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Almond, L, McManus, MA, Brian, D and Merrington, DP

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Article

Exploration of the risk factors contained within the UK's existing domestic abuse risk assessment tool (DASH): Do these risk factors have individual predictive validity regarding recidivism?

Dr Louise Almond

School of Psychology, University of Liverpool, Eleanor Rathbone Building, Bedford Street South, L69 7ZA, email: lalmond@liverpool.ac.uk tel: 00 44 (0)151 794 6708

Dr Michelle A. McManus[1]

Policing and Criminal Investigation, School of Forensic and Investigative Science, University of Central Lancashire, Preston, PR1 2HE, email: mamcmanus@uclan.ac.uk tel: 00 44 (0)1772 894154

Daniel Merrington

School of Psychology, University of Liverpool, Eleanor Rathbone Building, Bedford Street South, L69 7ZA. danielmerrington@hotmail.co.uk

David Brian

Policing and Criminal Investigation, School of Forensic and Investigative Science, University of Central Lancashire, Preston, PR1 2HE, email : djbrian@uclan.ac.uk tel: 00 44 (0) 1772 893539

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[1] Corresponding author

Abstract

Purpose-Risk factors contained in the existing UK Domestic Abuse (DA) risk assessment tool (DASH) were explored for individual predictive validity of DA recidivism using data from Devon and Cornwall Constabulary.

Methodology-1441 DA perpetrators were monitored over a 12 month period, and 270 (18.7%) went on to commit a further DA offence. The individual risk factors which were associated and predictive of increased risk of recidivism were identified.

Findings-Only four of the individual risk factors were significantly associated with an increased risk of DA recidivism, 'criminal history'; 'problems with alcohol', 'separation', and 'frightened'. Therefore, 21 of the risk factor items analysed could not discriminate between non-recidivist and recidivist perpetrators. Only two risk factors were able to significantly predict the recidivist group when compared to the non-recidivist group. These were identified as 'criminal history' and 'separated'. Of those who did commit a further DA offence in the following 12 months, 133 were violent and 137 were non-violent. The risk factors associated with these types of recidivism are identified

Practical implications- The implications for UK police practice and the DASH risk assessment tool are discussed.

- There are key individual risk factors contained within the DASH

- By identifying individual factors that can prioritise those individuals likely to recidivate and the severity of that recidivism, this could assist police decision making regarding the response and further prevention of DA incidents

- The validation of association between individual factors and DA recidivism should improve the accuracy of risk levels.

Originality-This is the first large scale validation of the individual risk factors contained within the UK's DA risk assessment tool. It should be noted that the validity of the DASH tool itself was not examined within the current study.

1. Introduction

1.1. Definition of Domestic violence and prevalence.

The UK's Home Office cross-government definition of domestic violence and abuse is: *any incident or pattern of incidents of controlling, coercive, threatening behaviour, violence or abuse between those aged 16 or over who are, or have been, intimate partners or family members regardless of gender or sexuality. The abuse can encompass, but is not limited to: psychological, physical, sexual, financial, emotional (*Home Office, 2015).

UK figures reported by CAADA (Co-ordinated Action Against Domestic Abuse, 2016) suggest a high prevalence of domestic abuse with around 2.1 million people suffering from some form of domestic abuse. This has been estimated to involve 1.4 million women (8.5% of the population) and 700,000 men (4.5% of the population). Data collected within a 6 month period between April and September 2015 show that domestic abuse was flagged in a third of violence against the person offences (Office for National Statistics, 2015). When exploring the rates of DA within Devon and Cornwall, Her Majesty's Inspectorate of

Constabulary (HMIC) Inspecting Policing in the Public Interest (2014) recorded 9,212 recorded crimes resulting in charges for 20% of cases.

1.2. Risk assessment tools for domestic abuse

In an ideal world the police would respond to every case in the same way, but limited resources due to budget cuts mean that the police have to respond selectively to DA incidents. Risk assessment tools can be used to direct the management of these limited resources, as they allow for clear intra- and inter-agency documentation and communication of risk (Chan, 2012). This is conducive to ensuring appropriate action is taken to manage the risk proportionately, according to the outcome of the risk assessment.

