

The Relationship Between Students' Self-Perceived Assessment of Emotional Intelligence and Clinical Performance Across Practice Areas

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Received: January 15, 2018; **Published:** March 28, 2018

Abstract

Background/Aims: Previous research has identified emotional intelligence (EI) as a crucial factor in students' clinical performance success. The purpose of this study was to: (a) examine the relationship between students' self-rated EI scores and their clinical scores as measured by their supervisors; and (b) investigate the similarities and differences between student's self-ratings of EI and supervisor's EI ratings of students.

Methods: Forty-five occupational therapy graduate students participated in this study. The Emotional and Social Competence Inventory (ESCI) was used to measure EI, while the American Occupational Therapy Association's Fieldwork Performance Evaluation (FWPE) measured fieldwork performance. Associations between students EI ratings and supervisors FWPE ratings in general and during each clinical rotation was assessed using Pearson correlations. Differences in EI ratings between students and supervisors were assessed using multiple paired sample t-tests.

Results: The relationship between supervisor rating of student EI and their clinical performance on the FWPE, revealed significant, moderate, and positive for the students during their third-year pediatrics rotation, with higher scores on the Self-Management and Social Awareness subscales of the ESCI being correlated to higher clinical performance. In addition, significant differences were found between student and supervisor ratings of Self Awareness and Relationship Management subscales during the mental health rotation, with students rating themselves higher.

Conclusions: Assessing student's EI and its relatedness to clinical performance may contribute to their education. Further exploration of the overall relevance of EI for practice is in alignment with the professional educational agenda of identifying relevant and desirable learner characteristics.

Keywords: Emotional Intelligence; Clinical Performance; Student and Supervisor Perception

Introduction

Emotional intelligence (EI) has emerged as one of the most important factors contributing to success in the field of management and more recently has been discussed in the health care arena [1,2]. EI has been described as a form of social intelligence that involves the

ability to identify and manage one's own emotions and behaviors in addition to those of others [3,4]. EI, as a component of professional development, plays a significant role in how health care practitioners interact with clients and colleagues, including their supervisors [5]. The growth of knowledge regarding EI as an essential requisite for professional development has encouraged medical and health science education programs to recognize the importance of EI skills into their academic curriculum [6-8].

Health care education programs are exploring EI as a relevant competence for clinical training [9-11]. Given the importance of clinical performance, a greater understanding of factors such as EI that may relate to success are of utmost interest and value to educators. The purpose of this study was to explore the relationship between clinical performance and EI as perceived by both students and respective supervisors in various clinical settings (rotation type) within an occupational therapy program.

Emotional Intelligence and clinical performance

Current research in health care education suggests that personality, as well as emotional and social intelligence may relate to academic achievement [12-15]. Research on intelligence quotas and grade point averages have shifted to include skills that integrate cognitive, emotional, and social abilities as part of a competent repertoire of professional development [16-19]. Most studies exploring the relationship between academic and clinical performance in occupational therapy programs confirmed the broader health care literature, that academic performance alone is not an effective indicator of clinical success [20,21].

In clinical settings, individuals who are able to interpret and understand the meaning of their own and others' emotions may be better adept at guiding their clinical decision-making based on these abilities [22,23]. In Goleman [23,24] and Boyatzis's [22] holistic and comprehensive model, EI was conceptualized as learned abilities, skills or competencies. These EI competencies cannot be measured solely by IQ, because they encompass both affective and cognitive processes [25]. Competencies were defined as behavioral representations of EI demonstrated in performance of work related skills including: self-awareness, self-regulation, communication, and adaptability as assessed by the Emotional and Social Competence Inventory (ESCI) [26].

Self and other EI ratings

Research regarding the ability to understand one's own and others' emotions was shown to be correlated with more effective communication and performance skills in clinical settings [27,28]. These EI abilities are essential in developing a patient-centered approach to practice and collaboration with peers and colleagues to create a positive working environment [29]. Self-awareness is an important driver of problem solving and decision-making in clinical practice [27,30]. In a study by Parker, Austin, Hogan, Wood, and Bond [31], it was found that a lack of self-awareness, as evidenced by low scores of EI, was a significant predictor of poor success in medical students' clinical rotations. Joseph, *et al.* [2] conducted meta-analyses of primary studies in the literature of self-reported ratings of EI and found it to be a predictor of job performance.

