

FORSYTH, P., MAGUIRE, B., O'BRIEN, R., CAREY, J., RUSHWORTH, G., CUNNINGHAM, S. and RADLEY, A. [2024].
Alienation and/or anomie in pharmacists: a protocol for a narrative systematic review. *BMJ open* [online],
(accepted). To be made available from: <https://bmjopen.bmj.com/>

Alienation and/or anomie in pharmacists: a narrative systematic review.

FORSYTH, P., MAGUIRE, B., O'BRIEN, R., CAREY, J., RUSHWORTH, G.,
CUNNINGHAM, S. and RADLEY, A.

2024

1 **Title:** Alienation and/or Anomie in Pharmacists: A Protocol for a Narrative Systematic Review

2
3 **Authors:** Paul Forsyth¹, Barry Maguire², Robert O'Brien³, James Carey⁴, Gordon Rushworth⁵, Scott
4 Cunningham⁶, Andrew Radley⁷

5
6 **Institutions, ORCID-IDs, and Contact Details:**

- 7 1. Pharmacy, NHS Greater Glasgow & Clyde, ORCID- ID ORCID ID 0000-0003-3804-6795,
8 paul.forsyth@ggc.scot.nhs.uk
- 9 2. School of Philosophy, Psychology and Language Sciences, University of Edinburgh, ORCID-ID
10 0000-0002-1975-2793, barry.maguire@ed.ac.uk
- 11 3. Library & University Collections, University of Edinburgh, ORCID-ID 0009-0000-4989-4023,
12 robrien3@ed.ac.uk
- 13 4. School of Philosophy, Psychology and Language Sciences, University of Edinburgh,
14 j.w.carey@sms.ed.ac.uk
- 15 5. Highland & Islands Pharmacy Education & Research, NHS Highland, and School of Pharmacy
16 & Life Sciences, Robert Gordon University, ORCID 0000-0001-18 6085-6044;
17 gordon.rushworth@nhs.scot
- 18 6. School of Pharmacy & Life Sciences, Robert Gordon University, ORCID-ID 0000-0001-9655-
19 2245, s.cunningham@rgu.ac.uk
- 20 7. School of Medicine, University of Dundee, ORCID 0000-0003-4772-2388,
21 aradley@dundee.ac.uk

22
23 **Corresponding Author:** Paul Forsyth, NHS Greater Glasgow & Clyde, Clarkston Court, 56 Busby Road,
24 Glasgow G76 7AT, Scotland (telephone: 0141 201 6021 / email: paul.forsyth@ggc.scot.nhs.uk)

25
26 **Key Words:** Pharmacists, Social Alienation, Alienation, Anomie, Workforce, Systematic Review

29 **Abstract**

30

31 **Introduction:** Accounts of alienation and/or anomie in pharmacists have been reported in historical
32 accounts since the 19th century. Alienation and anomie are distinct types of psychological or social
33 ills where people are problematically separated from, or their skills and values are misaligned with,
34 others and their environment. Alienation and/or anomie can be important precursors of many
35 negative work experiences, including job dissatisfaction, burnout, and/or intention to leave.

36

37 **Methods and Analysis:** We aim to study alienation and/or anomie in international pharmacists,
38 reviewing all types of methodological designs, published in peer-reviewed journals, including all
39 primary qualitative, quantitative, and/or mixed method research studies. We will narratively
40 describe any focuses, causes, associated factors, and/or consequences of alienation and/or anomie.
41 We will identify all published peer-reviewed research through searching seven electronic databases
42 (MEDLINE, Embase, APA PsychINFO, CINAHL Plus, Cochrane Library, Web of Science Core Collection,
43 and Scopus) and Google Scholar in May 2024. Extensive hand and citation-searching will also take
44 place. Two independent reviewers will identify eligible studies, conduct a critical appraisal of study
45 conduct, extract data, and synthesise reported findings by narratively exploring relationships within
46 and between studies. The synthesis will follow a hybrid thematic analysis. Initially we will
47 deductively structure the findings according to six themes from underpinning alienation and anomie
48 theory: Care, Values, Meaning, Recognition, Autonomy, and Shared Responsibility. This structure
49 may thereafter be inductively adapted, by creating new additional themes, if required from the data.
50 A GRADE Confidence in the Evidence from Reviews of Qualitative research approach will be used to
51 determine a confidence profile of each theme. A thematic map showing the links between themes
52 will also be produced.

53

54 **Ethics and Dissemination:** Ethical permission is not required, as this study uses data from published
55 research. Dissemination will be through publication in peer-reviewed journals, and conference
56 presentations.

57

58 PROSPERO registration number CRD42024536336

59

60

61

62 **Strengths and limitations of this study**

63 • This systematic review, with narrative synthesis, will allow the authors to analyse the
64 relationships within and between studies of different methodological designs and will give
65 an overall assessment of the confidence of the evidence.

66 • The robust search strategy, including extensive hand/citation searching and use of
67 synonyms/antonyms, will increase the potential capture of relevant studies.

68 • The collaboration between pharmacists and an academic philosophy department will
69 strengthen the theoretical understanding and analytical underpinning of alienation in the
70 study.

71 • The scarcity of existing publications, and linguistic challenges around the how ‘alienation’
72 and ‘anomie’ are described, or not, in the existing literature may be the main limitations of
73 the study.

