Check for updates

RESEARCH ARTICLE

Monitoring the compliance of the academic enterprise with the Fair Labor Standards Act [version 1; peer review: 2 approved, 1 approved with reservations]

Adriana Bankston¹, Gary S. McDowell ^{1,2}

¹The Future of Research, Inc., 848 Brockton Avenue, Abington, MA, USA

²Manylabs, 1086 Folsom Street, San Francisco, CA, USA

V1 First published: 17 Nov 2016, 5:2690
<https://doi.org/10.12688/f1000research.10086.1>

Latest published: 28 Sep 2017, 5:2690
<https://doi.org/10.12688/f1000research.10086.2>

Abstract

Background: On December 1 2016, the Fair Labor Standards Act (FLSA) will be updated by the U.S. Department of Labor. The key changes are an increase in the salary threshold for exemption from overtime for working more than 40 hours per week, and indexing the salary level so that it is updated automatically every 3 years. This update is predicted to have a profound effect on the academic enterprise as a large proportion of the postdoctoral researcher population is currently paid at a salary below the new threshold for exemption. Here we review the key changes to the FLSA, how they came about, and how the postdoctoral population is affected by the ruling.

Methods: We describe recent data collection efforts (checking university websites and contacting HR departments) to uncover what institutions in the 2014 NSF Survey of Graduate Students and Postdoctorates in Science and Engineering are doing to comply with the FLSA ruling for postdocs.

Results: Our data show that 41% of the estimated postdoctoral workforce in STEM and 57% of institutions checked have not decided or have no public decision yet available one month prior to implementation, and only 35.5% of institutions are planning to raise salaries to the new minimum.

Conclusions: Our data show the uncertainty of postdoc salaries in the U.S. one month prior to implementation of the FLSA ruling. This implementation also gives rise to various issues that have arisen in an already strained research enterprise, including short-, medium- and long-term effects on academe.

Keywords

FLSA ruling , postdoctoral salary , research enterprise , science policy , biomedical research , research funding , academic labor , institutional policy

Open Peer Review

Approval Status

	1	2	3
version 2 (revision) 28 Sep 2017	 view	 view	
version 1 17 Nov 2016	 view	 view	 view

1. **Nathan L. Vanderford** , University of Kentucky, Lexington, USA

2. **Christopher L. Pickett** , Rescuing Biomedical Research, Washington, USA

3. **Paula E. Stephan**, Georgia State University, Atlanta, USA

Any reports and responses or comments on the article can be found at the end of the article.

This article is included in the **Research on Research, Policy & Culture** gateway.

This article is included in the **Future of Research (FoR)** collection.

Corresponding author: Gary S. McDowell (garymcdow@gmail.com)

Competing interests: No competing interests were declared.

Grant information: This work was supported by a grant from the Open Philanthropy Project to Future of Research, awarded in April 2016.

Copyright: © 2016 Bankston A and McDowell GS. This is an open access article distributed under the terms of the **Creative Commons Attribution License**, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. Data associated with the article are available under the terms of the **Creative Commons Zero "No rights reserved" data waiver** (CC0 1.0 Public domain dedication).

How to cite this article: Bankston A and McDowell GS. **Monitoring the compliance of the academic enterprise with the Fair Labor Standards Act [version 1; peer review: 2 approved, 1 approved with reservations]** F1000Research 2016, 5:2690 <https://doi.org/10.12688/f1000research.10086.1>

First published: 17 Nov 2016, 5:2690 <https://doi.org/10.12688/f1000research.10086.1>

Background

Defining the Fair Labor Standards Act (FLSA)

The Fair Labor Standards Act (FLSA) (<https://www.dol.gov/WHDO/overtime/final2016/>) establishes standards such as minimum wage and overtime pay for employees in both the public and private sectors in the United States. Through the FLSA a minimum wage and overtime pay (for working more than 40 hours per week) at 1.5 times the employee's regular rate are guaranteed (United States Department of Labor, 2016a).

On December 1 2016, the FLSA will be updated by the U.S. Department of Labor (DOL). One key change is an increase in the salary threshold for exemption from overtime pay from the 2004 level of \$23,660 to \$47,476. The other key change is indexing the salary level so that it is updated automatically every 3 years pegged to the 40th percentile of full-time salaried workers in the lowest-wage Census region, estimated by the DOL to be \$51,168 in 2020. We first describe the timeline of how these updates were decided, and how they affect the postdoctoral researcher population.

Updating the FLSA

On March 13 2014, a memorandum (<https://www.whitehouse.gov/the-press-office/2014/03/13/presidential-memorandum-updating-and-modernizing-overtime-regulations>) was issued by the White House from U.S. President Barack Obama to Secretary of Labor Thomas Perez, instructing the Department of Labor to investigate updating and modernizing current overtime regulations:

"I hereby direct you to propose revisions to modernize and streamline the existing overtime regulations. In doing so, you shall consider how the regulations could be revised to update existing protections consistent with the intent of the Act; address the changing nature of the workplace; and simplify the regulations to make them easier for both workers and businesses to understand and apply (Obama, 2014)."

On July 6 2015, the Department of Labor issued a "Notice of Proposed Rulemaking," soliciting feedback by September 4 2015. The notice proposed increasing the current exemption salary of \$23,660, set in 2004, to \$50,440 in 2016, with automatic updates to the level every 3 years (Obama, 2015; United States Department of Labor, 2016b).

On May 18 2016, the Secretary of Labor, Thomas Perez, gave notice of the final decision on the updates to overtime regulations in the FLSA. The exemption salary would be set at \$47,476 (lower than the \$50,440 originally proposed) with updates every 3 years determined by future wage growth (United States Department of Labor, 2016f). The date for implementation was set as December 1 2016. Therefore, 2 years after the first indication of a change to overtime regulations, and just under a year from the indication of what those changes were likely to be, an additional 6 months allowance was made to prepare for compliance with the new rule.

As of Nov 1 2016, ongoing efforts to delay implementation of the new rule included H.R.6094, the Regulatory Relief for Small Businesses, Schools, and Nonprofits Act, which passed the U.S. House of Representatives on September 28 2016 by 246 votes to 177. It

was then passed to the Senate on September 29 2016 (Congress of the United States of America, 2016). An emergency motion for preliminary injunction was also filed by 21 States (Anon, 2016).