Risk assessment for DA concerns the formal application of instruments to assess the likelihood that DA will be repeated by the same perpetrator (Roehl & Guertin, 2000). The central purpose of risk assessment tools is to ensure the safety of victims by targeting and managing the risks of perpetrators (Laing, 2004). Risk assessment tools must, therefore, be accurate to provide a structured way for responding officers to gather detailed and relevant information about offenders of DA (Campbell, 1995; Ioannou, 2008). A Rapid Evidence Assessment, based on 16 systematic reviews, of domestic abuse risk factors and risk assessments was conducted by the College of Policing in 2014 They reported that a total of 16 different risk assessment tools were identified within the studies, with 'current evidence base for each tool was found to be limited, making general conclusions about the efficacy of existing models problematic' (p.7). They concluded that the Ontario Domestic Abuse Risk Assessment (ODARA) and the Spousal Assault Risk Assessment (SARA) were the most 'promising' in predicting risk of domestic abuse.

1.3. DASH

Within the UK the Domestic Abuse, Stalking and harassment and Honour based violence (DASH) model has been defined as the next generation of domestic violence risk assessment built on "*the existing good practice of the evidence based SPECCS+ Risk Identification, Assessment and Management Model*" (Richards, 2009). DASH was commissioned by the then Association of Chief Police Officers (ACPO) in partnership with CAADA and has been endorsed by other UK domestic violence agencies (Richards, 2009). The ACPO has since been replaced by the National Police Chiefs Council (NPCC). The DASH is a multi-agency assessment tool, designed for use by front line officers, specialised staff, call handlers, station reception officers, custody officers and intelligence staff as well as front line practitioners of partner agencies. Richards (2010) states that the DASH tool uses evidence-based risk identification and assessment to help those working with victims of domestic abuse to identify those who are at high risk of harm, particularly serious violence and homicide.

The NPCC DASH has been used as standard practice throughout the UK since 2009, as a tool for assessing the risk of the suspect committing a further domestic abuse offence. The NPCC DASH contains four sections (i) *current situation*, (ii) c*hildren/dependants*, (iii) *domestic violence history* and (iv) *abuser*. It is assumed that the greater the number of risk factors, the greater the risk of the suspect committing a further domestic violence offence. Individuals completing the checklist are then required to categorise their assessment as 'standard' (likelihood of no further serious harm), 'medium' (offender has potential to cause serious harm, but is unlikely to do so unless there is a change in circumstances) or 'high' (a risk of serious harm that could happen at any time). A survey conducted by HM Inspectorate of Constabulary (2014) found that there are considerable variations in the way DASH is utilised, completed and scored across England and Wales. In particular, they found forces had

different interpretations of the number of identified risks or 'ticks' that constitute a high risk case; how risks should be weighted (if at all); and when professional judgment should be used.

Despite the claim that this tool is evidenced based, to date, there appears to be little in the way of published empirical reviews, or evaluations around the efficacy of the DASH model and risk factors contained within it. There is one publication that refers to DASH, Walklate and Mythen (2011), which examined 13 domestic abuse deaths. They highlighted that just under 50% of DA incidents involving a death had not been previously identified as high risk, thus indicating potential validity problems within the tool, or with how the tool was being used. It is imperative therefore to establish each individual risk factor's association with DA recidivism and across the full spectrum of risk - low, medium and high.

1.5. Aims of the study

The aim of the study was to empirically validate the individual risk factors contained with the existing DASH risk assessment tool using data from Devon and Cornwall Constabulary. The study will use methods that have been previously used in similar research (see Chan, 2012; Kropp, 2004, Williams & Houghton, 2004) in order to establish the predictive capacity and accuracy of each of the individual risk factors. This study will not validate the DASH risk tool and resulting risk levels due to previously noted inconsistencies in coding, scoring systems and thresholds, thus making any comparisons between forces unreliable. As all forces do record the individual risk factors, these alone will form the basis of this study.

1) Identify the individual risk factors that are associated with domestic abuse recidivism;

2) Identify the individual risk factors that are associated with two specific types of recidivism: violent and non-violent domestic abuse.