A meta-analysis study of 35 medical student's EI self-assessments were used to determine accuracy based on clinical performance ratings by supervisors. The students demonstrated a moderate ability to self-rate performance. However, as they progressed through their medical education training, particularly regarding communication as a clinical skill, objective knowledge-based and specific technical procedures indicated greater accuracy. Student overestimation of competencies was associated with a decrease in seeking feedback for improvement [32].

Self-perception and other-rater perceptions are different approaches to perceiving and collecting observations of a person's behavior. These perceptions are influenced by contextual expectations [3,33,34]. Research on social cognition reveals that people give more weight to their own thoughts and feelings than to their behavior when forming their own self-perceptions, but this effect is reversed when forming perceptions of others [35,36]. For instance, Chui [37] found that although social work students and supervisor's perceptions of student clinical performance differed, their divergent perceptions promoted a better understanding of pedagogical issues and relationship

dynamics inherent in the process of clinical training. These similarities as well as incongruences between self and others' perceptions is known as self-other-agreement and considered a highly reliable measure of self-awareness [3,34,38].

In health profession education, successful students are regarded as active seekers of feedback. de Jong, Favier, van der Vleuten, and Bok [39] investigated the performance levels and motivation of different students (low, average, and high) to seek feedback in the clinical workplace using Self-Determination Theory. The researchers found that high performing students were more motivated to receive feedback and demonstrated awareness and higher self-determination compared to low performing students. In Hochberg's, *et al.* [40] study 209 student-supervisor ratings were compared for discrepancies in perceptions of student clinical performance in surgical rotations. Students overall self-scores were 52% lower than supervisor ratings. Student-supervisor agreement was highest on the Professionalism subscale with lowest area of agreement on procedural or technical skills.

Students who overestimate their clinical skills may be unaware of their limitations, and may not seek improvement or reject feedback on performance. Those students who underestimate themselves may lack confidence or be modest about their self-presentation of abilities. Based on their own bias, clinical supervisors might overestimate or underestimate students' ability [32]. de Jong, Cees, and van der Vleuten [39] found that high performing medical students were more motivated and demonstrated higher self-determination compared to low performing students to seek feedback from supervisors. Student's self-ratings collected at different intervals during their course of learning were important and revealed discrepancies [32,41]. Clinical performance is a central and essential component of the education of health professionals; greater attention is required regarding student and supervisor's perceptions of EI and possible relatedness to student's clinical performance. Thus, this study addressed the following questions: (a) is there a relationship between student's EI ratings and their overall clinical performance in each practice area as rated by the supervisors? and (b) are there any differences between student self-ratings of EI and supervisor's EI ratings of students?

Methods

Participants

Forty-five students in a full-time three-year BS/MS occupational therapy program participated in the study. Participating students included three separate groups of students: 1st year students rotating through mental health settings (n = 14), 2nd year students rotating through physical disability settings (n = 15), and 3rd year students (n = 16) rotating through pediatric settings. The three cohorts consisted of 43 females and 2 males, all living in the greater NYC area, age range 20 - 30 from culturally diverse ethnic, socio-economic and educational backgrounds, job-levels and experience backgrounds. As part of the requirements for accredited occupational therapy programs, students were actively engaged in a 12-week clinical experience, spending an average of 40 hours per week in each setting. No other specific demographic information was collected. Student's clinical supervisors (n = 45) provided consent as participants in this study. Clinical supervisors were from various practice settings in the greater New York metropolitan area with a minimum of one-year supervisory experience in the following settings: (a) mental health-e.g. inpatient psychiatric unit, homeless shelters; (b) physical disabilities- e.g. acute care, rehabilitation centers; and (c) pediatrics- e.g. school settings, private pediatric clinics.

Research Design

The current study used a quantitative, non-experimental cross-sectional, correlational design with a convenient sampling method.

Procedures

Participation was voluntary, and the university's Institutional Review Board approved the study protocol. Prior to the beginning of each cohort's clinical rotation the researcher informed of their participation in the research study. Each student participant signed a consent form and completed an ESCI Self-assessment in class. As part of the standard requirement for all accredited graduate occupational therapy programs, clinical supervisors completed the American Occupational Therapy Association Fieldwork Performance Evaluation (FWPE) [42] for each student upon completion of the fieldwork experience [42]. In addition, respective fieldwork supervisors received an informational letter and consent form describing the study and requesting they complete the ESCI as a further measure to understand clinical performance.