The debate over the FLSA changes and their effect on higher education

The changes to the FLSA proposed on July 6 2015 stood to make a large impact on higher education. The large rise in the salary threshold for exemption had the potential to affect a wide range of workers in academe. As stated by the College and University Professional Association for Human Resources (CUPA-HR), affected employees could include: "librarians; advisers; counselors; residence hall managers; admissions counselors; financial aid counselors' student activities officers; human resources professionals and trainers; accountants; head cashiers; textbook managers; ticket managers; alumni relations; fundraising professionals; head of mail services; farm managers; information technology professionals; research and clinical professionals (including many with advanced degrees and those engaged in advanced training such as postdocs); managers in food service, security and building and grounds. Many of these jobs have always been and are well suited to exempt status (CUPA-HR, 2015a)."

A concerted effort was therefore made to reduce the potential impact of FLSA changes on higher education. A letter to the Department of Labor was coordinated by CUPA-HR on behalf of 18 higher education organizations (CUPA-HR, 2015a; CUPA-HR, 2015b). Key recommendations made in the letter were: 1) the Department of Labor providing a longer time to adjust to the changes; 2) proposed lower salary level options of: \$29,172, \$30,004 or \$40,352; and 3) rephrasing language to specifically exempt postdocs based on their "trainee" status in a similar manner to medical residents.

Similarly, the Association of American Medical Colleges (AAMC) submitted a letter supporting this position and adding:

"Any increase in the salary threshold for exemption should be graduated and incremental. AAMC recommends an initial threshold that does not exceed the National Institutes of Health (NIH) guidelines for postdoctoral stipends, currently set at \$42,840 for new trainees in [fiscal year] 2015. In addition, postdoctoral scientists should be considered salaried, FLSA-exempt "learned professionals," similar to medical residents (AAMC, 2015)."

On the other hand, in addition to postdocs themselves commenting on the ruling (Wexler, 2016), on May 10 2016 four unions representing postdocs or higher education employees (American Federation of State, County and Municipal Employees; Service Employees International Union; the United Auto Workers and the National Education Association) met with the Department of Labor to argue against institutional calls for exemption for postdoctoral researchers (Penn, 2016).

Attempts to exempt postdocs and to push for an exemption threshold below current postdoctoral salary levels were unsuccessful. With the announcement of updates to the FLSA, there was a simultaneous announcement that postdocs would not be exempt and would in fact be targeted by the ruling, discussed in the article

co-authored by Director of the NIH Francis Collins and the Secretary of Labor Thomas Perez, “Fair Pay for Postdocs: Why We Support New Federal Overtime Rules (Collins & Perez, 2016).”

Employees must meet a series of tests in order to be exempt from overtime payments. First, they must be paid on a salary basis and not an hourly basis, by the “salary basis test.” Second, their salary must meet the minimum salary threshold of \$913 per week or \$47,476 annually, by the “salary level test” (which does not apply to doctors, lawyers or teachers). Finally, the employee’s primary job duty must pass the “standard duties test”. The duties test is either an executive exemption (e.g. managing a department), an administrative exemption (e.g. being in a primarily clerical role), or a professional exemption, such as that of a postdoc. Unless all 3 tests are passed, the employee is eligible for overtime payment.

The Department of Labor issued a summary of the impact that updates to the FLSA have on higher education (United States Department of Labor, 2016c) and guidance for higher education on compliance with the FLSA ruling (United States Department of Labor, 2016c). Limits to the impact of this ruling include exemptions for those who are in primarily teaching roles (such as adjunct faculty) and students (including undergraduate and graduate students) earning degrees. However, technical staff who are primarily carrying out benchwork and not clerical work are likely affected by the new ruling.

The effect of FLSA updates on postdoctoral researchers

From this point, we will focus particularly on postdoctoral researchers in Science, Engineering and Health, as this population has been the focus of our data collection efforts. However all postdocs (in Science, Technology, Engineering and Math (STEM) disciplines, as well as in humanities and social sciences) primarily engaged in research (and not teaching) at an U.S. institution regardless of visa status and salary source are affected by this ruling as follows:

“Postdoctoral fellows are employees who conduct research at a higher education institution after the completion of their doctoral studies. Postdoctoral fellows are not considered students because they are not working towards a degree...Postdoctoral fellows often meet the duties test for the “learned professional” exemption but must also satisfy the salary basis and salary level tests to qualify for this exemption.” (United States Department of Labor, 2016c).

Raising postdoctoral salaries in the U.S. under the FLSA. Recommendations have been made across a wide swathe of academe, as summarized by Pickett *et al.* (Pickett *et al.*, 2015). The American Academy of Arts and Sciences (American Academy of Arts and Sciences, 2014), the National Academies (Committee to Review the State of Postdoctoral Experience in Scientists and Engineers *et al.*, 2014), senior biomedical researchers (Alberts *et al.*, 2014), junior scientists (McDowell *et al.*, 2014), organizations representing postdocs (National Postdoctoral Association, 2016) and advisory groups to the NIH (Biomedical Research Workforce Working Group, 2012) have all recommended increases to postdoc salaries in the years prior to the FLSA update, often to the level of at least \$50,000, which is higher than the current required level of \$47,476 for overtime exemption.

The Department of Labor has issued the following statement in its guidance to higher education about current postdoctoral salaries:

“Under the 2016 National Institutes of Health (NIH) salary guidelines for postdoctoral research fellows, some fellows earn more than the revised salary level. Other postdoctoral research fellows earn less, although it is the Department’s understanding that many postdoctoral research fellow salaries are close to the new salary level, and that any differences are not more than a few thousand dollars a year (United States Department of Labor, 2016c).”

There is an assumption that postdoctoral salaries are, on average, around \$45,000 per year for a full-time postdoc (Collins & Perez, 2016) and that most institutions follow the NIH National Research Service Award (NRSA) stipend levels. In theory, therefore, the salary changes expected for postdocs in many cases should approximate the changes in the new NRSA levels (National Institutes of Health, 2016) as shown in Figure 1.

