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Ee, Jonathan; Stenfert Kroese, Biza; Rose, John

DOI:
[10.1111/bld.12401](https://doi.org/10.1111/bld.12401)

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Document Version
Publisher's PDF, also known as Version of record

Citation for published version (Harvard):
Ee, J, Stenfert Kroese, B & Rose, J 2021, 'A systematic review of the knowledge, attitudes and perceptions of health and social care professionals towards people with learning disabilities and mental health problems', *British Journal of Learning Disabilities*. <https://doi.org/10.1111/bld.12401>

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Download date: 06. May. 2024

A systematic review of the knowledge, attitudes and perceptions of health and social care professionals towards people with learning disabilities and mental health problems

Jonathan Ee  | Biza Stenfert Kroese | John Rose 

Centre for Applied Psychology, School of Psychology, University of Birmingham, Birmingham, UK

Correspondence

Jonathan Ee, Centre for Applied Psychology, School of Psychology, University of Birmingham, Birmingham, UK.
Email: jpe669@alumni.bham.ac.uk

Funding information

No funding was obtained for this review

Accessible Summary

- Many people with learning disabilities need mental health services at some point in their lives.
- This paper looks at how health and social care professionals (e.g. doctors, nurses and psychologists) think about people with learning disabilities who also have mental health problems.
- The research shows that health and social care professionals who do not work in learning disability services are not comfortable working with people with learning disabilities because they do not know enough about them and have not had proper training.
- Health and social care professionals also have negative views of people with learning disabilities. They prefer it if a specially designed mental health service takes on the work with people with learning disabilities.
- Having more training can help health and social care professionals to become more confident in this work.

Abstract

Background: People with learning disabilities have poorer access to mental health services. It is important for health and social care professionals to have adequate knowledge and skills combined with positive attitudes to work with this population. This review focuses on the knowledge, attitudes and perceptions of health and social care professionals who provide mental health services to people with learning disabilities.

Method: A systematic literature search was carried out to identify quantitative studies published in the English language between 2006 and 2020.

Results: Thirteen studies were identified that met the inclusion criteria. The studies identified a lack of knowledge and competency among health and social care professionals to address the mental health needs of people with learning disabilities. Health and social care professionals in these studies viewed people with learning disabilities

are more vulnerable and suggested specialist mental health services to cater to their specific mental health needs.

Conclusions: Health and social care professionals appear to hold negative views of people with learning disabilities, which adversely influences their willingness to work with them. It is recommended that health and social care professionals receive more training opportunities to increase their skills and develop confidence in providing services to this population.

KEYWORDS

attitudes, intellectual disabilities, mental health professionals, services, stigma, training

1 | INTRODUCTION

People with learning disabilities can be poorly integrated in mental health services (Ervin et al., 2014), and the provision of services for them remains underdeveloped when compared to services for the general population (Bhaumik et al., 2008). There have been calls to reform mental health services to improve access for people with learning disabilities (Trollor, 2014). Alborz et al. (2005) found that general practitioners are often the first point of contact for people with learning disabilities to receive general healthcare services, but they are ill-equipped to manage their mental health needs, suggesting a lack of knowledge and skills to identify mental health problems of people with learning disabilities.

Trollor (2014) recommends providing accessible mainstream and specialist mental health services for people with learning disabilities. There has also been an increased emphasis on providing staff training in the mental health needs of people with learning disabilities to health and social care professionals and support workers (Woodward & Halls, 2009), which can improve attitudes, as well as skills and knowledge (Rose et al., 2013).

There is a limited amount of research conducted to understand the attitudes and perceptions of health and social care professionals working with people having learning disabilities with mental health and/or behavioural problems. Current literature focuses on examining the stigmatising attitudes of health and social care professionals providing general healthcare services to people with learning disabilities (Pelleboer-Gunnink et al., 2017). The studies in the review (Pelleboer-Gunnink et al., 2017) did not focus on health and social care professionals providing mental health services for people with learning disabilities, and eight out of the 30 studies identified in the review were conducted more than 10–20 years ago when there were less awareness of the rights of people with learning disabilities and little training and education available for health and social care professionals.

Another review carried out by Whittle et al. (2018) identified barriers and facilitators to access to mental health services for people with learning disabilities without examining the attitudes or perceptions of health and social care professionals working with

this population. Identifying the attitudes and perceptions of health and social care professionals working with people with learning disabilities and mental health problems would aid in understanding whether they have any impact on the mental health service delivery and confidence in working with this population. Moreover, it would be useful to understand the training needs of health and social care professionals to aid in the development of training programmes and supervision so as to improve their competency, skills and knowledge and thus the mental health service received by people with learning disabilities.

1.1 | Aim of the review

The review aimed to investigate the attitudes of health and social care professionals towards people with learning disabilities and mental health problems. The review examines the findings from the literature in order to understand how health and social care professionals perceive people with learning disabilities and mental health problems, their knowledge and competency in providing services or interacting with them, and the impact of their attitudes on service delivery and training needs.

