expression of the real self online.

4.3. Analysis of Secondary Variables

4.3.1. Gender Differences

Significant differences between male and female adolescents were found in several aspects. In fact, it was found that the model was strongly correct for female adolescents (male N=67, female N=86). Female adolescents use the Internet to communicate with their peers significantly more than male adolescents do ($p < 0.005$). While the average adolescent in this study spent 3.25 hours a day communicating with friends via CMC ($M = 3.25$, $SD = 2.64$), conditions; $t(151) = 5.45$, $p = 0.006$ males spent on average 2.89 hours a day communicating with friends from school via the Internet ($N = 67$, $SD = 1.23$), while females spend on average 3.53 hours a day communicating with friends from school via the Net ($N = 86$, $SD = 1.21$).

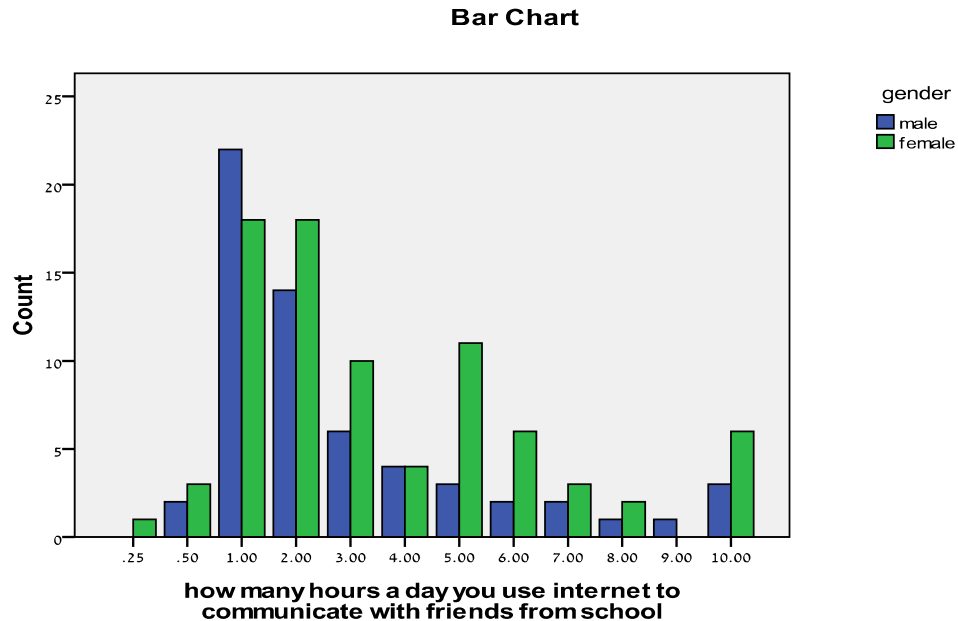


Figure 4 – How many hours a day do you use CMC with friends from school – Gender differences.

T-tests were performed to identify gender differences. As shown in Table 2 and 3, a significant difference was noted in group belonging. Given that communication via CMC is much more important for female adolescents than it is for male adolescents (male mean =2.88 female mean =3.65, $p < 0.035$), conditions; $t(149) = -2.442$, $p = 0.016$. It is likely that female adolescents who self disclose their "real me" via CMC also feel a greater sense of group belonging than do their male counterparts.

Rejection sensitivity. Another significant difference that was found between male and female adolescents pertained to the issue of rejection sensitivity: "you ask your friend to borrow something; how concerned or anxious would you be over whether or not your friend would want to lend it to you?" ($p < 0.026$). The mean answer for males was 2.92, while for females it was 2.38, conditions; $t(147) = 2.262$, $p = 0.025$. conditions; $t(133) = 2.252$, $p = 0.026$. which means that males are more concerned with the possibility of rejection.

Table 2 – Group belonging

	gender	N	Mean	Std. Deviation	Std. Error Mean
How important is it to be in touch with friends from school via instant messages?	male	67	4.3881	1.87451*	.22901
	female	86	5.0000	1.60880*	.17348
How important is what your friends think about your behavior online?	male	67	2.8209	1.62299*	.19828
	female	85	3.4824	1.82973*	.19846
How important is it that your friends from school do not ignore you online?	male	67	4.1045	1.90003	.23213
	female	85	4.2000	1.93218	.20957
How important is it to be part of your school friends' online conversations ?	male	67	2.8806	1.87909*	.22957
	female	84	3.6548	1.97877*	.21590

*p<.05

Feeling shy. A significant change was found regarding the question "as a result of online CMC with school friends I feel less/more shy" ($p < 0.007$). The average answer of male adolescents was 3.08 on a scale of 1 to 5, while for female adolescents the average answer was 3.56. Female adolescents, more than male adolescents, described themselves as feeling less shy following online CMC with school friends. The average answer of male adolescents was "it makes no difference."

Friendship strength. Female adolescents feel closer to their friends than do male adolescents when communicating with their peers via CMC (female $M = 3.44$, $p < 0.013$, male $M = 3.03$, $p < 0.013$). conditions male; $t(139) = -2.753$, $p = 0.007$. conditions female; $t(138) = -2.848$, $p = 0.005$. In addition, on the question "following communication with school friends from via CMC I am invited to friends more often," the female average answer was 3.43 and the male counterpart was 3.09, which again indicates that female adolescents attribute greater value to CMC with peers from school, since they see it as leading to the creation of stronger relationships.

Table 3 – Gender Differences

	Gender	N	Mean	Std. Deviation	Std. Error Mean
You ask a friend to borrow something: how concerned ; how concerned would you be over whether or not your friend would want to lend it to you ?	Male	64	2.9219	1.45083*	.18135
	Female	85	2.3882	1.40657*	.15256
As a result of online CMC with school friends I feel (shy)	Male	61	3.1803	.69542**	.08904
	Female	80	3.5625	.89787**	.10038
As a result of online CMC with school friends I feel (close to friends)	Male	62	3.0323	.94031*	.11942
	Female	82	3.4390	.98253*	.10850
As a result of online CMC with school friends I am invited by friends (frequency)	Male	61	3.0984	.86996*	.11139
	Female	81	3.4321	.87946*	.09772

*p<.05, **p<.01,

4.3.2.City vs. Kibbutz

Adolescents from the city constituted 69% (N=107) of the study participants and kibbutz adolescents constituted the remaining 31% (N=48). Significant differences were found between these groups.

