

Institution: University of Portsmouth		
Unit of Assessment: UoA4 - Psychology, Psychiatry and Neuroscience		
Title of case study: The ACRE profiling assessment tools: Enhancing employers' ability to provide person-centred support for autistic people		
Period when the underpinning research was undertaken: 2008 - 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Beatriz López Vasu Reddy	Reader in Developmental Psychology Professor of Developmental and Cultural Psychology	15/09/2008 - date 01/01/2005 - 16/08/2020
Paul Morris Julie Udell	Principal Lecturer Senior Lecturer	17/09/1990 - date 01/11/2014 - 01/10/2017
Period when the claimed impact occurred: January 2015 - 31 December 2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact		
<p>Dr Beatriz López and her team at the Autism Centre for Research on Employment (ACRE) have developed an innovative approach to autism employment support that focuses on supporting employers, not just autistic employees. As part of this approach, ACRE has developed a suite of freely available Profiling Assessment (PA[®]) tools, which have benefitted 137 of the 150 autistic adults without learning disabilities (LD) known to Hampshire services. Specifically, the PA[®] tools have led to: 1) changes in policy and practice at national level across all 638 Job Centres in the UK; 2) changes to employment provision by autism professionals across Spain; 3) higher employment rates and wellbeing of autistic people without LD across Hampshire; 4) improved ability of employers to make tailored adjustments in the workplace for their autistic employees without LD; and 5) a reduction in the costs of delivering employment programmes.</p>		
2. Underpinning research		
Contextual information		
<p>In 2008, the National Autistic Society (NAS) estimated that only 15% of autistic adults in the UK were in full-time employment. The significant negative effect that unemployment has on the lives of autistic people came alongside an estimated GBP25,000,000,000 to the UK economy (Knapp et al, 2009). Informed by these figures, and to counter unemployment rates, the UK Government launched the first Autism Adult Strategy 'Think Autism' in 2010.</p> <p>Local authorities were in charge of the implementation strategy, hence, in 2011, López, and her team at the Autism Centre for Research on Employment (ACRE) started to work in partnership with all four Hampshire local authorities (Hampshire County Council, HCC; Portsmouth City Council, PCC; Southampton City Council, SCC; and Isle of Wight Council, IoWC) and Hampshire's local charity (Autism Hampshire, AH).</p> <p>At the time, Hampshire's strategic employment provision focused on supporting autistic adults (e.g. employability skills training for autistic adults). However, research by López and her team demonstrated the need to include employers' support as a core element of strategic employment provision. Specifically, this body of research demonstrated:</p>		
<p>1. The need to include employers in strategic employment provision: As a first step, López conducted an employment survey in 2012 to ensure that the limited local authority resources targeted the most pressing employment priorities. The survey was disseminated to practitioners, carers and autistic people in England and Wales and the results consistently identified that employers' failure to make adjustments in the workplace (i.e. provide low-level lighting instead of fluorescent lighting) was the primary barrier to employment. Specifically, only 25% of autistic adults who had worked reported their employer had made the right adjustments for them in their workplace (R1, Study 1).</p>		
<p>2. The need to improve the quality of training given to employers: At the time, employers' autism awareness training focused on increasing knowledge about autism. However, a study conducted in the UK and South Korea by López demonstrated that autism knowledge is not a good predictor of positive attitudes towards the condition (R2). Hence, to enhance hiring rates and</p>		

employers' willingness to make adjustments in the workplace, employers' training also needed to promote positive attitudes towards autism.

3. The need to provide individually-tailored support plans in the workplace: Traditionally, research in autism compares group performance across autistic and non-autistic groups - a methodology based on the assumption that autism is a homogeneous condition. In contrast, the team's research has systematically explored individual variability. The team's research findings consistently demonstrated that autism, in fact, is a very heterogeneous condition. For example, a stereotypical feature of employers' autism awareness training is the presence of sensory issues in autism. In contrast, the team's research shows that the majority of autistic children (74%) do not have, or only have mild, sensory difficulties (**R3**), and that there is large variability in auditory thresholds within the autistic adult population (**R4**). If there is wide variation in the cognitive profiles of autistic individuals, it is not possible to provide standard guidelines regarding the adjustments employers need to make for their employees. Therefore, this body of research demonstrated that there is a clear need to develop methods to support employers in the design of personalised support plans for their employees.

