

A Pilot Programme Assessing Improvements in Stress-management through Self-knowledge Using Intelligent Behaviour Analytics®: a Useful Addition to the Teacher's Toolbox



Abstract

Each year, teachers face a plethora of new challenges which appear to be impacting their mental health and resilience levels. Consequently, the present study aims to combat the paucity of research regarding teacher wellbeing. This study pilots a novel self-knowledge intervention, the Intelligent Behaviour Analytics® programme (developed by Hillcroft House Research Hub) at an independent junior school which aims to enhance teachers' ability to manage challenges encountered at work. The programme consisted of a combination of informational workshops and personalised behavioural reports to develop self-knowledge in staff. Interviews with staff and a subsequent thematic analysis were carried out to assess the efficacy of the programme. The findings from this study indicated the intervention was successful in increasing teachers' understanding of the behaviours of themselves and additionally, those of others. This in turn, led to better management of relationships and stress, paving the way for increased wellbeing of teachers and potentially, their students.

Introduction

There are many challenges facing teachers in the UK, ranging from meeting pastoral and academic targets to finding time to achieve a work-life balance (Pells, 2015). Recent statistics suggest that pressures resulting from these challenges may be affecting teachers' mental wellbeing and work performance. For example, a 2017 survey conducted by YouGov found 75% of teachers exhibited psychological, physical or behavioural problems, all attributable to work stress ("Pressure on teachers", 2017). Moreover, this figure was significantly greater than the national workforce average which stood at 62%. In addition, more than half of teachers surveyed had considered leaving the profession due to stress and subsequent pressures on their health. Furthermore, there has been a 35% increase in teachers seeking mental health support from April 2017 to March 2018 (Stanley, 2018). Experiencing low mental wellbeing over a substantial period of time increases the risk of developing mental health problems, poor problem management, absenteeism and early retirement in teachers (Warin, 2013; Bowers & McIver, 2000). Accordingly, tackling low mental wellbeing before it manifests as mental illness appears an apt starting point for improving teacher welfare and work productivity.

Despite the acknowledged importance of improving and maintaining teacher wellbeing in the literature, few studies focus on interventions to improve teacher wellbeing (Kidger et al., 2016). Rather, most of the literature concentrates on improving student wellbeing and, perhaps inadvertently, overlooks teacher wellbeing. So why does this happen? In recent years, schools have faced budget cuts which has resulted in a "funding catastrophe" according to the National Education Union (Richardson, 2018). In a survey conducted by the Department for Education, 71% of schools attributed a lack of mental health provision to funding (Camden, 2017). Thus, schools are having to prioritise their expenditure, leaving mental health provision trailing behind. Yet, studies have suggested that enhancing teacher wellbeing generates a ripple effect and subsequently increases student wellbeing (Busch & Jeavons, 2016). This effect is believed to result from high teacher wellbeing creating positive teacher-student relationships, thereby enhancing student academic engagement and wellbeing (Kidger et al., 2016). Conversely, it is posited that teacher anxiety may spread to pupils and therefore negatively impact student wellbeing and academic achievement (Bloom, 2018). As such, these findings highlight the significance of improving mental wellbeing within the teaching profession since both teachers and their students can benefit.

One cost-effective way to enhance teacher wellbeing is to consider developing teachers' personal resources, namely by improving their self-knowledge. A positive correlation appears to exist between mental wellbeing and levels of self-knowledge, an effect that is recognised cross-culturally (Salovey & Mayer, 1990; Behjati et al., 2011; Kim & Chiu, 2011). Specifically, self-knowledge denotes an understanding of one's cognitions, emotions and behaviours across contexts, alongside an awareness of how one is perceived by others (Carlson, 2013). Psychotherapies frequently work to develop clients' self-knowledge as it is purported to be

essential for effective functioning and thus, psychological wellbeing (Vogt & Colvin, 2005; Brown, 1991). Within human service professions such as teaching, self-knowledge is positively correlated with the capacity to deal with occupational stress (Ogińska-Bulik, 2005). Correspondingly, in stressful situations, an increased ability to clarify and distinguish between one's emotions was associated with a reduced psychophysiological stress response, namely reduced cortisol levels (Salovey, Stroud, Woolery & Epel, 2002). Hence, accurate self-knowledge appears to be linked to better stress-management and ultimately, greater wellbeing.

Whilst the literature acknowledges the significant impact of self-knowledge on mental wellbeing, studies appear to be mostly correlational (Behjati et al., 2011; Hammett, 2013; Salovey et al., 2002). Barring a few studies with mixed success rates (Carlson, 2013; Grant, Kinman & Alexander, 2014), little seems to have been done in the way of self-knowledge interventions in the workplace. Perhaps it is because, intuitively, to increase one's self-knowledge, one should simply engage more time introspecting. However, despite the exclusive access to one's inner emotions and thoughts, research indicates such introspection can sometimes be considerably inaccurate (Dunning, Heath & Suls, 2004). In fact, studies have highlighted 'self-other knowledge asymmetries' whereby certain behaviours and emotions exhibited by an individual are better identified by others than by the individual themselves (Vasire, 2010; Thielmann, Zimmermann, Leising & Hilbig, 2017). Moreover, recent evidence suggests even computers may be greater predictors of some behaviours than the self (Youyou, Kosinski & Stillwell, 2015). Bollich and colleagues (2011) propose that whilst self-reported introspection certainly has its benefits, external feedback is invaluable for achieving accurate self-knowledge. Thus, the paucity of data assessing self-knowledge interventions and their impact on wellbeing reflects a potential shortcoming of the existing literature.