2. Methods

2.1. Sample

Data from 1,441 completed DASH risk assessments were extracted from Devon and Cornwall's pre-coded police databases. Perpetrator groups were categorised following extraction of domestic abuse recidivism data in the 12 months following the index assessment, recidivism being defined as a further crimed incident involving an intimate partner. The categories were: Non-recidivist, Recidivist violent and Recidivist non-violent. Non-recidivist perpetrators who had been incarcerated for 5 months or more in the follow up period were excluded from the sample, as the researchers could not ascertain whether these individuals might have offended had they not had this significant reduction in opportunity. Recidivists who had been incarcerated were, however, included in the study.

The researchers conducted a two stage analysis. The first stage identified and separated non-recidivists from recidivists. The second stage, whilst maintaining the non-recidivist sample further divided the recidivists into non-violent and violent using content analysis. Individuals were only categorised as non-violent recidivists if they had no violent DA offences in the 12 month follow-up period. Non-violent DA offences included; criminal damage, harassment, theft, and breaches of orders. Violent recidivists were individuals who had a minimum of one violent DA offence in the 12 month follow-up period; these individuals may therefore have a mix of violent and non-violent DA incidents. Violent DA offences included; assault, serious assault and sexual incidents. The purpose of this division was to enable identification of risk factors specific to either non-violent or violent domestic abuse.

2.2. Data capture

DASH assessment data from Devon & Cornwall Constabulary consisted of all domestic abuse instances reported to the constabulary in the month of February 2011. The 12 month follow up period for recidivism data, consisted of any further instances of domestic abuse occurring from the index DASH assessment up to and including 31st January, 2012. Ethical clearance for this study was grantedby the University of Liverpool.

2.3. Procedure

Each recorded case included the presence or absence of the 25 DASH risk factors recorded by Devon and Cornwall Constabulary (see Appendix) for the target month February 2011 (N=1,441). To enable exploration of domestic abuse recidivism each index perpetrator was then systematically entered into the database up to and including 31st January 2012 to establish 1) whether there were any further DA offences by this perpetrator and 2) whether the further incidents could be deemed violent or non-violent.

2.4. Statistical Analysis

Statistical analysis was a two stage process. Stage 1 compared non-recidivists to DA recidivists. Stage 2 divided recidivists into violent and non-violent categories resulting in three categories of perpetrators (non-recidivists, non-violent recidivists and violent recidivists). Chi-square analyses were performed to establish any differences between the perpetrator groups in percentages of 'present' entries for each of the 25 DASH risk factor items recorded by Devon and Cornwall Constabulary.

The comparison groups were systematically paired (i) Non-recidivists vs. Recidivists, (ii) Non-recidivists vs. Non-violent recidivists, (iii) Non-recidivists vs. Violent recidivists and finally (iv) Non-violent recidivists vs. Violent recidivists. Risk factor items 'present' in a higher percentage of one group vs. another would indicate an association between that item

and that type of DA recidivism. In order to reduce false positive significant results Holm Bonferroni corrections were applied to the critical p value (Holm, 1979). This procedure is deemed to be more powerful than traditional Bonferroni corrections (Olejnik, Li, Supattathum, & Huberty, 1997). All odds ratios were considered to indicate small (<1.5), medium (1.5-5), large effect (>5) sizes using the cut-off points evidenced by (Chen, Cohen & Chen, 2010).

In order to identify which risk factors produced the optimal predictive model for each of the above comparative groups, the significant risk factors identified by Chi square analysis underwent a logistic regression analysis (Chan, 2012; Kropp, 2004; Williams & Houghton, 2004).

3. Results

3.1. Stage 1

3.1.1. Non-Recidivists vs. Recidivists

To establish risk factors associated with increased risk of domestic abuse recidivism, perpetrators with at least one further instance in the 12 month follow up period were identified. The presence/absence of each of the risk factors for these recidivists were compared to those individuals for whom there was no further domestic abuse instance within the following 12 months (non-recidivist). Chi-square analysis of the non-recidivists (n =1171) and recidivists (n =270) established that 4 of the 25 DASH risk factors (Table 1) were associated with domestic abuse recidivism in the follow up period. This meant that 21 of the risk factor items analysed did not discriminate between non-recidivists and recidivists.

