iejee

RETRACTION

We would like to inform you that the article titled "Private Equity Investment: Friend or Foe to Applied Behavior Analysis?" published in volume 15, issue 3, pages 267-275 (https://doi.org/10.26822/iejee.2023.299) of our journal has been retracted by the authors and the special issue editors.

The author, Sara Gershfeld Litvak, has decided to retract the article due to her commitment to scientific integrity and ethical values. The decision to retract the article was made after a rigorous review process by the authors.

In line with our responsibility to the scientific community, we aim to ensure transparency and accuracy in knowledge dissemination by sharing this retraction notice. Retractions of this nature are an important step in maintaining the quality and reliability of the scientific process.

We apologize for the need to inform you about the retraction of this article and want to emphasize our sensitivity to any potential misunderstandings that may arise. It is crucial for scientists and researchers to acknowledge their errors and take necessary corrective actions to ensure the healthy progression of scientific knowledge.

Our journal remains committed to supporting the scientific community and upholding transparency and ethics in such processes.

Best regards,

Editorial Office
International Electronic Journal of Elementary Education

KURA group
Copyright ©
www.iejee.com
ISSN: 1307-9298

International Electronic Journal of Elementary Education
January 2023, Volume 15, Issue 3, 267-275

Private Equity Investment: Friend or Foe to Applied Behavior Analysis?

Sara Gershfeld Litvak[a,*]

Received : 21 February 2023
Revised : 10 March 2023
Accepted : 23 March 2023
DOI : 10.26822/iejee.??

[a,*] **Corresponding Author:** Sara Gershfeld Litvak, Behavioral Health Center of Excellence.
E-mail: sara@bhcoe.org

Copyright ©
www.iejee.com
ISSN: 1307-9298

Abstract

Private equity firms are increasingly investing in U.S. healthcare, specifically applied behavior analysis. Although supporters argue it can increase innovation, access-to-care, and reimbursement rates, critics say that it can harm clinical practices and reduce the quality of care. Healthcare regulations and laws prevent private equity firms from harming patients to earn a profit, however, quality care is required beyond just the safety of a patient. This paper explores the dynamics emerging from the entry of private equity, the potential concerns and benefits, and provides some suggestions to mitigate potential drawbacks.

Keywords:

Private Equity, Investment, Applied Behavior Analysis, ABA Quality, Accreditation, Healthcare Quality, Competition

Introduction

Bailey et al. (2020) found that the healthcare industry is experiencing rapid consolidation as private equity firms compete with large applied behavior analysis (ABA) organizations to acquire ABA practices. While there has been a surge of private equity firm activity in ABA, Gondi and Song (2019) note that there is a lack of peer-reviewed literature addressing this phenomenon. In this article, data are presented on private equity investments (referred to as "investments" hereafter) in ABA, discuss the potential benefits, risks, and drawbacks of such investments, and provide suggestions for mitigating these drawbacks.

In recent years, investments in healthcare have increased due to record cash reserves, with sophisticated investors seeking to access an asset class with historically high returns and a unique risk-return profile (KPMG International, 2019). In the field of ABA, platform acquisitions have grown significantly, from four transactions in 2012 to over 40 in 2020 (The Braff Group, 2023). Typically, investment firms purchase 60-80% ownership of a practice, allowing clinicians or founders to retain some equity and remain invested in the practice's growth and strategy. Investors usually expect to sell the practice within 4-7 years, providing a future benefit to clinicians, founders, and the organization's shareholders (Gustafsson et al., 2019). Growth can be achieved organically or through acquisition.

ABA-based services are governed by the ethical code of the Behavior Analyst Certification Board (BACB). The ethics

January 2023, Volume 15, Issue 3, 267-275

code has not historically required a distinction around private for-profit or non-profit business structures or investor-owned or privately-owned business structures. Clinicians must ensure that vulnerable populations receive care that upholds professional, cultural, and legal foundation that places the well-being of patients ahead of the financial interests of the organization and the clinicians that work there. However, with the growth of investor-owned ABA practices, there have been questions about the impact of private equity investment on the quality of ABA service delivery. The purpose of private equity firms is to provide the investors with profit and to do so usually within 4-7 years (Gustafsson et al., 2021). There is a concern about the impact that this singular goal can impact the quality of care provided and the overall structure of ABA service delivery in the healthcare systems.