74

75 **Introduction**

76 The concept of alienation identifies a distinct type of psychological or social ill; namely, one involving
77 a problematic separation between a person and other persons or things that ideally belong together.¹
78 Alienation can be subjective, based on the feelings of the individual, or objective, based on the
79 environments and structures around an individual, even if the individual does not subjectively feel
80 alienated¹, or both. Various philosophers, both historical and contemporary, have defined and
81 furthered our understandings of alienation, drawing on accounts of the following related concepts²⁻⁵:

- 82 a) Care, in its broadest sense, entails being reliably motivated to do what one can to meet needs.
- 83 b) One's values are what one cares about caring about.
- 84 c) Meaningfulness entails doing what one cares about and which oneself and/or one's
85 community also values.⁶
- 86 d) Recognition of others and oneself is manifest approval or disapproval, based on one's values.⁷
- 87 e) Autonomy is being empowered to act in the light of one's values.⁷
- 88 f) Sharing responsibility is the state of caring about things together, in a way that involves group
89 deliberation about the means to our shared ends.

90 General philosophical theories of alienation vary with which of these concepts individuals or
91 communities are problematically separated from.

92

93 Anomie is a specific form of alienation, characterised by the disintegration of the standards or norms,
94 which had previously been common to a society or community.⁸ Anomie results from a lack of
95 congruence between an individual's values or abilities and those of the prevailing norms.^{8,9} Durkheim
96 identifies two major causes of anomie: the division of labour, and rapid social, political, or economic
97 change.^{8,9} Habermas further explains anomie as a misalignment of three structural components of
98 'lifeworld': culture, society, and personality.¹⁰ Anomie is often a transition phase where previous
99 standards and norms are no longer valid, but new ones have not yet fully evolved.⁹ An increasing
100 division of labour within a profession can weaken the sense of self-identification with others.⁹ Such a
101 lack of a coherent identity in pharmacists is well characterised¹¹, catalysed by the rapid change in the
102 role of the pharmacist from traditional dispensing and supply duties to more patient-facing clinical
103 roles.¹² Skills segregated in the workplace may also weaken solidarity in pharmacists.¹³

104

105 The notion of alienation and/or anomie in pharmacists is not necessarily new. Accounts of alienation
106 and/or anomie in the historical pharmacy literature appear from the 19th century, including cases
107 linked to the changing role and identity of pharmacists in France¹⁴, and failed attempts to achieve full
108 professionalization in the United States of America.¹⁵ A lack of social acceptance as a true profession,
109 a lack of congruence between the role of pharmacists and the training undertaken, a lack of
110 professional autonomy, a skewed focus on medications rather than people, an unclear professional
111 purpose, and a lack of professional harmony have been suggested in 20th century commentaries as
112 additional mechanisms of alienation in pharmacists.^{16,17} Recently, the *Collaborative Care Model* has
113 theorised that the segregation of four key skills in the pharmacist workforce (clinical practice,
114 leadership, education, and research) can also lead to reduced professional agency, dissonance, and
115 ultimately alienation and/or anomie.¹³ It has been claimed that 'pharmacy perceives itself as the
116 quintessential professional exemplar of untapped potential, underutilised skill, and systematic
117 underappreciation' and that 'these are classic markers of an alienated profession'.¹⁸

118

119 Research into alienation and/or anomie in doctors and nurses is becoming more prevalent in the
120 academic literature.¹⁹⁻²³ Alienation and/or anomie in a healthcare workforce can precipitate significant
121 strategic problems, including aspects of job dissatisfaction, acquiescence, and depersonalisation.^{19,20}
122 Alienation may be an important precursor of many negative work experiences, including
123 sickness/stress absence, intention of leave, and/or 'burnout'.¹⁹ Previous systematic reviews in
124 pharmacy have studied the endpoints of intention to leave²⁴, and 'burnout'²⁵, and there is also
125 previous work on job dissatisfaction.^{26,27} Alienation can also have positive effects, for example when

126 frustrated individuals strive to deliver positive change.¹⁹ Little has been synthesised about the overall
127 evidence-base surrounding the focuses, causes, associated factors, and/or consequences of alienation
128 and/or anomie in pharmacists.

129

130 ***Aims & Objectives***

131 The aim of this systematic review is to deliver a narrative synthesis of primary peer-reviewed
132 published research accounts of alienation and/or anomie in pharmacists.

133

134 The objectives are to:

- 135 • Identify all published primary peer-reviewed research accounts describing alienation and/or
136 anomie in pharmacists.
- 137 • Produce a descriptive and critical analysis of the studies.
- 138 • Narratively explore relationships within and between studies, looking at the focuses, causes,
139 associated factors, and/or consequences of alienation and/or anomie in pharmacists
- 140 • Assess the robustness and confidence of the narrative synthesis.

141

142 These objectives follow the structure of the guidance on the Conduct of Narrative Synthesis in
143 Systematic Reviews.²⁸ A meta-analysis will not be undertaken due to different methodological study
144 types and study outcomes included in the synthesis.

145

146 ***Methods and Analysis***

147 A systematic review methodology has been chosen to deliver an exhaustive and comprehensive
148 search of the existing evidence.²⁹ The narrative approach will allow multiple evidence types to be
149 synthesised into a single complex descriptive story.²⁸

150

151 This systematic review will follow the recommendations of the Preferred Reporting Items for
152 Systematic Reviews and Meta-Analyses (PRISMA).³⁰ The protocol for this study has been registered
153 in PROSPERO (CRD42024536336) and the ongoing status of the project will be tracked and updated
154 in PROSPERO.

155

156 We have structured the inclusion criteria for our question around the acronym SPIDER: Sample,
157 Phenomenon of Interest, Design, Evaluation, and Research type.³¹

158

159 *Inclusion Criteria*

160

161 Sample

162 The population we will study is international pharmacists. This will include anyone described as a
163 pharmacist in each study (usually meaning they are registered to practice pharmacy in their
164 respective country), and may include any job/role or sector of care (e.g. community pharmacy,
165 hospital pharmacy, primary care pharmacy, leadership roles etc).

166

167 Phenomenon of Interest

168 The phenomena we will be study is alienation and/or anomie. Panel 1 shows how the authors define
169 alienation and/or anomie and also explains why these topics should be important to pharmacists.