2 | METHOD

2.1 | Search strategy

A search strategy was developed to search the electronic databases MEDLINE, PubMed and OVID for quantitative studies published in English between 2006 and June 2020. The current review focused on more recent studies, which were published after the adoption of the United Nations Convention on the Rights of Persons with Disabilities in 2006. The first author independently reviewed the titles and abstracts of the articles identified. Articles that appeared to meet the inclusion criteria were read in full and verified with the second and third authors. Table 1 provides an example of the search strategy that was utilised.

TABLE 1 List of search terms for literature review

Attitudes	Learning disability	Mental Health	Professionals
Attitu*	Intellectual disabili*	Mental health illness*	Staff
OR	OR	OR	OR
Beliefs	Learning disabili*	Psychiatr*	Therapis*
OR	OR	OR	OR
Perception	Developmental disabil*	Dual diagnos*	Nurs*
	OR		OR
	Mental Retardation		Psych*

2.2 | Inclusion criteria

Quantitative studies focused on examining the attitudes or perceptions of health and social care professionals who work with adults with learning disabilities and mental health problems. These studies may include their views or perceptions about knowledge of learning disability and competency to work with this population. The professional groups included in the studies consist of medical staff, nurses, therapists, psychologists or social workers. Excluded were studies that focus on efficacy of staff training programmes, health and social care professionals' views on efficacy of specific intervention targeted to people with learning disabilities and mental health problems, and health and social care professionals' attitudes towards sexuality or parenting issues in people with learning disabilities. The authors excluded these studies as they do not pertain to the mental health problems of the people with learning disabilities. Additionally, review articles, conference proceedings, book chapters, case and qualitative studies were excluded in this review. A review consisting of qualitative studies was carried out separately (Ee et al., 2020).

3 | RESULTS

A total of 1196 publications were identified, which were screened, and 351 duplicates were removed leaving a total of 845 publications. Subsequently, a further 730 publications were removed after reading the titles as they did not meet the inclusion criteria leaving a total of 115 publications. For publications that included a mix of different professionals, such as health and social care professionals and support care staff, they were only included if the majority of the participants were health and social care professionals. During a second screening, the abstracts of the remaining publications were read and 75 articles were removed as they did not meet the inclusion criteria, which left 40 publications. These 40 publications were further inspected by reading the main text, and 28 publications were excluded as they failed to meet the inclusion criteria. This left 12 studies for quality assessment. The reference sections of each of these 12 publications were examined to identify any further studies that met the inclusion criteria. One study was deemed suitable for the review and was added; thus, 13 studies were included in this review.

3.1 | Study characteristics

A summary of the papers reviewed detailing the characteristics, findings, strengths and limitations is presented in Table 2, and the studies included in this review will be referred to by the numbers allocated in the table.

Studies were from Israel (4), the UK (3), Australia (3), the USA (1) and Singapore (1). One study was cross-cultural and conducted in the UK and Australia. Seven studies were of medical staff that comprised of psychiatrists, trainee psychiatrists and generalist doctors. Two studies consisted of social workers, and one consisted of nurses. Two studies were of a mixture of health and social care professionals working in different specialities. The majority of the studies comprised of health and social care professionals working in mainstream mental health service setting. Five studies (studies 3, 5, 6, 7 and 8) were of health and social care professionals working in specialist learning disability settings including hospitals and social service sectors.

All the studies used cross-sectional designs to investigate their research aims and hypotheses. Three studies compared participants' responses related to different client population groups: people with learning disabilities (no mental health problems), people with mental health problems (no learning disabilities) and people with learning disabilities and mental health problems. Four studies compared the responses between different groups of health and social care professionals.

3.2 | Measures

The research studies used self-report measures together with a variety of procedures and questionnaires to measure the participants' attitudes towards and perceptions of people with learning disabilities and mental health problems. Studies 11 and 12 used case vignettes to assess for objective knowledge of participants, whereas the participants in studies 1 and 10 read two case vignettes before completing the Attribution Question-27 (Corrigan et al., 2003), which indicated internal consistency ranging from 0.7 to 0.89.