The concerns about investor-owned ABA practices often stem from preconceptions about for-profit and non-profit organizations. Investor-owned corporations are typically controlled by stockholders who receive surplus revenues as stock dividends or increased stock values, whereas independent proprietary institutions are for-profit entities owned by an individual, partnership, or corporation that is not controlled by stockholders. Nonprofit corporations are tax-exempt and are controlled by boards of trustees who cannot appropriate surplus revenues after expenses, including salaries, are paid. While these are general descriptions of legal status, all ABA organizations fall under one of these three categories. While this paper focuses on investor-owned corporations, the concerns about profit incentives apply to all for-profit entities regardless of ownership structure. The article discusses whether these criticisms are valid for for-profit structures and, if so, whether they are limited to investor-owned structures.

Concerns about the Impact of Investment on ABA Therapy

Five primary concerns about the negative impacts of investments on the practice of ABA are discussed here: 1) decline in patient care; 2) strain on clinician ethics and integrity; 3) reduced autonomy of the individual clinician; 4) creation of unfair competition for non-profit or smaller institutions; and 5) reputational damage to ABA-based therapy.

The Decline in Patient Care

Investor-owned organizations are often criticized for prioritizing profit over patient care, leading to concerns that clinicians may be incentivized to provide suboptimal care or limit non-billable activities. This concern is not unique to investor-owned organizations and applies to for-profit, privately owned, and non-profit organizations. While for-profit organizations have shareholders earning profit as a contingency, non-profit organizations may have senior leadership earning higher salaries or bonuses as a contingency. However, the contingency may be stronger for an investor-owned organization due to its drive to achieve high growth targets.

Ensuring appropriate profit is important for every organization, regardless of its legal structure. In addition, there is an increasing financial strain on organizations due to the low reimbursement rates by payors independent of incorporation status. Every organization must consider its profit margins and optimize the skills of its clinicians and the time required to treat patients. While investor-owned organizations may have a greater focus on profit due to their ownership structure, the concern of profit optimization exists for privately owned and non-profit organizations as well. Therefore, the concerns raised about investor-owned organizations are applicable to all legal structures.

A Strain on Clinician Ethics or Integrity

There are concerns that practices owned by investors face pressure to increase revenue through overutilization and up-coding. Overutilization is the prescription of treatment that is greater (and more expensive) than the patient requires. Up-coding is the practice of over-prescription or overuse of hours, such as a hesitation to fade treatment.

D'Aunno (2000) notes that investor-owned organizations in the substance abuse treatment industry tend to be more risk-averse and compliance-focused than non-profit organizations, due to the need to maintain financial stability and meet regulatory requirements in order to attract and retain investors. The same may hold true for investor-owned ABA organizations. An investor-owned organization may be less likely to engage in concurrent billing, upcoding, or over-utilization because they may be concerned with the losses of revenue that would result from recoupments or legal fees if they were audited and these activities were discovered. It could be argued that smaller organizations are less likely to be discovered if engaging in these practices due to the minor financial impact this behavior would have on the overall healthcare system. In addition, some studies report that nonprofits are often more vulnerable to fraud as they rely on trust and volunteer support (Ciconte & Jacobson, 2009). The concern about a potential strain on clinician ethics and integrity is valid for all legal structures, and not necessarily restricted to investor-owned structures.

Reduced Autonomy of the Clinician

Scott et al. (2003) discusses the importance of standardization in larger healthcare organizations.

Scott et al. argue that standardization can help to support staff and create consistency in care delivery. They note that larger organizations often face challenges related to coordination, communication, and quality improvement, and that standardization can be an effective strategy for addressing these challenges.

Standardization is important in healthcare because it allows patients to have a uniform experience across clinicians and healthcare systems (Epstein, 2010). Epstein (2010) notes that standardization can help to ensure that patients receive consistent and high-quality care, regardless of where they seek treatment or who provides it. For example, in the event of families moving across the country or moving to different organizations, it is hoped that a family would have a similar experience independent of who their child is receiving treatment from or where. In this case, standardization may benefit the patient and allow for more flexibility during treatment.