170

171 Design

172 We will study all types of methodological designs, published in peer-reviewed journals.

173

174 Evaluation

175 The main outcomes that we intend to look for are the focuses, causes, associated factors, and/or
176 consequences of alienation and/or anomie in pharmacists.

177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227

Research Type

We will study all primary qualitative, quantitative, and/or mixed method research studies that study (by design), describe (in the results), or discuss (based on the results) aspects of alienation and/or anomie in pharmacists.

Studies that describe alienation and/or anomie in multiple different professional groups will be allowed, as long as pharmacists are included in the cohort. Where studies are unclear whether pharmacists were included, the corresponding author of such studies will be contacted to clarify, before inclusion.

Exclusion Criteria

The following criteria will be used for excluding a study from the final results:

- Non-English sources
- Systematic reviews, as they are not primary research
- Sources describing alienation and/or anomie only involving student pharmacists (i.e. pre-registration), but not fully qualified or registered pharmacists
- Sources describing alienation and/or anomie involving only pharmacy technicians or pharmacy support workers, but not pharmacists
- Sources describing patients experiences of alienation and/or anomie from pharmacists (NB-pharmacists experiences of alienation and/or anomie from pharmacists will be allowed)
- Conference abstracts without full-text papers

Non-research papers describing alienation and/or anomie (for example, review articles, expert commentary, editorials articles, university theses, grey literature, and other sources, e.g. books, blogs etc.) discovered in the literature search will not formally be included in the narrative synthesis, but may be used as context for the final paper (e.g. the discussion section).

Patient and public involvement

Patients and the public were not involved in the design, conduct, or reporting and dissemination plans of this study.

Information Sources

Seven different conventional academic databases will be searched, due to the differences in the content and controlled vocabulary, especially around alienation and anomie, in order to ensure the systematic review search is comprehensive. The following databases will be searched:

- MEDLINE (Ovid)
- Embase (Ovid)
- APA PsychINFO (Ovid)
- CINAHL Plus (EBSCO)
- Cochrane Library (Wiley)
- Web of Science Core Collection (Clarivate)
- Scopus (Elsevier)

No time limitations will be placed on the search from these databases.

Google Scholar (Google) will be used as an additional source, to augment the standard electronic databases and increase the likelihood of identifying potentially suitable studies. Private browsing mode will be used to negate the influence of cookies and previous search histories influencing the results. Google Scholar may produce almost limitless results however, and as per existing guidance³², only the first 200 entries will be screened.

228 The systematic review may encounter linguistic challenges in the description of alienation and/or
229 anomie in the pharmacy literature. For example, previous authors, and/or the participants of
230 studies, may or may not use words derived from 'alienation' and/or 'anomie'. The formal indexing of
231 papers may not also include 'alienation' and/or 'anomie'. Both of these are especially likely to be
232 true where these states are objective, rather than subjective. To partially counter this possibility, in
233 addition to the standard electronic bibliographic databases and Google Scholar, the authors will
234 conduct extensive targeted hand-searching and citation-searching, including:

- 235 • Papers referenced in the included studies, identified from their reference list
- 236 • Papers that cite the included studies
- 237 • Papers referenced in other paper types excluded in the screening that discuss or study
238 alienation and/or anomie in pharmacists (e.g. review articles, expert commentaries,
239 editorials articles, and/or systematic reviews), identified from their reference list
- 240 • Papers that cite the other paper types excluded in the screening that discuss or study
241 alienation and/or anomie in pharmacists (e.g. review articles, expert commentaries,
242 editorials articles, and/or systematic reviews)
- 243 • Other publications by the lead authors of included studies
- 244 • Journals from the included studies to identify non-indexed articles, using the basic terms
245 such as 'alienation', 'alienate', and 'anomie'
- 246 • Other web-based search engines (e.g. Google) and websites, using the basic terms
247 'alienation', 'alienate', and 'anomie' AND 'pharmacist'

248 249 *Search Strategy*

250 Searches will be undertaken in two separate arms: (a) terms relating to 'pharmacists', and (b) terms
251 relating to 'alienation' or 'anomie'. Searches will involve a mixture of controlled vocabulary terms
252 and keywords. Multiple keyword synonyms for alienation and/or anomie will be used to attempt to
253 counter some of the linguistic challenges and improve the capture rate of suitable studies, including
254 versions of 'estrangement', 'meaninglessness', 'powerlessness', 'normlessness', 'hopelessness',
255 'disillusionment', 'meaning in work', 'social isolation', 'moral distress', and 'value conflict'. One
256 keyword antonym, 'solidarity', will also be used to look for cases that describe alienation and/or
257 anomie through the lack of solidarity. 'Title', 'Abstract' and 'Keyword Heading' options will be used
258 in search settings where available. Where applicable in each database both the 'explode' function
259 and the 'include all subheadings' functions will be used to include all the narrower terms below the
260 main heading and to increase the identification rate of possible studies. 'Full text' search option will
261 also be used where available, including CINAHL Plus, and Cochrane Library. The terms within each
262 arm will be combined with a Boolean 'OR' command. The results from both separate arms will then
263 combined using a Boolean 'AND' command. Searches may be filtered by 'peer-reviewed papers
264 only', where available.

265
266 The search terms and strategy were developed iteratively by the lead author (PF) and an
267 experienced librarian (RO), guided by the other authors, and was tailored specifically for each
268 database to be searched. The Peer Review of Electronic Search Strategies (PRESS) Guidelines were
269 used to help form the search.³³ Test searches were conducted to ensure the viability of the final
270 strategies. The terms used and structure of search for each database is shown in Table 1.