3. References to the research

3.1. Research outputs

R1. **López, B.**, Kargas, N., **Udell, J.**, & Rubin, T. (accepted 7 October 2020). Evaluation of the ACE employment programme: helping employers to make tailored adjustments for their autistic employees. To appear in *Advances in Autism: Special Issue on Autism and Employment*. Publication delayed due to COVID-19 (statement from editor with REF2 Output ID: 25153786). <https://doi.org/10.1108/AIA-11-2019-0038> [text removed for publication].

R2. Mac Cárthaigh, S., & **López, B.** (2020). Factually based autism awareness campaigns may not always be effective in changing attitudes towards autism: Evidence from British and South Korean nursing students. *Autism* 24(5), 1177-1190. <https://doi.org/10.1177/1362361319898362>

R3. Nieto, C., **López, B.**, & Gandía, H. (2017). Relationships between atypical sensory processing patterns, maladaptive behaviour and maternal stress in Spanish children with autism spectrum disorder. *Journal of Intellectual Disability Research*, 61(12), 1140-1150. <https://doi.org/10.1111/jir.12435>

R4. Kargas, N., **López, B.**, **Reddy, V.**, & **Morris, P.** (2015). The relationship between auditory processing and restricted, repetitive behaviors in adults with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 45(3), 658-668. <https://doi.org/10.1007/s10803-014-2219-2>

3.2. Evidence of the quality of the research

All the outputs listed are original studies employing robust research designs and have been published in respected peer-reviewed academic journals. R2-R4 combined have been cited 55 times according to Scopus and 78 times according to Google Scholar. R1 and R4 are returned to REF2021 with Output IDs 25153786 and 9043115, respectively.

3.3. Related grants

G1. **López, B.** Hampshire City Council, Portsmouth City Council, Southampton City Council, Isle of Wight and Autism Hampshire. *Autism Centre for Employment (ACE)*. Funded by the Autism Innovation Fund, Department of Health, 01/2015 - 06/2015 (GBP65,000).

G2. **López, B.** Applying models of ASD to the development of effective employment assessment tools. Funded by Research Autism, 12/2015 - 05/2016 (GBP27,500).

G3. **López B.** *Autism Employment Assessment*. Funded by the European Social Fund via the Solent Jobs Programme (SJP), 11/2016 - 12/2018 (GBP18,375).

G4. **López B.** Enhancing employment opportunities for people with ASD. Funded by European Social Fund (Solent LEP) via Autism Hampshire, 04/2017 - 02/2018 (GBP3,167) and by Hants & IoW Community Foundation (via Autism Hampshire), 04/2017 - 03/2018 (GBP2,996).

4. Details of the impact

The findings of López and her team have directly led to a fundamental shift in local authority employment strategic provision across Hampshire. As the Commissioning Lead for Adult Health and Social Care at HCC states: *'The research and expertise of Dr Beatriz López has been instrumental to the success of the implementation of the employment strand of the [Adult Autism] strategy'* (S1). The ACRE team, in partnership with the four Hampshire local authorities (HCC, SCC, PCC and IoWC) and Autism Hampshire (AH), have co-developed a suite of freely-available, evidence-based employment Profiling Assessment (PA[®]) tools that allow, for the first time, the systematic provision of individually-tailored recommendations for employers on the adjustments they need to make for their autistic employees without learning disabilities (LD). The PA[®] tools assess: a) employability profiles to facilitate matching the person to a suitable job; and b) cognitive profiles to identify strengths and potential adjustments required in the workplace. The demonstrated cost-effectiveness of the PA[®] tools in a series of employment programmes in Hampshire has subsequently led to policy and practice changes at national levels in the UK and Spain.

The ACRE team has also developed training packages aimed at changing attitudes towards autism, rather than merely increasing autism knowledge. Between 2015 and December 2020, ACRE staff have used these packages to train over 400 job advisors and autism ambassadors, responsible for raising employers' autism awareness in Hampshire (PCC, SCC, IoWC, HCC, AH, approximately 180 delegates), elsewhere in the UK (Worcester County Council 2018, 2019; Surrey County Council 2015 approximately 70 delegates) and in Spain (e.g. Autismo España 2019, AETAPI 2017, approximately 150 delegates).