The minimum salary should therefore rise from \$43,692 for new postdocs to \$47,484, which constitutes an increase of 8.7%. Thus, postdocs with more than 3 years of postdoctoral experience are, in theory, already exempt from this rule. However, it is difficult to gauge exactly how postdoctoral salaries are changing across the U.S. Transparent salary information for postdoctoral positions is very hard to find and the administration of postdocs (McDowell, 2016b) means that many may be on lower salaries than expected. It is not currently possible for all institutions in the United States to identify and obtain information on the salaries of all of their postdocs with certainty.

Another problem with the NRSA assumption is that not all institutions peg their salaries to NRSA levels, and institutional salary

Figure 1. NRSA stipend level changes with FLSA. The current salary for postdocs on NRSA grants (blue) in 2016 increases from a minimum of \$43,692 at a linear rate with increasing years experience. The FLSA ruling (red) will raise the minimum salary in 2017 to \$47,484, which will remain relatively constant until 2 years experience and increase linearly therein (data source: NIH NOT-OD-16-134, (National Institutes of Health, 2016)).

policies may indicate more realistic effects of the FLSA on salaries. In 2014, 89% of institutions had a minimum salary policy, where 51% of those institutions set their postdoctoral salary scales to the NRSA scale but ~30% set their minima lower and 7% did not enforce these policies (data in Figure 21, (Ferguson *et al.*, 2014); for a visual description of this see also (McDowell, 2016)). It is also unclear how many postdocs are employed at each of these institutions (populations potentially from 1 to 5761, according to 2014 data from the National Science Foundation (NSF, (National Science Foundation, n.d.))) and therefore the number of U.S. postdocs at different points on this salary range is also unclear. If 11% of U.S. institutions haven't set a minimum salary level, it is therefore possible (and legal) that there may be full-time postdocs currently earning as little as \$23,660, and these salaries will need to double if they are to meet the FLSA exemption ruling.

Implementing the salary change. Institutions have the choice to either increase the minimum salary for postdocs to \$47,476, or to classify postdocs as hourly workers.

The first option is difficult because there is no extra money for this ruling, and PIs may have to pay postdocs from research grants such as R01 grants. Salaries of postdocs on training grants/fellowships (NRSA, HHMI and possibly NSF) are likely to be increased (National Institutes of Health, 2016; National Science Foundation, 2016).

The second option, however, may cost more. It would involve implementing a system for keeping track of the hours that postdocs spend in the lab. Many postdocs work, and are expected to work, in excess of a standard 40-hour week. One calculation posits that a postdoc earning the NRSA minimum of \$43,692 working 50 hours a week under the new rule would have an increase in salary to \$60,076 (Polka, 2016).

Methods

What are institutions planning to do under the FLSA?

In an effort to make salary information as transparently available as possible, we have been gathering information at the FLSA and postdocs resource at Future of Research (Future of Research, 2016b). This data-gathering has involved checking university websites and contacting HR departments at institutions for information on complying with the FLSA ruling for postdocs. We made it clear that this information is to be made publicly available, using as our guide data from the 2014 NSF Survey of Graduate Students and Postdoctorates in Science and Engineering (National Science Foundation, n.d.) using the total number of Science, Engineering and Health postdocs as our postdoc population (as all postdocs are affected). We are in a position, with one month prior to implementation, to describe the current landscape of publicly available information on changes to the administration of postdocs in compliance with the FLSA.

Council on Governmental Relations Survey - August

The only other datasource that is publicly available on this is a survey by the Council on Governmental Relations conducted of their membership in August (Council on Governmental Relations, 2016). Of 190 member institutions, 109 responded, 68 of which had medical schools. Out of these, 79 were public institutions and 30 were private.

In August, 63% claimed to have made a decision, 19% said the decision would be made in September, and 15% said their decision would be made in October. Therefore 97% surveyed by now, with a month before implementation, should have made a decision. Based on decisions that institutions made or were leaning towards, the survey reported 75% of institutions would raise salaries, and 25% would allow the tracking of hours, 55% of which leave the decision up to the individual PI. Also, 96 institutions have reported on salary levels with ¾ reporting at least 50% of salaries, and ¼ reporting at least 75% of salaries were below the new threshold, and 2% reported that 90% of salaries exceeded the new threshold.

Results

Future of Research - end of October

In a recent blogpost for Addgene, we reported data that had been collected so far (McDowell, 2016a). In this analysis, we looked at both the percentage of the postdoctoral workforce at institutions implementing various plans for the FLSA, as well as provided data on the percentage of institutions implementing various FLSA plans, as of October 21 2016.

Repeating this analysis a month before compliance is required, we are now able to discuss data for institutions that we have checked or contacted covering 97.5% of the estimated postdoctoral workforce, or every U.S. higher education institution listed in the NSF dataset with > 35 postdocs in 2014 (Dataset 1).

Out of these, 51% of the estimated postdoctoral workforce comes from institutions that have stated they are raising salaries, 1.5% from institutions focused on tracking hours, and 4% from institutions allowing the tracking of hours while promoting (but not mandating) salary raising. However, still 41% of postdocs come from institutions that have either reported to us that they have not decided, have no information available, and/or have not yet responded to a request for information (Figure 2A).

One month away from Dec 1st, we have now checked 56% of institutions, and of those checked, 35.5% are planning to raise salaries, and 57% have no public decision yet available (Figure 2B).

A case in point: Boston postdocs

To illustrate the point of what postdocs may know at this point in time, with one month prior to implementation, we take Boston postdocs as an example. The Boston Postdoctoral Association has been taking an active role in gathering institutional information and preparing resources on the FLSA for its members (Boston Postdoctoral Association, 2016). There are 14 academic postdoctoral associations in the Boston Postdoctoral Association (<http://bostonpostdocs.org/>) and we list them here along with the numbers of postdocs from the NSF dataset we used for our analysis (where known: "Harvard" and "MIT" are each listed as a single institution) and current estimates of 9,000 postdocs in Boston (Table 1).