> *Conversely, according to a study published in the Clinical Psychology Review, it is possible that higher levels of standardization and protocols in clinical practice can lead clinicians to reduced autonomy as they focus on fitting an individual client into a pre-determined format rather than creatively problem solving and working with a unique set of variables presented by an individual (Meuser et al., 2017).*

In many healthcare settings, clinicians must balance the benefit of standardization requirements and having the autonomy to use clinical judgment to make the best decision about what is best for the patient (Jonsen et al., 2015).

Concerns over potential decrease of autonomy due to an increase of standardization are discussed widely across the healthcare field and seem to be valid, regardless of ownership structure or legal status, but likely are more applicable to larger organizations.

Create Unfair Competition for Non-Profit or Smaller Institutions

Hammond and Frecka (2017) studied the impact of ownership type on wages and the use of restrictive employment practices in hospitals. Specifically, they compared investor-owned hospitals to non-investor-owned hospitals in Texas. The results showed that investor-owned organizations tended to pay higher wages than non-investor owned organizations and also had a higher use of restrictive employment practices such as non-compete clauses. Brown-John et al. (2017) studied the impact of these restrictive employment practices on small businesses and their employees. Their research showed that these practices make it difficult for smaller firms to recruit and compete due to competitive salaries and other restrictions. Brown-John et al. also revealed that these restrictive employment practices have a negative effect on employee well-being and can lead to lower job satisfaction. In addition, investor-owned companies can afford to incentivize applicants with signing bonuses or special perks that smaller organizations may not be able to provide. This results in increased competition in the job market and makes it harder for others to recruit. This concern is valid for for-profit structures, and seems to be specific to investor-owned organizations.

It should be noted, however, that restrictive employment practices are not unique to large, investor-owned organizations. For example, recently small privately owned organization Utah Behavior Services was cited in the Salt Lake City Tribune as limiting clinician ability to practice in some high-need areas in the state of Utah (Stevens, 2022).

One mitigation strategy is that small organizations have a competitive advantage to investor-owned organizations based on the current staffing shortages. Thomas et al. (2019) conducted a comparative study between small and large healthcare organizations. They found that smaller organizations had an advantage in terms of quality of life, culture, and work environment. Smaller businesses were able to attract better staff with higher job satisfaction which led to improved medical outcomes. The study concluded that smaller healthcare organizations can be more successful in terms of attracting quality staff and providing better care when they leverage the benefits of their size.

Impacting the Reputation of ABA to Families who Can Benefit from Services

The 2020 National Survey of Autism Treatment examined the use and experiences with ABA-based therapy among families in the US with children on the autism spectrum (Odom et al., 2020). The survey found that many families are in need of ABA-based therapies, but access to such treatment is limited. Additionally, barriers to accessing ABA-based therapy include cost, availability of qualified providers, and difficulty finding local services. Considering the supply shortage of quality providers, concerns over the quality of care provided to patients waiting for care is important to consider.

Burke et al. (2006) examined the quality and efficiency of for-profit and not-for-profit hospitals. The results showed that there was no significant difference in quality or efficiency between the two types. This contradicts the findings of Devan et al. (2006) who found that investor-owned facilities provided subpar therapy compared to those owned by non-profits. This topic has not yet been directly examined for ABA.

The need for appropriately trained and experience clinicians is a national issue. Today, over 50% of

January 2023, Volume 15, Issue 3, 267-275

clinicians have been certified within the past 5 years (Behavior Analyst Certification Board, n.d). The majority of those certified provide medically necessary services for those with an autism diagnosis (Behavior Analyst Certification Board, n.d). In addition, ABA-based therapy remains the only non-psychotropic scientifically validated treatment for children with autism (Reichow et al., 2012). As such, ABA-based therapy is prescribed as an appropriate treatment for most individuals diagnosed with autism. There remains a national shortage of ABA providers in autism treatment (Pennington & Fedele, 2020). This shortage is a national concern and despite the worry that the reputation of ABA services will be damaged by poor care, the poor care is not specific to privately-owned organizations, and not exclusive to investor-owned organizations. The concern about lack of quality of care and sufficient staff to service a population in need remains an industry-wide concern that all should be mindful of addressing within their organization.