271
272 [NB- Type setters please insert Table 1]

273 274 *Data Selection*

275 The review and data extraction processes will follow that described in the PRISMA statement.³⁰ All
276 relevant entries uncovered in the search will be exported to a reference manager software (e.g.
277 EndNote™). Thereafter, article titles will be screened and duplicates removed. Titles and abstracts
278 will then be reviewed for relevance and inclusion/exclusion criteria. A second researcher will

279 independently review all papers. At this point, lists between both researchers will be compared,
280 Cohen's kappa coefficient will be used to measure the inter-rater reliability, and discrepancies (i.e.
281 differences between the two lists) will be discussed between the researchers and agreement
282 reached on the final list for full-text review. Any disagreements will be adjudicated by a third
283 researcher. A final PRISMA 2020 flow diagram for 'new systematic reviews which included searches
284 of databases, registers and other sources' will be produced.³⁰

285

286 Full-text articles will be reviewed by the lead researcher and again independently double-reviewed
287 by a second researcher and then a final produced by each researcher. Again, at this point lists
288 between both researchers will be compared, Cohen's kappa coefficient will be used to measure the inter-
289 rater reliability, and discrepancies (i.e. differences between the two lists) will be discussed between
290 the researchers and agreement reached. Any disagreements will be adjudicated by a third
291 researcher.

292

293 Hand-searching and citation-searching will take place at this stage, as per the *Information Sources*
294 section above. Papers thought to be interesting or relevant from the hand-searching and citation-
295 searching sources will be identified by the lead author for independent double screen of both
296 title/abstract and then full paper. The screening and review methods will mirror that already
297 described, with the processes independently undertaken by two researchers, and adjudicated by a
298 third researcher where needed, and Cohen's kappa coefficient calculated. A snow-balling technique
299 will be used to further hand-screen, as per the *Information Sources* section above, if further relevant
300 articles are identified and/or included. The screening and review methods will mirror those already
301 described. This will continue until no further articles are identified.

302

303 The final included list of studies will then be complete.

304

305 *Data Analysis and Synthesis*

306 The narrative systematic review will be delivered over four methodological stages:

- 307 • *Step 1- Determining the role of theory in evidence synthesis:* With the help of two academic
308 philosophers (BM & JC), we have synthesised six theoretical themes from alienation and
309 anomie theory^{2-8,10} that will be explored in the synthesis: Care, Values, Meaning,
310 Recognition, Autonomy, and Shared Responsibility- see Figure 1.

311 [NB- Type setters please insert Figure 1]

- 312 • *Step 2- Developing a preliminary descriptive and critical analysis/synthesis:*

313 a) *Descriptive:* A standardised data extraction form will be used to extract relevant
314 descriptive characteristics of each included study independently by the lead author
315 and one of the other researchers. Papers will be described and compared both in
316 text and in tabular form. Papers will be summarised, highlighting the year published,
317 country, paper/study type, care location, group, intervention, comparator, and
318 summary findings of the study relevant to alienation and/or anomie.

319 b) *Critical:* A quality assessment of each study will be carried out using the Quality
320 assessment with diverse studies (QuADS) appraisal tool.³⁴ The QuADS tool requires a
321 rating from 0-3 across 13 separate criteria. This will be scored independently by two
322 researchers. The first QuADS criteria, on the theoretical or conceptual underpinning
323 of the study, will be scored independently by two academic philosophers with
324 expertise in alienation and/or anomie theory. The remaining QuADS criteria, from
325 two to thirteen, will be scored independently by the lead researcher and senior
326 supervising researcher. Scores across each QuADS criteria will be compared between
327 both scorers and agreement sought. Where necessary a third researcher will
328 adjudicate any disagreements. A QuADS score will be worked out for each study, out
329 a possible 39 points. No arbitrary threshold of high or low quality will be predefined

330 based on the numerical score, as per advice from the QuADS authors. Instead,
331 deficits in quality will be narratively described. Papers will be described and
332 compared both in text and in tabular form.

- 333 • *Step 3- Exploring relationships within and between studies:*
 - 334 a) *Coding:* All articles will be reviewed by the lead researcher and deductively coded
335 for the six *a-priori* themes. Sub-codes below each of the six themes may also be
336 used, in order to help understand the theme, describing any focuses, causes,
337 associated factors, and/or consequences of alienation and/or anomie. Additional
338 new codes may be used for any aspects of alienation or anomie that do not fit into
339 the six deductive *a-priori* themes. All studies will also be independently coded in the
340 same way by a second researcher. A meeting between coders will then be arranged
341 to discuss the initial coding of the data, including how well the data fits into the six
342 theoretical *a-priori* themes and whether or not there is a need to develop any new
343 themes outside of these, and how best to code these. All disagreements will be
344 adjudicated by a third researcher. Patterns of this coded data will be collated into
345 broader concepts which linked them together (i.e. themes and sub-themes), where
346 needed.
 - 347 b) *Mapping:* From the coded articles, a visual map of codes will then be produced,
348 illustrating the link within and between themes and sub-themes. This visual map will
349 help guide the formation of an initial preliminary narrative synthesis (PF). This map
350 will be jointly produced during a face-to-face meeting between the lead author and
351 the senior supervising author. All disagreements will be adjudicated by a third
352 researcher.
- 353 • *Step 4- Assessing the robustness of the synthesis:* A GRADE Confidence in the Evidence from
354 Reviews of Qualitative research (GRADE-CERQual) analysis will be undertaken,
355 independently by two researchers, for both the six *a-priori* themes and if necessary any new
356 themes which have been produced.³⁵ Results will then be compared between both
357 researchers and agreement sought. Were necessary a third researcher will adjudicate any
358 disagreements. This analysis will deliver five key components for each theme:
 - 359 a) A summary of review findings statement will be produced
 - 360 b) Studies contributing to the review finding will be logged against each theme
 - 361 c) Four key components of the finding will be analysed: Methodological limitations,
362 Coherence, Adequacy, and Relevance
 - 363 d) A GRADE-CERQual assessment of the confidence in the evidence in each finding will
364 be produced
 - 365 e) A summary explanation of this assessment will also be produced

366 The analysis will be undertaken independently by two researchers. Results will then be
367 compared between both scorers and agreement sought. Were necessary a third
368 researcher will adjudicate any disagreements.