Out of 9,000 postdocs in Boston, data about postdoc numbers and salaries are known for only 740. Whitehead Institute for Biomedical Research and the Department of Brain and Cognitive Sciences cannot be more than a small proportion of the 1,516 at MIT, while Boston Children's, Dana Farber, Harvard Chan School of Public

a Postdoctoral population affected by FLSA implementation plans **b FLSA administrative plans for postdocs at researched institutions**

Figure 2. The effect of FLSA and institutional decisions on the STEM postdoctoral workforce. Pie charts show the percentage of the postdoctoral population at institutions implementing various plans for FLSA (A) and the percentage of institutions implementing various plans for FLSA (includes institutions so far researched for the FLSA and postdocs resource) (B).

Health and Harvard University may be a larger number out of 5,761 but likely not the majority. It could be that as many as two thirds of postdocs in Boston - a very well organized group of postdocs already gathering information - are not aware of what their status will be in a month, either because they have not been told, or their institution has not yet made a decision.

Dataset 1. FLSA status of postdocs as of 10/31/16

<http://dx.doi.org/10.5256/f1000research.10086.d142615>

The dataset, which comprises data obtained for Figure 2, is a compilation of information obtained from checking HR websites or contacting HR departments at various universities listed in the 2014 NSF Survey of Graduate Students and Postdoctorates in Science and Engineering. The majority of these data are publicly available on institutional websites (listed where available), and some were obtained by e-mail from HR contacts.

Conclusions**Discussion of the data collected**

We are assuming that all institutions will make information transparently and publicly available, whereas of course there is bound to be a great variation in the institutions that will publish postdoc salary information on the web or respond to queries for FLSA compliance information, and this does not seem to be linked to the size of the institution.

Some institutions (such as "Harvard" and "MIT") are listed as a single institution in the NSF dataset, and as we have so little data for each (as discussed above) we count them as not having yet made decisions. Combined with previous discussions that the NSF dataset may only approximate postdoc numbers, and this is 2014 data (not up to date), the numbers likely have some degree of

Table 1. Postdoctoral salary status and the number of postdoctoral researchers at various universities in Boston. *Unknown number out of 5,761 at "Harvard" and **Unknown number out of 1,516 at "MIT".

University	Postdoc salary status	Number of postdocs
Boston Children's Hospital	Raising salary	Unknown*
Boston University & Boston University Medical Campus	Raising salary	444
Brandeis University	Raising salary	102
Brigham and Women's Hospital	Unknown	Unknown*
Broad Institute	Unknown	Unknown*
Dana-Farber Cancer Institute	Salary already \$50,000	Unknown*
Harvard Medical School & Harvard School of Dental Medicine	Decision not yet made/available	Unknown*
Harvard T.H. Chan School of Public Health	Raising salary	Unknown*
Harvard University	Raising salary	Unknown*
Joslin Diabetes Center	Unknown	Unknown*
Massachusetts Eye and Ear Infirmary	Unknown	Unknown*
Massachusetts General Hospital	Unknown	Unknown*
Massachusetts Institute of Technology	Unknown except for Department of Brain and Cognitive Sciences, which has a salary already of \$51,120	Unknown**
Tufts University	Raising salary	194
Whitehead Institute for Biomedical Research	Salary already \$50,127 (in 2012)	Unknown**

variation. Also, in contrast to the Council on Governmental Relations report of August, we see a very striking difference in what has been publicly declared compared with private data. Decisions that have been made this time were predicted to be at 97% whereas we have found only 47% have publicly done so. The ratio of institutions planning to raise salaries to those planning to track hours was 3:1 in the report whereas our data show the ratio closer to 9:1.

We have not yet done a thorough analysis comparing salary reporting by region, or comparing between public and private institutions, however we hope to carry out this analysis as data continues to be collected through December 1st.

Issues encountered so far

Are postdocs on fellowships FLSA exempt? Both Brown and Brandeis universities have suggested that postdocs paid on training grant/fellowship stipends may be FLSA exempt, and so will not be mandating raises in the salaries of postdocs on stipends that are below the exemption level. At the time of writing this manuscript, we are still awaiting responses to requests for further information from institutions. Nevertheless, the position of Brown University is stated explicitly as follows:

“Postdoctoral fellows are defined as non-employees, paid by stipend rather than salary, and are thus not covered by the FLSA (Brown University, 2016).”

The position of Brandeis University is stated publicly on their website as follows (with info that salaries need to be raised for postdoctoral associates, but with no mention of fellows):

“Postdoctoral Fellows come to Brandeis to further their scholarly competence, with fellowship aid through sources other than the NRSA. These sources may be federal or non-federal. Appointments are usually for one semester or more and are renewable, based upon the terms and conditions of the individual award. Postdoctoral Fellows are trainees and do not provide services to the University, and are not considered to be employees. A Postdoctoral Fellow is eligible to be appointed as a Postdoctoral Associate after the term of the Postdoctoral Fellowship has ended (Brandeis University, 2016).”

Postdoctoral fellows are not considered employees by institutions, as they are not paid by the institution. However, reading the directions from the Department of Labor, that is not the same as being recognized as exempt from the FLSA. A postdoc is federally recognized as both a trainee and an employee (Code of Federal Regulations, Title 2, part 200.400(f) (U.S. Government, 2014)) and unless they are in a primarily teaching role, all postdocs come under the FLSA (see Overtime Final Rule and Higher Education (United States Department of Labor, 2016c)). In addition, the Department of Labor defines what “employ” means in the context of the FLSA:

“The FLSA defines the term “employ” to include the words “suffer or permit to work”. Suffer or permit to work means that if an employer requires or allows employees to work, the time spent is generally hours worked (United States Department of Labor, n.d.).”

The “employer” is the institution that “suffers [someone] to work,” so institutions are the ones responsible for ensuring FLSA compliance. Postdoc fellows are “permitted” to work at the institution. In combination with further guidance from the Department of Labor on independent contractors, the closest possible analogy to postdoctoral fellows (United States Department of Labor, 2014), it is our understanding that if fellowships do not pay full FLSA rates, the employer is still responsible for making sure employees get supplemented up to federal standards. What matters is not where the money comes from, but what a person is doing at an institution that “suffers or permits them to work” there. Guidance in the latest update to the NRSA stipends and applying for supplements (NOT-OD-17-002) makes clear that NIH is taking no position on the status of workers at institutions (National Institutes of Health, 2016).