Instruments

Emotional and Social Competency Inventory (ESCI) [43]: The ESCI is a 72 item survey utilizing a five-point Likert response scale and measures four domains of emotional and social intelligence: (a) Self-Awareness; (b) Self-Management; (c) Social-Awareness; and (d) Relationship-Management. The ESCI domain subscales are derived from the instrument's 12 distinct emotional and social competencies; emotional self-awareness, empathy, organizational awareness, emotional self-control, achievement orientation, positive outlook, adaptability, coach and mentor, inspirational leadership, influence, conflict management, teamwork, systems thinking, and pattern recognition [26,43]. The ESCI demonstrates desirable reliability and validity, internal consistency reliability scales range from 0.61 to 0.85 with a Cronbach alpha of 0.77 - 0.70

American Occupational Therapy Association Fieldwork Performance Evaluation (FWPE) [42]: Grades for clinical performance were assigned by clinical supervisors based on the 42 item four-point Likert response scale that measures overall rating of the student's performance on seven sub-scales of clinical experience: (a) fundamentals of practice; (b) basic tenets of the profession; (c) evaluation and screening; (d) intervention; (e) management of occupational therapy services; (f) communication; and (g) professional behaviors.

Data Analysis

All data were entered into Statistical Package for the Social Sciences (SPSS) version 23 [44] for analyses. Descriptive statistics were calculated to obtain means, standard deviations, skew and kurtosis. To answer the questions exploring associations between students EI ratings and supervisors FWPE ratings in general and each clinical rotation Pearson correlations were used. To answer questions regarding differences in EI ratings between students and supervisors, multiple paired sample t-tests were performed. For all above-mentioned analyses the level of significance was set for 0.05 then Bonferroni correction was calculated depending on the number of comparisons to adjust level of significance and decrease the change of a type I error.

Results

Aim 1

To explore whether there is a relationship between student's EI ratings and their overall performance in FW in each practice area as rated by the supervisors. The first research aim examined the relationship between supervisor rating of student EI and their clinical performance on the FWPE (see Tables 1, 2, and 3). Results demonstrated significant, moderate, and positive correlations for the cohort of students in their third year on their pediatrics rotation. Higher scores on the Self-Management and Social Awareness subscales of the ESCI, were correlated with higher clinical performance based on the FWPE of particular importance is that both the Self Awareness and Relationships subscales of the ESCI did not reach statistical significance after Bonferroni correction was made, but did exemplify the same magnitude and direction of association between EI rating and student's performance during the pediatric rotation.

ESCI Subscale	Year 1 Mental Health (n = 14)	
	r	p
Self Awareness	.16	ns
Self Management	.24	ns
Social Awareness	.16	ns
Relationships	.38	ns

Table 1: Association between EI ratings and Clinical performance in Mental Health rotation.

Note. *Bonferroni correction, correlation is significant if $p < .013$.

ESCI Subscale	Year 2 Physical Disabilities (n = 15)	
	r	p
Self Awareness	.14	ns
Self Management	.21	ns
Social Awareness	.15	ns
Relationships	.11	ns

Table 2: Association between EI ratings and Clinical performance in Physical Disabilities rotation.

Note. *Bonferroni correction, correlation is significant if $p < .013$.

ESCI Subscale	Year 3 Pediatrics (n = 16)	
	r	p
Self Awareness	.58	ns
Self Management	.63	.01*
Social Awareness	.63	.01*
Relationships	.51	ns

Table 3: Association between EI ratings and Clinical performance in Pediatric rotation.

Note. *Bonferroni correction, correlation is significant if $p < .013$.

Aim 2

To explore whether there are any differences between student and supervisor EI ratings in each practice area. The second research aim examined differences between student and supervisor EI ratings during each rotation. Tables 4, 5 and 6 present the paired t-tests that were performed, after controlling for the multiple comparisons made. Significant differences and the p value were found between student and supervisor ratings of Self Awareness and Relationship Management subscales during the mental health rotation. In both subscales, students rated themselves higher than the rating of their supervisor. Across the rest of the comparisons observed, student EI ratings were higher than those of their supervisor, but did not reach statistical significance.