The DASH risk factor which relates to 'criminal history' showed the largest differentiation. This factor was present in 71.1% of recidivists compared to 51.2% of non-recidivists DASH assessments, χ^2 (1, N = 1441) = 35.00, p < .001. The risk factors items relating to 'separation', 'problems with alcohol' and 'frightened', were also found to be present in a significantly higher percentage of recidivist than non-recidivist DASH assessments, p<.002

When the four significant factors were entered into a binary logistic regression only 'criminal history' b = 0.70, Wald χ^2 (1) = 21.13, p < .001 and 'separation', b = 0.52, Wald χ^2 (1) = 12.09, p = .001, were found to be significant with correct group allocation to recidivist versus non recidivists in 81.3% of cases.

3.2. Stage 2

Stage 2 of the analysis explored risk factors associated with types of domestic abuse namely violent and non-violent resulting in 3 perpetrator group comparisons.

3.2.1. Non-Recidivists vs. Non-Violent Recidivists

Chi-square analysis conducted between the non-recidivist (n=1171) and non-violent recidivist (n =137) groups established that 6 of the 25 risk factors on the DASH, were associated with non-violent domestic abuse recidivism in the follow up year (see Table 2)., 19 of the items did not differentiate between the two groups.

The DASH risk factor which related to 'stalk/harass' showed the greatest differentiation. This factor was present in 50.4% of non-violent recidivists and compared to 30.2% of non-recidivists (χ^2 (1, $N = 1308$) = 22.72, $p < .001$). The risk factors 'criminal history', 'separation', 'alcohol', 'frightened' and 'suicidal' were also found to be present in a significantly higher percentage of non-violent recidivist than non-recidivist DASH assessments, $p<.003$.

When the six significant factors were entered into a binary logistic regression four factors 'stalk/harass' (b=-.55, Wald χ^2 (1) =7.87, p< .01) ; 'criminal history' (b= .48, Wald χ^2 (1) =5.37, p< .03); 'separation' (b= .49, Wald χ^2 (1) =5.19, p< .03) and 'alcohol' (b=-.44, Wald χ^2 (1) =5.55, p< .02) were found to be significant with correct group allocation to non-violent recidivist versus non recidivists in 89.5% of cases.

3.2.2. Non-Recidivists vs. Violent Recidivists

Non-recidivists and violent recidivists index DASH assessment were compared. Chi-square analysis between non-recidivists ($n =1171$) and violent recidivists ($n =133$) identified 3 of the 25 risk factors were associated with violent domestic abuse recidivism in the follow

up year (see Table 3). There were no differences between the groups for the remaining 22 risk factors.

Once again the risk factor item relating to 'criminal history' was found to show the largest differentiation (21.7%) between the groups. This risk factor was present in 72.9% of violent recidivists index DASH assessments compared to 51.2% in non-recidivists (χ^2 (1, $N = 1304$) = 22.59, $p < .001$). The risk factors 'choke' and 'pregnancy' were also found to be present in a significantly higher percentage of violent recidivist than non-recidivist DASH assessments, $p<.002$

When the significant factors were entered into a binary logistic regression all three 'criminal history' (b= .81, Wald $\chi2$ (1) =15.18, p< .001); 'pregnancy' (b= .67, Wald $\chi2$ (1) =10.07, p< .003); and 'choke' (b= .44, Wald $\chi2$ (1) =4.73, p< .03), were found to be significant with correct group allocation to violent recidivists versus non recidivists in 89.8% of cases.

3.2.3. Non-violent Recidivists vs. Violent Recidivists

To explore differences in risk factors associated with types of domestic abuse non-recidivists were removed from analysis. The DASH assessments of the two recidivist perpetrator categories violent ($n =133$) and non-violent ($n =137$) were compared. Chi-square analysis indicated that 3 of the 25 risk factor items showed significant percentage differences between the perpetrator groups (see Table 4). The remaining 22 risk factor items revealed no differences and therefore could not differentiate between an increased risk of non-violent or violent domestic abuse recidivism.

A significantly higher percentage of violent recidivists had 2 risk factors: 'pregnancy' and 'injuries' (see Table 4) present in their DASH assessments in comparison to non-violent recidivists. The greatest differentiation between the two groups was found for the risk factor

'stalk/harass', this factor was present in a higher percentage of non-violent recidivists, 50.4%, compared to 27.8% of violent recidivists.

