Probation officers' judgements: A study using personal construct theory

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Abstract

● *Summary:* Social workers and probation officers are frequently called upon to make judgements about the likelihood of re-offending. However, whilst the use of risk assessment instruments is now commonplace, the cognitive processes through which these judgements are made are rarely explicit.
● *Findings:* This study used the repertory grid method to elicit the constructs of judgements about re-offending of 15 experienced probation officers. Primary factors in their judgements were related to: (1) responsibility and risk taking behaviour; (2) criminal history; (3) self-awareness; and (4) stability. Personality characteristics, substance misuse and family dysfunction were also important. The findings are discussed in relation to two theoretical frameworks for understanding decision making: heuristics and biases and image theory, which focuses on values.
● *Application:* It is suggested that the design and implementation of assessment tools should be undertaken in the light of the constructs used in making professional judgements which inform the relevant decision making.

Keywords

Social work, assessment, re-offending

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Introduction

Criminal justice social work context

Probation officers and many other professionals make numerous risk decisions on a daily basis. The Council of Europe (2010) notes:

> Probation work involves making judgements and taking decisions. While the actions of staff are circumscribed by law and by agency policy, staff shall be trained and encouraged to exercise their professional judgement to take valid decisions whilst recognising the need for accountability. (p.6)

In Northern Ireland, where this study took place, all probation officers are qualified social workers. Internationally, this is the most common training for this type of work although, in England and Wales, a social work qualification is not required to work with offenders in the equivalent probation services. There is no Probation Service in Scotland, but similar roles are carried out by 'criminal justice social workers' with a professional social work qualification. To avoid repetition, this article will refer to 'probation officers' generally whilst diversity is recognised. However, it should be noted that the central focus of this article – understanding the cognitive processes in professional judgement – applies to social workers generally.

   Professional knowledge is increasingly organised into standardised systems. For example, it is generally recognised, in professional probation practice, that the level of risk needs to be identified before any subsequent decisions regarding intervention can be made. Andrews and Dowden (2006) talk about the 'central eight' risk factors in relation to offending. They list these in order of predictive power: history of antisocial behaviour; antisocial personality pattern; antisocial cognition; antisocial associates; family and/or marital; school and/or work; leisure and/or recreation; substance abuse (p. 11). Risk assessment has developed from such research-based knowledge into a procedural tool that can be utilised in daily practice. The factors included in such a tool are those that have demonstrated an empirical link to the area being assessed.

Actuarial vs. clinical risk factors

Some assessment tools are described as 'clinical' assessing individuals independently and relying heavily on the knowledge and skill of the particular worker. Other assessment tools are referred to as 'actuarial' and are based on statistical techniques which calculate probabilities. In a criminal justice context, four 'generations' of risk assessment regarding re-offending behaviour can be identified. These range from the 'first generation', referred to as 'structured clinical judgment', to the 'fourth' which assess factors of risk and need but also have a case management function. (Andrews & Bonta,1995; Andrews, Bonta, & Wormith, 2006; Andrews & Dowden, 2006; Bonta, 1996; Home Office, 2002; Roberts, Burnett, Kirby, & Hamill, 1996;

Webster, Douglas, Eaves, & Hart, 1997). Bonta (1996) had noted that many probation organisations classified offenders using a subjective clinical approachtaking false comfort in the ability of staff to recognise a high risk criminal when they see one' (p. 74) with Harris (2006) highlighting the 'scepticism' amongst some probation officers regarding the usefulness of actuarial assessment tools. However, research has indicated that structured risk assessment tools are more reliable than clinical assessment (Ægisdóttir et al., 2006; Gottredson & Morriarty, 2006; Hanson & Morton-Bourgon, 2009) and that third and fourth-generation tools have higher predictive validity than the earlier generations (Schwalbe, 2007).

Is there a place for professional judgement?

The assessment of risk is argued to be the single most important decision made by probation officers (Byrne, 2006) but Whitehead and Thompson (2004) propose that 'risk assessments... are only as accurate as the information fed into the instrument by the person who has interviewed the offender' (p. 80). Byrne and Robinson (1990) indicated that differences in the assessment outcome can be assigned to the individual characteristics of the worker. But what are these 'characteristics' and how do they influence the professional judgement process?

Keeler (2010), a service-user of probation, is highly critical of the risk assessment process saying that there has been a move away from genuine concerns regarding the causes of crime and the concept of rehabilitation towards actuarial classification and control. He argues that just as risk assessment tools 'dehumanise prisoners as units to be measured and managed', they also de-skill the probation officers who are 'reduced from professionals able to use judgements' to 'mere box-ticking technicians' (p. 306). Keeler (2010) would be supportive of Matravers and Hughes (2003) who state that risk assessments are 'clouded with emotion and misinformation' (p.306). In summary, whilst standardised risk assessment tools have provided some measure of consistency (Hanson & Howard, 2010; Lancaster & Lumb, 2006), there are concerns that the tools are too often used in a mechanistic fashion and are not fulfilling their potential. This may be because of the lack of connection of the tool to the cognitive processes of those professional using them. Thus, it is extremely important to explore the decision-making processes being undertaken by staff completing risk-assessment tools but it is this, which this study attempts to explore.