ESCI subscale	Student		Supervisor		t	df	p
	M	(SD)	M	(SD)			
Self Awareness	3.87	.41	3.20	.65	4.18	13	.001*
Self Management	3.67	.37	3.24	.68	2.53	13	ns
Social Awareness	4.04	.48	3.80	.87	0.93	13	ns
Relationships	3.49	.42	2.95	.70	3.32	13	.005*

Table 4: Comparing supervisor and student EI ratings in Mental Health rotation.

Note. *Bonferroni correction, difference is significant if $p < .013$

ESCI subscale	Student		Supervisor		t	df	p
	M	(SD)	M	(SD)			
Self Awareness	3.88	.36	3.52	.41	2.64	14	ns
Self Management	3.83	.35	3.56	.48	1.71	14	ns
Social Awareness	4.28	.39	3.96	.60	1.90	14	ns
Relationships	3.55	.34	3.17	.55	2.55	14	ns

Table 5: Comparing supervisor and student EI ratings in Physical Disabilities rotation.

Note. *Bonferroni correction, difference is significant if $p < .013$.

ESCI subscale	Student		Supervisor		t	df	p
	M	(SD)	M	(SD)			
Self Awareness	3.78	.45	3.49	.60	1.46	15	ns
Self Management	3.77	.37	3.54	.51	1.39	15	ns
Social Awareness	4.23	.50	4.11	.69	0.53	14	ns
Relationships	3.40	.50	3.20	.60	0.94	15	ns

Table 6: Comparing supervisor and student EI ratings in Pediatric rotation.

Note. *Bonferroni correction, difference is significant if $p < .013$.

Discussion

This study explored the possible association between students' self-rated EI scores and their clinical scores as measured by their supervisors in different practice areas, mental health, physical disabilities, and pediatrics, as well as similarities and differences between student's self-ratings of EI and supervisor's EI ratings of students. Results demonstrated that the higher the student's Self-Management and Social Awareness subscales of the ESCI were, the higher their clinical performance was. These results are in alignment with a study that assessed the EI of dental students and their clinical performance. In that study, Boyaztis and Victoroff [15] found that supervisors who scored students high on Self-Management were more likely to perform well clinically. The current study's findings show correlations within third year student pediatric rotation and self-ratings of EI. Perhaps the expression of EI was more available as an inner resource to students by their third rotation [41] given they felt more confident and effective in their clinical role.

The investigation of student self-ratings and supervisors' ratings of EI revealed that students did not have the same perception of themselves as their supervisors. In particular, ratings differed in Self Awareness and Relationship Management subscales during the MH rotation. In both subscales, student ratings were significantly higher than their supervisor's. One explanation for this may be that students engage in specific activities in one practice setting, which may or may not elicit necessary behaviors in another. Thus, these results may have more to do with the effect of the rotation type. Chui's [37] study of social work students parallels our study's discrepancies between supervisor and student ratings. Students may possess a broad range of EI skills that they utilize within the multiple roles and contexts in their lives, yet not fully integrate them during clinical practice [2]. This can be attributed to the newness of the clinical environment where students must be able to simultaneously incorporate EI while focusing on adjusting to their new clinical situation. Moreover, students might overestimate their skills, or be unaware of their limitations, which could result in a discrepancy with the supervisor's estimation of their EI competencies.

Perception discrepancies are common among supervisors, colleagues, and subordinates. Atkins and Wood [35] explain that some raters are better able than others to observe and evaluate specific competencies depending on their relationship with the individual being

evaluated. The student/rater rapport and environment may impact how raters observe or identify different facets of behavior [3]. Multi-raters, each with their unique tendencies, including cultural assumptions, may interpret the same observed behavior differently [33]. Since research on social cognition indicates that people give more weight to their own thoughts and feelings than to their behavior when forming their own self-perceptions [36], a combination of self-ratings and multi-rater assessments can contribute to a broader profile of information about the student being assessed.

This study explored students' and supervisors' perceptions of EI and clinical competencies across practice areas. The investigation demonstrated that students and their supervisors differ in how they perceive EI and that students tended to rate their EI higher. Research regarding the ability to understand one's own and others' emotions has been shown to be related to more effective communication and performance skills in the clinical arena [27-29]. Self-awareness is an important driver of problem solving and decision-making in clinical practice [1,27] and a lack of self-awareness was found to predict poor success in medical student's clinical rotations [31]. This study suggests positive implications for defining EI in terms of practical and discrete skills that can be developed and assessed to enhance overall clinical performance.