First, there was a difference in the usage habits; adolescents in the city spent significantly more time on average per day communicating with their peers from school via CMC. Thus, 23.4 % (N=25) of the city adolescents compared to only 2.1 % (N=1) of kibbutz adolescents indicated spending an average of 6 to 10 hours a day on CMC; 31.8 % of the urban participants vs. 8.3 % of kibbutz adolescents used CMC with peers between 3 to 5 hours a day; and 25 %, vs. 19.6%, respectively, spent an average of 2 hours a day on CMC. The Kibbutz adolescents' daily average for CMC time with school peers was 1.55

hours, (equivalent to approximately 1 and a half hours), whereas urban kids actually spend more than double that amount of time, an average of 3.95 hours (nearly 4 hours a day).

T-tests were performed to identify differences between urban & kibbutz adolescents. As shown in Table 4, there was a significant difference regarding the type of CMC used. Although both populations barely use e-mail for CMC compared to the other options (instant messaging, social networks and the Net in general, i.e., chat rooms, forums, etc.), city adolescents nevertheless, indicated that they use CMC significantly more than do their kibbutz counterparts, conditions; $t(153)=6.163$, $p=0.000$.

Table 4 – City vs. Kibbutz – CMC by means of communication

	City or Kibbutz	N	Mean	Std. Deviation	Std. Error Mean
CMC via Instant Messaging software	City	107	4.3084	1.04981***	.10149
	Kibbutz	48	2.9792	1.59106***	.22965
CMC via Internet	City	106	3.9717	1.25324***	.12173
	Kibbutz	48	3.0833	1.48515***	.21436
CMC via e-mail	City	106	1.6887	1.01759*	.09884
	Kibbutz	48	1.5417	.74258*	.10718
CMC via Internet social network	City	106	3.8491	1.40606*	.13657
	Kibbutz	48	3.4792	1.55727*	.22477

* $p<.05$, ** $p<.01$, *** $p<.001$

An additional significant difference was found regarding the "real me" questions (all $p`s < .05$). As shown in Table 5, urban adolescents self disclose significantly more than do kibbutz adolescents, conditions; $t(149)=2.284$, $p=0.024$. This was expected to lead to a significant difference in the sense of group belonging, but this was not the case: no significant differences were found. It is possible that because kibbutz adolescent live in a relatively close environment they enjoy a greater sense of group belonging, while urban adolescents compensate for lack of group belonging by increased use of CMC and greater self disclosure.

Table 5 - City vs. Kibbutz – “real me” differences

	City or Kibbutz	N	Mean	Std. Deviation	Std. Error Mean
I tell my school friends via Internet things I wouldn't tell them f2f.	City	106	3.3491	1.85186*	.17987
	Kibbutz	45	2.6222	1.62773*	.24265
My friends were surprised by things I told them about myself via Internet.	City	106	2.8962	1.72339**	.16739
	Kibbutz	45	2.0667	1.45227**	.21649
My friends understand me better as a person because of the things they learn about me via Internet communication.	City	106	2.9340	1.83754**	.17848
	Kibbutz	46	2.0000	1.28236***	.18907
There are things I share with people via Internet that I don't share with my friends from school.	City	106	3.8302	2.17550***	.21130
	Kibbutz	46	2.6087	1.75725***	.25909

*p<.05, **p<.01, ***p<.001

Interestingly, additional significant differences were found in all of the outcome questions about stronger friendships and greater self esteem, as shown in Table 6. It is possible that city adolescents relate the sense of stronger friendships and greater self esteem to CMC, while the kibbutz adolescents, who use CMC less, see CMC as contributing less to these outcomes.

In conclusion we can see that urban adolescents use CMC significantly more than do kibbutz adolescents, self disclose significantly more and relate greater self esteem and sense of stronger friendships to CMC significantly more than do their kibbutz counterparts..

Table 6 - City vs. Kibbutz – Outcome Differences

	City or Kibbutz	N	Mean	Std. Deviation	Std. Mean Error
As a result of online CMC with school friends, I feel (close to friends).	City	102	3.4314	1.03894**	.10287
	Kibbutz	44	2.8864	.68932*	.10392
As a result of online CMC with school friends, I have (number of friends).	City	102	3.4020	.81155**	.08036
	Kibbutz	44	3.0682	.54550**	.08224
As a result of online CMC with school friends, I know more about my friends so I can help them in the hour of need..	City	99	3.6263	1.08408**	.10895
	Kibbutz	40	3.0750	.82858**	.13101
As a result of online CMC with school friends, I am invited by friends (frequency).	City	101	3.3069	.99742 P=.46	.09925
	Kibbutz	43	3.1860	.62700 P=.38	.09562
As a result of online CMC with peers, making real friends is (easy).	City	102	3.3333	.84822***	.08399
	Kibbutz	43	2.8605	.74263***	.11325
As a result of online CMC with school friends, I visit friends (frequency).	City	102	3.3431	.96979**	.09602
	Kibbutz	42	2.9524	.62283**	.09611
As a result of online CMC with school friends, I have more self confidence.	City	103	3.8544	1.80091 P=.085	.17745
	Kibbutz	41	3.2927	1.63162 P=.074	.25482
CMC with people not from school helps me in f2f communication with school friends.	City	103	3.2136	1.85584*	.18286
	Kibbutz	41	2.5366	1.43348*	.22387
CMC with friends from school makes it easy to communicate with them at school	City	103	4.1262	1.98859*	.19594
	Kibbutz	41	3.2927	1.52059**	.23748

*p<.05, **p<.01, ***p<.001

5. Conclusion and Discussion

Ever since the Internet emerged into our lives and became widely available, computer mediated communication has opened many possibilities for social interactions for individuals connected to the Internet. The notion that the primary use of the Internet is social has been known for several years. Since the introduction of the Internet, many studies have been conducted regarding the psychological effect of CMC on the individual user, focusing mostly on adult users and its effects on the self, loneliness, social anxiety, alienation, friendship formation and self esteem.