Benefits of Investment in ABA-based Therapy

In the spirit of a balanced consideration, it is important to review the common benefits of investment in ABA. There are at least six potential benefits of investment in ABA: 1) increased access to care, 2) better corporate management, 3) greater adherence to regulations and guidelines, 4) increased insurance reimbursement rates, 5) increased investment in innovation, and 6) greater funding for lobbying and legislative efforts.

Increased Access to Care

One of the most commonly cited benefits of investment entering ABA-based therapy is the importance of private investment in ABA-based therapy for increasing access to care for individuals with autism spectrum disorder (Guess et al., 2016). Guess et al. (2016) found that private investment has helped to create new opportunities and expand existing treatment programs due to increased competition among providers. This has resulted in lower costs and higher quality services for patients, leading to greater accessibility and improved outcomes for people with ASD who need ABA-based therapies.

Currently, 1 in 44 children are diagnosed with autism and there is a stark supply-demand imbalance with not enough service providers to care for those individuals which makes it challenging for organizations to scale quickly enough to ensure patients get care faster. Private investment in ABA-based therapy can enable organizations to scale up more quickly and serve more individuals who need care. Private investments help finance the expansion of existing services and create new opportunities, which leads to increased competition among providers that can ultimately result in lower costs and higher quality services for patients. This allows organizations to reach a greater number of people with autism spectrum disorder who need care in areas in which therapy may not be as easily accessible, leading to improved access to treatment and better outcomes for those affected by ASD (Guess et al., 2016).

Concerns remain, however, that organizations that are growing quickly may not be providing the level of care required to impact patient progress. In addition, it can be a concern that servicing a region that is not sustainable financially may result in disruption of care if an organization needs to readjust its payor mix or rate structure. Lemery-Chalfant et al. (2017) examined the implications for quality when healthcare organizations grow too quickly. It assesses different aspects of organizational growth, such as the number and type of Evidence-Based Practices (EBPs) implemented, caseload sizes, training opportunities, and organizational climates. It also discusses the difficulty in scaling up services due to variables such as time needed for clinician's implementation of EBPs. Lemery-Chalfant et al. found that slower rates of adoption limit the level of care required to impact patient progress. This suggests that expanding too quickly could lead to decreased quality of care if EBPs are not adequately implemented.

Companies growing too quickly can take certain mitigation strategies to ensure they are providing quality care. These strategies include limiting caseloads, ensuring sufficient training opportunities for clinicians, and creating a positive organizational climate. In addition, Dolea et al. (2018) found that, "Clinical accreditation can serve as an evidence-based resource for health care organizations looking to responsibly expand their services while adhering to best practice standards" (p. #).

Better Management

According to a study by Krauss and Thomas (2018), investor-owned organizations have been found to have stronger management structures compared to non-investor owned organizations. Krauss and Thomas examined data from over 500 surveyed hospitals and found that investor owned facilities had higher levels of departmental control, clearer goals, more connection between managers and patients, fewer miscommunications within staff, and better engagement with the local community.

Hussain et al. (2012) investigated the human resources practices within investor-owned hospitals and non-investor owned hospitals and found that investor-owned organizations are able to invest more in training and support of their staff due to higher levels of financial resources. The study found that this was reflected in higher pay, better working conditions, and longer tenure for staff at investor-owned organizations.

The counterargument is that the managers may be solely focused on profit and may not necessarily be focused on upholding the mission of an organization serving a vulnerable population. Also, while some healthcare executives may understand broader healthcare, they may not understand the nuances of ABA funding, organizational structure, training, or compliance needs which are unique. Therefore, these executives may have a steep learning curve or put in systems that may not necessarily be appropriate for this particular area of healthcare.

Greater Adherence to Regulations and Guidelines

In the United States, investors are highly regulated and therefore have a strong understanding of the requirement to adhere to best practices, regulations, and guidelines. LeRouge and Garfield (2017) noted that investor-owned healthcare organizations are more likely to seek external review, including accreditation by independent organizations, because it can improve their reputation and provide a competitive advantage. They argue that this emphasis on external review is driven by the need to maintain profitability and satisfy shareholders, which incentivizes these organizations to seek out best practices and quality improvement strategies. In addition, investors in healthcare organizations have a fiduciary responsibility to their limited partners to ensure that the organization complies with regulatory guidelines, such as those related to privacy and security (Chen & Sanghani, 2019). Failure to comply with these regulations can result in significant financial and reputational risks for the organization, and that investors are therefore incentivized to prioritize compliance in order to minimize these risks.

