The Impact of M-Bullying on Self-Esteem and Subjective Well Being

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Abstract:
The mobile phone has become a symbol of membership and exclusion, providing opportunities for connection with friends and a means to establish identity and difference with social networks. However, there is also a disturbing trend of bullying including the use of the mobile phone. This paper investigates the occurrence of bullying via mobile phones (m-bullying) on high school students and its impact on self-esteem and subjective well-being. Additionally, it examines gender differences in terms of occurrences of m-bullying, levels of distress and impacts on self-esteem. A cross sectional mall intercept survey was used to collect a total of 218 responses from senior high school students who used a mobile phone. The results of the study suggest that the experience of m-bullying is widespread among high school student. Consistent with previous research indicating a link between self-esteem and subjective well-being, our findings support this relationship in the mobile phone context.

Introduction
The seamless integration of mobile digital technology with daily activities has a increasingly pervasive impact on consumers. Wilska (2003), in a study of young people’s use of mobile phones as part of their consumption styles, found that mobile communication is an extremely important part of their daily life. As well as providing the core mobile “delivery of individualized/customised relationship based, timely and location specific” services to the user (Sullivan Mort and Drennan, 2002, p. 17), it enhances efficiency and entertainment as well as increasing spontaneity (Anckar and D’Incau, 2002). It is widely acknowledged that mobile digital devices have become integrated into young people’s personal identity, for example through personalization of mobile devices (colour and design options, ring tones, screen savers, and carry cases) and through connectivity within reference groups (Pura, 2003; Wilska, 2003). For many, mobile devices are increasingly regarded as a necessity. Fitzgerald and Drennan (2003) have examined consumption practices surrounding mobile phones and found that some consumers express a strong sense of the embeddedness of mobile phones in their lives both from a communications capability and from a security perspective.

The use of the mobile phone in the teenage population has thus emerged as an important research area. Firstly, the ubiquitous nature of mobile phones’ present in teenagers’ lives is unarguable, and secondly, these teenage years are a crucial developmental stage of life (Green 2003, Taylor and Harper 2003; Ling and Yttri 2002; Garcia-Montes, Caballero-Munoz and Alvarez 2006; Wei and Lo 2006). Teenagers and children are increasingly connected to each other through technology; including the Internet and mobile phones, which allow them to communicate in ways that are unknown and unmonitored by adults (Keith and Martin 2005). Research has determined that the mobile phone has become a symbol of membership and exclusion, providing opportunities for connection with friends and is a means to establish identity and difference with social networks (Green 2003). This paper investigates the occurrence of bullying via mobile phones (m-bullying) on high school students
and its impact on self-esteem and subjective well-being. Additionally, it examines gender differences in terms of occurrences of m-bullying, levels of distress and impacts on self-esteem. The outcome of this study will inform both societal and commercial marketing strategy. It has ramifications for firms in terms of social responsibility and for social marketers in particular, it highlights a range of experiences and behaviours that may be targeted for modification.

Text messaging is an example of how teenagers use mobile phones to cement relationships; where they are considered to be of value and have been referred to in the literature as “gifts”, based on the expectation of return (Taylor and Harper 2003). Young people’s motivations for texting reflect those identified for the use of mobile phones in general; being normative, complex and deeply rooted in their perceptions of social relations (Taylor and Harper 2003). As an enabler of social interaction, it would also be expected that the device could be exploited for both positive and negative interactions, similar to other communications technologies such as the Internet. *We therefore, hypothesize that the extent to which occurrences of m-bullying and levels of distress impact will have an impact on levels of self-esteem.*

The Internet has seen the emergence of the “cyberbully”, defined as anyone who repeatedly misuses technology to harass, intimidate, bully or terrorise another person (Franek 2005/2006). It has been suggested that technology has decreased the boundaries to access people and reduced the reflection time between contemplating or planning a serious prank and actually committing the act (Franek 2005/2006). Another recent study conducted by Texas mobile in conjunction with the United Kingdom Childrens Charity (NCH) in 2005 found that 20% of youngsters admitted to experiencing some sort of bullying via email, Internet chatroom or text message and text messaging was the most dominant form (14%), with 1 in 10 youngsters also admitting to sending someone else a bullying or threatening message. 73% of those surveyed also stated that they knew the person who bullied or threatened them and of concern is that 28% of respondents did not tell anyone, one third of whom said that it was because “it wasn’t a problem”. One study (Migliore 2003 in Keith and Martin 2005) also identified differences based on gender, finding that girls inflict abuse more often than boys in the on-line environment through instant messaging, online conversations and emails. *We thus hypothesize that, in the mobile phone environment, females will experience more m-bullying than males and experience higher levels of distress.*