369
370 *Analysis of subgroups or subsets*
371 No analysis of subgroups or subsets of the data is planned.

372
373 *Planned Start Date*
374 May 2024

375
376 *Expected End Date*
377 End of November 2024

378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402

Ethics and dissemination

Ethical permission is not required, as this study uses data from published research. Dissemination will be through publication in peer-reviewed journals, and conference presentations.

Author Contributions

PF = Conceptualization, Methodology (all), Software (Test database searches), Visualization, Writing – Original Draft Preparation (lead author), Writing – Review & Editing (lead author) and Guarantor.

BM = Conceptualization, Methodology (philosophical theory), Supervision (philosophical theory), Writing – Review & Editing

RO = Methodology (Information Sources & Search Strategy), Software (Test database searches), Writing – Review & Editing

JC = Methodology (philosophical theory), Writing – Review & Editing

GR = Writing – Review & Editing, Supervision (professional evidence base)

SC = Methodology (systematic review methods), Writing – Review & Editing, Supervision (professional evidence base)

AR = Conceptualization, Methodology (all), Visualization (review & editing), Writing – Original Draft Preparation (lead supervisor), Writing – Review & Editing (lead supervisor), Supervision (lead)

Funding

This study receiving no funding of any type, including private, public, or ‘not-for-profit’.

Declarations of Interest

None

403 References

- 404 1. Leopold D. Alienation. In: Zalta E.N., ed. *The Stanford Encyclopedia of Philosophy (Winter 2022*
405 *Edition)*. Edward N. Zalta & Uri Nodelman (eds.), The Metaphysical Research Lab, Philosophy
406 Department, Stanford University, 2022. Available:
407 <https://plato.stanford.edu/archives/win2022/entries/alienation/> (accessed 15 March 2024).
- 408 2. Brixel P. The unity of Marx's oncept of alienated labor. *Philosophical Review*. 2023. Vol.
409 (Forthcoming). <https://philpapers.org/versions/BRITUO-5> (accessed 19 March 2024).
- 410 3. Brudney D. Community and Completion. *Reclaiming the History of Ethics Essays for John Rawls*.
411 Cambridge University Press, 1997. pp. 388 - 418, doi:
412 <https://doi.org/10.1017/CBO9780511527258.015>.
- 413 4. Maguire B. Efficient markets and alienation. *Philosophers' Imprint*. 2022. 22(14). 1 - 19. Available:
414 <https://journals.publishing.umich.edu/phimp/article/id/545/>.
- 415 5. Kandiyali J. The Importance of Others: Marx on Unalienated Production. *Ethics*. 2020. Vol. 130, 4.
416 <https://www.journals.uchicago.edu/doi/abs/10.1086/708536> (accessed 19 March 2024).
- 417 6. Wolf S. *Meaning in Life and Why it Matters*. Princeton University Press, 2010.
- 418 7. Taylor C. *The Politics of Recognition*. Princeton University Press, 1994.
- 419 8. Durkheim E. *The Division of Labour in Society (Translated by W.D. Halls)*. Palgrave Macmillan,
420 1984.
- 421 9. Elwell FW. Emile Durkheim on Anomie. 2003. Available:
422 <http://www.faculty.rsu.edu/~felwell/Theorists/Essays/Durkheim1.htm> (accessed 18 March 2024).
- 423 10. Habermas J. Theory of Communicative Action, Volume 1: Reason and the Rationalization of
424 Society: Reason and the Rationalization of Society, Volume 1. Polity, 1986. Vol. 1st edition.
- 425 11. Kellar J, Singh L, Bradley-Ridout G, Martimianakis MA, van der Vleuten CPM, Oude Egbrink MGA,
426 Austin Z. How pharmacists perceive their professional identity: a scoping review and discursive
427 analysis. *Int J Pharm Pract*. 2021. 29(4). 299-307. doi: 10.1093/ijpp/riab020. PMID: 33978740..
- 428 12. Toklu HZ, Hussain A. The changing face of pharmacy practice and the need for a new model of
429 pharmacy education. *J Young Pharm*. 2013. 5(2). 38-40. doi: 10.1016/j.jyp.2012.09.001. Epub 2013
430 Mar 30. PMID: 24023452; PMCID: PMC3758081..
- 431 13. Forsyth P, Radley A, Rushworth GF, Marra F, Roberts S, O'Hare R, Duggan C, Maguire B. The
432 Collaborative Care Model: Realizing healthcare values and increasing responsiveness in the
433 pharmacy workforce. *Res Social Adm Pharm*. 2023. 19(1). 110-122. doi:
434 [10.1016/j.sapharm.2022.08.016](https://doi.org/10.1016/j.sapharm.2022.08.016). Epub 2022 Sep 2. PMID: 36100521..
- 435 14. Berman A. CONFLICT AND ANOMALY IN THE SCIENTIFIC ORIENTATION OF FRENCH PHARMACY
436 1800-1873. *Bull Hist Med*. 1963. 37. 440-62. PMID: 14063103..
- 437 15. Anderson L. "A Case of Thwarted Professionalization: Pharmacy and Temperance in Late
438 Nineteenth-Century Iowa". *The Annals of Iowa*. 1991. 50(7). 751-771. doi:
439 <https://doi.org/10.17077/0003-4827.9508>.
- 440 16. Shaw CT. Societal sanctioning--the pharmacist's tarnished image. *Soc Sci Med (1967)*. 1972. 6(1).
441 109-14. doi: 10.1016/0037-7856(72)90010-8. PMID: 5016430..