This study will pilot a novel intervention that works to develop self-knowledge: the Intelligent Behaviour Analytics® ("IBA") programme. This programme has been principally used within healthcare but has not currently been tested within the educational sector. Accordingly, the programme will be implemented with staff at Bablake Junior School to address stressful challenges identified by teachers. We hypothesise that the IBA programme will improve teachers' self-knowledge, therefore enhancing their abilities to manage stressful challenges, paving the way to better wellbeing. Post-intervention staff interviews and a subsequent thematic analysis will be carried out to assess the effectiveness of the IBA programme. Ultimately, this study aims to combat the paucity of research into interventions for both teacher wellbeing and self-knowledge.

Method

Participants

40 teaching staff from the independent Bablake Junior School took part in the IBA intervention.

Procedure

Our research team conducted 3 site visits to deliver the inset training day, assist with in-class sessions and to carry out staff interviews. Prior to the inset day, staff were asked to complete the Intelligent Behaviour Analytics® questionnaire in addition to a short survey listing the challenges staff believed they faced at work (see Appendix 1). Challenges identified included three task-based challenges: time management, procedures and facilities, alongside three relationship-based challenges: pupils' parents, children and staff collaboration. Since the basis of the intervention programme is to enhance staff's understanding of behaviours, the present study focussed upon tackling the relationship-based challenges identified.

Inset day

On the day, each participant received their personalised IBA report and were placed on tables with staff of matching behavioural styles. Four members of Hillcroft House Research Hub attended the inset day and the training was primarily facilitated by two of these members. The facilitators presented the concept behind the IBA programme and explained individual differences in behavioural styles. The facilitators also highlighted the challenges identified by staff and prompted staff to discuss how they could personally influence these challenges by considering their personal needs and those of others. During the workshop, staff were also asked to collaborate within their tables to discuss their IBA reports and how to recognise different behavioural styles. This IBA workshop took approximately four hours to complete.

In-class Sessions

These sessions were delivered by a senior member of Bablake Junior School teaching staff who had previously attended an IBA Masterclass and who was coached by the Hillcroft House Research Director. Five 20-minute sessions focussed on understanding behaviours were spread over two months and were typically conducted in the morning before classes started to fit in with the teaching timetable.

1. The first session focussed upon the needs, fears and strengths of different behavioural profiles.
2. The second session involved a site visit from the Hillcroft House Research Hub research director who role played challenging behavioural profiles with the in-class facilitator. From this, the staff had to identify and suggest methods to problem manage each situation.

3. In the third session, staff identified and discussed potential frustration-inducing situations for different behavioural styles.
4. The fourth session looked at specific strategies for parent-teacher meetings. Here, vignettes were used describing different parental behaviours and complaints. Staff had to identify the behavioural domain of each parent and discuss the ways in which they could manage the situation and achieve the best outcome.
5. The fifth and final session provided a summary of all the informational workshops to consolidate information gained from the programme. This session also offered the opportunity for staff to ask any questions regarding the programme.

Participant Interviews

Interviews took place after the completion of the IBA inset training day and subsequent in-class sessions. At least one staff member from each year group took part in the interviews ($N = 11$) and informed consent was obtained from all participants. One researcher from Hillcroft House Research Hub conducted and recorded the interviews which consisted of 9 open-ended questions assessing the impact of the IBA programme e.g. “do you feel IBA has had an impact on your teaching in the classroom?” (see Appendix 2). Additionally, interviewees were asked to rate the helpfulness of IBA on a scale ranging from 1 (unhelpful) to 4 (really helpful), of which the average rating was 3, therefore describing the programme overall as ‘helpful’. All interviews took place on the same day and ranged in length from 9 to 25 minutes.

Thematic Analysis

The interview recordings were transcribed by the same researcher who conducted the interviews. Once transcribed, interview recordings were destroyed and initial thoughts on salient themes from the dataset were written down. The primary researcher then read and re-read the interview datasets so as to familiarise themselves with the data, crucial to the foundation of thematic analysis (Braun & Clarke, 2006). Meaningful segments of data from the transcripts were highlighted, coded and organised into a table of potential themes. The researcher then drew a candidate thematic map to assess commonalities and differences between themes (Braun & Clarke, 2006). This led the researcher to review and condense the number of themes identified, creating superordinate themes where relevant and removing any themes with insufficient supporting data. Thus, another candidate thematic map was created, and the dataset was re-read with the new candidate themes in mind. This prompted a further and final evaluation into the acceptability of themes which became ultimately refined into one global theme, two organising themes and six basic themes (Attride-Stirling, 2001; See Thematic Network in Figure 1.). Thematic validity was assessed by reading through the dataset and ensuring the final themes reflected staff’s perceptions across the entire dataset.