Professional decision making (e.g. risk assessment), however, can never be entirely standardised. Even when only 'box-ticking', professionals are necessarily involved in judging when different categorisations apply. They also make other judgements (e.g. whether someone is motivated to change), utilising criteria and signs of which they may not be entirely aware. Therefore, the process of professional judgement and decision making is very complicated. In addition, it is exacerbated by public demand for accountability and the prioritisation of resources.

The aim of this article seeks to demonstrate the use of 'personal' knowledge by probation officers when making professional judgements. It also explains, in necessary summary form, Kelly's Personal Construct Theory (PCT) and how this was utilised to analyse probation officers thinking. One probation officer's responses are explored in some detail to illustrate how professional and personal knowledge affect decision making. This is followed by a summary of the findings of an analysis of 15 other professionals' decision making. We go on to acknowledge that, whilst PCT has some limits, it can provide important insights into professional social work decision making. In conclusion, we argue that whilst systemising professional knowledge (e.g. in standardised risk assessment forms), adhering to ethical principles together with the provision of continuing education, feedback and supervision, all have roles to play, professional decision making continues to be fraught with difficulty.

PCT

PCT (Kelly, 1955) explains how people make sense of themselves and the world around them. This sense-making affects how people make decisions. According to Kelly, we are all scientists who hold our own personal ideas and philosophies about the world based on both our formal (including professional) education and personal experiences. On the basis of these theories we, like the professional scientist, develop hypotheses which we test and revise as we attempt to make sense of our experiences and the world around us (Beail, 1985). Our *behaviour* becomes the experiment. We come to understand the world by creating a personally organised system of interpretation, or constructs, of experienced events. The system is 'personal' because we interpret our own experiences through our uniquely constructed construct structure. The meaning of an event, or the individual interpretation of the event, is based on in its antecedents and the resulting consequences. We therefore look to all events to confirm or disconfirm our predictions. Kelly (1955), however, was careful to avoid conveying the idea that constructs were explicit 'cognitive' events with verbal labels. Constructs include attitudes, opinions, non-verbal information and similar. They are not limited to cognitive concepts and categories. Thus, they can include beliefs and attitudes which we might consider create biases and assumptions in the way we view the world.

A researcher working within the Personal Construct theoretical framework is able to explore an individual's interpretation of a concept, in this study the likelihood of re-offending, and subsequently achieve a greater understanding of the respondent's unique view of the world and the issue under investigation (Giles & Mullineux, 2000). In order to apply the theory, Repertory Grid technique was employed.

The repertory grid is a structured interview procedure which allows the researcher to obtain a glimpse of the world through the 'goggles' of their subject's construct system (Winter, 1992). It formalises this 'glimpse' by applying mathematical values to the constructs, as conceived within the theory of personal constructs

(Fransella & Bannister,1977; Kelly, 1955; Neimeyer, 1985). As such, there are two dimensions to a repertory grid. The *elements* are determined first. These are examples from the chosen topic of exploration, in this instance, people who have been assessed by the probation officer in terms of their likelihood of reoffending. Elements can be people (i.e. clients/service users), situations or events and can be presented in written, verbal or pictorial form. In essence, these act as a frame of reference; comparisons between the different elements (in this case offenders) allow the constructs to be elicited, i.e. the characteristics salient in one's decision making. Thus, in practice, the respondent (e.g. probation officer) will be asked to identify the elements (i.e. offenders) within the range of interest and relevant to the study (Yorke, 1989). A number of predefined roles will be used to facilitate this process. The respondent (probation officer) will then be presented with three of the elements written on cards and asked to determine 'in what way two of them are the same in some way and thereby different from the third'. The explanation given by the probation officer that discriminates between the people/elements is the *construct*. For example, with a triad involving Gary, Patricia and J.L.B., a respondent may declare that Gary and J.L.B. are 'consistent' but Patricia is 'unpredictable'. Thus, 'consistent vs. unpredictable' is the construct. This process is repeated until a sufficient number of constructs have been elicited. Hunt (1951) suggests that after 20 to 30 have been elicited, it is unlikely that any new constructs will emerge. In the third stage, each *element* is rated on a seven-point scale defined by each bipolar construct.

PCT will have identified the factors which are important to this particular respondent, when making decisions. This will be significant if any of these factors, or their dimensions, vary significantly from the best science or any other criteria for determining good professional practice (e.g. the criteria probation officers ought to be adopting when undertaking risk assessments).