Limitations and Recommendation for Future Research

A sample of convenience was used because the researcher had access to this particular group. Future studies utilizing a larger sample size from other health professional programs would make the findings more generalizable and allow comparisons between different health care professionals. Further research is needed to examine the impact of different rater perceptions among professionals, the process of observation and interpretation of skill performance, and discrepancies between supervisor and student EI. Further exploration of the overall relevance of EI for practice would be in alignment with the professional educational agenda of identifying relevant and desirable learner characteristics.

Significance of Study Findings

- Assessing student's EI and its relatedness to their clinical performance may contribute to their clinical education.
- Assessing EI and its relatedness to clinical performance is valuable for the supervision process of novice clinicians across the health professions.
- The use of student self-assessment is informative for faculty to understand what students perceive as their strengths and weaknesses.

Bibliography

1. Arora Sonal., *et al.* "Emotional intelligence in medicine: a systematic review through the context of the ACGME competencies". *Medical Education* 44.8 (2010): 749-764.
2. Joseph Dana L., *et al.* "Why does self-reported emotional intelligence predict job performance? A meta-analytic investigation of mixed EI". *Journal of Applied Psychology* 100.2 (2015): 298-342.
3. Boyatzis Richard E., *et al.* "EI competencies as a related but different characteristic than intelligence". *Frontiers in Psychology* 6 (2015): 72.
4. Mayer John D., *et al.* "Emotional intelligence meets traditional standards for an intelligence". *Intelligence* 27.4 (1999): 267-298.
5. Gribble Nigel., *et al.* "Differences in the emotional intelligence between undergraduate therapy and business students and the population norms". *Asia-Pacific Journal of Cooperative Education* 18.3 (2017): 225-242.
6. Birks Yvonne., *et al.* "Emotional intelligence and perceived stress in healthcare students: a multi-institutional, multi-professional survey". *BMC Medical Education* 9.1 (2009): 61.

7. Chapin Krysta. "The effect of emotional intelligence on student success". *Journal of Adult Education* 44.1 (2015): 25-31.
8. Cook Christian Jaeger, *et al.* "Does emotional intelligence influence success during medical school admissions and program matriculation?: a systematic review". *Journal of Educational Evaluation for Health Professions* 13 (2016): 40.
9. Bathje Molly, *et al.* "The relationship between admission criteria and fieldwork performance in a masters-level OT program: Implications for admissions". *The Open Journal of Occupational Therapy* 2.3 (2014): 1-14.
10. Codier Estelle E., *et al.* "Graduate-Entry Non-Nursing Students: Is Emotional Intelligence the Difference?" *Nursing Education Perspectives* 36.1 (2015): 46-47.
11. Gutman Sharon A and Janet P Falk-Kessler. "Development and psychometric properties of the emotional intelligence admission essay scale". *The Open Journal of Occupational Therapy* 4.3 (2016): 1-14.
12. Akerjordet Kristin and Elisabeth Severinsson. "Emotionally intelligent nurse leadership: a literature review study". *Journal of Nursing Management* 16.5 (2008): 565-577.
13. Rao Paul R. "Emotional intelligence: The sine qua non for a clinical leadership toolbox". *Journal of Communication Disorders* 39.4 (2006): 310-319.
14. Romanelli Frank., *et al.* "Emotional intelligence as a predictor of academic and/or professional success". *American Journal of Pharmaceutical Education* 70.3 (2006): 69.
15. Victoroff Kristin Zakariasen and Richard E Boyatzis. "What is the relationship between emotional intelligence and dental student clinical performance?" *Journal of Dental Education* 77.4 (2013): 416-426.
16. Fidler Gail S. "Developing a repertoire of professional behaviors". *The American Journal of Occupational Therapy* 50.7 (1996): 583-587.
17. Gutman Sharon A., *et al.* "Student level II fieldwork failure: Strategies for intervention". *American Journal of Occupational Therapy* 52.2 (1998): 143-149.
18. Randolph Diane Smith. "Evaluating the professional behaviors of entry-level occupational therapy students". *Journal of Allied Health* 32.2 (2003): 116-121.
19. Tickle-Degnen Linda. "Working well with others: The prediction of students' clinical performance". *American Journal of Occupational Therapy* 52.2 (1998): 133-142.
20. James Karen L and Linda Musselman. "Commonalities in level II fieldwork failure". *Occupational Therapy in Health Care* 19.4 (2006): 67-81.
21. Kirchner Grace L., *et al.* "Use of admission criteria to predict performance of students in an entry-level master's program on fieldwork placements and in academic courses". *Occupational Therapy in Health Care* 13.1 (2001): 1-10.
22. Boyatzis, Richard E. "Competencies in the 21st century". *Journal of Management Development* 27.1 (2008): 5-12.
23. Goleman Daniel. "Leadership that gets results". *Harvard Business Review* 78.2 (2000): 4-17.
24. Goleman Daniel. "What makes a leader". *Organizational Influence Processes* (1998): 229-241.
25. Boyatzis Richard E. "Commentary on Ackley (2016): Updates on the ESCI as the behavioral level of emotional intelligence". *Consulting Psychology Journal Practice and Research* 68.4 (2016): 287-293.