This may become part of the larger conflict in the debate over whether postdocs are trainees or employees, and what services (including intellectual property) they do or do not provide (Haak, 2002a; Haak, 2002b; Haak, 2002c). This may aggravate existing issues with postdoctoral fellowships, as recipients already face losing benefits (Gaval, 2014), or dealing with tax complications such as imputed income tax (National Postdoctoral Association, n.d.; University of California San Francisco 2015). Elsewhere we have discussed changes that may be taking place to postdoctoral benefits, such as reductions in fringe rates, as a similar but separate effect of the FLSA implementation at institutions (Future of Research, 2016a).

If violations to the FLSA ruling occur, will they be reported?

One question that has occupied some discussion about the FLSA is whether violations, such as directing employees to give false reports on timesheets, will actually be reported. The Department of Labor gives advice on how to report these violations (United States Department of Labor, 2016d) and points out that there is a three year statute of limitations, reporting is completely confidential until the point of allegation being pursued and the person then deals with the Department of Labor and not the institution, in reporting violations. In addition, it is illegal for employers to take action against employees based on reporting of violations, and immigration status will not be investigated.

A comparison is often made about the perceived lack of reporting hours’ violations during medical residency, a similar role in the medical system to the postdoc in academia, and so we use this comparison here to illustrate why reporting could be more common in academic science. First, medical residents are exempt from FLSA so a different system of reporting exists to begin with. Medical residents can have up to an additional ~\$250,000 debt for tuition, compared to the relatively lower (undergraduate) student debts in the academic path, as well as the cultural eschewing of financial gain, and perhaps have more “skin in the game”. The bottleneck in the medical system is often getting into residency, from where job certainty is much higher than in academia, whereas most postdocs end up leaving academia despite a high interest in staying in it (Sauermaun & Roach, 2016). In addition, medical residents may consider that reporting hours may actually harm their own

training and the training of others, whereas whether many postdocs actually receive training is of great concern in academe (Pickett *et al.*, 2015) and perhaps the perceived harm to that training may be seen as minimally impacting them. All of this, combined with the 3-year statute of limitations, makes “burning bridges” a much stronger possibility for postdocs.

If a violation of the FLSA is reported, it seems that the burden of proof is on the institution to counter the evidence from the complaint (discussed in (American Council on Education, 2016)). There are many common false assumptions being discussed in academia about how federal labor law can be implemented (Reynolds & Rudnick, 2010), which makes it very interesting that a number of institutions will let departments, or even PIs, decide on how to administer postdocs.

Moving towards greater transparency in postdoc salaries. Our goal in presenting these data is to increase transparency about the postdoc position, in terms of the administration and benefits, in a similar manner to a call for transparency in career outcomes (Polka *et al.*, 2015). We have presented our impression of the information currently available to postdocs about how their roles may be changing in one month, and aim to continue collecting and further analyzing data as we go forward until December 1, 2016.

Possible effects of the FLSA ruling. Tracking hours runs counter to academic culture, and the notion of the postdoc as a “trainee”, someone in a mentored environment developing independence. It is also in contrast to behaviors learned in graduate school and the working culture of the faculty positions to which postdocs are meant to be directed. Analyzing data, writing and reading papers and carrying out other job related duties of the postdoc are often performed during nights and weekends, while away from the lab. How will those hours be tracked to everyone’s satisfaction? Conflicts arising could force postdocs to work fewer hours and thus make themselves less competitive compared to postdocs exempted by salary level or under/over-report their hours, risking reporting violations to the Department of Labor. An institution that tracks hours could also put its postdocs and PIs at a competitive disadvantage compared to other institutions raising salaries. At the moment, the relatively small numbers of institutions tracking hours suggest that the larger implications of the FLSA may be as a result of the raise in postdoctoral salaries.

It is unclear what the effects of the FLSA ruling may be on academe. How will this affect smaller institutions? Will there be a drop in new postdoc hires as they become more expensive? How many postdocs are about to lose their jobs? How many will have to shorten their current positions? Will junior faculty bear the brunt, will mid-career researchers be most strained, or will tenured professors be more likely to cut postdocs loose? Will institutions look to increase admission of graduate students, to keep up the labor at the bench? Will there be a shift to more postdocs on particular training mechanisms or fellowships, where the salary is provided, and less on other types of fellowships or research grants?

Perhaps most importantly, will we as a research enterprise start acting on recommendations in a more timely fashion? The academic system will survive this modernization, and in the long term the likely decrease of the postdoctoral population may be a necessary cap on the expanding “trainee” population. This will make the research enterprise more sustainable by limiting the number of postdocs in the system that can be supported. The FLSA ruling change could have been handled far better by the system in favor of postdocs and hopefully is a call to action in terms of how to deal with other issues affecting the research enterprise in the future. The FLSA ruling imposes changes on the system, but these changes had been recommended for some time and could have been implemented more gradually, and with less pain inflicted on postdoctoral researchers (and not only), than they are now. How to correctly deal with the administration of postdocs at institutions has been in discussion over decades (Curtis, 1969), and raising postdoc salaries has been advocated for as we also describe above. Will other recommended changes within the research enterprise be made by the deliberate action of scientists and administrators, or will they have to be imposed by federal statutes? We hope that the abrupt nature of the FLSA revision serves as a call to redouble efforts for academia to become the driver, rather than the subject, of change.

Data availability

F1000Research: Dataset 1. **FLSA status of postdocs as of 10/31/16**, <http://dx.doi.org/10.5256/f1000research.10086.d142615> (Bankston & McDowell, 2016)

Author contributions

GS conceived the study and designed the experiments. AB and GS carried out the research. AB collected a large portion of the data. GS made the figures and wrote the manuscript with extensive editing input from AB. The final version was approved by both AB and GS.

Competing interests

No competing interests were declared.

Grant information

This work was supported by a grant from the Open Philanthropy Project to Future of Research, awarded in April 2016.

The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Acknowledgements

Many thanks to Jessica Polka, David Riglar and Rodoniki Athanasiadou for comments on the manuscript, and Chris Pickett for discussions. Future of Research is supported by a grant from the Open Philanthropy Project (<http://www.openphilanthropy.org/focus/scientific-research/miscellaneous/future-research-general-support>).