Improved employment strategic provision in Hampshire

Since 2015, the PA[®] tools have been used across three employment programmes delivered in Hampshire: the ACE programme (15 participants) (G1, S2); the Solent Job Programme delivered by SCC and PCC (75 participants) (G3, S3a,b); and one programme delivered by Autism Hampshire (47 participants) (G2, G4, S4). To date, these programmes combined have benefitted 137 out of the approximate 150 autistic adults without LD known to local services in Hampshire at the time (S2, S3b, S4).

The inclusion of the PA[®] tools in these programmes have:

- Increased employment rates and work experience:** A preliminary report from the Solent Jobs Programme (SJP) demonstrated that 53% of 75 autistic participants gained paid long-term employment suitable to their qualifications, compared with 29% for all other participants in the programme who did not receive a PA[®] assessment (S3a). Of the 15 participants completing a work placement in the ACE programme, 10 secured paid (n=3) or unpaid (n=7) long-term positions at the end of the programme, and 7 have now gained permanent employment suitable to their qualifications. In addition, the 2 programmes delivered by Autism Hampshire, which supported 47 autistic job seekers who were not ready for work, used the PA[®] tools to identify potential career pathways and training needs to achieve their goals (S4).
- Enhanced employers' ability to make adjustments in the workplace and improved attitudes:** The ACE programme demonstrated that the PA[®] tools are effective in helping employers design individually tailored adjustments for their employees. Employees reported higher satisfaction rates (83%) (S2) with the adjustments made by their employers compared with those reported in R2 (25%). There was also a significant increase in employers' reported likelihood to employ autistic adults, from 17% (n=2) before the programme to 58% (n=7) after the programme (S2).
- Reduced on-job support and assessments costs:** The main cost associated with the employment programmes delivered at the time came from on-job support by mentors in the workplace. By providing employers with the necessary information to support their autistic employee, thanks to the use of the PA[®] tools in the ACRE programme, the need for on-job mentoring was significantly reduced to an average of 2 hours a week (S2). Specifically, a comparative cost simulation showed a cost saving of GBP6.86 per participant per hour worked relative to published costings of a previous employment programme (S2). Crucially, the reduced costs do not result in reduced satisfaction; only one client (out of 15) reported that they would have liked more hours of support (S2). The use of the PA[®] tools also reduces the time mentors

spend on assessing their clients' needs. In the SJP, employer advisors reported that the PA[®] tools are “robust” and “very valuable” and confirmed that ‘*providing the assessment online was more cost-effective and quicker than other methods*’ (S3a).

- **Increased wellbeing of autistic people:** All programme evaluations revealed significant improvements in self-esteem and wellbeing (S2, S3a, S4). For instance, in the SJP, the 75 participants who received PA[®] assessments showed an average increase of 4.47 points on wellbeing scores (6.8% of the maximum possible score) compared to an average increase of 2.125 points in participants with other conditions who did not receive a PA[®] assessment (3% of the maximum possible score) (S3a). In turn, the ACE programme reported a statistically significant increase of 1.88 point change (6.2% of the maximum possible score) in self-esteem scores and a significant reduction of 8.4 point change (16.9% of the maximum possible score) in negative mood scores (S2).

The ACE programme, led by the ACRE team, was awarded the 2016 National Autistic Society prize for the Outstanding Adult Services category. Dr Adam Feinstein, who has served as a judge in five consecutive years stated that ‘*the ACE employment programme [...], stood out as a rare example of innovation combined with the genuine integration of research and practice. The originality of the ACE programme lies in the fact that it focuses on the provision of support towards the employer, rather than on the autistic employees*’ (S5). The programme also received a special mention in the Think Autism (2016) report (Department of Health, UK) detailing progress on the implementation of the UK Adult Autism Strategy (S6, p.61).

The significant benefits that the use of the PA[®] assessment tools have had on autistic people are probably best exemplified by a 54-year-old autistic adult who had been unemployed for over 3 years after a breakdown. For him, the PA[®] tools helped his ‘*employer understand fully the kind of problems I may face*’. He also says, ‘*I have learned that I can work again. I have learned that in the right circumstances, I can be utterly professional and crack on with the job. I have had self-doubt about whether I would be able to go back to work again. This has shown me that I still can contribute to society, that I can work, and that I can feel worthy again*’ (S7).

The PA[®] assessment tools will continue to benefit autistic adults in Hampshire in future as ‘*the positive contribution of ACRE profiling services and Dr López’s expertise is clear both in terms of employment outcomes and mental health*’, and hence, ‘*we have incorporated these assessments to the continuation of the SJP programme, also funded by the European Union, [...] until June 2023*’ (Service Manager, Employment skills, SCC, S8).