26. Korn Ferry. "Emotional and social competency inventory: Research guide and technical manual" (2017).
27. Chaffey Lisa., *et al.* "Relationship between intuition and emotional intelligence in occupational therapists in mental health practice". *American Journal of Occupational Therapy* 66.1 (2012): 88-96.
28. Punwar Alice J and Suzanne M Peloquin. "Occupational therapy: Principles and practice". Lippincott Williams and Wilkins (2000).
29. Taylor Scott N and Jacqueline N Hood. "It may not be what you think: Gender differences in predicting emotional and social competence". *Human Relations* 64.5 (2011): 627-652.
30. Isenberg Gerald A., *et al.* "Evaluation of the validity of medical students' self-assessments of proficiency in clinical simulations". *Journal of Surgical Research* 193.2 (2015): 554-559.
31. Parker James DA., *et al.* "Alexithymia and academic success: examining the transition from high school to university". *Personality and Individual Differences* 38.6 (2005): 1257-1267.
32. Blanch-Hartigan Danielle. "Medical students' self-assessment of performance: results from three meta-analyses". *Patient Education and Counseling* 84.1 (2011): 3-9.
33. Ng Thomas WH and Daniel C Feldman. "A comparison of self-ratings and non-self-report measures of employee creativity". *Human Relations* 65.8 (2012): 1021-1047.
34. Atkins Paul WB and Robert E Wood. "Self -versus others rating as predictors of assessment center ratings: Validation evidence for 360-degree feedback program". *Personnel Psychology* 55.4 (2002): 871-904.
35. Vazire Simine and Erika N Carlson. "Others sometimes know us better than we know ourselves". *Current Directions in Psychological Science* 20.2 (2011): 104-108.
36. Chui Ernest WT. "Desirability and feasibility in evaluating fieldwork performance: Tensions between supervisors and students". *Social Work Education* 29.2 (2010): 171-187.
37. Yammarino Francis J and Leanne E. Atwater. "Do managers see themselves as other see them? Implications of self-other rating agreement for human resources management". *Organizational Dynamics* 25.4 (1997): 35-44.
38. de Jong Lubberta H., *et al.* "Students' motivation toward feedback-seeking in the clinical workplace". *Medical Teacher* 39.9 (2017): 954-958.
39. Hochberg Mark., *et al.* "Midclerkship feedback in the surgical clerkship: the "Professionalism, Reporting, Interpreting, Managing, Educating, and Procedural Skills" application utilizing learner self-assessment". *The American Journal of Surgery* 213.2 (2017): 212-216.
40. Sherman Jeffrey J and Adam Cramer. "Measurement of changes in empathy during dental school". *Journal of Dental Education* 69.3 (2005): 338-345.
41. American Occupational Therapy Association. *Fieldwork Performance Evaluation for the Occupational Therapy Student*. Bethesda, MD: AOTA Press (2002).
42. Boyatzis Richard E and Goleman Daniel. "Emotional Competency Inventory". Boston: The Hay Group (2007).
43. IBM Corp. *IBM SPSS Statistics for Windows, Version 24.0*. Armonk, NY: IBM Corp., (2016).

Volume 7 Issue 4 April 2018

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