Results

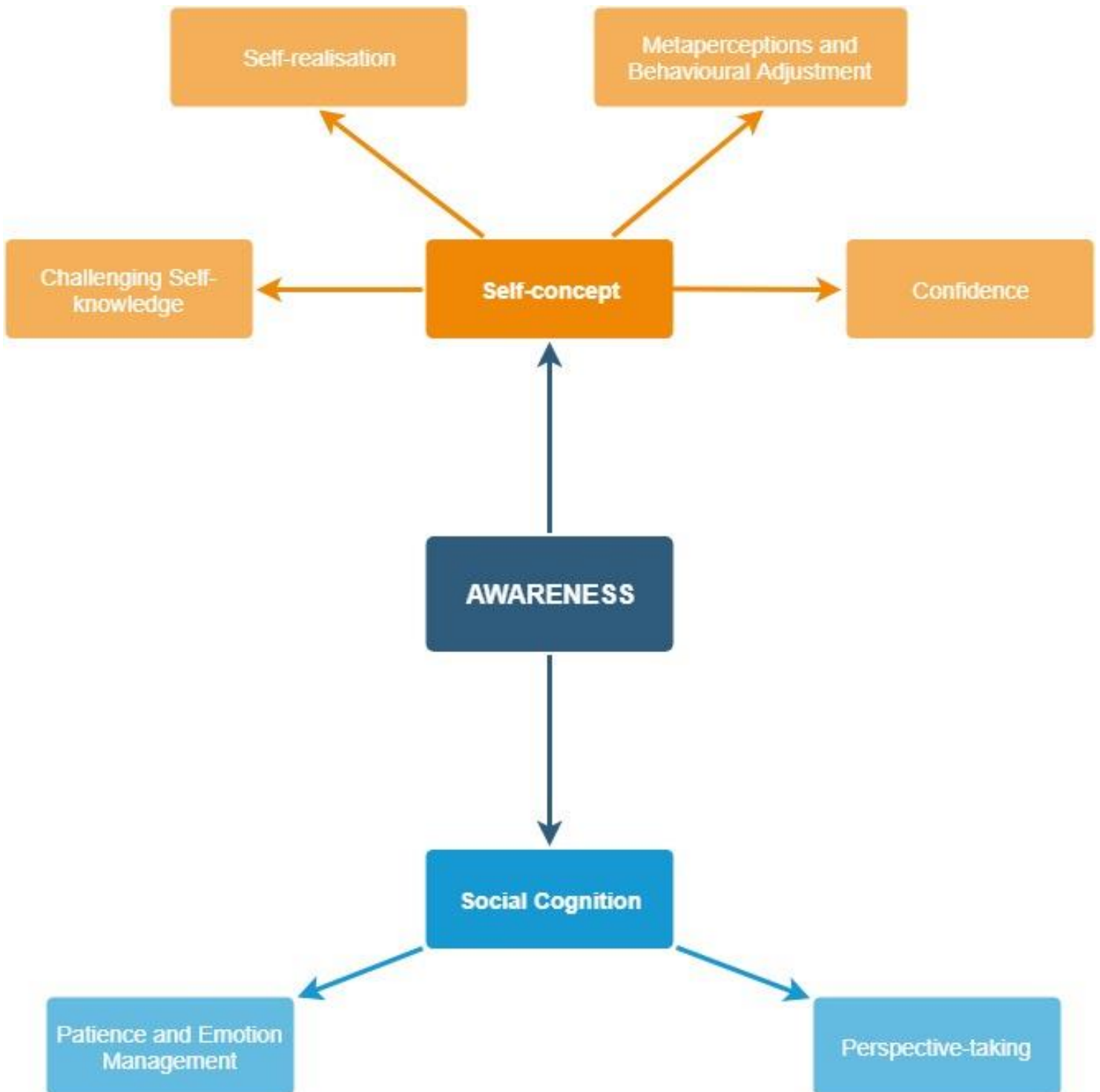


Figure 1. Thematic Network for Awareness (themes read in clockwise manner).

Global Theme

Awareness was identified as the global theme for this dataset, whereby awareness specifically pertained to a knowledge and understanding of human behaviour. Primarily, awareness was thought to encompass an understanding of both the self and others, and was therefore split into Self-concept and Social Cognition, respectively. There were inherent crossovers between self and social awareness as arguably, one can only understand the self when one understands others, and vice versa. Therefore, the determining factor in categorising basic themes into Self-concept or Social Cognition was dependent on whether they largely related to awareness of the self or others (See Thematic Network in Figure 1.).

Organisational Theme: SELF-CONCEPT

This organising theme reflects the internal views and beliefs one holds of oneself. Hence, in this context, awareness was introspective in nature. IBA's role in providing objective insight into a person's character and behaviour was discussed.