In this study, probation officers' clients were selected as elements. The *elements* are displayed as columns. The *constructs* used to differentiate them are displayed as rows to create a grid. A visual assessment of a grid may reveal interesting features such as obvious similarities or differences between elements/people. These may exist at a high or low level of cognitive awareness for the respondent. This approach can reveal considerations affecting the respondent's decision making, of which he or she was unaware. George Kelly described the grid as a method for 'going beyond words' (1955, p. 17) to obtain data that a simple 'question–answer' interview procedure would not elicit.

Method

Design

The repertory grid technique was utilised to elicit probation officers' personal constructs. The results were analysed, firstly, by exploring the individual data from each probation officer using cluster and principal components analysis

and, secondly, through content analysis and an exploration of collective themes elicited from all participating probation officers.

Participants

Repertory grids were completed with 15 probation officers in Northern Ireland. They ranged in age from 32 to 56 years (mean 43.5). Three were male and 12 female, broadly representative of the gender balance within the organisation. Length of service ranged from 8 months to 29 years (mean 14 years) and professionally qualified from 3 to 26 years (mean 14). Participants' current roles included both generic and specialist. No significant differences, between respondents, were identified as related to current employment roles. All regularly assessed how likely it would be for a specific individual to re-offend.

Procedure

The probation officers were asked to consider the following nine *element* roles, drawn from the actuarial risk assessment instrument they currently used and identify a recent client in relation to each:

1. Someone you assessed but did not regard as a 'recidivist';
2. Someone you assessed as low risk (<15);
3. Someone you assessed as medium risk (16–29);
4. Someone you assessed as high risk (30–44);
5. Someone you assessed as *very* high risk (45+);
6. Someone you found particularly difficult to assess on the scale;
7. Someone whose final summary score surprised you;
8. Someone whose final summary score presented you with a 'dilemma';
9. Someone who has *not* engaged in offending behaviour.

Each probation officer was then presented randomly with three of the names they had identified in the list above (triads) and asked to identify a similarity and difference between them. The process was repeated until all the variations were exhausted or respondents were unable to distinguish further. For most, between 10 and 14 constructs were elicited. Participants then considered each individual/ element in relation to the bipolar constructs and ranked them using a seven-point rating scale. For example, someone considered to have an 'addiction' would be allocated the score 7 and if 'no addiction' a score of 1.

Specialised computer software is available for repertory grid studies; *RepGrid IV* software was used for the analysis in this study.

Results

This results section includes: (i) One individual grid to illustrate the method including identifying constructs and themes, cluster analysis and principal components

analysis and (ii) group analysis across respondents. Both actuarial and experiential factors are identified throughout the findings.

Individual analysis: Probation Officer One

Probation Officer One (RepGrid01) was employed in a generic fieldwork team. S/he identified a particular client (using a pseudonym) against each element title as shown in Table 1.

The completed grid (RepGrid/01) for this probation officer, with the person identified for each *element* appearing beneath the box and the elicited *constructs* to the side of the box, is shown in Figure 1.

Table 1. Probation Officer One – Element titles and identified service user.

Element title	Named element
Someone you have assessed but did not regard as a 'recidivist'	J.L.B.
Someone you have assessed as low (<15)	'Dale Farm'
Someone you have assessed as medium (16–29)	William
Someone you have assessed as high (30–44)	Patricia
Someone you have assessed as *very* high (45+)	Paul
Someone you found particularly difficult to assess on the scale	Dennis
Someone whose final score surprised you	Shaun
Someone whose final summary score presented you with a 'dilemma'	Gary
Someone who has not engaged in offending behaviour	Deirdre

Display Repgrid/01

Left construct										Right construct
Old	4	2	4	5	2	2	2	5	6	Young
Employed	7	7	2	4	5	2	1	1	6	Unemployed
No previous convictions	5	5	1	6	1	1	1	1	6	Previous convictions
Family man/settled	5	5	1	4	2	2	1	1	5	Unstable
Successful	3	2	5	3	4	6	6	5	2	Very successful
Lower class	3	6	4	4	5	7	6	5	2	Middle/Upper class
Aware of strong Christian values	5	6	4	5	5	5	1	4	6	Not aware of strong christian values
Arrogant	6	3	3	3	5	1	7	7	3	Unassuming
Gentle character	2	6	3	5	2	3	1	1	6	Volatile
Have addiction	1	1	7	5	7	7	7	7	2	No addiction
Positive relationship/sustainer	6	7	1	4	2	2	1	2	6	Incapable of maintaining a relationship
Home-maker	5	7	1	5	2	1	1	2	4	Homeless
Hardworker	6	6	1	4	1	1	1	1	5	Societal dropouts/losers/unable to keep it together
Consistent	5	7	1	6	1	2	1	1	7	Unpredictable