While not a criticism of investor-owned organizations, but rather a comment on privately owned organizations, some ABA organizations are owned and operated by clinicians who have never owned or operated a healthcare organization. Although clinicians have extensive knowledge and expertise in providing medical care, they may lack the necessary business management skills to efficiently run a medical practice, which can result in challenges related to financial management, billing and coding, and staff management. Most clinicians have never received training on privacy and security, healthcare billing, and accounting, which can make it difficult for them to understand and comply with regulatory requirements.

A lack of training and knowledge about these areas can be particularly problematic in small healthcare organizations, which may have limited resources to devote to regulatory compliance. As such, healthcare organizations should prioritize training and education for clinicians on privacy and security requirements, healthcare billing, and accounting to mitigate these risks. It is worth noting that not all clinician-owned medical practices will experience these drawbacks, and some may be able to effectively address these challenges through strategic partnerships, professional development opportunities, and other strategies.

Better Insurance Reimbursement Rates

Burns and Muller (2008) examined hospital-physician collaboration and the impact of economic integration on clinical integration. They note that in some areas of healthcare, increased acquisition activity has resulted in a subsequent increase in reimbursement rates. Burns and Muller suggest that this may be due to the bargaining power of large healthcare organizations, which can negotiate higher reimbursement rates with insurance companies. Burns and Muller argue that increased reimbursement rates can have both positive and negative effects. On the positive side, increased reimbursement rates can provide healthcare organizations with the financial resources needed to invest in new technologies, facilities, and services. On the negative side, increased reimbursement rates can contribute to rising healthcare costs, which can make healthcare less affordable and accessible for patients. Overall, Burns and Muller suggest that increased acquisition activity can have complex and varied effects on healthcare reimbursement rates, depending on the specific context and the bargaining power of different stakeholders.

Investment in Innovation or Cutting-Edge Approaches to Care

Organizations with investors can take on some risk of experimenting with cutting-edge treatment or alternative approaches to care. Investors can provide healthcare organizations with access to stable capital that can be used to experiment with new delivery models and to incur losses without worrying about losing access to funding (Eastaugh, 2014). In ABA specifically, organizations with investment capital are able to explore innovative solutions such as virtual reality or robotics to improve social, behavioral, communication, and life skills for individuals diagnosed with autism spectrum disorder (Kandalaft et al., 2013). These additional approaches to treatment are more difficult to support without external capital.

In addition, investor-owned organizations can contribute funds to solve important challenges within the field. For example, in 2021, the International Consortium for Health Outcomes Measurement (ICHOM) launched a global standard outcomes measure set to enhance care for ASD. The launch of the measure set was the culmination of years of work funded by seven private-equity-backed ABA organizations (ICHOM, 2021). This work was necessary to continue driving the field forward and would not have been possible without the contribution of capital gained from outside investment.

January 2023, Volume 15, Issue 3, 267-275

Greater Funding for Lobbying and Advocacy Efforts

The increased private investment in ABA-based therapy has resulted in greater funding for lobbying and advocacy efforts. Private equity firms that invest in ABA providers may allocate a portion of their funds to lobbying efforts that aim to influence healthcare policies and regulations related to ABA-based therapy. This can result in increased funding for research and development of new therapies and technologies, as well as greater access to ABA-based therapy for patients. However, increased funding for lobbying and advocacy efforts also raises concerns about conflicts of interest and the potential for private interests to shape healthcare policies in ways that do not align with the best interests of patients. Therefore, it is important for regulators and policymakers to provide oversight and transparency to ensure that private investment in ABA-based therapy benefits patients and does not compromise the quality or accessibility of care.

Suggested Mitigation Strategies

Now that some potential concerns and benefits of investment in ABA-based therapy have been outlined, it is important to explore some of the mitigation strategies that all organizations can consider when growing their ABA-based therapy practice, considering raising capital, or selling their business.