Challenging Self-knowledge

Sometimes the objective information challenged existing self-concepts, namely in aspects of self-knowledge regarding personal cognitions, emotions, behavioural tendencies. The conflict between the novel, objective information and previous, introspectively-derived information prompted an evaluation into the accuracy of existing self-concepts. Accordingly, this led to deeper self-analyses in attempts to ascertain what constituted one's 'true self'. The IBA programme appeared to enhance accuracy in self-knowledge by providing objective personal insight which highlighted and challenged personal misconceptions:

4: *"It's made me perhaps see myself differently... Before I go, 'I'm like this'... it's made me go, well, actually am I? And perhaps think a little bit deeper about what I thought I knew."*

10: *"It was interesting to think about my own behaviours and think about how I actually am... and it all generally like slotted together."*

9: *"There were a few things on my report that I thought... in my mind that is not what I'm doing, I am not being blunt. In my mind I'm just telling you things, so that was a bit of an eye opener actually. And I thought, well that kind of explained a few things..."*

Self-realisation

Through developing self-knowledge, participants were better able to identify their strengths and limitations. Yet, 'weaknesses' were perceived in a neutral rather than negative format since acknowledging personal limitations was seen as essential for fulfilling one's potential.

Moreover, personal strengths were not perceived as independent of limitations. Rather, strengths and limitations were evaluated together to form clear ideas for potential self-development. In this way, negative thinking seemed to shift to constructive thinking in attempts to achieve self-realisation. Consequently, instead of negatively impacting self-confidence, identifying limitations appeared to increase awareness of individual potential and self-belief:

2: *“It’s kind of made me think ... about certain things that I may have personally viewed as a weakness, that aren’t necessarily a weakness. [I have been] looking more at the positives of my personality.”*

3: *“But definitely it has made me realise that my strengths are also my weaknesses. My results were max supportive in normal circumstances and under pressure, but I have definitely come to realise since January that ... it can put a ceiling on what you want as an individual.”*

“...my perception of myself and my strengths and weaknesses and where I can play to those and where I need to be a bit tougher and bring out the parts of my personality that I find harder.”

5: *“I think other people have found a strength within themselves as well. We have got certain strong characters and certain people are classed as quieter, nicer characters and I think there’s this kind of belief within society that if you’re nice, you can’t stand up for yourself and you’re a pushover. And I think those certain types of people have gone ‘well no I am here too, and I have a very valid voice and I’m as much a part of this’.”*

Metaperceptions and Behavioural Adjustment

Further insight into self-concept was achieved by reflecting over self-presentation, that is, thinking about how the self is understood by others. Such metaperceptions were evidenced by statements describing an awareness of the effect of one’s characteristics on others. Using this information, participants subsequently stated intentions to adapt their behaviour to suit others, which was hoped to promote positive future social interactions. Whilst this metaperception required a certain level of empathy, it predominantly transformed self-appraisals and was therefore placed within the theme of self-concept:

8: *“Me being more aware of me, what I do, how I am and how that might impact upon other people... the conversations I have with staff and parents. And silly little things like writing emails. I think I’ve always been very blunt and to the point and sometimes it’s just putting a little sentence like ‘hope you’ve had a nice weekend’ to start it off or something like that. Just be kind of aware of who you’re talking to and how it comes across, I would say that’s been quite useful.”*

9: *"I think knowing how people see me... has helped me change how I'm going to come across to people that that doesn't make sense to."*

7: *"...in feeling more confident that I'm reacting in the right way. Yeah and not wanting to wind people up."*

Confidence

For some, developing self-knowledge reduced anxieties over the self. Specifically, personal explanations given by the IBA programme appeared to create a sense of self-validation and reassurance. Furthermore, the clarity provided by the programme permitted easier assessment and acknowledgment of personal strengths of character. This confidence appeared to generate a more relaxed, positive personal outlook:

3: *"I felt validated and 'oh it's ok to be like that'... in some respects I felt I had a boost of confidence because it's ok to be me..."*

1: *"I'm at peace as to why I am because the explanations and the clarity is there."*

Organising Theme: SOCIAL COGNITION

According to this organising theme, social cognition denoted the ability to accurately understand others and interpersonal interactions. As such, in direct contradiction to the organising theme Self-concept, Social Cognition was extrospective in nature.

Perspective-taking

Participants described the ability to correctly identify and empathise with other's behaviours at the cognitive level. Staff attributed this enhanced empathy to the information gathered from the IBA programme. Participants spoke about how they had started to associate other's behaviours with certain personality domains. This enhanced awareness enabled perspective-taking where attempts were made to see the world through the lens of another. As a result, participants demonstrated greater assurance in their ability to comprehend the behaviours and intentions of others:

6: *"I think I've picked up on certain behaviours more so... I think that they already had but noticing them and associating them with a certain domain rather than just being like 'ah this is this person' and so making those links."*

3: *"But I would say everyone perhaps is more aware of one another, not that you necessarily know everyone else's domain, but now that we're aware of what the domains are, you can probably hazard a guess... [There is] An increase in understanding of where someone else is coming from."*

9: *“Normally I’d really struggle to think ‘well why is she fighting against this, just accept it and move on’ but sort of knowing that she’s a sensitive type, as now that I’m aware that they exist, I kind of came about it from a different point of view... I saw it from her point of view.”*

Perspective-taking extended to better identification of individual needs, preferences and priorities. This was largely related to management of meetings with pupils’ parents:

3: *“You get in your mind which parents. This parent is more concerned with academic than pastoral. It’s more obvious now that I’ve had this training.”*