In this study I wanted explore the effects of CMC on adolescents, and especially on adolescents who initially feel lonely, socially anxious and rejected. To this end, I investigated adolescents' CMC usage habits and the social and psychological effects that CMC has on their true self. I started by measuring the adolescents' CMC usage habits, to validate findings known from previous studies. I found that indeed adolescents do use CMC extensively to communicate mainly with their peers from school, for more than three hours a day, on average.

Then I examined the assumption that all adolescents, while communicating through CMC tend to increase their self disclosure with their peers, which leads to a greater sense of belonging to their peer and school groups, as well as to feeling more valued, as accepted members of these groups (Brewer, 1991; McKenna, 2002). These developments are expected to lead to positive outcomes for the individual, such as a greater sense of social inclusion, increased self confidence, strengthened existing peer relationships, reduced loneliness and social anxiety. The model proposed was confirmed for the most part; indeed, findings indicated that all adolescents tend to increase self disclosure while communicating via CMC with their peers, and those who do so feel a greater sense of group belonging and experience the positive outcomes suggested in the model.

Finally, I examined the same model specifically with adolescents who feel lonely, rejected and socially anxious, and who communicate via CMC (meaning, those who better express their "real me", greater sense of belonging, and positive outcomes). As presumed, the model was largely confirmed in this case and in a stronger manner.

5.1. Demographic Characteristics

According to the findings, the model is significantly more valid for female adolescents and for urban adolescents compared to their respective counterparts. This means that female adolescents and urban adolescents in general use CMC and self disclose more than average, and they enjoy a stronger sense of group belonging and stronger positive outcomes than the average. Although the age range for participants was fairly broad (age 12 to 17 years old), no significant difference was found in terms of age groups.

5.2. The Relation between the Predictors and the "Real Me"

The findings obtained using the "Real Me Online" model by McKenna, Green & Gleason (2002) regarding adult CMC users were corroborated also for adolescent users. Expressing the "real me" on the Internet is significantly more likely for those who experience high levels of loneliness and social anxiety than for other adolescent users. In addition, according to the model, rejection sensitivity appeared to be the strongest of the three predictors, even significantly stronger than loneliness. Compared to McKenna, Green & Gleason's findings, this may appear surprising; however, previous findings from other studies indicate that one of the main aspects of adolescent loneliness relates to peer acceptance or rejection (Asher and Gazelle, 1999; Asher and Paquette, 2003; Pedersen, Vitaro, Barker and Borge, 2007). Adolescents who are usually not accepted by their peers self-report experiencing higher levels of loneliness and feeling more rejected and neglected over time than those who feel accepted (Boivin, Himel and Buqowski, 1995). Thus, this supports the current findings that feeling socially rejected leads to loneliness and not the other way around. Unexpectedly, it was also found that feeling socially anxious and lonely and communicating via CMC leads directly to the unmediated effect of feeling a reduction of loneliness. A possible explanation can be found in Hoffman's understanding that adolescents who are socially anxious are also typically afraid of informal social interactions, which usually take place via face to face communication, such as attending parties and after school activities (1999). Given that fear may invoke avoidance of social situations (Velting and Albano, 2001), it is possible that CMC opens a "detour route" for the socially anxious adolescent to communicate with friends from school and thus reduce the sense of loneliness.

5.3. The Relation between the "Real Me" and Group Belonging

The model was largely confirmed, since a significant connection was found between the "real me" and group belonging. This means that greater expression of the "real me" does lead to a greater sense of group belonging, with the initial three predictors entirely mediated through the "real me." This is the case also for anyone who expresses the "real me" online, regardless of whether the individual feels lonely, socially anxious or rejected. The unexpected finding was that parallel to this connection there is also a significant direct effect of the "real me" unmediated by group belonging, on feeling less shy, greater social inclusion, increased self esteem and stronger friendships. Evidently, the real me does not mediate entirely through group belonging. It is possible that the real me is a strong mediator, such way that it is enough to self disclose while using CMC in order to enjoy the positive effect of the mentioned outcomes. Yet the "real me" is often mediated through group belonging, which implies that self disclosure does increase the sense of group belonging and thus renders the positive outcomes of the model.

It is important to note that the "real me" does not have a direct unmediated effect on reduced loneliness despite what we know from McKenna, Green & Gleason (2002). This supports the optimistic view that online communication promotes social support and expands social interactions (Cole & Robinson, 2002; Katz & Rice, 2002; Kestnbaum, Robinson, Neustadtl, & Alvarez, 2002). Furthermore, according to several studies, most adolescents feel that the use of CMC improves their relationships with friends, and some of them even use the Internet to make new friends (Lenhart, Rainie, & Lewis, 2001). This means that self disclosing the "real me" is "not enough" regarding loneliness; it only increases the positive effect that sense of group belonging has on the feeling of loneliness.

5.4. The Outcomes

The results of the analysis show that the predictors and the outcomes are largely mediated by the expression of the "real me" online and by a sense of group belonging. While the hypothesized model was largely confirmed, there were unexpected deviations. As described, both the "real me" and the group belonging have direct unmediated effects on

most of the outcomes. Unexpectedly, it was found that for adolescents, communicating via CMC and self disclosing with peers is significantly associated with feeling less shy, and that the same effect can also be mediated through an increased sense of group belonging. Both of the mediators have this direct effect.

