# Modes of Cyberstalking and Cyberharassment: Measuring the negative effects in the lives of victims in the UK

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**Abstract.** Cyberstalking may occur solely in the digital realm, or may form part of a wider campaign targeting individuals on and off-line. The impact cyberstalking has on victims may differ depending on the type. In this paper, we use Sheridan and Grant's (2007) classifications of, "Proximal with offline", "Online only" and "Cross-over" stalking types. These classifications are applied to responses gathered from 278 victims of cyberstalking and cyberharassment through the 2011-2014 ECHO survey. We analyse the responses to first classify the type of stalking experienced and then the reported number and types of effects in the life of the victims on a per-group basis. Using chi-square analysis, we identify that victims in the case of proximal and Cross-over stalking are significantly more likely to report negative changes to their work, relationships and financial lives and to report more negative changes in these areas than those experiencing online only. In addition, in the relationship category Cross-over cases provoke significantly more changes than proximal cases. This indicates that cases where the stalker moves from being an online presence to a proximal presence have an extreme impact and therefore should be treated with the utmost concern, both in terms of support and safeguarding strategies.

## 1. Introduction

r using the Internet and other forms of computer communications; whereas cyberstalking involves the repeated and deliberate use of the Internet and electronic communication tools to frighten, intimidate or harass someone. According to the Office for National Statistics [1] in the UK, harassment offences, including those incorporating a digital element, rose by 62 percent to 112,564 incidents in 2015, compared to the previous year.

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It should be noted these are merely reported incidents and are likely therefore to constitute only the tip of the iceberg in terms of prevalence. Indeed, according to Tokunaga and Aune [2], estimates suggest that around 20-40 percent of Internet users will experience some form of cyberstalking carried out against them. Cyberstalking may involve a combination of in-person attacks and attacks that are mediated purely through technological channels. Paladin, the United Kingdom's stalking advocacy service report that since 2013, "most stalking now contains a cyber or technological aspect" [3]

In this paper we analyse responses to questions regarding the types of negative impacts cyberstalking and cyberharassment have had on the lives of those having experienced them. We used data gathered from 278 self-identifying victims of cyberstalking and online harassment. The primary data are responses gathered through the 2011-2014 ECHO ("electronic communication harassment observation") survey. We find that the experiences described by victims within this dataset, fit the definitions of both online harassment and cyberstalking.

We then apply Sheridan and Grant's [4] classification of stalking types to ascertain whether different forms of stalking have differing levels of impact. Their classification was developed through analysis of responses of 1,051 self-defined victims of stalking sourced mostly from the UK, US and Australia and hence is a useful classification as applied to our dataset which is derived from the UK. 858 of the responses Sheridan and Grant analysed were classified based on the nature of their stalking experience as, "Purely online", "Cross-over", "Proximal with online" and "Purely offline". Here cross-over denotes cases where the stalking is initiated online and then moves offline and proximal with offline includes cases where the stalking begins offline, but the attacker also utilises the medium of the Internet to continue harassment of the victim. This classification may be useful to us when judging the impact of cyberstalking in-context, however in this paper we extend these definitions to include all forms of electronically mediated cyberstalking behaviours (e.g. we include those orchestrated via mobile phone and SMS text message as well as other technologies that may be used to conduct stalking behaviours).

In this paper, due to using the Web as the primary means of dissemination for ECHO, we do not seek to compare prevalence of cyberstalking with that of offline stalking. One thing the data does allow us to do however, is to compare the number of negative impacts of cyberstalking and cyberharassment reported between the purely online, cross-over, and proximal with online groups.


## 2. Method

The primary data used are responses gathered through the 2011-2014 ECHO ("electronic communication harassment observation") survey. Specifically, the data used in this analysis is derived from two questionnaires (ECHO versions 2.0 and 2.1), of which 2.1 is an extension of 2.0 with additional questions concerning participant demographics (e.g. ethnicity, whether they consider themselves to have a disability, sexual orientation,..). These ECHO questionnaires provide a unique and detailed insight to cyberstalking and online harassment cases.

*2.1. Effects on relationships*

Participants were asked, "Have you experienced any changes in your relationships?" Options offered were: Lost touch with friends/family,  Gave up social activities, Relationship break-up and Other (followed with a free-text response).