6: *“I’ve tried to think about, so if I’ve got a meeting with a certain parent I’ll think about what kind of domain they might be and try and tailor the way you approach. So, like some parents the approach is going to be a lot different to other parents because you know what their focus might be. You can have a guess whether their focus might be results, or their child’s happiness...”*

2: *“I think if anything, it’s helped me to probably think, understand that people haven’t got all the same kind of priorities... Definitely with parents, in a parent’s consultation that we know they’re more results/targets driven and acknowledging that and appreciating that and understanding even though that’s not me.”*

Additionally, perspective-taking was associated with increased reflective thinking over one’s perceptions of others. Greater caution was exhibited before passing judgement and time was taken to recognise and evaluate individual differences:

7: *“Step back, listen, take it all on board ... What is she doing, what is she saying here, what is really going on?”*

4: *“I can honestly say that I do tend to think a little bit more before I make an assumption.”*

5: *“This person isn’t going to respond to that the way this person is. So [IBA] made me take a step back and remember actually, all of these people are very different and need treating very differently.”*

Patience and Emotion Management

By developing social knowledge at the cognitive level, increases in empathy emerged at the behavioural level. Specifically, increases in social knowledge facilitated greater patience towards staff, families, pupils and parents of the pupils. Generally, a clearer understanding of other’s emotions and behaviours was associated with reduced internalised frustration and anger. Participants recalled typically stressful experiences and described how IBA training had allowed them to perceive and handle the situation in a less negative way. Often this was

attributable to an increased acceptance of the situation and recognising the limited extent to which one was able to change it:

Pupils

6: *“You can see their certain motivations behind things and how they might react. Whereas before you might have done something and think that’s an absolutely ridiculous reaction but then you can kind of maybe rationalise it a little bit.”*

Family & Parents

4: *“Sometimes I’m trying to pick a battle with him and I think it’s just not worth it because your personality says that no matter even if I prove you wrong a million times, you’re still not going to accept it so might as well forget it and move on. And maybe that has helped me to do that with the parents. Some parents it doesn’t matter what you do, you can bend over backwards, it’s still not going to be enough they’ve got beef about something, it’s normally nothing to do with the school and it’s your fault. So maybe [IBA] just helped me understand that different personalities, you just have to work with it.”*

Parents & Staff

7: *“I usually feel quite annoyed and frustrated after those kind of conversations but yeah I guess I was just fairly accepting actually, yeah, rather than totally annoyed. I probably just thought yeah it’s their problem more than mine, and you know, when you think of the reasoning why they behave in a certain way and you’ve done as much as you can, there’s no more you can do.”*

“A member of staff... has been quite difficult to deal with at times, I made efforts to understand that person better and sort of allow some kind of compensation in the way that they behave sometimes, knowing that that’s their domain and trying to understand of course the reasons why they behave in certain ways”

Staff

11: *“People are more patient with each other and more considered in their response to people.”*

Summary

Ultimately, Self-concept and Social Cognition were distinct in being introspective and extrospective, respectively. For Self-concept, awareness denoted a greater depth of understanding in self-knowledge. This was facilitated through the IBA programme’s challenges to previous self-perceptions and metaperceptions of the self. This in turn, led to

constructive thoughts regarding self-realisation and for some, an enhanced sense of self-confidence.

Conversely, for Social Cognition, IBA was seen to enhance empathetic qualities of participants, which manifested at the cognitive level (perspective-taking) and subsequently, at the behavioural level (patience). In this way, participants recognised self-other differences through perceiving situations from other's perspectives. As such, participants demonstrated assurance in their ability to manage and understand people and their needs. This resulted in greater patience, reduced rumination and lessened frustration in participants.

Consequently, greater awareness of human behaviour was achieved through the development of both participants' self-knowledge and empathy. Despite their differences, the themes Self-concept and Social Cognition developed in a synergistic manner to enable greater acceptance and understanding of human behaviour. Ultimately, the IBA programme appeared to increase awareness by initiating reflective thoughts over the self and others leading to greater clarity, acceptance and reductions in stress.

Discussion

The results from the thematic analysis appeared to confirm the hypothesis that the IBA programme would develop teachers' self-knowledge. In addition, the IBA programme seemed to increase teachers' knowledge of the behaviours of others. Improving awareness of human behaviour as a whole, developed participants' abilities to manage and positively adapt their behaviours in challenging situations, thereby reducing stress and frustration.

The present study demonstrated how the IBA programme developed participants' self-knowledge by challenging previous self-concepts and stimulating greater reflective practice. One reason why the IBA programme may have succeeded where other self-knowledge interventions failed, may be through overcoming motivational barriers to self-knowledge (Carlson, 2013). Commonly, people filter out negative information about themselves leading to an overly positive self-concept, known as self-enhancement (Alicke & Sedikides, 2009). In the face of negative self-information, ego-protective biases trigger self-defensiveness and consequently, serve to inhibit the development of accurate self-concepts (John & Robins, 1993). Accordingly, individuals are more likely to accept and integrate positive information about themselves into their self-schemas. This is especially true if the information confirms previous self-perceptions, creating a positive confirmation bias (Nickerson, 1998). However, information provided by IBA sometimes contradicted existing self-perceptions but was still accepted by participants. Perhaps previous self-knowledge interventions were unsuccessful as individuals were reluctant to accept socially undesirable trait labels, e.g. inflexibility or neuroticism. In contrast, the IBA programme identified personal strengths and presented limitations as an overplaying of these strengths, thereby overcoming potential threats to the ego e.g. 'inflexibility' was described as an overplaying of the strength 'organisation'. In this way, individuals seemed more receptive to information regarding their self-limiting qualities and were more willing to work to improve themselves in a constructive manner.