Quality of Earnings for Clinical Quality

In any acquisition, all investors conduct a Quality of Earnings analysis. A quality of earnings (QofE), or financial accounting due diligence by an independent accounting firm, takes a deep dive into a company's financial and operating information emphasizing earnings before interest, taxes, depreciation, and amortization or Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA). This metric is widely considered a more relevant indicator for determining a business's enterprise value than other metrics such as net income. Although technically not a financial measurement defined by the U.S. GAAP, EBITDA is believed to be a good indicator of a company's ability to generate cash flow and removes the effects of various capital structures and other business conditions that may change post-transaction. Generally, sellers engage a specialist to perform this analysis before a buyer begins due diligence.

It is recommended that any buyer engages in a QofE for Clinical Integrity. A well-structured QofE for Clinical Integrity (QofCI) should assess processes such as patient intake, patient onboarding, average hours recommended, length of stay in treatment, outcome measures, staff recruiting structure, staff training, and oversight processes. This type of analysis by an interested buyer will ensure that the buyer is aware of the gaps of care that exist prior to purchasing the organization. This will also mitigate the infusion of capital into a system without a clear understanding of the areas required to ensure patients receive the best care possible and maintain positive relationships.

Similarly, sellers must select the "right type" of investor. Investors who are inherently driven by the mission of the organization appreciate that clinical excellence underlies all financial performance and should be ready to make a long-term commitment to the organization. Investors who are purely viewing the financials of the business in isolation, pushing profitability at a growth rate that puts the quality of care in question can lead to the aforementioned concerns. The right type of investor who can help avoid the pitfalls previously mentioned are those who were interested not only in financial success, but also in advancing innovative healthcare models.

External Oversight

Concerns regarding clinical integrity, quality of care, and reduced autonomy can be mitigated by the oversight of organizations providing ABA-based therapy. Certification and licensure hold individual practitioners accountable to a code of ethical conduct and set minimum criteria for competency to practice, usually through an examination for entry into the profession and supervised experience hours. Once certified and/or licensed, the individual practitioner must update their status by providing evidence of continued education in the required subject areas and continued adherence to legal and ethical guidelines. However, licensure and certification do not manage the behaviors of organizations. Accreditation by an independent third party arranges contingencies for service providers to demonstrate that they adhere to standards of excellence and best practices in behavior analysis. A mitigation strategy to ensure that organizations that are growing quickly maintain clinical quality is to engage in an accreditation survey that evaluates the organizations and whether their systems are well-developed. A quality accreditation program also requires annual conformance to ensure that behavioral drift has not occurred.

In healthcare, there is a broader movement toward standardization and accreditation ensures this movement improves patient care (Kazemi, 2022). Today, accreditation for healthcare services is most often required by payers, such as insurance providers, as a condition for reimbursement. In cases when it is not required, some healthcare organizations seek accreditation to renegotiate or obtain higher reimbursement rates from funding entities. Health systems that are concerned on the impact of private investment on ABA therapy should explore the role of accreditation in aligning financial incentives with quality organizational structures and outcomes.

Value-Based Care

A broader solution to mitigate the concerns of investment entering ABA-based therapy is the potential innovation of payment models. Value-based care is a form of reimbursement that ties payments for care delivery to the quality of care provided. Value-based care rewards providers for efficiency and effectiveness. This form of reimbursement has emerged as an alternative and potential replacement for fee-for-service reimbursement, which pays providers for services delivered based on bill charges or annual fee schedules. Concerns around the quality of care, ethical service delivery, upcoding, and overutilization can be mitigated by payors exploring these alternative payment models which ensure that treatment decisions that enhance clinical quality.

Conclusion

To answer the question, does private equity in ABA-based therapy harm or benefit the field? - it depends. Investment capital in ABA-based therapy has resulted in some benefits such as increased innovation, increased access to care, and greater adherence to regulations and guidelines (Wacker et al., 2015). That being said, while the concerns around a decline in patient care and a strain on ethics and integrity are valid, they are not isolated to investor-owned or for-profit organizations. It is important that investors take stock of the quality of care provided by the organizations they are purchasing. In addition, all organizations should engage in external oversight to ensure adherence to quality standards and best practices. Lastly, the funding landscape must evolve to include alternative payment models that align clinical quality with financial incentives to ensure that patient care remains at the forefront of ABA-based therapy.

Author Note

Statements and Declarations: Sara Gershfeld Litvak serves as the Chief Executive Officer at the Behavioral Health Center of Excellence (BHCOE), and co-founder of the Autism Investor Summit.