- 442 17. Maestri WF. Values and Value Dilemmas in Pharmacology: A Theological Perspective. *Linacre*
443 *Quarterly*. 1981. 48(4). 303-312.
- 444 18. Forsyth, P. Radley, A. Stepping back from crisis: delivering a future workforce vision for
445 pharmacy. *The Pharmaceutical Journal*. 2022. 309(7967). DOI:10.1211/PJ.2022.1.164327.
- 446 19. Iliffe S, Manthorpe J. Job dissatisfaction, 'burnout' and alienation of labour: undercurrents in
447 England's NHS. *J R Soc Med*. 2019. 112(9). 370-377. doi: 10.1177/0141076819855956. PMID:
448 31496344; PMCID: PMC6824002..
- 449 20. Byrne JP, Creese J, McMurray R, Costello RW, Matthews A, Humphries N. Feeling like the enemy:
450 the emotion management and alienation of hospital doctors. *Front Sociol*. 2023. 24(8). 1232555. doi:
451 10.3389/fsoc.2023.1232555. PMID: 37693799; PMCID: PMC1048433.
- 452 21. You Q, Bai D, Wu C, Gao J, Hou C. Status of work alienation among nurses in China: A systematic
453 review. *Front Psychiatry*. 2022. 13. 986139. doi: 10.3389/fpsy.2022.986139. PMID: 36424993;
454 PMCID: PMC9679294..
- 455 22. Alfuqaha OA, Shunnar OF, Khalil RA, Alhalaiqa FN, Thaher YA, Al-Masarwah UM, Al Amad TZ.
456 Work alienation influences nurses' readiness for professional development and willingness to learn:
457 A cross-sectional correlation study. *PLoS One*. 2023. 18(5). e0284963. doi:
458 10.1371/journal.pone.0284963. PMID: 37159456; PMCID: PMC10168560..
- 459 23. Crowe S, Clarke N, Brugha R. 'You do not cross them': Hierarchy and emotion in doctors'
460 narratives of power relations in specialist training. *Soc Sci Med*. 2017. 186. 70-77. doi:
461 10.1016/j.socscimed.2017.05.048. Epub 2017 May 27. PMID: 28587868.
- 462 24. Thin SM, Chongmelaxme B, Watcharadamrongkun S, Kanjanarach T, Sorofman BA, Kittisopee T. A
463 systematic review on pharmacists' turnover and turnover intention. . *Res Social Adm Pharm*. 2022.
464 18(11). 3884-3894. doi: 10.1016/j.sapharm.2022.05.014. Epub 2022 May 29. PMID: 35691797..
- 465 25. McQuade BM, Reed BN, DiDomenico RJ, Baker WL, Shipper AG, Jarrett JB. Feeling the burn? A
466 systematic review of burnout in pharmacists. *J Am Coll Clin Pharm*. 2020. 3. 663-675.
467 <https://doi.org/10.1002/jac5.1218>.
- 468 26. Radwan RM, Bentley JP, Patterson JA, Dixon DL, Salgado TM. Predictors of job satisfaction among
469 pharmacists: A regional workforce survey. *Explor Res Clin Soc Pharm*. 2022. 5. 100124. doi:
470 10.1016/j.rcsop.2022.100124. PMID: 35478529; PMCID: PMC9031680..
- 471 27. Liu CS, White L. Key determinants of hospital pharmacy staff's job satisfaction. *Res Social Adm*
472 *Pharm*. 2011. 7(1). 51-63. doi: 10.1016/j.sapharm.2010.02.003. Epub 2010 Jun 29. PMID: 21397881..
- 473 28. Popay J, Roberts H, Sowden A, Petticrew M, Arai L, Rodgers M, Britten N, Roenk, Duffy S.
474 Guidance on the Conduct of Narrative Synthesis in Systematic Reviews: A Product from the ESRC
475 Methods Programme. 2006. Available: [https://www.lancaster.ac.uk/media/lancaster-](https://www.lancaster.ac.uk/media/lancaster-university/content-assets/documents/fhm/dhr/chir/NSsynthesisguidanceVersion1-April2006.pdf)
476 [university/content-assets/documents/fhm/dhr/chir/NSsynthesisguidanceVersion1-April2006.pdf](https://www.lancaster.ac.uk/media/lancaster-university/content-assets/documents/fhm/dhr/chir/NSsynthesisguidanceVersion1-April2006.pdf)
477 (accessed 19 March 2024).
- 478 29. Grant MJ, Booth A. A typology of reviews: an analysis of 14 review types and associated
479 methodologies. *Health Info Libr J*. 2009. 26(2). 91-108. doi: 10.1111/j.1471-1842.2009.00848.x.
480 PMID: 19490148..

481 30. Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for
482 reporting systematic reviews. *BMJ*. 2021. 372. n71. doi: 10.1136/bmj.n71. PMID: 33782057; PMCID:
483 PMC8005924..

484 31. Cooke A, Smith D, Booth A. Beyond PICO: the SPIDER tool for qualitative evidence synthesis. .
485 *Qual Health Res*. 2012. 22(10). 1435-43. doi: 10.1177/1049732312452938. Epub 2012 Jul 24. PMID:
486 22829486..

487 32. Haddaway NR, Collins AM, Coughlin D, Kirk S. The Role of Google Scholar in Evidence Reviews
488 and Its Applicability to Grey Literature Searching. *PLoS One*. 2015. 10(9). e0138237. doi:
489 10.1371/journal.pone.0138237. PMID: 26379270; PMCID: PMC4574933.