It was previously found that feeling shy is directly connected to social skills; there are two distinct modes in which an adolescent communicates with peers: one-to-one and one-to-many. These modes are associated with two different types of relationships: forming and maintaining individual friendships and belonging to peer groups. They fulfill different functions in an adolescent's development; each type of relationship is supported by a different type of communication technology. Person-to-person communication with another peer provides vital information for the adolescent to compare with similar others and to receive verification for his or her own feelings, thoughts and actions, and is crucial to self identity formation. In one-to-many communication, an adolescent's connectedness to a group creates a feeling of group belonging, which is crucial to one's social identity formation (Bonka, Boneva, Quinn, Kraut, Kiesler, & Shklovski, 2005).

5.5.Future Research Agenda

Significant differences between male and female adolescents were found in several aspects. In fact, it was found that the model was strongly correct for female adolescents. Female adolescents use the Internet in order to communicate with their peers significantly more than do male adolescents. This contradicts what we know from previous studies, that there is no significant difference in the habits of CMC usage between males and females. This finding should be further examined.

Participants were divided according to their dwelling location, urban or kibbutz. Here too, a significant difference was found. Urban adolescents use CMC significantly more than do kibbutz adolescents, self disclose significantly more and they connect greater self esteem and sense of stronger friendships to CMC activity significantly more than do their kibbutz counterparts. As noted, urban adolescents self disclose significantly more than do the kibbutz adolescents, which is expected to lead to a significant difference in their sense of group belonging; however, this was not the case. It is possible that because kibbutz adolescents live in a relatively close environment they enjoy a greater sense of group

belonging, while urban adolescents compensate for the different setting by increased use of CMC and greater self disclosure. Yet this is only hypothesized, since no previous research has been done regarding the differences between these two groups, perhaps because the kibbutz is a rare form of social organization. This subject represents a whole unexamined field and thus an interesting research opportunity.

In conclusion

Results show that adolescents who are lonely, socially anxious and rejection sensitive are more likely to express the "real me" on the Internet, and that those who express the "real me" are more likely to feel a greater sense of group belonging, which in turn will lead to an increased sense of self esteem, greater sense of social inclusion, stronger friendships, reduced feelings of loneliness and feeling less shy.

The findings largely confirm the model suggested in this study. The important contribution of this study is that self disclosing the "real me" remains strong and has a direct effect on part of the outcomes, parallel to the important effect of the sense of group belonging. The finding that rejection sensitivity is the strongest predictor, differs from what was previously assumed. This and the additional finding have an important understanding for those who work, educate and council adolescents who help them give a better guidance for adolescents.

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7. Appendix

7.1. Exemplary participation request e-mail

אוהד שלום!

ראשית שמי תומר הנדל, המחקר נעשה במסגרת עבודת תזה לסיום תואר שני בתקשורת המונים. עד כה ביצעתי מספר מחקרים בתחום של פסיכולוגיה ותקשורת במסגרת המרכז הבינתחומי בהרצליה ואוניברסיטת בן גוריון.

המחקר זה נעשה במסגרת אוניברסיטת בן גוריון, המחלקה לתקשורת, בהנחייתה של ד"ר יעל קיינן, ד"ר קיינן היא מהחוקרים המובילים בעולם בתחום הזה, היא ריכזה תחום זה באוניברסיטת ניו-יורק עד שעשתה עליה לישראל (שמה המקורי לפני שגם הוא עשה עליה ותחתיו מפורסמים רוב המחקרים שלה הוא Katelyn mckenna).

המחקר בודק את הרגלי השימוש באינטרנט של מתבגרים (גילאים 13 עד 18) וכיצד השימוש באינטרנט משפיע עליהם מבחינה חברתית ופסיכולוגית (איכות הקשר עם חברים, השפעה על בדידות, תחושת שייכות וכדומה) בנוסף צרפתי את הצעת המחקר המקורית במידה ותרצו לעיין יותר לעומק (באנגלית)

המחקר עושה שימוש בשאלונים (השאלון מצורף למייל זה) כמובן שהמידע הנאסף ישמש אך ורק לצרכי המחקר, בלי חשיפת אף פרט מזה (אנונימיות מלאה)

ביום שלישי אני צפוי להגיע לאזור החל משעה 12 בצהריים, אבל גם זמין להגיע אם תרצו בראשון ובשני בכל שעה שנוחה לכם.

ימים טובים,

תומר הנדל

טל:

7.2. The research questionnaire in Hebrew

שאלון מחקר

תלמיד יקר! שאלון זה הוא שאלון אנונימי, כל הפרטים בשאלון זה חסויים ומשמשים אך ורק לצורכי מחקר. אנא קראו את השאלון בעיון רב והשיבו על כל השאלות.

אנא זכרו! מחקר זה מאוד חשוב, מאמצים רבים של צוות גדול הושקעו בו! חשוב כי תענו בכנות וברצינות על כל השאלות!

תוכנות שמאפשרות שליחת הודעות דרך האינטרנט בין שני אנשים או בין קבוצה של אנשים בצורה מידית. ICQ, MSN Messenger, Skype, Face book (סקייפ, מסנגר, פייסבוק, איסיקיו) ואחרות הינן

באמצעות שימוש בתוכנות אלה וגם בעזרת שליחת דואר אלקטרוני, צטיים, בלוגים וכ"ו אנחנו יכולים לתקשר בין אנשים בכלל ועם חברים בפרט באמצעות האינטרנט.

1. אנא סמני את ההיגד שמאפיין אותך, כאשר 1 לא מאפיין כלל ו 5 מאפיין במידה רבה:

מאפיין במידה רבה	די מאפיין	מאפיין	לא מאפיין	לא מאפיין כלל	
5	4	3	2	1	א. אני משתמש\ת בתוכנות למסרים מיידיים כדי לתקשר עם חברים מביה"ס (לדוגמה icq, messenger, skype וכדומה)
5	4	3	2	1	ב. אני מתקשר\ת עם חברים מביה"ס באמצעות האינטרנט
5	4	3	2	1	ג. אני מתקשר\ת עם חברים מביה"ס באמצעות דואר אלקטרוני
5	4	3	2	1	ד. אני מתקשר\ת עם חברים מביה"ס בעזרת רשת חברתית באינטרנט (לדוגמה פייסבוק FACEBOOK)

2. באיזו מידה את\ה מרגיש את התחושות הבאות?