Patricia
Gary
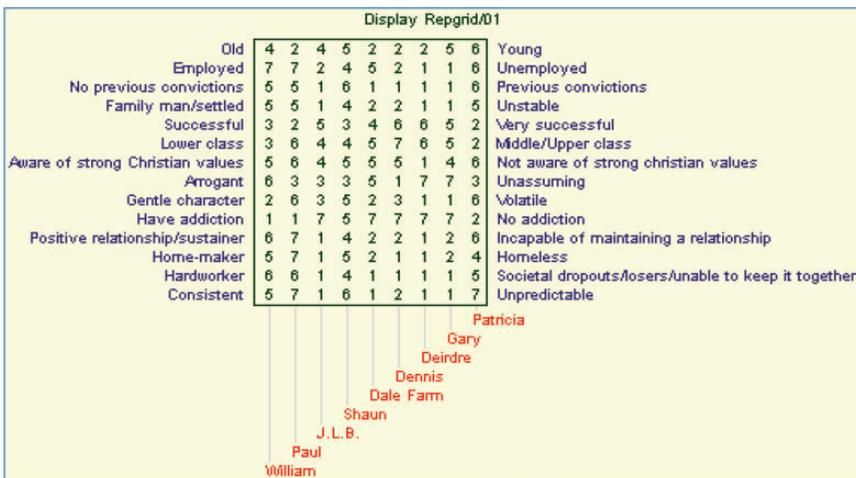Deirdre
Dennis
Dale Farm
Shaun
J.L.B.
Paul
William

Figure 1. The repertory grid completed by probation officer – RepGrid/01.

Some structural characteristics are immediately apparent (e.g. some of the constructs are categorical for example, 'employed' or 'unemployed'). The clients being considered on these constructs are therefore likely to fall at one or other end of the construct continuum. This is supported by the scoring pattern on these constructs as the more extreme scores 1/2 or 6/7 are evident. Some characteristics, such as 'unassuming', 'gentle character', 'consistent', 'aware of strong Christian values' revolve around the concept of 'human kindness'. Another cluster includes constructs such as 'home-maker', 'positive relationship/sustainer', 'family man/settled'. These highlight the importance of relationships and commitment. Another cluster includes constructs such as 'hardworker', 'employed' and 'successful' which explore productive use of time and again commitment. Constructs such as 'volatile', 'unable to keep it together', 'unpredictable' and 'unstable' suggest a thematic cluster describing more chaotic characteristics. The *cluster analysis* computing the similarity scores between the *elements* and between the *constructs* for this probation officer are illustrated in Figure 2.

This dendogram illustrates two clusters of people/*elements*. The first includes Deirdre, Gary, J.L.B., Dennis and Dale Farm where the similarity score ranges from 82 to 88%. The second cluster includes Shaun, Patricia and Paul who share a similarity score of 80–81%. The latter are perceived as having previous convictions, being volatile and unpredictable. The dendogram indicates that the similarity between Deirdre and Gary is 88% as the probation officer has rated them similarly on 12 of the 14 *constructs* with no more than one rating point
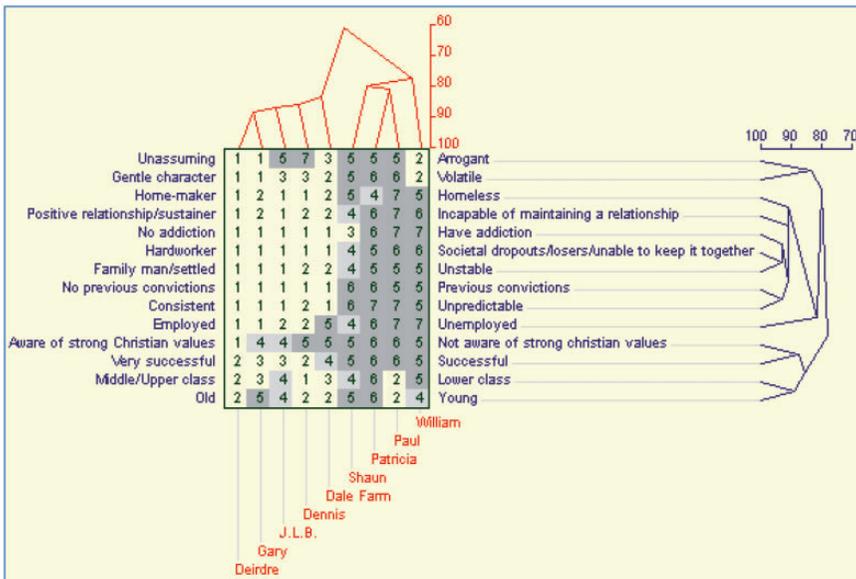

Figure 2. Cluster analysis: Probation Officer One (RepGrid/01).

difference between them. They tend to be perceived as consistent and hardworking with no previous convictions.