When the significant factors were entered into a binary logistic regression, all three: 'pregnancy' (b= 1.39, Wald $\chi2$ (1) =15.25 p< .001); ' injuries' (b= 1.24, Wald $\chi2$ (1) =8.84, p< .004) and 'stalk/harass' (b= -1.13, Wald $\chi2$ (1) =16.39 p< .001) were found to be significant with correct group allocation to violent recidivist versus non-violent recidivists in 63.3% of cases.

4. Discussion

Twenty-five risk factors contained within the current risk assessment used by the majority of UK Police Forces, in response to domestic abuse incidents, were explored in relation to their individual predictive validity for DA recidivism. The extent of any differentiation was established for each risk factor between those who did not commit a further DA incident in a 12 month follow up period (non-recidivists – 81.3%) with those who did (recidivists), with further analysis exploring those who reoffended with a DA violent (9.2%) or non-violent (9.5%) incident. The key finding was that four DASH factors were found to be associated with a risk of DA recidivism of any type (16% of the 25 DASH risk factors analysed) with only two factors able to significantly predict the recidivist grouping when compared to the non-recidivist group. These were identified as 'criminal history/trouble with police' and 'separation'. The findings of criminal history as a predictor of DA is in keeping with similar findings in a number of other studies (Hilton, *et al.,* 2008; Heckert & Gondolf, 2004; Hilton, *et al.,* 2004), as is the effect of separation or the threat of separation on DA (Weisz, Tolman, & Saunders, 2000). These two factors alone were able to correctly allocate individuals into non-recidivist and recidivist groups in 80% of cases.

In the second stage of analysis, recidivists were divided into non-violent and violent groups to further explore the DASH risk factors. When comparing non-recidivists with non-violent recidivists, six factors discriminated between the groups. These included the four factors that discriminated between non-recidivists and recidivists in Stage 1, with an additional two more being identified: 'perpetrator suicidal' and 'stalk/harass'. From these six factors, four were able to significantly predict the correct grouping. The factors criminal history and separation were again significant predictors along with 'problems with alcohol', which is another well recognised risk factor for DA (Stith et al2004; Hilton, *et al.,* 2004) and 'stalking/harassment', which researchers recognise can form part of a cycle of DA (Coleman, 1997). These four factors were able to predict correct allocation to non-recidivist and non-violent recidivist groups in almost 90% of cases.

. The number of significant risk factors decreased from six to three when comparing non-recidivists with violent recidivists. All three factors were associated with an increased risk of further violent DA. Again, consistent with other research findings 'criminal history' was a significant predictor along with pregnancy, and choke. Pregnancy has been found by many researchers to be a risk factor for DA (Taillieu & Brownbridge, 2010; Jasinski, 2004), McFarlane, Parker, Soeken, Bullock. (1992) reported a 17% prevalence rate of physical or sexual abuse during pregnancy. Correct allocation to non-recidivist or violent recidivist groups was again 90% using only these 3 factors.

When differentiating between the recidivists groupings (non-violent and violent recidivists), two factors were identified indicating an increased risk of violent DA (pregnancy and injuries), with one factor indicating an increased risk of non-violent DA (stalk/harass). Interestingly, this was the only group comparison that did not identify criminal history as a significant association. Pregnancy was found to significantly predict violent DA recidivists

regardless of the comparator group (i.e., non-recidivists or non-violent recidivists), suggesting this is a risk factor for violent DA only. Correct allocation to non-violent recidivist or violent recidivist grouping was only 63%, which is significantly lower than the previous findings in this study. This indicates the similarity of these two recidivists groupings in terms of their risk factors.

It is important to note that the current study explored the individual DASH risk factors and their ability to identify DA recidivism within a 12 month follow-up period. It did not explore the final risk level given within each DASH assessment (standard, medium or high) and as such cannot comment on the validity of the DASH tool. This decision was made as there are no current national guidelines as to the thresholds, or scoring systems forces should use to determine whether someone is a, moderate or low risk. Therefore, any research that aims to validate the DASH and its risk levels would only be valid for the individual police force examined, as each Police force may potentially have different scoring systems and different thresholds for risk (HMIC, 2014). The majority of forces do, however, record the presence/absence of the DASH risk factors, thus these were the basis of this study.