A more receptive and less defensive individual not only develops accurate self-knowledge but is also more likely to achieve their "ideal self", that is, the self-concept one wishes to possess the most (Rogers, 1959). Rogers' (1959) personality theory dictates that congruency between the perceived self and the actual self (accurate self-knowledge) facilitates realistic opinions of one's ideal self, therefore making it more achievable. Hence, to become one's ideal self, one must first understand their actual self, exemplified here by Rogers' quote (1961):

*“ The curious paradox is that when I accept
myself just as I am, then I can change ”*

The IBA programme appeared to reduce incongruence between participants' perceived selves and actual selves by providing objective information, which induced greater reflective practice and self-analysis. This enabled accurate identification of strengths and limitations, leading to realistic plans for personal development and fulfilment of one's potential, denoted

here as self-realisation. For some, this manifest as a renewed sense of self-confidence and personal acceptance. This corresponds with Rogers' (1959) theory which posits that achieving the ideal self leads to confidence, psychological adjustment and good mental wellbeing. Conversely, inaccurate self-knowledge is postulated to hinder attainment of the ideal self and create a state of psychological tension and vulnerability to anxiety¹. Supporting this, the Eudaimonic perspective of wellbeing proposes good mental wellbeing results from functioning as our best possible selves (Galderisi, Heinz, Kastrup, Beezhold & Sartorius, 2015). Consequently, the theme self-realisation hints at the potential for enhanced teacher wellbeing. However, as this was a pilot, future studies may wish to use a longitudinal format and assess changes in baseline wellbeing from pre-intervention to post-intervention to corroborate or falsify these suggestions.

The development of self-knowledge through the IBA programme also allowed participants to understand how others perceive them, known as metaperception (Carlson & Oltmanns, 2015). The more accurate one's self-knowledge is, the more accurate their metaperceptions, defined as meta-accuracy (Carlson, 2016). An individual with good meta-accuracy can recognise, and therefore correct, socially undesirable behaviours they might have made (Carlson, 2016). Hence, meta-accuracy promotes social functioning and positive relationships, which fosters psychological wellbeing (Wills, 1985). Indeed, poor meta-accuracy is associated with some personality disorders and maintaining social relationships is difficult for this group, negatively impacting wellbeing (Carlson & Oltmanns, 2015; Carlson, Wright & Imam, 2017). Consequently, Carlson (2016, P1) proposes that meta-accuracy "might be a hallmark of psychological functioning". Research suggests that meta-accuracy can be improved by increasing the amount of information made available to metaperceivers (Albright & Malloy, 1999). Accordingly, researchers have attempted to improve meta-accuracy by providing feedback to participants through video recording participants' social interactions (Albright & Malloy, 1999). Whilst this successfully improved meta-accuracy, arguably, it is not a practical, widely available or sustainable method of developing meta-accuracy in everyday life. Contrastingly, the IBA programme developed participants' accuracy of metaperceptions through a personalised behaviour report and informational workshops. Considering this, our findings suggest the IBA Behaviours[®] programme provides a novel and widely applicable method of developing individuals' meta-accuracy.

Additionally, the IBA programme appears to be a more sustainable self-knowledge intervention due to participants' enjoyment of the programme. Grant and colleagues (2014) successfully developed social work students' self-knowledge, emotional intelligence and wellbeing through asking students to write their emotions in a weekly journal; however, the authors highlighted how participants saw this process as a chore. This contrasts with IBA

¹ However, in some cases an incorrect, distorted and overly-enhanced self-concept, as is the case with narcissism, may promote high subjective wellbeing (Lapsley & Aalsma, 2006; Aghababaei & Blachnio, 2015). Yet, such inflated self-concepts are often at great interpersonal cost due to high levels of disagreeableness and apathy towards problematic personal behaviours (Aghababaei & Blachnio, 2015; Paulhus & Williams, 2002).

programme since every interviewee described the programme as “interesting” and almost all interviewees stated they enjoyed the programme. Therefore, perhaps the IBA programme offers a more practical intervention for individuals wishing to develop their self-knowledge.