References

- AAMC: **AAMC submits comments to Department of Labor on Overtime Rule.** 2015.
[Reference Source](#)
- Alberts B, Kirschner MW, Tilghman S, *et al.*: **Rescuing US biomedical research from its systemic flaws.** *Proc Natl Acad Sci U S A.* 2014; **111**(16): 5773–5777.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
- American Academy of Arts and Sciences: **Restoring the Foundation: The Vital Role of Research in Preserving the American Dream.** 2014.
[Reference Source](#)
- American Council on Education: **New Federal Overtime Regulation and Higher Education.** [Accessed: 3 October 2016], 2016.
[Reference Source](#)
- Anon: **State of Nevada et al v. United States Department of Labor et al, Docket No. 4: 16-cv-00731.** [Accessed: 2 November 2016], 2016.
[Reference Source](#)
- Bankston A, McDowell G: **Dataset 1 in: Monitoring the compliance of the academic enterprise with the Fair Labor Standards Act.** *F1000Research.* 2016.
[Data Source](#)
- Biomedical Research Workforce Working Group: **Biomedical Research Workforce Working Group Report.** (Report to the Advisory Committee to the Director), 2012.
[Reference Source](#)
- Boston Postdoctoral Association: **FLSA Overtime Pay Rule revision and Postdoc salaries.** 2016.
[Reference Source](#)
- Brandeis University: **Brandeis Postdoc Policy, Effective 12/1/2016.** [Accessed: 2 November 2016], 2016.
[Reference Source](#)
- Brown University: **Fair Labor Standards Act – 2016 Important Update.** [Accessed: 2 November 2016], 2016.
[Reference Source](#)
- Collins FS, Perez TE: **Fair Pay for Postdocs: Why We Support New Federal Overtime Rules.** *Huffington Post.* 2016.
[Reference Source](#)
- Committee to Review the State of Postdoctoral Experience in Scientists and Engineers, Committee on Science, Engineering, and Public Policy, Policy and Global Affairs, National Academy of Sciences, National Academy of Engineering and Institute of Medicine: **The postdoctoral experience revisited.** Washington (DC): National Academies Press (US); 2014.
[Reference Source](#)
- Congress of the United States of America: **H.R.6094 - 114th Congress (2015–2016): Regulatory Relief for Small Businesses, Schools, and Nonprofits Act.** [Accessed: 2 November 2016], 2016.
[Reference Source](#)
- Council on Governmental Relations: **Fair Labor Standards Act (FLSA) Postdoctoral Researcher Survey Results.** 2016.
[Reference Source](#)
- CUPA-HR: **DOL's Proposed Overtime Rule: Higher Education's Comments & Concerns.** 2015a.
[Reference Source](#)
- CUPA-HR: **Re: Notice of Proposed Rulemaking; Defining and Delimiting the Exemption for Executive, Administrative, Professional, Outside Sales and Computer Employees (80 Fed. Reg. 38515, July 6, 2015) (RIN 1235-AA11).** 2015b.
[Reference Source](#)
- Curtis RB: **Invisible University: Postdoctoral Education in the United States. Report of a Study Conducted Under the Auspices of the National Research Council.** Washington, D.C.: National Academies Press; 1969.
[Reference Source](#)
- Ferguson K, Huang B, Beckman L, *et al.*: **National Postdoctoral Association Institutional Policy Report 2014: Supporting and Developing Postdoctoral Scholars.** *National Postdoctoral Association.* 2014.
[Reference Source](#)
- Future of Research: **Changes to employee benefits for scientists after FLSA.** [Accessed: 2 November 2016], 2016a.
[Reference Source](#)
- Future of Research: **FLSA and Postdocs.** [Accessed: 3 October 2016], 2016b.
[Reference Source](#)
- Gaval M: **Stuff you should know but no one tells you: Employee benefits of postdoctoral appointments.** [Accessed: 2 November 2016], 2014.
[Reference Source](#)
- Haak L: **Postdocs and the Law, Part 3—Are Postdocs Employees?** [Accessed: 2 November 2016], 2002a.
[Reference Source](#)
- Haak L: **Postdocs and the Law, Part II: Principal Investigator Versus Individual Grants.** [Accessed: 2 November 2016], 2002b.
[Reference Source](#)
- Haak L: **Postdocs and the Law: Meet the IRS.** [Accessed: 2 November 2016], 2002c.
[Reference Source](#)
- McDowell GS: **Addgene Blog.** [Accessed: 2 November 2016], 2016a.
[Reference Source](#)
- McDowell GS: **ASBMB Today.** [Accessed: 9 July 2016], 2016b.
[Reference Source](#)
- McDowell GS: **Future of Research and the Fair Labor Standards Act.** *F1000Res.* 2016.
[Reference Source](#)
- McDowell GS, Gunsalus KT, MacKellar DC, *et al.*: **Shaping the Future of Research: a perspective from junior scientists [version 2; referees: 2 approved].** *F1000Res.* 2014; **3**: 291.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
- National Institutes of Health: **NOT-OD-16-134: Revised: Projected FY 2017 Stipend Levels for Postdoctoral Trainees and Fellows on Ruth L. Kirschstein National Research Service Awards (NRSA).** [Accessed: 2 November 2016], 2016.
[Reference Source](#)
- National Postdoctoral Association: **Overview of Tax Issues for Postdocs.** [Accessed: 2 November 2016].
[Reference Source](#)
- National Postdoctoral Association: **Statement from the NPA on the Fair Labor Standards Act.** [Accessed: 2 November 2016], 2016.
[Reference Source](#)
- National Science Foundation: **Frequently Asked Questions (FAQs) on the National Science Foundation's Implementation of the Department of Labor's Fair Labor Standards Act (FLSA) Final Overtime Rule.** 2016.
[Reference Source](#)
- National Science Foundation: **Survey of Graduate Students and Postdoctorates in Science and Engineering.** [Accessed: 6 January 2016].
[Reference Source](#)
- Obama B: **A Hard Day's Work Deserves a Fair Day's Pay.** *Huffington Post.* 2015.
[Reference Source](#)
- Obama B: **Presidential Memorandum -- Updating and Modernizing Overtime Regulations.** [Accessed: 3 October 2016], 2014.
[Reference Source](#)
- Penn B: **Employers to White House: Give Us More Time on Overtime Rule.** *Bloomberg.* 2016.
[Reference Source](#)
- Pickett CL, Corb BW, Matthews CR, *et al.*: **Toward a sustainable biomedical research enterprise: Finding consensus and implementing recommendations.** *Proc Natl Acad Sci U S A.* 2015; **112**(35): 10832–10836.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
- Polka J: **Fair Labor Standards Act—What It Means for Postdocs.** [Accessed: 2 November 2016], 2016.
[Reference Source](#)
- Polka JK, Krukenberg KA, McDowell GS: **A call for transparency in tracking student and postdoc career outcomes.** *Mol Biol Cell.* 2015; **26**(8): 1413–1415.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
- Reynolds PA, Rudnick B: **So You Think You Know About the FLSA? Ten Common Assumptions About the FLSA That Can Land You in Hot Water.** *Bloomberg Law Reports.* 2010; **4**(10).
[Reference Source](#)
- Sauermann H, Roach M: **SCIENTIFIC WORKFORCE. Why pursue the postdoc path?** *Science.* 2016; **352**(6286): 663–664.
[PubMed Abstract](#) | [Publisher Full Text](#)
- United States Department of Labor: **Compliance Assistance - Wages and the Fair Labor Standards Act (FLSA) - Wage and Hour Division (WHD).** [Accessed: 3 October 2016], 2016a.
[Reference Source](#)
- United States Department of Labor: **Defining and Delimiting the Exemptions for Executive, Administrative, Professional, Outside Sales and Computer Employees.** [Accessed: 3 October 2016], 2016b; **80**(128): 38515–38612.
[Reference Source](#)
- United States Department of Labor: **Fact Sheet #13: Am I an Employee?: Employment Relationship Under the Fair Labor Standards Act (FLSA).** 2014.
[Reference Source](#)
- United States Department of Labor: **FLSA hours worked advisor.** [Accessed: 2 November 2016].
[Reference Source](#)
- United States Department of Labor: **Guidance for Higher Education Institutions on Paying Overtime under the Fair Labor Standards Act.** 2016c.
[Reference Source](#)
- United States Department of Labor: **How to File a Complaint - We Can Help.** [Accessed: 3 October 2016], 2016d.
[Reference Source](#)
- United States Department of Labor: **Overtime Final Rule and Higher Education.** 2016e.
[Reference Source](#)