Due to the limited 12 month time period of follow up from the index incident in identifying recidivism, the findings from this research cannot be generalised to periods beyond that. Whilst it may provide an indication of increased risk for DA recidivism in the short term following a DA incident, individuals cannot be definitively classed as non-recidivists or otherwise beyond this 12 month period. Therefore, future validation of such DA tools may benefit from a much longer follow up period and explore in more detail the nature of repeat DA recidivists in terms of the number and types of offences committed. In addition, follow-up was conducted on the suspect identified in the index DASH and it is possible that

the follow-up DASH did not involve the same victim. The ability to follow-up cases through victim records was not possible within the police data, with only suspect information available. However, considering the relatively short period of follow-up time (12 months), it is reasonable to suppose that the victim and suspect in any subsequent DASH's remained the same.

The research is limited to reported DA cases and the very nature that the index incident has been reported may have a bearing on reporting to the police of future incidents. The data set used DA offences only, and did not involve police incidents that were deemed not to be crimes, or incidents not brought to the attention of the police. Therefore, it cannot be inferred with any degree of certainty that those classed as non-recidivists or non-violent did not go on to commit further DA incidents non-violent, or otherwise. Future research may benefit from broadening the scope of data collection to health and domestic abuse services, or follow up self-reports, however, these may all present their own problems. Caution should be taken when generalising the findings from this research to other populations as these DA assessments were completed by officers of Devon and Cornwall Constabulary and involved incidents in this region only. In order to address sample bias and explore other factors, further research would benefit from data collection, using the same procedure, from other UK forces, as behaviour patterns of perpetrators may differentiate between regions, as may police officers decision-making and assignment of risk.

Within the DASH the risk factor criminal history is listed as a single risk factor with no way of identifying the type of history recorded (violent, drugs, sexual). Future research should consider identifying the types of previous criminal convictions to explore whether certain categories of offences hold a greater predictability of future DA. A final limitation of note lies with the risk assessment tool itself. The DASH is primarily a self-report by the victim of risk factors 'present', thus, all the problems and biases of self-reports measures are

also relevant here, including recall bias, underreporting and inflated reports, as well as subjective understanding of the risk factors.

Findings of this study indicate a need for further empirical validation of the DASH, its risk factors and associated risk levels. By identifying factors that can prioritise those individuals likely to recidivate and the severity of that recidivism, this could assist police decision making regarding the response and further prevention of DA incidents. For example, on the basis of the findings here, DA perpetrators who have a criminal history were more likely to commit further DA than those who do not, and 'victims' who are pregnant, or recently had a child were more likely to be subjected to further violent DA. Given that the purpose of the DASH tool is to aid decision-making processes, the validation of association between factors and increased risk enables prioritisation of services and, therefore, should improve the accuracy of risk levels. Improved risk assessment accuracy enhances effective communication between police and other front line services with other multi-agency intervention teams (e.g., Multi-Agency Risk Assessment Conference, Multi-Agency Safeguarding Hub) and ultimately effective prevention and intervention measures as well as correct allocation to relevant rehabilitation programmes. Given the findings of the current study in identifying key individual risk factors within the DASH, the next stage of validation should look at the weightings and predictive modelling in effort to develop a model that can best predict future DA recidivism.

In conclusion, the data used from Devon and Cornwall Constabulary suggests that only a limited number of individual risk factors contained within DASH held predictive DA recidivism validity. The targeting of recidivist DA perpetrators, specifically those engaging in violent recidivism is a key challenge for modern day policing. The individual risk factors

contained within the DASH tool, which requires the cooperation of the victim for its completion, seems to have limited capability in terms of identifying those perpetrators who are likely to commit a further DA incident within 12 months. The findings from this study, and those from future research, can inform the development of a DA risk assessment tool that has optimal predictive capacity as well as being operationally useful for frontline police officers in aiding their decision making processes.

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Appendix 1. The 25 DASH risk factors recorded by Devon and Cornwall Constabulary.