*2.2. Effects on other people*

Participants were asked, "Has this experience adversely affected other people in your life? If yes, which of the following?" Options offered were: Affected my children, Affected my partner, Affected other members of my family, Affected my acquaintances, Affected my friends – offline, Affected my friends – online, Affected my work colleagues, Affected my neighbours , Affected people I know through chat rooms and networking sites and Other (followed with a free text response).

*2.3. Effects on electronic communications technology use*

Participants were asked, "Has the harassment resulted in a reduction in your use of electronic communications? If so, which ones?" Options offered were: Social networking sites (e.g.Facebook, Twitter, Linkedin), Instant messaging services(e.g. Windows live messenger, Yahoo messenger, Trillion, Skype), Webmail (e.g. Gmail, Hotmail, Yahoo), Work email, Mobile phone calls, Mobile texts, Physical environment (being approached in person by the harasser), MMORPG (World of Warcraft, EVE Online etc...),, Other online game, Online Dating and Other (followed with free text response).

*2.4. Financial effects*

Participants were asked "Have you experienced any changes in your financial situation?" Options offered were: Lost money, Expense of security measures, Legal expenses, Annual leave used up on stalking related problems, Changed/sold car, Moved home, Expense of therapy, Expense of fixing property damaged by harasser (e.g. buying a new computer, buying a new phone) and Other (followed with free text response).

*2.5. Classifying the reported behaviours in-line with Sheridan and Grant's types*

We used responses to the questions, "In which environment did you first meet/encounter your harasser?" to ascertain whether the stalking started off as cyberstalking or traditional stalking and then, "In which environments have you experienced harassment? (Select all boxes that apply)" to ascertain whether the stalking behaviours were experienced in the physical world, via digital technologies or both. For example if a participant told us they first encountered their stalker face-to-face and then that same participant selected any digital environments in response to the second question, we classified the stalking campaign against them as, "proximal", whereas if a participant told us they first encountered their attacker online and then indicated they had experienced harassment in physical environments, this would be classified as, "Cross-over". Those who met their attacker online and experienced only online harassment are

classified as "online only" cases. All other combinations were classified "Offline Only" or "Unknown" and are outside the scope of this paper.

We use the Pearson's chi-squared test for statistical independence, the null hypothesis being that there is no difference between the negative life effects of the various classifications of stalking. We reject this null hypothesis if the resulting chi-squared statistic is less than 0.05. In these cases we determine that there is a difference in the effects of the different classification types.

### 2.6. Participant demographics

#### 2.6.1. Stalking type experienced:

Table 1 provides a breakdown by stalking type.

**Table 1.** Breakdown of participants by type of harassment

| Classification | Count | Percentage |
|---|---|---|
| Proximal | 135 | 44.3% |
| Online only | 91 | 29.8% |
| Cross-over | 35 | 11.5% |
| No harassment | 25 | 8.2% |
| Unknown | 17 | 5.6% |
| Offline only | 2 | 0.7% |
| Total | 305 | 100 |

In all demographics and results that follow, analysis is based on the 278 participants left after removing those 25 who did not self-identify as having experienced some form of harassment or who were classified as having experienced offline only stalking (2 participants).

#### 2.6.2. Gender and Age:

The gender breakdown of participants was: Male: 56 (20.1%), Female: 214 (76.9%), Undisclosed: 8 (2.8%). 14 participants chose not to disclose their age. For the 264 that did:

**Table 2.** Age demographics of respondents to the ECHO 2 questionnaire

| Gender | Mean Age | Mode Age | Median Age | Std. Dev. |
|---|---|---|---|---|
| Female | 34.5 | 39 | 36 | 11.06286 |
| Male | 39.1 | 30 | 40.5 | 13.74074 |
| All | 36.7 | 36 | 36 | 11.7367 |

## 3. Results

**Table 3.** Percentage of cases experiencing particular types of changes in their lives as a result of cyberstalking, broken down by type.

| Type of Change | Proximal | Online Only | Cross-over | p |
|---|---|---|---|---|
| **Worklife** | 71.9% | 53.8% | 68.6% | **0.0186** |

| | | | | |
|---|---|---|---|---|
| **Relationships** | 78.5% | 56.0% | 85.7% | **0.0002** |
| **Other People** | 87.4% | 80.2% | 85.7% | 0.3332 |
| **Financial** | 63.0% | 44.0% | 68.6% | **0.0061** |
| **Online behaviour** | 80.7% | 79.1% | 82.9% | 0.8876 |

Comparing the different types of case, we looked at which areas the respondents experienced changes in their life due to the harassment. A chi-square test indicates that for working life, relationships and financial changes, where the Online Only cases have a lower percentage reporting changes in these areas, is not independent of the case type. This suggests that Proximal and Cross-over cases cause more changes in these areas, but that all types have a high likelihood of causing changes to relationships with acquaintances and with a victim's online behaviour.