There are five distinct *construct* clusters illustrated by the dendogram branches on the right-hand side of Figure 2:

1. 'Unassuming' and 'gentle character' 83% similarity.
2. 'Very successful' and 'aware of Christian values' 86% similarity.
3. 'Old' and 'middle/upper class' 90% similarity.
4. The majority of the remaining constructs similarity 93%.
5. 'Employment' sits outside the other clusters 78–80% similarity.

This information highlights consistency and similarity in thinking and perception. For example, the probation officer is saying that where there are 'previous convictions', the person is also 'unpredictable' (% similarity 93). Where there is 'addiction', they are also 'unable to keep it together' and are 'unstable' (% similarity 93). These results are elaborated through principal components analysis illustrated in Figure 3.

The *principal components analysis* shows the percentage of variance accounted for by each of the components extracted. The higher the percentage of variance accounted for by a principal component, the more tightly organised and unidimensional the individual's construing is considered to be. An example of this can be seen in RepGrid/01 (Figure 3) where 76.2% of the variance in the grid can be
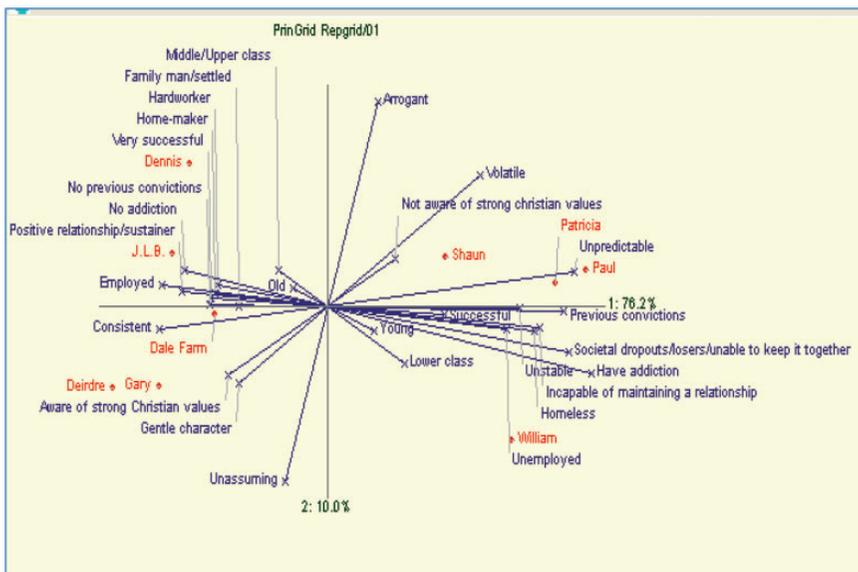

Figure 3. Principal components analysis: Probation Officer One (PrinGrid/01).

accounted for by the first principal component. Ten per cent is accounted for by the second component. The constructs 'previous convictions', 'incapable of maintaining a relationship', 'societal dropouts/unable to hold it together' and 'unpredictable' lie close to the horizontal first component line. The construct 'unassuming' lies closest to the vertical second component line. The angle between the construct lines reflects the extent to which the ratings of elements on those constructs are correlated. The smaller the angle, the more similarly they have been scored. For example, in Figure 3, the lines representing the *constructs* 'Previous convictions vs. No previous convictions' and 'Unstable vs. Family man/settled' are almost parallel indicating that these constructs are highly correlated for this probation officer.

The first component relates primarily to previous convictions and employment, the second to personality characteristics. The first relates to the literature on criminogenic factors linked to offending behaviour, the second to more affective issues.

For RepGrid/01, the individuals assessed as being of 'high' (Patricia) and 'very high' (Paul) likelihood of re-offending are located around the first component. The grid also illustrates where each individual is located in relation to each of the constructs. Individuals who were not regarded as recidivists or were assessed as having a low likelihood of re-offending were clustered around the positive side of the first component being described as 'consistent', 'employed', 'having no addiction' and being 'able to sustain relationships'. Client's perceived as having a high, or very high, likelihood of re-offending were quite strongly defined as being 'unpredictable' with 'previous convictions'. The person assessed as 'low' likelihood of re-offending (Dale Farm) was placed near the constructs 'no previous convictions', 'homemaker', 'family man/settled' and 'hard-worker'. The person who had 'not engaged in offending behaviour' (Deirdre) was positioned beside the person whose score 'presented a dilemma' (Gary) both being close to the constructs 'gentle character' and 'Christian values'.

Group analysis

A content analysis (Jankowicz, 2004) was undertaken looking at the probation officers' constructs collectively in order to identify natural categories or themes emerging. Where a construct was considered to be similar to another they were placed together in a 'category'. A number of discrete categories were identified. A colleague, to ensure reliability, repeated the process autonomously. The agreed results identified five broad categories from:

1. *Personal characteristics*: age/maturity; motivation to change; mental health; impulsivity/risk-taking/reckless; social skills; intellectual ability; response to supervision; locus of control; personal traits/personality;
2. *External factors*: lifestyle; environmental factors; peer influence; relationships; support networks; childhood/parenting issues; past anger/unresolved conflicts; paramilitary links; probation officer's personal view/feelings.