490 33. McGowan J, Sampson M, Salzwedel DM, Cogo E, Foerster V, Lefebvre C. PRESS Peer Review of
491 Electronic Search Strategies: 2015 Guideline Statement. *J Clin Epidemiol*. 2016. 75. 40-6. doi:
492 10.1016/j.jclinepi.2016.01.021. Epub 2016 Mar 19. PMID: 27005575.

493 34. Harrison R, Jones B, Gardner P, Lawton R. Quality assessment with diverse studies (QuADS): an
494 appraisal tool for methodological and reporting quality in systematic reviews of mixed- or multi-
495 method studies. *BMC Health Serv Res*. 2021. 21(1). 144. doi: 10.1186/s12913-021-06122-y. Erratum
496 in: *BMC Health Serv Res*. 2021 Mar 16;21(1):231. PMID: 33588842; PMCID: PMC7885606..

497 35. Lewin S, Bohren M, Rashidian A, Munthe-Kaas H, Glenton C, Colvin CJ, Garside R, Noyes J, Booth
498 A, Tunçalp Ö, Wainwright M, Flottorp S, Tucker JD, Carlsen B. Applying GRADE-CERQual to qualitative
499 evidence synthesis findings-paper 2: how to make an overall CERQual assessment of confidence and
500 create a Summary of Qualitative Findings table. *Implement Sci*. 2018. 13 (Suppl 1). 10. doi:
501 10.1186/s13012-017-0689-2. PMID: 29384082; PMCID: PMC5791047..

502

503

504

505 **Panel 1:** What are alienation and/or anomie and why are they important to pharmacists?

506

There are many theories of what 'alienation' is.¹ We can ignore subtle differences to present the following logical structure common to many. Alienation is the remoteness or separation which arises when some structural or social factor inhibits an agent's ability to appropriately relate to something. This typically leads to a negative psychological endpoint for the agent. Accordingly, in this study, we plan to explore how pharmacists are alienated from other individuals, themselves, their work, or the public at large [focus], when relations to care, values, meaning, recognition, autonomy, or shared responsibility [theme] are inhibited by structural or social factors [cause]. In the case of pharmacists, this may lead to distress, burnout, and job dissatisfaction, among other sequelae [consequence]. Anomie is an instance of alienation in which agents are inhibited by ill-fitting social expectations, for instance, when clinicians are treated as shop assistants.

Many forms of alienation may be present at the same time. As the logic suggests, a pharmacist might be alienated from their patients, for instance if prevailing rules or expectations mean they are unable to care for them to the best of their ability; this might in turn lead to them being alienated from themselves in virtue of being unable to live in accordance with their own values; this might further lead to them being alienated from their work, since it fails to utilise their developed skills; and generally to them being alienated from the wider population, who fail to recognise their vocational potential. Alienation, by this logic, has a social cause; consequently, it also admits, at least in principle, of a social solution.

507

508 **Table 1:** Search terms and structure for each electronic bibliographic database

Database	Embase ¹	MEDLINE ¹	APA PsychINFO ₁	CINAHL Plus _{1,2}	Cochrane Library ^{1,2}	Web of Science Core Collection	Scopus	Google Scholar
Pharmacist Arm	Pharmacist (controlled vocabulary) OR Pharmacist* (Keyword)	Pharmacists (controlled vocabulary) OR Pharmacist* (Keyword)	Pharmacists (controlled vocabulary) ¹ OR Pharmacist* (Keyword)	Pharmacists (controlled vocabulary) ¹ OR Pharmacist Attitudes (controlled vocabulary) OR Pharmacist* (Keyword)	Pharmacists (controlled vocabulary) ¹ OR Pharmacist* (Keyword)	Pharmacist* (Keyword)	Pharmacist* (Keyword)	'with all of the words' Pharmacist
Alienation or Anomie Arm	Alienation (controlled vocabulary) OR Alienat* (Keyword) OR Anomie (controlled vocabulary) OR Anomie (Keyword) OR Estrange* (Keyword) OR Meaningless* (Keyword) OR Powerless* (Keyword) OR Normless* (Keyword) OR Hopeless* (Keyword) OR Disillusion* (Keyword) OR Meaning in work (Keyword) OR Social isolat* (Keyword) OR Moral distress (Keyword) OR Value conflict (Keyword) OR Value conflict* (Keyword) OR Solidarity (Keyword)	Social Alienation (controlled vocabulary) OR Alienat* (Keyword) OR Anomie (controlled vocabulary) OR Anomie (Keyword) OR Estrange* (Keyword) OR Meaningless* (Keyword) OR Powerless* (Keyword) OR Normless* (Keyword) OR Hopeless* (Keyword) OR Disillusion* (Keyword) OR Meaning in work (Keyword) OR Social isolat* (Keyword) OR Moral distress (Keyword) OR Value conflict (Keyword) OR Solidarity (Keyword)	Alienation (controlled vocabulary) OR Alienat* (Keyword) OR Anomie (controlled vocabulary) OR Anomie (Keyword) OR Estrange* (Keyword) OR Meaningless* (Keyword) OR Powerless* (Keyword) OR Normless* (Keyword) OR Disillusion* (Keyword) OR Meaning in work (Keyword) OR Social isolat* (Keyword) OR Moral distress (Keyword) OR Value conflict (Keyword) OR Solidarity (Keyword)	Social Alienation (controlled vocabulary) OR Alienat* (Keyword) OR Anomie (controlled vocabulary) OR Anomie (Keyword) OR Estrange* (Keyword) OR Meaningless* (Keyword) OR Powerless* (Keyword) OR Normless* (Keyword) OR Disillusion* (Keyword) OR Meaning in work (Keyword) OR Social isolat* (Keyword) OR Moral distress (Keyword) OR Value conflict (Keyword) OR Solidarity (Keyword)	Social Alienation (controlled vocabulary) OR Alienat* (Keyword) OR Anomie (controlled vocabulary) OR Anomie (Keyword) OR Estrange* (Keyword) OR Meaningless* (Keyword) OR Powerless* (Keyword) OR Normless* (Keyword) OR Disillusion* (Keyword) OR Meaning in work (Keyword) OR Social isolat* (Keyword) OR Moral distress (Keyword) OR Value conflict (Keyword) OR Solidarity (Keyword)	Alienat* (Keyword) OR Anomie (Keyword) OR Estrange* (Keyword) OR Meaningless* (Keyword) OR Powerless* (Keyword) OR Normless* (Keyword) OR Disillusion* (Keyword) OR Meaningless* (Keyword) OR Hopeless* (Keyword) OR Disillusion* (Keyword) OR "Social isolat*" (keyword) OR "Moral distress" (Keyword) OR "Value conflict" (Keyword) OR Solidarity (Keyword)	Alienat* (Keyword) OR Anomie (Keyword) OR Estrange* (Keyword) OR Meaningless* (Keyword) OR Powerless* (Keyword) OR Normless* (Keyword) OR Disillusion* (Keyword) OR Meaningless* (Keyword) OR Hopeless* (Keyword) OR Disillusion* (Keyword) OR "Social isolat*" (keyword) OR "Moral distress" (Keyword) OR "Value conflict" (Keyword) OR Solidarity (Keyword)	'with at least one of the words' Alienate Alienated Alienation Anomie Estranged Estrangement Meaningless Meaninglessness Powerless Powerlessness Normless Normlessness Disillusion Disillusioned Disillusionment Hopeless Hopelessness "Meaning in work" "Moral distress" "Social isolation" "Value conflict" Solidarity