This disturbing trend of bullying including the use of the mobile phone has been evidenced in Australia with a recent survey finding that 14% of first year high school students had been harassed by SMS (short messaging service), (ABC 2006). Increasing concern has led to some schools banning the use of mobile phones for bullying as was recently announced by the Queensland State Government (2006). The problem of mobile phone bullying has reached such significance that it has resulted in the launch of an industry based campaign to help combat the increasing trend of mobile phone use to harass, menace or offend someone (ABC 2006). The emergence of 3G capabilities further threatens the integrity and safety of mobile phone use with potential for the availability of adult-based materials such as pornographic video clips, multimedia messages and also bullying, harassment and intimidation through peer-to-peer networks and chat rooms (Reid 2005). For young people, life dissatisfaction has been associated with social-emotional problems, such
as depression, anxiety, peer difficulties and drug abuse. In contrast, researchers have found life satisfaction linked with high self-esteem, self-concept and self-mastery (Gilman, 2001). Overall, research indicates a positive correlation between social-emotional experiences and life satisfaction (Gilman and Huebner, 1997; Harter, 1999; Lewinsohn, Redner, and Seeley, 1991; Valois et al, 2001). As the consumption of mobile digital technology is an important part of the daily lives of young people, it is highly appropriate to investigate its relationship with their subjective well-being and to relate it to specific domains such as friendship, family, work, finances, social group and leisure.

These factors introduce the potential for the exploitation of a vulnerable group and require careful monitoring and policy development in order to provide some protection. It is therefore hypothesised that levels of self-esteem will impact on subjective well-being.

Industry marketers and educators have called for greater education surrounding the use of mobile phones and other technology to reduce children’s susceptibility to bullying (Australian Mobile Telecommunications Association, 2007). Increasing the awareness that no device is anonymous in cyberspace, that people can be tracked and data can be obtained for evidence leading to punishment is thought to both increase childrens own accountability for how they use phones and also lead to those who commit such acts being punished (Franek 2005/5006). Despite the increasing trend and concern, little research has focused on the negative aspects of mobile phone use beyond industry based surveys. The focus of this phenomenon in teenagers suggests that a greater understanding of their use of mobile phones and text messaging, based on social communications theory, well-being and personality may provide information which would be crucial to reducing “cyberbullying”. The following sections will provide the methodology used for this research, provide the findings and discuss the ramifications.

In summary, we hypothesize that:

H1 The greater the frequency with which individuals have experienced m-bullying the more negative will be the influence on perceptions of self-esteem
H2 The greater the levels of distress that are experienced, the more negative will be the impact on self-esteem
H3 Females will experience more m-bullying than males
H4 Females will experience higher levels of distress.
H5 Levels of self-esteem will impact on subjective well-being

Method
A cross sectional mall intercept survey was used to collect the data. A total of 218 responses was collected through systematic sampling in a busy mall of a major destination for the holiday break after final high school exams and in the busy shopping mall of the nearby state capital. The population of interest was defined as young people of late high school age who used a mobile phone. All respondents were users of mobile phones. Of the 218 questionnaires, 38.2% (n=85) were from males and 60.8% (n=132) were from females.
The survey questionnaire comprised sets of statements about the self and the experience of using mobile phones followed by a set of demographic questions (i.e. gender and age). To improve readability and understanding, the questionnaire was pre-tested using a judgment sample of teenagers, and was subsequently revised. The statements about the self included a self esteem measure (Morris, 1965) and a subjective well-being scale (Pavot & Diener, 1993). The set of statements about mobile phones were of five types. The first set of statements which tapped responses regarding social experiences involving mobile phones were developed following focus group sessions and required yes/no responses. A set of statements about m-bullying, defined as “undesirably and/or obsessively communicated with or pursued you through your mobile phone”, which asked for a report of occurrence and a rating of experienced distress on a five point scale anchored by “not at all distressed” and “extremely distressed” followed. These statements were derived from focus groups discussions and a review of the literature. This was followed by a set of statements about actions taken following any experienced m-bullying requiring yes/no responses and a final set of mobile phone privacy statements with yes/no responses. Descriptive statistics were derived and factor analysis and simple and multiple regression analyses were undertaken using SPSS 12.0.1 for Windows.