3. *Crime orientated*: offending history; type/nature of offending; offending specific issues.
4. *Substance misuse*: drug; alcohol; addiction; sobriety; relapse.
5. *Values*: responsibility/attitude; victim awareness; morals/values (including faith); reputation.

The largest group of constructs, with regard to frequency, comprised those to do with 'personal characteristics' (impulsivity/risk-taking and response to supervision). The second largest were to do with 'external factors' (support networks and relationships). This was followed by constructs which were 'crime orientated' (offending history and nature/type of offence). The fourth group comprised constructs of 'substance misuse' which incorporated alcohol and drugs and ranged from 'use' to 'addiction'. The smallest group of constructs related to values, for example, respect and victim awareness.

The data were then analysed using principal components analysis and a summary is illustrated in Table 2.

Table 2 illustrates the primary and secondary components from the analysis. The primary components identified through the PCA mirrored the results from the content analysis regarding a number of factors. The key themes were: criminal history/type of offence; responsibility/risk-taking; stability (environmental); ability

Table 2. Summary of results from the principal components analysis.

RepGrid ID	Principal component 1	Percentage of variance (%)	Principal component 2	Percentage of variance (%)
01	Previous convictions	76.2	Personality characteristics	10.0
02	Offence history	38.3	Type of offence	21.1
03	Level of responsibility taken	58.1	Employment	16.2
04	Risk-taking	81.1	Mental health issues	5.7
06	External locus of control/ won't take advice	88.8	Personal presentation (Invades personal space)	4.6
07	Offence type (low risk vs. very high risk offence)	77.1	Take responsibility for behaviour	12.0
08	Instability	41.6	Nature of offence	27.7
09	Frequency/type of offender	48.8	Family dysfunction	20.4
10	Openness and respect	83.5	Substance misuse	11.1
11	Ability and insight	76.8	Egocentric	10.2
12	Maturity and responsibility	47.0	Family and deprivation	22.5
13	Control and consistency	61.8	Motivation and rationale	17.2
14	Genuine and reflective	53.1	Internal/external control	13.2
15	Ability and stability	64	Personality characteristics	15

and insight; personality characteristics; family dysfunction; substance misuse. However, the significance of offence history, in other words the length of criminal record and the nature of the offence/s committed, was considered a very influential factor. Also, an individual's acceptance of personal responsibility for their offending behaviour, their stability (primarily in terms of accommodation) and the presence of a number of personality characteristics such as, being open, being genuine and being able to reflect. Many of these constructs and themes are represented in the assessment instruments currently used in recidivism assessment; however, some are not addressed as explicitly.

Discussion

Innovative methods of studying decision making are required given the complexity of social work and the vulnerability of our clients (Taylor, 2006). The repertory grid technique explored the content and structure of the 'implicit theories' used by the participating probation officers through which the process of assessment and professional judgement was viewed. Kelly (1963) proposes that individuals function as 'active scientists' striving to make sense of the world by continually testing and revising hypotheses about social reality. He argues that instead of passively responding to environmental stimuli, people are active agents and, as such, actively interpret or construe events and then behave in ways which are consistent with their own particular view of the world. The information gathered in this research provided a 'snapshot' of probation officers' construct systems. Some constructs were evaluative in that they offered an opinion about the offending behaviour ('unlikely to sustain behaviour') whilst others attributed a rationale for the behaviour ('childhood abuse'). Other constructs were more personal and related to an individual's behaviour in the context of supervision ('will take advice') or how they portray themselves in supervision ('invades personal space'). Finally, some referred to the probation officers evaluation of the personal values (e.g. 'have integrity') and personal beliefs (e.g. 'strong Christian values') of the clients. The process helped to tease out issues wielding high levels of influence or dominance as well as identifying areas of potential bias and/or stereotyping. For example, for one probation officer, 'addiction' and 'breach of supervision' were strongly linked (90%). This suggests that when the probation officer assesses an individual as having an 'addiction', he or she is at least expecting that they will breach supervision. This provides a comprehensive insight into the tacit processes within assessment practice as this probation officer may be unaware of his/her association between these two factors which may, in turn, influence their assessment decisions.

The key themes identified through the principal components analysis are listed in Table 3 against the nearest equivalent actuarially based risk factors identified by Andrews and Dowden (2006).

However, some of the constructs elicited in the present study suggest that probation officers were also considering experiential factors not supported by robust empirical research. Constructs such as 'Feel protective over them vs. They are able

Table 3. Key themes identified placed against actuarially based risk factors.