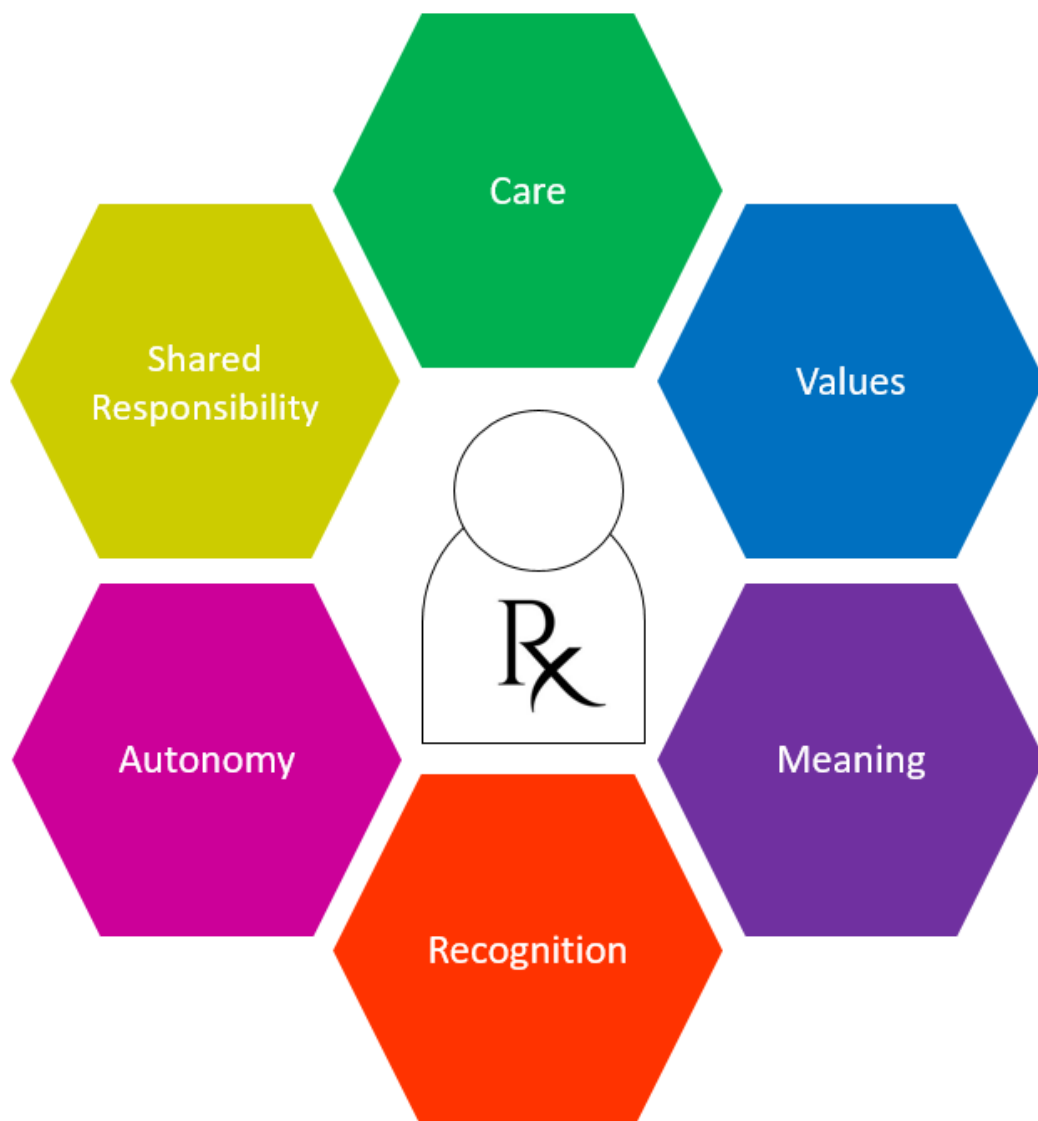
509 1 = Explode function used & Include All Subheadings used, where applicable

510 2 = Full text search option used, where available

511 OR = Boolean command to include any of the listed options

512 * = truncation of word for alternative endings

513 **Figure 1:** Model for unalienated work in pharmacists to be tested in the synthesis



514