כל הזמן	לפעמים	לעיתים רחוקות	לעולם	
4	3	2	1	באיזו תדירות את\ה מרגיש\ה בודד\ה?
4	3	2	1	באיזו תדירות את\ה מרגיש\ה שאין לך אף אחד קרוב?
4	3	2	1	באיזו תדירות את\ה מרגיש\ה עזוב\ה?
4	3	2	1	באיזו תדירות את\ה מרגיש\ה שאין אדם שבאמת מכיר אותך?

3. **אנא סמנאי בעיגול באיזו מידה הדברים הבאים חשובים לך?**

3א. עד כמה חשוב לך להיות בקשר עם חברים מביה"ס באמצעות אינטרנט? (למשל icq, messenger, skype, facebook וכדומה).

מאוד לא חשוב 1 2 3 4 5 6 7 **מאוד חשוב**

3ב. עד כמה חשוב לך מה החברים שלך מביה"ס חושבים על התנהגות שלך באינטרנט? (כמו למשל אייקונים בהם אתה משתמש, כינויים, סלנג, זמן שלוקח לך להגיב וכדומה).

מאוד לא חשוב 1 2 3 4 5 6 7 **מאוד חשוב**

3ג. עד כמה חשוב לך שחברים שלך מביה"ס לא יתעלמו ממך באינטרנט? (לדוגמה שיוסיפו אותך לרשימת החברים, שלא יסננו אותך, שלא יתעלמו מהודעות שאתה שולח, וכדומה).

מאוד לא חשוב 1 2 3 4 5 6 7 **מאוד חשוב**

3ד. כמה יהיה לך חשוב עם חברים שלך ידברו ביניהם באינטרנט ולא ישתפו אותך בשיחה?

מאוד לא חשוב 1 2 3 4 5 6 7 **מאוד חשוב**

4. אני... 1. זכר 2. נקבה

5. אני בן/בת (גיל) _____.

6. כמה שעות ביום בממוצע\ בערך אתה משתמש\ת באינטרנט כדי להיות בקשר עם חברים מביה"ס? (לדוגמה icq, messenger, skype, face book וכו').

(לדוגמה: רבע שעה, חצי שעה, שעה, שעתיים, 5 וחצי שעות וכדומה) _____

7. **באיזו מידה אתה מסכימה עם המשפטים הבאים:**

לא מסכים בהחלט	לא מסכים	מסכים	מסכים בהחלט	
4	3	2	1	לעיתים אני מרגישה לא בטוח לגבי מי אני באמת?
4	3	2	1	אני מרגישה שמשפחתי לא קרובה אליי כפי שהייתי רוצה
4	3	2	1	נראה שרוב הסובבים אותי אינם מקבלים אותי כאשר אני מתנהגת כאני האמיתית
4	3	2	1	לעיתים אני חשה לבד גם כשאני עם אנשים אחרים

8. א. כשאתה מדברת עם חברים שלך מביה"ס באינטרנט, אתה מגלה להם על עצמך יותר ממה שאתה מגלה להם כשאתה מדברת איתם פנים מול פנים. 1. כן 2. לא

8. ב. האם יש דברים שחברים שלך מביה"ס שאיתם אתה מתקשרת באינטרנט יודעים עליך וחברים שלך שלא מתקשרים איתך באינטרנט לא יודעים? 1. כן 2. לא

8. ג. אני מגלה לחברים מביה"ס באינטרנט דברים שלא הייתי מספרת להם פנים מול פנים?

לא מסכים 1 2 3 4 5 6 7 מסכים

8. ד. חברים שלי הופתעו מחלק מהדברים שסיפרתי על עצמי באינטרנט. (למשל: רגשות, חלומות, דעות וכדומה)

בכלל לא 1 2 3 4 5 6 7 במידה רבה מאוד

8. ה. חברים שלי מבינים טוב יותר מי אני כבן אדם בזכות דברים שהם למדו עליי מלתקשר איתי באינטרנט.

בכלל לא 1 2 3 4 5 6 7 במידה רבה מאוד

8. ו. יש דברים שאני חולקת באינטרנט עם אנשים שהם לא חברים מביה"ס.

לא מסכים 1 2 3 4 5 6 7 מסכים

9. אנא סמני עד כמה ההיגדים הבאים מאפיינים אותך? כאשר 1 לא מאפיין כלל ו 5 מאפיין בצורה קיצונית.

מאפיין אותי בצורה קיצונית	מאוד מאפיין אותי	די מאפיין אותי	מאפיין אותי מעט	לא מאפיין אותי כלל	
5	4	3	2	1	כאשר אני נמצאת בחברת אנשים לא מוכרים אני מרגישה לא נוח
5	4	3	2	1	הייתי רוצה להיות בטוחה יותר במצביים חברתיים
5	4	3	2	1	באופן כללי אני אדם ביישן
5	4	3	2	1	אני מרגישה רגוע בקרבת אנשים גם אם הם אנשים שונים ממני

10. לפניך תאור של 5 מצבים. על כל מצב יש 2 שאלות.

מצב 1. אתה מבקש/ת ממישהו בכיתה להעתיק שיעורים.

עד כמה זה מטריד אותך או מדאיג אותך אם הוא/היא בכלל יסכים או לא יסכים לתת לך להעתיק?

מאוד מדאיג \ מטריד			בכלל לא מדאיג \ מטריד		
6	5	4	3	2	1

הייתי מצפה שהו\יא ייתן לי להעתיק.