In addition to the self-concept, our findings suggest IBA improved participants’ social cognition, thereby increasing their patience and emotion management during stressful encounters. The finding that understanding others’ behaviours may aid stress-management, extends Salovey et al.’s (2002) theory regarding the mechanism by which accurate self-knowledge enhances stress-management. Salovey and colleagues (2002) posit self-knowledge reduces stress through a more efficient direction of attentional resources. Specifically, by more readily understanding one’s cognitions, emotions and behaviours, one is less susceptible to excessive rumination about the self, commonly associated with stress and psychopathology (Michl, McLaughlin, Shepherd & Nolen-Hoeksema, 2013). Instead, attention can be focussed on the appropriate actions to take to repair mood and wellbeing. Our findings support and extend this theory by proposing that, during challenging situations, understanding others’ cognitions, emotions and behaviours also directs attention away from excessive rumination and frustration. Instead, participants focussed attention on problem solving via perspective-taking and recognising others’ needs. Thus, the present study suggests that a greater awareness of both the self and others may enhance emotional and stress-management through more efficient direction of attentional resources.

The global theme identified in the interview analysis was an increased awareness of human behaviour, including the self and others, which might be interpreted as an increase in emotional intelligence. Indeed, some believe self-knowledge is an important facet of emotional intelligence (Goleman, 1995). The dominant definition of emotional intelligence is currently Mayer and Salovey’s (1997) four-branch model (Fiori & Vesely-Maillefer, 2018) of which the four branches are: the ability to perceive emotions, facilitate thought using emotions, understand emotions and to manage emotions. Emotional intelligence in teachers is positively associated with the ability to communicate with colleagues, empathise and accept differences in others alongside a better management of anger in stressful situations (Nelson, Low & Nelson, 2005). All of the above appear to correlate with our findings from the thematic analysis. However, as the name suggests, the IBA Behaviours programme is specific to understanding humans at the behavioural level. Whilst behaviours are inextricably linked to emotions, IBA theory (Crizzle, 2018) dictates that understanding emotions is most effective once we first understand our behaviours. Thus, in the present study, participants primarily increased their social competencies through understanding, anticipating and managing the behaviours of themselves and others. Understanding behaviours may have enhanced emotional intelligence in the staff; however, the principle focus of the present study was self-knowledge and so emotional intelligence was not measured here. The next stage for the staff at Bablake Junior School will be the IBA Emotions element of the IBA programme and when combined with IBA Behaviours, could develop teachers’ emotional intelligence further.

Limitations and future directions

Ultimately, improvements in self-knowledge and reductions in stress were assessed via self-reports. The lack of objective measurements is a limitation of this study since self-reporting is inherently introspective in nature, which can be inaccurate at times (Paulhus & Vazire, 2007). Future research should aim to use objective tests to determine if self-knowledge has truly increased; see Vogt and Colvin (2005) who provide an extensive report evaluating the different ways to measure self-knowledge. With regards to measuring stress levels, future studies could assess differences in cortisol levels between an intervention and a control group before and after the intervention (Salovey, Stroud, Woolery & Epel, 2002).

Additionally, research suggests that improving teachers' ability to manage stress is thought to benefit their students (Kidger et al., 2016). Improvements in both teacher and student self-knowledge and social competencies appears conducive to a healthy classroom environment (Jennings & Greenberg, 2009). Sage (2018) argues little has been done to enhance students' personal development and that government policy has favoured focussing on academic achievement. Correspondingly, Durlak and colleagues (2011) believe developing social competencies in students should be prioritised since it is linked to better academic and health outcomes (Durlak, Weissberg, Dymnicki, Taylor & Schellinger, 2011). As such, future research could look to adapt and implement the IBA programme with both students and their teachers.

Conclusion

In conclusion, the IBA programme appeared promising in that it increased teachers' understanding of themselves and of others, suggesting an overall increase in awareness of human behaviour. This resulted in self-reported increases in patience and reductions in stress during challenging scenarios. In this way, the IBA programme appears to offer a practical and cost-effective method of improving self-knowledge amongst teachers. This may have wider implications, not only for teacher mental health, but also for improving student outcomes. Future research is required to objectively test these findings so as to assess the present study's applicability. At present, the findings suggest that the IBA programme may be a useful tool for teachers under stress.

Acknowledgments

It has been a privilege for the authors to be involved in this project at Bablake Junior School and we have thoroughly enjoyed our time working with such dedicated and talented people.

The authors would like to extend their warmest appreciation and thanks to Mr Neil Price, Head Teacher at Bablake Junior School. Without his generous support and approval, this pilot study simply could not have taken place.

In addition, we would like to recognise the invaluable input of Mr Lorrian Holder, Deputy Head Teacher at Bablake Junior School. Despite an already busy working life, his energy coupled with his enthusiastic delivery of the in-house class sessions, ensured the successful completion of this project.

Finally, the project could not have been undertaken without the active participation, patience and support of all of the teaching and administrative staff. The authors owe a debt of gratitude and most especially to those who willingly gave of their time to complete the in-depth interviews.