1. **Abuser suicidal** (Has .....ever threatened or attempted suicide?)
2. **Abuse often** (Is the abuse happening more often?)
3. **Abuse worse** (Is the abuse getting worse?)
4. **Alcohol** (Has..... had problems in the past year with alcohol?)
5. **Child conflict** (Is there conflict over child contact?)
6. **Children present** (Was a child present?)
7. **Choke** (Has .....ever attempted to choke you?)
8. **Control / Jealous** (Does.... try to control everything you do / or are excessively jealous?)
9. **Criminal history** (Does.... have a criminal history?)
10. **Drugs** (Has.... had problems in the past year with drugs?)
11. **Financial** (Are there financial issues – are you dependent on the suspect for money / has .... recently lost their job / other financial issues?)
12. **Frightened** (Are you frightened?)
13. **Hurt child / dependent** (Has ..... ever hurt the children / dependants?)
14. **Hurt others** (Has ..... hurt others?)
15. **Injuries** (Did ..... inflict injuries upon you?)
16. **Isolated** (Does you feel isolated from family / friends?) / does... try to stop you from seeing friends / family / doctor or others
17. **Mental health** (Has..... had problems in the past year with mental health?)
18. **Pet abuse** (Has ...... ever mistreated an animal or the family pet?)
19. **Pregnancy** (Are you pregnant or has there been a recent birth (in the past 18 months??)
20. **Separation** (Have you separated or tried to separate from .... within the last year?)
21. **Sexual** (Does.... say or do things of a sexual nature that makes the victim feel bad)
22. **Stalk / Harass** (Does ......constantly text, call, follow, stalk or harass you?)
23. **Threat to kill** (Has .... ever threatened to kill the you/ someone else?)
24. **Victim suicidal** (Does you feel depressed / have suicidal thoughts?)
25. **Weapons / Objects** (Has .... ever used weapons / objects to hurt you?)

Table 1: Chi-square analysis of DASH risk factors differentiating non-recidivists (n =1127) and recidivists (n =270) of domestic abuse.

Risk factor	Non-Recidivists % 'present'	Recidivists % 'present'	*Sig*	*OR*
Do you know if.. has ever been in trouble with police/criminal history?	51.2	71.11	*.000+*	2.34*
Have you separated/ tried to separate from…?	55.8	70.7	.000+	1.92*
Has… had problems in the past year with alcohol?	36.3	47.4	*.001*	1.58*
Are you frightened?	48.0	58.5	.002	1.53*

+significant in logistic regression * medium effect size

Table 2: Chi-square analysis of DASH risk factors differentiating non-recidivists ($n =1171$) and non-violent recidivists ($n =137$) of domestic abuse

Risk factor	Non-Recidivists % 'present'	Non-violent Recidivists % 'present'	Sig	OR
Does ... stalk/harass you?	30.2	50.4	.000+	2.34*
Have you separated/ tried to separate from…?	55.8	73.7	.000+	2.23*
Do you know if.. has ever been in trouble with police/criminal history?	51.2	69.3	.000+	2.15*
Has… had problems in the past year with alcohol?	36.3	51.8	.000+	1.89*
Are you frightened?	48.0	62.0	.002	1.77*
Has… ever threatened or attempted suicide?	33.6	46.7	.002	1.74*

+significant in logistic regression * Medium size effect

Table 3: Chi-square analysis of DASH risk factors differentiating non-recidivists (*n* =1171) and violent recidivists (*n* =133) of domestic abuse.

Risk factor	Non-Recidivists % 'present'	Violent Recidivists % 'present'	*Sig*	*OR*
Do you know if... has ever been in trouble with police/criminal history?	51.2	72.93	*.000+*	2.56*
Has ... attempted to strangled/choke you?	21.4	35.3	*.000+*	2.00*
Are you currently pregnant or have you had a baby in last 18mths?	15.7	30.1	*.000+*	2.31*

+significant in logistic regression * Medium size effect

Table 4: Chi-square analysis of DASH risk factors differentiating non-violent recidivists (*n* =137) and violent recidivists (*n* =133) of domestic abuse.

Risk factor	Non-Violent Recidivists % 'present'	Violent Recidivists % 'present'	*Sig*	*OR*
Are you currently pregnant or have you had a baby in last 18mths?	11.0	30.1	*.000+*	3.5*
Has the current incident resulted in an injury?	7.29	21.1	*.001+*	3.39*
Does ..... stalk/harass you?	50.4	27.8	*.000+*	0.38

+significant in logistic regression * Medium size effect