מאוד הגיוני			מאוד לא הגיוני		
6	5	4	3	2	1

מצב 2. אתה מציאה חברות למשהו\י מביה"ס.

עד כמה זה מטריד אותך או מדאיג אותך אם הוא/היא בכלל יסכים או לא יסכים?

מאוד מדאיג \ מטריד			בכלל לא מדאיג \ מטריד		
6	5	4	3	2	1

הייתי מצפה שהו\י ירצה לצאת איתי.

מאוד הגיוני			מאוד לא הגיוני		
6	5	4	3	2	1

מצב 3. אתה ניגש/ת לדבר עם חבר\ה אחרי שאמרת או עשית משהו שמאוד עיצבן אותו או פגע בו\ה.

עד כמה זה מטריד אותך או מדאיג אותך אם הוא בכלל ירצה או לא ירצה לדבר אתך?

מאוד מדאיג \ מטריד			בכלל לא מדאיג \ מטריד		
6	5	4	3	2	1

הייתי מצפה שהו\היא ירצה לדבר איתי כדי לפתור את העניין.

מאוד הגיוני			מאוד לא הגיוני		
6	5	4	3	2	1

מצב 4. אתה שואל חבר האם אתה יכול לקחת\ להשאיל ממנו משהו.

עד כמה זה מטריד אותך או מדאיג אותך אם הוא בכלל ירצה או לא ירצה לתת \ להשאיל לך את הדבר?

מאוד מדאיג \ מטריד			בכלל לא מדאיג \ מטריד		
6	5	4	3	2	1

הייתי מצפה שהו\היא ברצון ייתן\ ישאל לי את הדבר.

מאוד הגיוני			מאוד לא הגיוני		
6	5	4	3	2	1

מצב 5. אתה מבקש מחברה לעשות לך טובה גדולה.

עד כמה זה מטריד אותך או מדאיג אותך אם הוא/היא בכלל יסכים או לא יסכים לעשות לך את הטובה?

מאוד מדאיג \ מטריד	6	5	4	3	2	1	בכלל לא מדאיג \ מטריד
הייתי מצפה שהו יעשה לי את הטובה הגדולה ברצון.							
מאוד הגיוני	6	5	4	3	2	1	מאוד לא הגיוני

11. אנא השלם את המשפטים הבאים על ידי הקפה בעיגול את התשובה המתאימה לך:

3 פחות בודדה	2 ללא שינוי	1 יותר בודדה	אני חושבת שתקשורת עם אנשים בעזרת האינטרנט גורמת לי להיות
--------------	-------------	--------------	----------------------------------------------------------

הרבה יותר טוב	יותר טוב	פחות טוב	הרבה פחות טוב	בעקבות שימוש בתקשורת באינטרנט חבריי מכירים אותי
אז היו לי הרבה יותר חברים	אז היו לי יותר חברים	אז היו פחות חברים	אז היו לי הרבה פחות חברים	אם ההורים שלך היו אוסרים עליך להשתמש במחשב כדי לדבר עם חברים

12. אנא סמן עד כמה אתה מסכים/ה עם ההיגדים הבאים?

5 הרבה יותר בטוחה מי אני באמת	4 יותר בטוחה מי אני באמת	3 ללא שינוי	2 פחות בטוחה מי אני באמת	1 הרבה פחות בטוחה מי אני באמת	כתוצאה מהתקשורת עם חברים במצעות האינטרנט אני
5 באמת מקבלים אותי כאשר אני מתנהג כאני האמיתי/ת	4 מקבלים אותי כאשר אני מתנהג כאני האמיתי/ת	3 מקבלים אותי ללא שינוי	2 אינם מקבלים אותי כאשר אני מתנהג כאני האמיתי/ת	1 בכלל אינם מקבלים אותי כאשר אני מתנהג כאני האמיתי/ת	כתוצאה מתקשורת עם חברים באמצעות האינטרנט נראה שרוב הסובבים אותי
לא מסכים/ה בהחלט	לא מסכים/ה		מסכים/ה	מסכים/ה בהחלט	כתוצאה מתקשורת עם אנשים באמצעות האינטרנט אני חשׂה לבד גם כשאני עם אנשים אחרים

13. אנא סמן את ההיגד איתו אתה מסכים ביותר כאשר 1 לא מסכים בכלל ו 5 מסכים בהחלט.

5 מאוד בטוחה במצבים חברתיים	4 יותר בטוחה במצבים חברתיים	3 בטוחה במצבים חברתיים באותה מידה	2 פחות בטוחה במצבים חברתיים	1 מאוד לא בטוחה במצבים חברתיים	בעקבות התקשרות עם חברים מביה"ס באמצעות האינטרנט אני מרגישה
5 הרבה פחות ביישן/ית	4 פחות ביישן/ית	3 ביישן/ית באותה מידה	2 יותר ביישן/ית	1 הרבה יותר ביישן/ית	בעקבות התקשרות עם חברים מביה"ס באמצעות האינטרנט אני מרגישה

14. השלם את המשפט בעזרת היגד שמאפיין אותך.

5 הרבה יותר קרובה לחברים	4 יותר קרובה לחברים	3 קרובה לחברים באותה מידה	2 פחות קרובה לחברים	1 הרבה פחות קרובה לחברים	בעקבות התקשרות עם חברים מביה"ס באמצעות האינטרנט אני מרגישה
5 הרבה יותר חברים טובים מאוד	4 יותר חברים טובים מאוד	3 יש לי אותו מספר של חברים טובים	2 פחות חברים טובים מאוד	1 הרבה פחות חברים טובים מאוד	בעקבות התקשרות עם חברים מביה"ס באמצעות האינטרנט יש לי
מסכים/ה בהחלט	די מסכים/ה	מסכים/ה	לא מסכים/ה	לא מסכים/ה בכלל	בעקבות התקשרות עם חברים מביה"ס באמצעות האינטרנט אני יודעת יותר על חברים שלי וכך יכולה לעזור להם יותר בשעת הצורך

15. אנא השלם/י את המשפט בעזרת ההיגד הבא.