This study (2016)	Andrews and Dowden (2006)
Criminal history/type of offence	History of antisocial behaviour
Personality characteristics	Antisocial personality pattern
Ability and insight	Antisocial cognition
Responsibility/risk-taking	Antisocial associates
Family dysfunction	Family and/or marital
Stability (environmental)	School and/or work
Substance misuse	Leisure and/or recreation
	Substance misuse

to get on with things', 'Do not know their father vs. know their father' and 'Reputation of offending is deemed positive vs. struggle with their reputation'. The diverse nature of these constructs illustrates the complexity of the assessment process. There is also potential for 'bias' and the suggestion that probation officers are not always evaluating using a 'professional' evidence base. Ruch (2002) helps to explain this and identifies three types of knowledge that she believes are utilised in decision-making processes. First, there is 'orthodox knowledge', the objective information provided by scientific empirical research. Second, there is 'tacit knowledge' which incorporates knowledge accrued over time but which may not be readily articulated. Third is 'practice wisdom' which is 'experiential theory . . . derived from integrating over time orthodox theoretical understanding with personal experience' (p. 203). Ruch's model suggests that a worker processes empirical knowledge when facilitating procedural guidelines but, in addition, utilises their professional 'tool-box' which contains a bank of knowledge from cultural, practical and personal sources. Ruch (2002) describes this as a filter through which the practitioner sorts information and identifies patterns of meaning. The study results illustrate that probation officers are using both a number of risk factors based on robust research and factors which do not have such a strong empirical foundation. Inevitably, professional judgement must include mechanisms by which research knowledge is applied to the case at hand. This is discussed further below in terms of reflective practice, heuristics and image theory. As any profession develops, there has to be a process where factors identified through experience are then clarified, conceptualised and measured in terms of their effect as risk factors. At this stage, we have to expect that there will be some attributes which are not empirically based, but which in time might be.

Social workers must utilise the knowledge, skills and values that they have gained through their education, training and experience in order to make decisions and take appropriate action. These 'decisions and actions' may in turn have serious ramifications for service users. Houston (2015) emphasises the importance of reflective practice and the need for conscious examination of the self in order to develop an awareness of how personal and psychological characteristics, as well as experience,

influence how we see and respond to others. Reflection has often been cited as the key to developing both personal and professional effectiveness as it questions our thoughts and subsequent behaviours (Gardner, 2014; Knott & Scragg, 2010). The use of repertory grids and the exploration of the constructs elicited illustrates how such 'scrutiny' can take place and how social workers can develop a greater awareness of themselves and avoid the creation of 'oppressive structures' (Houston, 2015, p. 8) in practice. The increasing demands for public accountability mean that greater attention needs to be given to understand how social workers make judgements about risk (Taylor & Campbell, 2011). This study adds to our knowledge of the mental constructs used by criminal justice social workers in making 'threshold judgements' in terms of the ways they conceptualise the characteristics which distinguish one situation from another (Taylor & Killick, 2013).

The cluster analysis results provide an interesting insight into the thought processes of the probation officers with the possible impact on subsequent judgements becoming apparent. It is possible that, in the context of high caseloads and pressing deadlines, where such a strong association between constructs exists, mental associations or shortcuts will be taken (Taylor, 2016). The final assessment may therefore not be a true representation of the unique individual being assessed. Jones, Brown, and Zamble (2010) suggest that in complex cognitive tasks, such as risk assessment, as the amount of information increases so personal judgement becomes impeded. The results of the repertory grid analysis demonstrate the extent and variety of the factors being considered by probation officers in the assessment task. An awareness of such complexity and the links and shortcuts in one's thinking as a practitioner may be a first step in addressing and reducing potential bias.

Mental shortcuts to decision making are widely recognised and are usually considered in terms of biases (Tversky & Kahneman, 1974). However, it may be that such mental shortcuts, 'heuristics', are an essential and intrinsic way that human beings simplify complex information (Gigerenzer & Goldstein, 1996). As Taylor (2017) suggests, we cannot amass all possible information in making every decision in life, including professional social work decisions. The completion of the repertory grid exercise allowed issues to be explored at a deeper level of cognitive awareness. Gladwell (2006) cites T.D. Wilson who states 'The mind operates most efficiently by relegating a good deal of high-level, sophisticated thinking to the unconscious' (p. 12). This concurs with concepts of Personal Construct Psychology on which the repertory grid is based: '*behind any single act of judgement that a person makes (consciously or unconsciously) lies his or her implicit theory about the realm of events within which he or she is making those judgements*' (Fransella, Bell, & Bannister, 2004, p. 3).

The results may also be considered in the context of 'image theory'. Beach and Connelly (2005) propose that an individual has a bank of knowledge that can be divided into three categories. The first is the 'values image' which embraces the individual's values and beliefs, and which may or may not be readily articulated. The constructs elicited through the repertory grid process can be seen, on occasion, to be directly linked to the individual probation officer's personal values, for

example, 'lack of respect vs. respect for society, 'background of church attendance – moral message vs. no background of church attendance – no moral message'.