United States Department of Labor: **The Overtime Rule**. [Accessed: 3 October 2016], 2016f.

[Reference Source](#)

University of California San Francisco: **Tax Issues Associated with Reporting Fellowships**. 2015.

[Reference Source](#)

U.S. Government: **Code of Federal Regulations**. Title 2, part 200.400(f). *U.S. Government Publishing Office*. 2014.

[Reference Source](#)

Wexler E: **What does the Department of Labor's overtime rule mean for higher education?** *Inside Higher Ed*. 2016.

[Reference Source](#)

Open Peer Review

Current Peer Review Status:

Version 1

Reviewer Report 28 November 2016

<https://doi.org/10.5256/f1000research.10867.r18035>

© 2016 Stephan P. This is an open access peer review report distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Paula E. Stephan

Department of Economics, Andrew Young School of Policy Studies, Georgia State University, Atlanta, GA, 30303, USA

The Bankston & McDowell article is highly informative on two counts. First, it highlights the extreme difficulty encountered in collecting information regarding postdocs. The Boston data are but one case in point. Second, it contributes information concerning the percent of postdocs which, at the time Bankston & McDowell collected their data, were likely to be affected by the FLSA ruling. This constitutes a significant contribution to our understanding of how the law may affect actual salaries.

For my taste, however, the article could go a bit further. First, the authors present no information regarding who will pay for the increase on campuses that intend to raise salaries sufficiently so that postdocs will be exempt. The authors speculate that the funds will come out of grants. And in the long run, they are probably right. But, in the short run the evidence is that universities and departments will pick up some of the increases. (See Council on Governmental Relations 2016 Survey). Second, they do not speculate on how the increase will likely affect the number of postdocs employed. To the extent the demand for postdocs is sensitive to salary, one would predict that in the long run the regulation will lead to a decrease in the number of postdocs working at universities.

The authors also imply that it is not clear as to whether the regulation applies to postdocs on fellowships. It is my understanding that a decision by the Department of Labor means that those on fellowships are to be treated the same as are postdocs supported in other ways.

The authors also make no effort to explain why their results seem so at odds with the results found by the Council on Governmental Relations Survey, which suggests that something like 75% of campuses surveyed were choosing to raise salaries so that postdocs would be exempt from overtime pay.

Finally, there is the issue that the authors could not have foreseen that a Federal Judge would issue an injunction November 22, 2015 which preserves the status quo. While the injunction is

temporary, many believe that the judge's language "indicated he was likely to strike down the regulation." <http://www.nytimes.com/2016/11/22/business/obama-rule-to-expand-overtime-eligibility-is-suspended-by-judge.html>.

To the extent the implications of the regulation for postdoc pay were difficult to understand before this ruling, they are even more so today. Assuming the rule is found to be invalid, campuses will find themselves in the awkward position of having to decide if they will take back a promised increase. Or, take back an increase that has already taken effect.

Competing Interests: No competing interests were disclosed.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Reviewer Report 22 November 2016

<https://doi.org/10.5256/f1000research.10867.r17778>

© 2016 Pickett C. This is an open access peer review report distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Christopher L. Pickett

Rescuing Biomedical Research, Washington, DC, USA

The research article "Monitoring the compliance of the academic enterprise with the Fair Labor Standards Act" by Bankston & McDowell is a review of academic compliance with changes to the FLSA overtime rules as of Nov. 1. The authors give a good primer on the history of the FLSA overtime rule change and how it is expected to affect academic research starting Dec. 1. They then discuss their extensive outreach to institutions with postdocs, and their efforts to determine how the institutions are adjusting to the new overtime rule with regard to postdoc salaries.

This paper and the results of the authors' outreach are important for the postdoc and larger academic communities to understand how institutions are dealing with the increase to postdoc pay.