5 לעיתים הרבה יותר קרובות	4 יותר קרובות	3 באותה תקיפות	2 יותר רחוקות	1 הרבה יותר רחוקות	בעקבות התקשרות עם חברים מביה"ס באמצעות האינטרנט אני מוזמן/ת ע"י החברים לעיתים
5 בקלות רבה מאוד	4 בקלות	3 באותה מידה	2 בקושי	1 בקושי רב	בעקבות התקשרות באינטרנט, היום יותר מתמיד ניתן למצוא חברים אמתיים
5 לעיתים קרובות מאוד	4 לעיתים קרובות	3 באותה מידה	2 לעיתים רחוקות	1 לעיתים רחוקות הרבה מאוד	בעקבות התקשרות עם חברים מביה"ס באמצעות האינטרנט אני מבקרת/ת חברים

16. תקשורת עם החברים מבית ספר באינטרנט נותנת לי יותר בטחון עצמי.

מסכים ה						לא מסכים ה
7	6	5	4	3	2	1

17. תקשורת באינטרנט עם אנשים לא מבית ספר, עוזרת לי לתקשר יותר טוב עם החברים מבית ספר בבית .

מסכים ה						לא מסכים ה
7	6	5	4	3	2	1

18. לתקשר עם החברים מבית ספר באינטרנט גורם לכך שזה קל יותר לתקשר איתם כשאני פוגש אותם בבית הספר.

מסכים ה						לא מסכים ה
7	6	5	4	3	2	1

נא למסור את השאלון למראיין.

תודה על שיתוף הפעולה!!!!

8. Hebrew Summary

תקציר

במהלך העשור האחרון מספר האנשים המחברים לאינטרנט גדל באופן אקספוננציאלי. השימוש הנפוץ ביותר באינטרנט השתנה מהשגת ידע, דבר אטרקטיבי בעיקר עבור יחידים בעלי רמה גבוהה של צורך קוגניטיבי לדעת ולהבין (Katz et al, 1992) אל עבר היותו מקור עיקרי לאינטראקציה חברתית. (D'Amico, 1998; Moore, 2000; Kraut, Mukopadhyay, Szczypula, Kiesler, & Scherlis, 1998).

באמצעות מגוון רחב של אמצעי תקשורת מתווכת מחשב (CMC) (דוגמת דואר אלקטרוני, רשתות חברתיות, חדרי צ'אט, מסרים מיידיים וכיוצא בזה) אנשים משתפים היבטים ופרטים בנוגע לחיי היום יום שלהם, שומרים על קשר עם משפחה ועם חברים, מחליפים מחשבות, רגשות ודעות האחד עם השני. במובנים רבים, תקשורת חברתית באמצעות תקשורת מתווכת מחשב זהה לתקשורת הפנים מול פנים המסורתית אישית. על כן, אנשים פונים יותר ויותר לאינטרנט בכדי למלא צרכים חברתיים ופסיכולוגיים חשובים.

האינטרנט מציג בפני הפרט המחובר לרשת מצבים חברתיים רבים, ובכך פותח אפשרויות חדשות רבות להשפעה פסיכולוגית משמעותית על הפרט. אינטרנט כבר אופיין כבעל איכויות לגבי אינטראקציות חברתיות דוגמת אנונימיות רבה יותר, הידועה כמאפשרת לייצר אינטימיות וקרבה גדולים יותר, המגדילים חשיפה עצמית (Laurenceau, Barrett, & Pietromonaco, 1998; Reis & Shaver, 1988), תחושה חזקה יותר של בטחון ושליטה על ההתקשרות בשל היכולת לסיים את אותה בכל עת, קלות שימוש על ידי יצירת מקומות מפגש לבעלי אינטרסים מיוחדים, בהם יכול אדם לקחת חלק בכל עת, ביום או בלילה ובקלות יחסית למצוא אחרים החולקים אינטרסים משותפים (Byrne, 1971).

האינטרנט, המאופיין כבעל איכויות בכל הנוגע להתקשרויות חברתיות, בשילוב עם אפשרויות חברתיות רבות לתקשורת בין אישית, מציע למשתמשים דרכים ייחודיות למשחק עם הזהות שלהם, לחקור את "האני האמיתי" שלהם, ולאפשר ל"אני האמיתי" לבוא לידי ביטוי (Turkle, 1995). תהליך זה של הפרט הבוחן התנהגויות והתנסויות הקשורות למשחקי תפקידים וגילוי "העצמי האמיתי", כבר נחקר והוכר כבעל חשיבות רבה בעיצוב זהותו ובריאותו הנפשית של אינדיבידואל, ללא קשר לנסיבות ההתקשרות (Striker, 1968; Hogg et al, 1995; Rogers, 1951).

במהלך שני העשורים האחרונים, נבחנו בהיבטים שונים הסיבות וההשלכות של אנשים לחשוף את "האני האמיתי" שלהם באינטרנט. לדוגמא, כבר הוצע בעבר כי **תקשורת מתווכת מחשב** היא בעלת

השפעה של הגברת תחושת בדידות, החלשת הקשרים החברתיים ואף דיכאון (Kraut, Patterson, & Lundmark, 1998; Nie, Hillygus, & Erbring, 2002). מצד שני, מחקרים ארבים הגיעו לתובנות הפוכות, דוגמת חיזוק מערכות יחסים (Lenhart, Rainie, & Lewis, 2001), הגברת תחושת השייכות לקבוצה והעצמת תחושת הערכה עצמית (Harter, 1999), ואף רווחה נפשית כללית והגברת תחושת הסיפוק מהחיים (Bargh, McKenna, & Fitzsimons, 2002; Helliwell & Putnam, 2004; Bargh & Shaw & Gant, 2002; McKenna, 2004; McKenna & Bargh; 2000).