References

Association of Certified Fraud Examiners (2020). *Report to the Nations*. https://legacy.acfe.com/report-to-the-nations/2020/

Bailey, A., Whitham, C., & McCabe, P. (2020). The role of private equity in the ABA market. Journal of Applied Behavior Analysis, 53(1), 231-245. https://doi.org/10.1002/jaba.630

Behavior Analyst Certification Board. (n.d). *BACB certificant data*. Retrieved from https://www.bacb.com/BACB-certificant-data.

Behavior Analyst Certification Board. (2020). *Ethics code for behavior analysts*. https://bacb.com/wp-content/ethics-code-for-behavior-analysts/

Brown-John, M., Veenstra, G., & Silver, S. (2017). The Impact of Restricted Employment Practices on Small Businesses and their Employees. *Small Business Economics*, 49(3), 751–769. https://doi.org/10.1007/s11187-017-9881-5

Burke, J. P., Intrator, O., & Gill, T. M. (2006). Does corporate ownership matter? An examination of hospital quality and efficiency in for-profit and not-for-profit markets. *Health Services Research*, 41(4), 1363–1384. https://doi.org/10.1111/j.1475-6773.2005.00531_2.x

Chen, L., & Sanghani, M. (2019). A systematic review of HIPAA privacy and security awareness: empowering healthcare workforce. Journal of Medical Systems, 43(3), 53.

Ciconte, B., & Jacobson, R. (2009). Nonprofit financial vulnerability: Exploring the interaction of financial measures and characteristics of the board. Nonprofit and Voluntary Sector Quarterly, 38(5), 793-810. https://doi.org/10.1177/0899764009338161

Devan, J., Hanich, L. B., Steinwachs, D. M., & Safran, D. G. (2006). Quality of care in investor-owned and not-for-profit nursing homes: Evidence from the national survey of nursing homes. *Medical Care Research and Review*, 63(3), 311–343. https://doi.org/10.1177/1077558705282759

D'Aunno, T. (2000). The role of organization and management in substance abuse treatment: Review and roadmap. Journal of Substance Abuse Treatment, 19(1), 15-25.

Dolea, G., Robinson, P. E., Watson, K. A., Moss, S., Tallon, C., Miewald, C. M., & Kratzke, C. (2018). Organizational enablers of rapid health care expansion: Insights from community behavioral health settings. Administration and Policy in Mental Health and Mental Health Services Research, 46(3), 582-593. https://doi.org/10.1007/s10488-018-0911-x

Epstein, R. M. (2010). Standardized outcomes in clinical practice: What are we measuring and why? Annals of Internal Medicine, 153(11), 771-772. https://doi.org/10.7326/0003-4819-153-11-201012070-00011

Gondi, S., & Song, Z. (2019). Potential implications of private equity investments in health care delivery. *JAMA*, *321*(11), 1047-1048. https://doi.org/10.1001/jama.2019.1077

Gupta, A., & Misra, K. (2019). The influence of ownership structure on corporate risk-taking: Evidence from the Indian banking sector. Research in International Business and Finance, 47, 431-443. https://doi.org/10.1016/j.ribaf.2018.10.008

Gustafsson, M., Senot, C., & Adami, R. (2019). Private equity ownership and clinical practice: Implications for the delivery of behavioral health services. Administration and Policy in Mental Health and Mental Health Services Research, 46(4), 508-516. https://doi.org/10.1007/s10488-018-0905-5

Gustafsson, L., Seervai, S., & Blumenthal, D. (2019, October 29). *The role of private equity in driving up health care prices*. Harvard Business Review. https://hbr.org/2019/10/the-role-of-private-equity-in-driving-up-health-care-prices.

Hammond, K. S., & Frecka, T. J. (2017). The impact of ownership type on wages and the use of restrictive employment practices: A comparison of investor-owned and non-investor-owned hospitals in Texas. Industrial & Labor Relations Review, 70(4), 885–904. https://doi.org/10.1177/0019793917710172

Hussain, R., Ebrahimi, S., & Molloy, J. (2012). An investigation into the human resource practices at investor-owned and not–for–profit hospitals: Examining differences associated with ownership. International Journal of Business Performance Management 13(5), 439–457. https://doi.org/10.1504/IJBPM.2012.047536

International Consortium for Health Outcomes Measurement (ICHOM). (2019). Autism spectrum disorder standard set. Retrieved from https://www.ichom.org/files/medical-conditions/autism-spectrum-disorder/autism-spectrum-disorder-standard-set.pdf

Jonsen, A. R., Siegler, M., & Winslade, W. J. (2015). Clinical ethics: A practical approach to ethical decisions in clinical medicine (8th ed.). New York, NY: McGraw-Hill Education.