Major concerns:

- The authors should devote some space to a discussion of international postdocs and how they are affected by the FLSA overtime rule change. Anecdotally, international postdocs may not be paid on the same scale as American postdocs, even at institutions with well-defined salary minima. Since the nation of origin does not affect whether someone is FLSA exempt, just how widespread the disparities in U.S. versus international postdoc pay are could have significant repercussions in the relative populations of each in the enterprise moving forward.
- The authors should take the time to explain exactly what is going on in Boston. There seems to be an assumption that the reader will know all of the institutions that are classified under

“Harvard” or “MIT”. The assumption comes across in phrases such as institutions “...cannot be more than a small proportion...” As someone who has never done research in Boston, it is not clear to me why this phrase must be true. The authors should take the time to indicate, both in the text and Table 1, which institutions are part of “Harvard” for example, which have released decisions about postdoc pay, and why this may be confusing for postdocs employed there.

- The conclusions section opens with a meandering and confusing sentence and the first section is about the difficulties of data collection. I agree these are real concerns, but the authors should state their overall and most important conclusions at the beginning of this section as a way to frame the rest of the discussion.

Minor concerns

- Background
  - The sentence beginning, “The other key change is indexing...” is not clear. Recommend breaking the sentence into two with the second sentence starting something like, “This means the OT threshold will be \$51,168 in 2020.”
  - It would be helpful to know the current status of H.R. 6094. Was it vetoed or does it await action?
  - On page 4, in the paragraph about the test that must be passed to be eligible for overtime pay, the authors should consider a short example at the end of the paragraph. For example, “A first year postdoc in 2015 earning a salary of \$XX,XXX would pass the salary basis test, would fail the salary level test and pass the standard duties test. Hence the focus on the overtime pay threshold.”
  - In the paragraph starting “The minimum salary should therefore...”: for consistency, recommend the authors indicate years experience as they do in Fig. 1 (Year 0, 1, etc.) as opposed to calling them “new postdocs”.
  - The two problems with the assumption of the NRSA minimum as the actual minimum pay for postdocs, as I understand them are, (1) transparent salary information does not exist and (2) institutional salary minima are unknown or unenforced. These seem very similar problems to me and I don’t understand the distinction the authors are trying to make. I recommend the authors draw a starker division between the two problems they see or discuss them as one.
- Due to the date-sensitive nature of the information, I recommend the authors add the date to the titles of all figures and tables.
- In the discussion, the comparison between medical residents and postdocs:
  - The authors should explicitly state why, after each condition they site, why postdocs would be more likely to report violations. For example, “...debts in the academic path, meaning postdocs are significantly less dependent on academic employers and may be more inclined to report violations.” “...postdocs end up leaving academia meaning postdocs are less likely to be concerned about how academic employers will view their willingness to report violations.”

- "...compared to the relatively lower (undergraduate) student debts..." It is not clear why the authors specify these as undergraduate debts. Graduate students can also secure student loans. I recommend removing the parenthetical.

Competing Interests: No competing interests were disclosed.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Reviewer Report 18 November 2016

<https://doi.org/10.5256/f1000research.10867.r17777>

© 2016 Vanderford N. This is an open access peer review report distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Nathan L. Vanderford

Markey Cancer Center, Department of Toxicology and Cancer Biology, College of Medicine, University of Kentucky, Lexington, KY, USA

Bankston and McDowell provide a comprehensive and well-written report on the status and impact of the Fair Labor Standards Act (FLSA) on the US postdoc population. This article is very timely given the "go-live" date for implementing this Act is less than a month away and given that there has been great consternation among academic institutions in terms of how the mandates will be implemented and what impacts it will have on institutions, postdocs, and science in general.

While acceptable for publication now, there are minor changes that could improve the article.

1. The non-yes (i.e., the "X" and "-") annotations in dataset 1 should be defined.
2. The y-axis of Figure 1 should be labeled.
3. At the top of page 7, a deeper analysis comparing salary by region, public vs. private institutions, etc. is mentioned as a future direction. This is a critical aspect of understanding how the FLSA will differentially impact institutions and postdocs across the country. I believe it is a very important point that, for example, the cost of living in the middle of the country is not comparable to the cost of living on the east and west coast, which begs the question of whether such differences should be considered within the FLSA. Will this analysis be added to this current article as more data is collected or will this form the basis of another article? It is my opinion that this analysis would greatly strengthen and compliment the current article's argument and impact.
4. It may be interesting (and impactful) to add a current snapshot of what postdocs think of

the FLSA implementation at their institutions. At my institution, postdocs have been very concerned about the short- and long-term impacts on their current positions and how any potential changes (eg, losing their position) may impact their career progression. It would be interesting to hear from postdocs representing institutions across the country (not just on the coasts).

5. At the bottom of page 8 the authors begin to question how the FLSA will impact the biomedical enterprise. It would be more powerful if the authors were more definitive and concrete with their own opinions as to what impact FLSA will have on science. Some have argued that the FLSA will shrink the postdoc pool thus shrink the pipeline of future researchers thus set back the momentum of new science discoveries. The article could be more impactful if the authors wrote specific speculations as to the threats and opportunities that the FLSA will have on the biomedical enterprise.
6. Similar to point #4, could the authors provide some specific recommendations to institutions, postdocs, the government, etc.?
7. What implications will/could a new political party and leader have on FLSA?

In summary, this is an important article that is acceptable for publication now although there are several areas that could be improved upon as noted above. As such, I look forward to reviewing any revised version of the article.

Competing Interests: No competing interests were disclosed.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Comments on this article

Version 1

Author Response 17 Nov 2016

Gary McDowell

We are constantly updating the resource and have updates on the data as time progresses. For example you can find a similar analysis of the data as of November 10th here: <http://futureofresearch.org/2016/11/11/20-days-to-go-what-institutions-are-doing-about-flsa/>

Competing Interests: No competing interests were disclosed.

The benefits of publishing with F1000Research:

- Your article is published within days, with no editorial bias
- You can publish traditional articles, null/negative results, case reports, data notes and more
- The peer review process is transparent and collaborative
- Your article is indexed in PubMed after passing peer review
- Dedicated customer support at every stage

For pre-submission enquiries, contact research@f1000.com

F1000Research