עיקר המחקרים הללו מתמקדים במבוגרים, ולא במתבגרים. מחקרים הראו כי קיים הבדל משמעותי באופן השימוש באינטרנט בין מבוגרים לבין מתבגרים; מבוגרים נוטים לאמץ טכנולוגיות חדשות בצורה מעמיקה ומקיפה יותר מאשר מתבגרים, ואז לשלב אותם בתוך החיים החברתיים שלהם בקלות יחסית (Brown, Mounts, Lamborn, & Steinberg, 1993; Madden & Rainie, 2003). לעומת זאת, עבור מתבגרים חשוב במיוחד להשתייך ולהיות מקובל בקבוצת בני גילם, על מנת לגבש את זהותם ואת מקומם בעולם. תקופה זו בחייהם בדרך כלל מאופיינת בחוסר ודאות וחוסר ביטחון. במהלך תקופה זו, יכולות חברתיות מכריעות נרכשות באמצעות התקשרות עם אנשים קרובים להם (דוגמת הורים, עמיתים).

עבור בני נוער מוזנחים ודחויים היבט זה של התפתחות פסיכולוגית הינו חשוב עוד יותר, זאת כיוון שלמתבגרים מוזנחים ודחויים אין קשרים חזקים עם בני גילם מבית הספר. חשוב ביותר שיהיו אנשים שידעו, יקבלו ויתנו תוקף לעצמי האמיתי, אך מתבגרים שהוזנחו ונדחו בדרך כלל מנועים מלהביע היבטים חשובים של העצמי עם בני גילם ועם אחרים. דבר זה מדאיג במיוחד, כיוון שתופעת ניכור כזו וחוסר יכולת להביע ולקבל תוקף להיבטים מכריעים של העצמי יכולה להשפיע במידה רבה על ההצלחה בלימודים ובהמשך בחיים, במגוון תחומים רחב יותר.

יחד עם זאת, במידה ובני נוער מוזנחים ודחויים מסוגלים לפצות על כך באמצעות השימוש בתקשורת מתווכת מחשב, ולהשתמש בו בכדי להביע היבטים חשובים של העצמי, לחזק קשרי חברות ולחזק מערכות יחסים עם חברים על בסיס זה, אמורות להיות השלכות קריטיות משמעותיות על בריאותם ורווחתם הנפשית. מחקר זה מנסה לספק תובנות בנוגע לפוטנציאל של תקשורת מקוונת לשיפור איכות החיים ושלל ההיבטים הפסיכולוגיים הרלוונטיים בהתפתחות המתבגרים.

בכדי לבחון שאלות מחקר אלו ערכתי סקר בקנה מידה גדול הכולל 155 תלמידים, בנים ובנות, בגילאי 12 עד 17. הסקר מורכב מ-56 שאלות הנוגעות להרגלי השימוש באינטרנט, ושאלות הלקוחות ממדדים פסיכולוגיים קיימים.

בהסתמך על הסקירה הספרותית, בניתי שלושה אינדקסים של מדדים מנבאים וארבעה אינדקסים של מדדי תוצאה. הנחות המחקר הן כי ככל שמתבגרים דחויים ומנוזים משתמשים יותר בתקשורת מתווכת מחשב, כך עולה הסבירות שיבטאו את "האני האמיתי" שלהם עם חבריהם או בני גילם, דבר שבתורו יגדיל את תחושת השייכות לקבוצה באמצעות תקשורת מתווכת מחשב וכתוצאה

מכך הם יחוו תחושה חזקה יותר של קבלה חברתית במקום דחייה חברתית, הערכה העצמית מוגברת, חיזוק מערכות יחסים עם חבריהם ובני גילם ויחוו הפחתה בתחושת בדידות.

תוצאות המחקר מראות כי מתבגרים המרגישים בודדים, סובלים מחרדה חברתית ומרגישים דחויים ומנוודים חברתית, נוטים יותר לבטא את "האני האמיתי" באינטרנט, וכי אלו המבטאים את "האני האמיתי" נוטים לחוש תחושה חזקה יותר של שייכות לקבוצה, דבר שבתורו יביא לעליה בתחושת ההערכה העצמית, תחושה מוגברת של שייכות לקבוצה, מערכות יחסים חזקות יותר, תחושת בדידות מופחתת, ואף ירגישו פחות ביישנים.

באופן מפתיע, למרות שמצאתי קשר חזק בין השייכות הקבוצתית כמתווך לכל התוצאות המפורטות במודל המחקר, נמצא שבמקביל ישנו קשר ישיר וחזק מאוד בין "האני האמיתי" כמתווך לכל התוצאות החזיוניות לפי המודל, למעט הפחתת תחושת הבדידות בתוך ההמון.

מחקר זה עשוי להיות פתח למחקרים נוספים בכל הנוגע להיבטים החברתיים של השימוש בתקשורת מתווכת מחשב ו"האני האמיתי" בקרב מתבגרים. בנוסף, מחקר זה יכול לשמש בסיס למחקר ארוך טווח במטרה לבחון באם הממצאים שאני מציג כאן נכונים ספציפית ליום זה ולתרבות זו, או שהינם תקפים לאורך זמן.

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אוניברסיטת בן-גוריון בנגב
הפקולטה למדעי הרוח והחברה
המחלקה לתקשורת

ההשפעות הפסיכולוגיות והחברתיות של תקשורת מתווכת מחשב על
ה"אני האמיתי" של מתבגרים דחויים ומנוודים חברתית

חיבור זה מהווה חלק מהדרישות לקבלת התואר "מוסמך למדעי הרוח והחברה" (M.A)

מאת : תומר הנדל
בהנחיית : ד"ר יעל קינן

תשרי תשע"א

ספטמבר 2010

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חתימת הסטודנט : _____
חתימת המנחה : _____
תאריך : _____
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חתימת יו"ר הועדה המחלקתית : _____
תאריך : _____

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