Broadening the benefits to the UK and Spain

The PA[®] tools were first developed as a solution to local demand; however, funding to ACRE from Research Autism in 2016 (G2) allowed the development of an online version of the PA[®] tools. The online format and its cost-efficiency have led to changes in policy and practice in the UK and Spain. Specifically:

- **Changes in policy and practice UK:** ACRE was approached in October 2020 by the [text removed for publication] to include the PA[®] tools in the revised version of the UK Autism Adult Strategy, to be published in Spring 2021 by the Department of Health and Social Care. In this communication, [text removed for publication] also confirmed the plans to launch the PA[®] tools across all 638 UK Job Centres as part of the standard provision delivered by Disability Employment Advisors supporting autistic job seekers without LD (S9).
- **Changes in employment provision in Spain:** The PA[®] tools have been translated by the Spanish National Society for Autism Professionals (AETAPI) and have been incorporated as a core element to the employment provision across the country. AETAPI is the largest organization of professionals supporting autistic people in Spain with a membership of 950 autism professionals (S10).

The PA[®] tools were due to be launched both by the [text removed for publication] in the UK and by AETAPI in Spain during International Autism Awareness Week (April 2020). However, as a result of the COVID-19 pandemic, the [text removed for publication] had to deploy resources to support the significant rise in unemployment (S9). Consequently, launch of the PA[®] tools was delayed to 6th November 2020. For similar reasons, AETAPI delayed the launch of the tools until October 2020 (S10).

Finally, and to reach English-speaking autistic adults unknown to services, in April 2019, ACRE launched the [Autism & Employment online toolkit](#), developed in collaboration with Leeds Beckett University (GBP2,000 from PCC). This toolkit provides guidance regarding employment and includes activities and self-reflective questions to empower autistic people and their families in their journey to prepare, look for and stay in work. The use of the toolkit is one of only 3 autism toolkits recommended by the DWP (UK) in their [Guidance for employing people with disabilities and people with health conditions](#), published in March 2020 (S11). To date, the site has received over 2,500 visitors from 9 countries.

5. Sources to corroborate the impact

- S1. Statement from Commissioning Lead for Adult Health and Social Care at HCC confirming the positive contribution of Dr López to the implementation of the Adult Autism strategy in Hampshire (26/05/2020).
- S2. López, B., Kargas, N., Udell, J., & Rubin, T. and Health and Social Care commissioning leads from 4 local authorities (accepted 07/10/2020). Evaluation of the ACE employment programme: helping employers to make tailored adjustments for their autistic employees. *Advances in Autism: Special Issue on Autism and Employment*. Publication delayed due to COVID-19 (see statement from editor for REF2 Output ID 25153786).
- S3a,b. Interim evaluation reports prepared by Southampton City Council detailing the positive outcomes in wellbeing and employment for autistic adults of the Solent Job Programme (May and June 2018).
- S4. Statement from Community Partnerships Senior Manager, Autism Hampshire confirming the contribution of the PA[®] tools to the delivery of the Employment Pathways project (10/12/2020).
- S5. Statement from Dr Adam Feinstein, panel member of NAS awards 2016 (02/07/2020).
- S6. Think Autism: Update report by the Department of Health highlighting the ACE programme as an example of best practice (02/2016).
- S7. Video clip from participant in the ACE employment programme describing the benefits of the PA[®] report on the relation to his employer (09/2015) [text removed for publication]
- S8. Statement by the Services Manager from Southampton City Council confirming the inclusion of use of the PA[®] tools in the continuation of the Solent Jobs Programme until 2023 (06/07/2020).
- S9. Emails from the [text removed for publication] confirming: 1) standard provision of PA[®] assessments across the UK Job Centre network; 2) its inclusion on the refresh of the Adult Autism UK strategy and the delay in the launch of assessment provision due to COVID-19 (24/03/2020 and 14/10/2020).
- S10. Statement from the President of the Spanish National Association of Autism Professionals (AETAPI) confirming adoption of PA[®] tools and the delay of the launch of PA[®] tools due to COVID (18/12/2020).
- S11. Confirmation of the recommendation of the Autism & employment toolkit by the DWP in their [Guidance for employing disabled people and people with mental health conditions](#) (25/03/2020).