RESULTS

Overall, 93.6% of respondents reported experiencing at least one incident of m-bullying in terms of the items listed in the scale we employed. We conducted an analysis of the data checking for gender differences and found a number of key distinctions.

There were few significant differences between genders regarding the frequency with which m-bullying was experienced. Seventy-two respondents (33.6%) claimed to have received unsolicited pornographic or obscene images or messages on their phones. Of those, boys (50.6%) were significantly more likely to have been sent such information than females (22.5%) (Chi-square=18.13; p < .001). Fifty-eight people (27.1%) had been sent threatening messages, of which 37.6% were male and 20.2% were female (Chi-square=7.94; p < .01). Fifty-three participants (24.8%) reported receiving sexually harassing messages of which, notably, significantly more were male (32.9%) than female (19.4%) (Chi-square=5.06; p < .05). One hundred and six individuals (49.5%) had also been sent excessively disclosive messages and again, males were more likely to experience this than females (Chi-square=6.18; p < .05).

We conducted regression tests on the data to test Hypotheses 1-2. H1 stated that the greater the frequency with which individuals have experienced m-bullying the more negative would be the influence on perceptions of self-esteem. Although the data did not support this conclusion at the aggregate level, we determined that such an effect did exist for female participants (t=-2.19; df 1,126; p < .05) but not for males (t=-0.04; df 1,83; p > .05). Therefore, hypotheses 1 is partially supported.

H2 stated that the greater the levels of distress that are experienced, the more negative will be the impact on self-esteem. We summated the distress levels associated with each item that comprised the m-bullying scale and regressed the composite variable against self-esteem. No significant influences were found at either the aggregate or gender level. We then proceeded to regress the individual items in a multiple
regression and found that only one of these items, “Sent tokens of Affection” had a significant impact on self-esteem ($t=-3.04; df=12,192; p<.01$). However, on inspecting for gender differences, it was observed that this effect was not significant for females. Other gender related findings were that distress was significant for males in terms of sabotage of their work/school reputation ($t=-2.0; df=12, 69; p=.05$). For females, high distress related to threatening pictures or images was significantly associated with low self-esteem ($t=-2.19; df=12, 109; p<.05$).

The issue of gender differences presented some unanticipated results. It was expected that females would experience more m-bullying than male and experience higher levels of distress. However, it was found that boys are, on average, exposed to more m-bullying instances than girls. With regard to distress levels, on nine out of the twelve items comprising the m-bullying scale, girls were significantly more likely than boys to be distressed by such experiences. They are more concerned about having private information about them exposed to others ($t=-3.09; df=1,64; p < .01$), people pretending to be someone they are not ($t=-2.06; df=1,91; p < .05$), others sabotaging their private reputation ($t=-3.62; df=1,61; p < .01$) or school reputation ($t=-3.82; df=1,55; p < .01$), being sent pornographic/obscene images or messages ($t=-2.47; df=1,66; p < .05$), threatening ($t=-3.35; df=1,53; p < .01$) or harassing messages ($t=-3.05; df=1,50; p < .01$), excessively disclosive messages ($t=-3.33; df=1,141; p < .01$) and exaggerated messages of affection ($t=-2.88; df=1,101; p < .01$). It is also notable that girls are significantly more likely to keep any m-bullying messages (Chi-square=16.82; $p < .01$) and tell a trusted adult about what was happening (Chi-square=5.66; $p < .05$).

It was finally hypothesized that levels of self-esteem will impact on subjective well-being. A further regression analysis revealed that self-esteem has a significant positive effect on perceptions of well-being at both the aggregate and individual gender levels. However, neither frequency of m-bulling nor distress experienced had a direct impact on well-being. Hypthesis 5 is therefore supported.