No significant differences were noticed in the effects on 'Other people' or 'Usage of electronic communications' categories related to the type of harassment. The results for the other categories are presented below:

*3.1. Mean average per respondent number of effects experienced in working life by stalking type*

**Table 4.** *Mean per respondent number of worklife effects experienced*

| Type of Change | Mean | >1 effects | 1 effect | No Effects |
|---|---|---|---|---|
| **Proximal** | 1.259259 | 31.852% | 40.000% | 28.148% |
| **Online Only** | 0.846154 | 18.681% | 35.165% | 46.154% |
| **Cross-over** | 1.514286 | 37.143% | 31.429% | 31.429% |

Proximal and Cross-over have significantly **(p** = 0.03309) more effects in the worklife of victims than in online only cases.

*3.2. Mean average per respondent number of effects experienced in relationships by stalking type*

**Table 5.** Mean per respondent number of family effects experienced

| Type of Change | Mean No. Effects | >1 effects | 1 effect | No Effects |
|---|---|---|---|---|
| **Proximal** | 1.37037 | 41.481% | 37.037% | 21.481% |
| **Online Only** | 0.89011 | 25.275% | 30.769% | 43.956% |
| **Cross-over** | 1.828571 | 65.714% | 20.000% | 14.286% |

Cases involving Cross-over stalking/harassment have significantly **(p** = 0.03619) more effects reported than Proximal or Online Only.

*3.3. Mean average per respondent number of changes in financial situation by stalking type*

**Table 6.** Mean per respondent number of online communication effects experienced

| Type of Change | Mean No. Effects | >1 effects | 1 effect | No Effects |
|---|---|---|---|---|
| **Proximal** | 1.888889 | 49.630% | 13.333% | 37.037% |
| **Online Only** | 0.769231 | 18.681% | 25.275% | 56.044% |
| **Cross-over** | 2.028571 | 45.714% | 22.857% | 31.429% |

Proximal and Cross-over are significantly more likely to cause more financial effects (p=6.421 E-05) to the victim than online only stalking.

## 4. Conclusion

Previous work [4] considers the different types of cyberstalking lying on a scale based on the amount of cyber involvement with least to most: Offline Only, Proximal, Cross-Over and Online Only. With differences in effects being associated with the amount of cyber involvement. However, our results indicate that the amount of cyber-involvement may not explain the differences entirely. Cross-Over cases rather than lying between Proximal and Online Only in terms of effects, actually have their own unique characteristics.

Overall, the findings from a psychological perspective indicate that the victims of harassment whether proximal, Cross-over or purely online endure high levels of negative effects and changes to their life. The changes victims make to their lives are generally due to becoming more suspicious of people, more withdrawn or presenting with emotional distress, which affects the personal aspects of life associated with day-to-day living. In addition, those who reported more life changes due to the harassment are more likely to present with anxiety and fear, and although on-line stalking causes less life changes as demonstrated here, the sense of not knowing who the culprit is in online stalking or if the offender may make a face-to-face appearance must be extremely intimidating.

Cases where there is real life contact are more likely to cause changes in the victim's lives in terms of their worklife, their financial status and their close relationships. Importantly, they are not only more likely to cause a change in these areas but also to cause more changes, leading to a higher impact on the victim's life. Whilst Cross-over cases have been treated as a variation on proximal cases with more reliance on technology, we have identified a difference in the effects on victims close relationships, where Cross-over cases cause more changes than the other types. One hypothesis is that the intrusion of someone unknown from outside into the lives of your close friends and family causes more disruption. This paper considers just one aspect of cyberstalking/harassment and future work will be done to determine any other differences in the effects of the mode attack.

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