In their model, Beach and Connolly (2005) suggest that these values may be sufficient to inform a decision. In a recidivism assessment context, this could be the assessor aligning themselves sympathetically with someone whom they perceive shares similar values to themselves. This process may not be conscious as many values and constructs develop in early childhood and may even exist with no verbal label attached. The assessor could be vulnerable to 'fundamental attribution error' (Ross, 1977) where the influence of the value similarity outweighs presenting situational factors. As one probation officer in the study stated: '*Values and experience contribute most strongly to professional judgement on a daily basis*'.

However, the practitioner may not be at liberty to base a decision solely on values as people do not act as autonomously at work as at home. Issues of legislation, agency policy and procedure would require consideration. If the values image is not sufficient to inform the decision, the second category within Beach and Connolly's (2005) model is the 'trajectory image'. The individual making the decision reflects on their goals for the future and what they believe to be appropriate behaviour. In the assessment of recidivism, this may require the probation officer to consider future goals, for example, they may review the offender's case and weigh up the effectiveness of their intervention in terms of agency objectives. In doing so, they may also ponder the risks to themselves as a worker. These risks may relate to work load pressures and the contemplation of effort hours required to impact on the case effectively. Alternatively, the risks may relate to concerns regarding agency reputation and/or public safety. Consideration of these factors within the original values context may be sufficient for the probation officer to make a decision. As one probation officer stated: '*On occasions our own values can be tested then the professional decision making needs to take over and rationalise outcomes for offender and public*'.

However, if indecision remains, Beach and Connolly (2005) suggest a third category, the 'strategic image'. They suggest that each goal, within the trajectory image, has a unique plan for its achievement. The probation officer may consider the information from the first two categories in the context of strategic, future planning. This could be consideration of future issues such as the likelihood of the individual re-offending or it could include personal objectives, such as to feel competent in the assessor role. The linkage of personal constructs to image theory illustrates how probation officers' constructs span the different types of knowledge, described in the theory as 'images'. The model assists us in understanding how the breadth and depth of these constructs, personal and professional, inform our judgements and ultimately our decision-making practice.

Probation officers are perhaps under more pressure than some other social workers to make recommendations that are 'certain' and that have credibility in court. Probation officers and social workers could fall in to a 'need for certainty' (Gigerenzer, 2014) category particularly in the context of risk assessment. Whilst this study confirms the use of a number of actuarial-founded risk factors, it also

highlights a number of other key factors, the relevance of which is not yet proven through robust research.

Reflections on the method and limitations of the study

The repertory grid is a flexible procedure for eliciting a sample of constructs with minimal interference from the researcher (Winter, 1992). The grid process is liberating in that there is no 'question–answer' format and therefore no sense that there must be a 'right–wrong' answer. However, in terms of limitations, it should be noted that participants volunteered to participate, the sampling was purposive not random selection, and an assumption could be made that these were workers who were interested in the subject matter and motivated to develop their knowledge and understanding. The constructs may therefore have been restricted and omit wider ranging issues deemed relevant by non-participating practitioners,

Conclusion

The repertory grid is a promising method for illustrating the complexity of factors being considered by probation officers in their assessment of recidivism. The results indicate that a range of factors are considered, both criminogenic and non-criminogenic. The constructs presented highlight that some factors which are influential in decision-making practice do not always reflect the objective categories that are more amenable to being measured and do not exactly correspond with how we are advised to measure these concepts. In light of this, assessment tools need to take into account, not only actuarial measures of risk factors but also the ways in which the probation officer conceptualises the risks in everyday practice. The design of assessment tools needs to take in to account the people making the judgements not just the risk factors. The consideration of these results in terms of theoretical decision-making models assists in operationalising the concepts and helps our understanding of how a social worker moves from making a 'judgement' to making a 'decision'. The perspective of heuristics and biases is a useful framework through which to view the findings of this study. As indicated with a number of examples, respondents used one construct as a proxy for another. Distinct variables, for example, addiction and breach of supervision, were considered the same rather than as independent factors. Image theory, with its value dimension, also proved to be a useful theoretical framework connecting the findings of this study to the practice of decision making in social work.

The knowledge developed through this study, especially through the linkage to decision-making models, will contribute to existing understanding, not only in a criminal justice context but also in other areas of social work decision-making practice. It also explicitly illustrates the importance of maintaining and constantly developing practitioners who can reflect on 'thoughts, experiences and actions' to better meet

the needs of service users and the communities within which they reside. Repertory grids create a lens in to the world of assessment by eliciting concepts, often less tangible, perhaps even non-verbal, that are then open to consideration and scrutiny. It provides workers the opportunity to see 'in print' their thoughts and feelings, their personal connections and their subsequent conclusions.

Ethics

This study was granted ethical approval by the Probation Board Northern Ireland (PBNI) and the University of Ulster's School research governance committee.

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