**Discussion and conclusion**

The results of the study suggest that the experience of m-bullying is widespread among high school students. Although some research has indicated that that m-bullying occurs frequently, it appears to underrate the incidence of the phenomenon quite significantly. In contrast to some studies where the incidence rate hovers around the 14% mark, our findings indicate that nearly all students have experienced at least one form of m-bullying by the time they have left high school. The distinction may be due to the different samples used. One employed a group of first year high school students study (ABC Online, 2007) while NCH (2005) surveyed 11-19 year olds which may have diluted the figure. The conclusion we draw is that exposure to m-bullying experiences increases with age and by the last years of school is more prevalent.

In contrast to previous research suggesting m-bullying would not appear to be increasing, our study finds that it is more prevalent than generally perceived among one of the key marketing segments for mobile phone companies (i.e. senior high school students). This extremely high incidence of m-bullying (93.6%) is clearly a major concern for the mobile phone industry, child welfare groups, schools and policy
makers. In fact, the Australian Mobile Telecommunications Association has initiated a social marketing campaign to increase awareness of mobile phones and bullying as well as providing strategies to cope with this type of bullying. It has also produced a policy template to assist schools for governing mobile phone use in schools (Australian Mobile Telecommunications Association, 2007).

Although it was proposed in Hypothesis 1 that the more individuals experienced m-bullying the more negative will be the influence on perceptions of self-esteem, our findings showed this not to be the case for the aggregate sample. Instead, an effect was observed for females only which suggests that they are more sensitive to higher rates of bullying. Boys, on the other hand, may be accustomed to general insults within their peer group and, as it is a common feature of male teen culture. Consequently, they are likely to suffer less damage to their self-esteem. That is not to say, however, that steps should not be taken to dramatically decrease incidences of m-bullying of both sexes. As discussed in the results, only specific types of m-bullying created distress that significantly impacted on self-esteem. For males, sabotage of their school/work reputation and receiving unwanted tokens of affection were the most likely to cause negative effects on self-esteem. This may be that within the school context, boys are sensitive about their status within the institutional setting and that they feel embarrassed by having to deal with unwanted affection. For some boys, this may feel like harassment. Girls’ self-esteem, on the other hand, appears to be most affected by distress arising from threatening pictures or images. This suggests that the thought of being perceived as someone deserving of receiving such material harms their self image.

H3 suggested that females would experience more m-bullying than males. In fact no difference was observed in terms of overall experience. However, differences were found on specific types of m-bullying experiences. Boys reported receiving significantly more messages that were pornographic/obscene, threatening, sexually harassing, and excessively disclosive in nature. This is in contrast to findings from bullying in the internet context suggesting that girls engage in more of this type of behaviour than boys. The finding is important and may be a reflection of how genders differ in their use of electronic communication technology. For example girls may use the Internet more for communicating than boys, but mobile phones are used equally by males and females for communication (Lemish and Cohen, 2005). Despite the hypothesis (H4) that females would experience higher levels of distress as a result of m-bullying, we found no evidence of gender differences.

Consistent with previous research indicating a link between self-esteem and subjective well-being, our findings support this relationship in the mobile phone context. As the consumption of mobile digital technology is an integral part of the daily lives of young people, it is important to investigate its relationship with subjective well-being and to relate it to specific domains such as m-bullying that takes into account friendship, family, work, social group and leisure. Youth-related health and social issues are costly for individuals, industry and government organisations in terms of time, money and effort. An understanding of the impact of mobile devices and m-services on youth well-being, which may enable educators, consumer groups, youth counsellors, parents and government organisations to develop intervention strategies, is therefore important for the nation’s future. The results of this research have direct social marketing applicability. Specifically, we envisage the development
of curriculum modules that can be deployed in schools to actively combat the damaging behaviours we have highlighted in the paper. Moreover, this research will provide policy-makers with an increased understanding of the impact of m-services on youths’ lives in order to develop strategies that can be used to promote health attitudes and behaviours that positively affect their well-being.

Reference List


Humphreys L 2005 Cellphones in public: social interactions in a wireless era, New Media & Society, v. 7, n. 6, pp. 810-833.


Ling R 2000 “We will be reached”: the use of mobile telephony among Norwegian youth, *Information Technology and People*, v. 13, n. 2, pp. 102.


Wei R & Lo V-H 2006 Staying connected while on the move, *New Media and Society*, v.8, n. 1, pp. 53-72.