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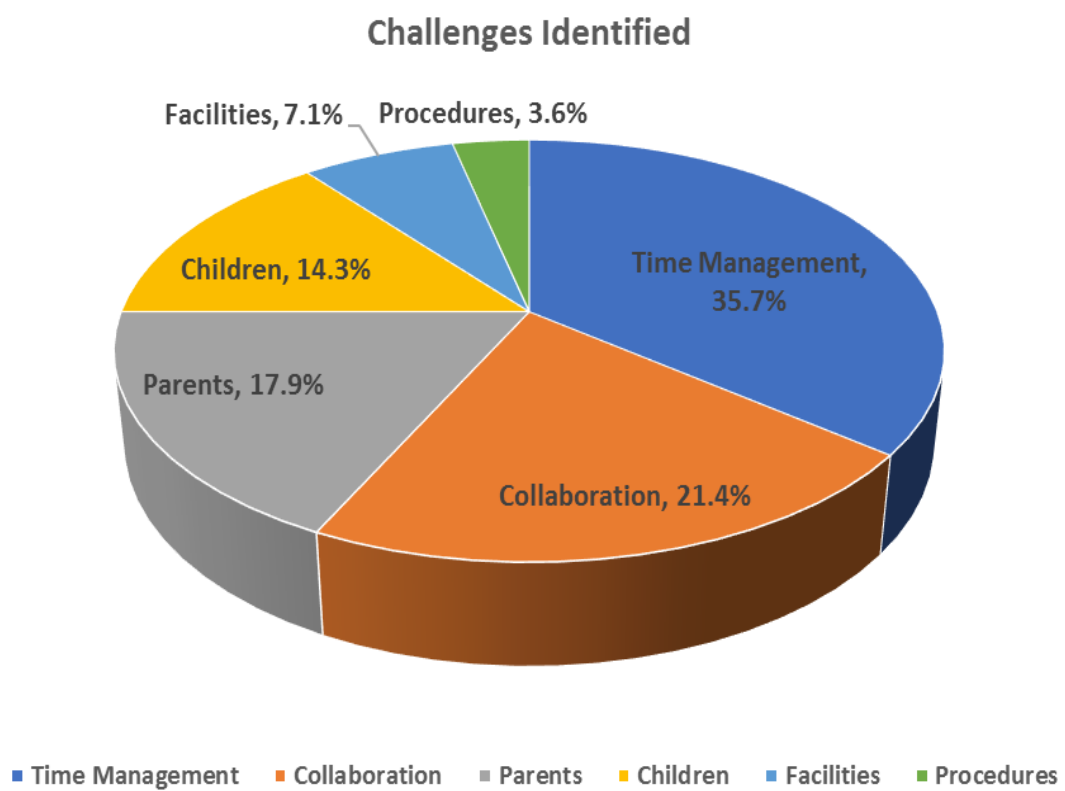
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Appendix 1

Survey Question

1. Disregarding resources and funding, what do you feel is the biggest challenge in your workplace?

Survey Results



Appendix 2

Interview Questions

1. Did you attend the inset day in January?
 - a. How did you find the inset/how did it compare to previous teacher training days?
2. Have you attended the in-class sessions after the inset day?
 - a. How did you feel these sessions went and why?
3. With respect to your colleagues, have you noticed any shifts in their behaviour since IBA was introduced?
4. How easily have you been able to implement the IBA techniques?
5. Do you feel IBA has had an impact on your confidence in any way?
6. Do you feel IBA has had an impact on your teaching in the classroom?
7. Do you feel IBA has had an impact on your teacher-pupil relationship with the children?
8. Has IBA influenced your relationships with parents?
9. Do you feel IBA has had an impact on collaboration at Bablake?
10. How would you rate the helpfulness of IA on a scale of 1-4 for your personal experience? Where 1 is unhelpful, 2 is moderately helpful, 3 is helpful and 4 is really helpful.
 - a. Can you please describe the reasons for this score?

About the Authors

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Katy is a Research Graduate at Hillcroft House Research Hub. She achieved a First-Class Hons degree in Psychology with Neuroscience from the University of Sussex in July 2017. She is going on to complete an MSc in Clinical Neuroscience at King's College London starting September 2018.

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Adam is a Visiting Professor in the Faculty of Health, Education and Life Sciences at Birmingham City University. He is the Managing Director & Research Director at Hillcroft House Research Hub and is the inventor of Intelligent Behaviour Analytics®. He is a Board Member of IBA Alumni and a CPD Standards accredited speaker. In addition, he is the Chair of the JCT Research Trust which is focussed on raising educational awareness for blood, organ and bone marrow donation

Adam has over three decades within the fields of Human Behaviour, Research, Statistical Forecasting, Logistics and Education. His research interests include the understanding of human behaviour and human emotions to improve mental health and well-being. In addition to his research interests Adam is an Executive Career Coach and Leadership Trainer.

Statement of Funding Acknowledgment

This research report was wholly funded by Hillcroft House Research Hub. The school inset day and any costs associated with staff availability for participation, was funded by Bablake Junior School.

Statement and voluntary declaration of conflict of interest

In accordance with Hillcroft House Research Hub Governance, it is acknowledged that there is a conflict of interest as follows:

Professor Adam Crizzle is the Inventor of Intelligent Behaviour Analytics®

Professor Adam Crizzle is co-author of this pilot project examining the efficacy of the use of Intelligent Behaviour Analytics® in an educational setting.

Hillcroft House Research Hub adheres to the RCUK Policy and Guidelines on Governance of Good Research Conduct (updated April 2017) and now part of UK Research and Innovation (www.ukri.org). This includes maintaining the highest standards of integrity, honesty, professionalism and designing robust, rigorous, transparent and appropriate research frameworks to properly test, examine and report on findings.