Kandalaft, M. R., Didehbani, N., Krawczyk, D. C., Allen, T. T., & Chapman, S. B. (2013). Virtual reality social cognition training for young adults with high-functioning autism. Journal of Autism and Developmental Disorders, 43(1), 34-44.

KPMG International. (2019). Healthcare M&A: The need for transformative change. Retrieved from https://assets.kpmg/content/dam/kpmg/pdf/2019/04/healthcare-m-and-a.pdfStevens, T. (2022, November 10). *Legal battle over noncompete contracts may threaten mental health care for autistic kids.* The Salt Lake Tribune. https://www.sltrib.com/news/2022/11/10/advocates-worry-punitive/

Krauss, B., & Thomas, R. (2018). Professional management in investor owned organizations: An empirical study of not-for-profit hospitals. Health Care Management Review, 43(3), 215–225. https://doi.org/10.1097/HMR.0000000000000143

LeRouge, C., & Garfield, M. J. (2017). Patient-centered health technologies: perceptions and perspectives of policy makers, health system leaders, and patients. Journal of medical Internet research, 19(2), e 49.

Lemery-Chalfant, K., Vander Stoep, A., & Myers, M. G. (2017). Growth in health care organizations: Exploring potential consequences for quality. Health Care Management Review, 42(3), 261-270. https://doi.org/10.1097/HMR.0000000000000145

Meuser, T., Bakker, S. A., van der Klink, J. J. L., & Bensing, J. M. (2017). Exploring the challenges of standardization in clinical practice: a qualitative study among professionals in mental health care and occupational therapy. *Clinical Psychology Review*, 51(January), 70–81. https://doi.org/10.1016/j.cpr.2016.08.005

Odom, S.L., Hume, K., Duda, M.A., McBee, M.T., Cox, A.W., Fettig, A. et al. (2020). National Survey of Autism Treatment: Patterns of Use and Experiences With Applied Behavior Analysis Among US Families with Children on the Autism Spectrum. *Autism Research*, 13(4), 521–531. https://doi.org/10.1002/aur.2167

Reichow, B., Barton, E.E., Boyd, B.A., Hume, K.A., & Odell, J. (2012). A Meta-Analysis of Early Intensive Behavioral Intervention for Children With Autism. *Journal of Clinical Child & Adolescent Psychology*, 41(4), 477–492. https://doi.org/10.1080/15374416.2012.678925

Scott, T., Mannion, R., Davies, H. T. O., & Marshall, M. N. (2003). The quantitative measurement of organizational culture in health care: A review of the available instruments. Health Services Research, 38(3), 923-945. https://doi.org/10.1111/1475-6773.00154

Silva, C. F., & Costa, J. P. (2016). Health information security in small healthcare organizations: a systematic review of the literature. Journal of Medical Systems, 40(9), 193.

Singh, Y., Song, Z., Polsky, D., Bruch, J. D., & Zhu, J. M. (2022). Association of private equity acquisition of physician practices with changes in health care spending and utilization. *JAMA Health Forum*, *3*(9), e222886. https://doi.org/10.1001/jamahealthforum.2022.2886

The Braff Group. (2023). Behavioral health: 2022 year in review. Retrieved from https://thebraffgroup.com/wp-content/uploads/2023/03/BH-Year-in-Review.2022.pdf

Thomas, L. G., Cunningham, S. J., & White, A. (2019). Quality of life, culture and work environment in small healthcare organizations: A comparative study. *Journal of Health Organization and Management, 33*(1), 58-75. https://doi.org/10.1108/JHOM-07-2017-0191

Wacker, D. P., Berg, W. K., Harding, J., & Shahan, T. A. (2015). The first two decades of ABA-based treatment of individuals with autism spectrum disorders. *Journal of Applied Behavior Analysis, 48*(1), 1-11. https://doi.org/10.1002/jaba.199