Study 1 used the Knowledge of Causes subscale of the Attitudes Towards Intellectual Disability Questionnaire (Morin et al., 2013) together with Attribution Question-27. The researchers did not provide information on its internal consistency, but findings from Morin

TABLE 2 Summary of quantitative studies included in the review

No	Author (Year) and Country	Aims	Participants	Method of data collection
1	Araten-Bergman and Werner (2017) Israel	To examine how social workers view people with learning disabilities and psychiatric illness	279 social workers (219 females and 60 males with an average age of 34.5 and worked for an average of 9 years)	Participants read a vignette, answered an adapted version of the Attribution Questionnaire 27 (AQ-27) and some items extracted from the Knowledge of Causes subscale of the Attitudes Towards Learning Disability Questionnaire (ATTID)
2	Edwards et al. (2007) Australia	To examine attitudes of Australian psychiatrists and perceptions of the mental health problems of adults with learning disabilities	175 psychiatrists (96 males and 73 females, the rest did not indicate their gender)	Participants responded to a 28-item self-administered questionnaire that probed perceptions of psychiatrists across their spectrum of responsibilities
3	McCorkindale et al. (2017) United Kingdom	To identify how specialist learning disability staff perceives the mental health problems of people with learning disabilities	210 participants comprised of nurses, support workers and managers (average age of 46, 71 males and 138 females) 109 qualified nursing staff (66% females and 34% males with an average age of 46 years)	Participants completed the modified version of the Illness Perception Questionnaire—Schizophrenia Carers Version
4	Mesa and Tsakanikos (2014) United Kingdom	To compare the differences in attitudes and self-efficacy towards people with learning disabilities and those with mental health problems among mainstream health and social care professionals	68 acute inpatient psychiatric staff. No other information is provided	Participants were randomised into two groups. One group completed a Community Living Attitudes Scale (CLAS) that included self-efficacy, and attitude questions pertaining to people with learning disabilities while the other group completed the same questionnaire with questions pertaining to people with mental health problems
5	Jess et al. (2008) United Kingdom, Australia	To examine the differences between the UK and Australian psychiatrists' knowledge and competency, and the impact of service quality and the need for specialist services for people with learning disabilities	294 UK psychiatrists and 205 Australian psychiatrists. No other information is provided.	Participants were asked to complete the questionnaire that included a section on details of work experience with people with learning disabilities, views regarding the role of psychiatrist for people with learning disabilities and their views of knowledge, training experiences and quality of services

Method of Data Analysis	Key Findings	Strengths	Limitations
Factor analysis, analysis of variance (ANOVA), regression analysis	Stereotype of dangerousness was found to be the strongest predictor of discriminatory behaviours. Social workers were found to have higher levels of helping behaviour when they were less angry and pitied people with learning disabilities and mental health problems	Detailed background literature with use of theoretical framework Clear hypotheses Identification analysis of extraneous variables	Lacks details of inclusion criteria of participants Convenience sampling
Descriptive statistics	Majority of psychiatrists expressed the mental health needs of people with learning disabilities were not met. 75% of participants reported the overuse of psychotropic medication to treat aggression. 34% were less willing to provide mental health service to people with learning disabilities. Overall, psychiatrists agreed that specialist mental health services are needed with specialist training in mental health to work with the learning disabilities population	Includes details of questionnaire Include details about nonrespondents	Only descriptive statistics used Low response rate Lacks discussion of ethical issues Lack validated measures
Spearman-Brown coefficient and Pearson's correlation analysis	Positive correlation was found between the severity of mental health problems of people with learning disabilities and the negative impact on their caregivers Staff perceive the mental health problems will negatively impact the lives of people with learning disabilities Negative correlation between the treatment duration and positive outcomes Pessimistic view of outcomes for schizophrenia in people with learning disabilities.	Details of inclusion criteria of participants Includes details on adaption of questionnaire Relevant literature	Inconsistent psychometric properties of the questionnaire Nonprobability limited sampling in one geographical location
Chi-square, t test, Mann-Whitney U test	Hospital staff did not have more negative attitudes to people with learning disabilities than people with mental health. However, they were not willing to empower or encourage people with learning disabilities to self-advocate. They were not aware of service policies for people with learning disabilities. reported lack adequate training and experience to provide care to people with learning disabilities, hence were less confidence to assess and treat them.	Uses validated questionnaire to measure outcomes Appropriate statistical analysis chosen Use of randomisation	Low response rate and sample size Did not include sample characteristics Lack details on ethical issues and consideration
Chi-square, Mann-Whitney U test	Both the UK and Australian psychiatrists reported having more positive views about their specialist learning disabilities services with a higher percentage in the UK sample. The UK sample had better training, higher levels of knowledge and reported more confidence to work with people with learning disabilities than the Australian psychiatrists.	Clear objectives of the research study Comparison between professionals in different countries Adequate background information about the differences in the service delivery between the countries	Lacks information about the sample characteristics (e.g. years of working experience, gender, age) Different response rates between the two groups with one group that may affect validity of the results Lacked validated measures to explore attitudes and perception

(Continues)

TABLE 2 (Continued)

No	Author (Year) and Country	Aims	Participants	Method of data collection
6	Rose et al. (2012) United Kingdom	To compare the attitudes and emotional experiences of specialist and mainstream health and social care professionals	42 mainstream service participants (10 men and 32 women with an average age of 43 years 8 months and worked for an average of 15 years in their chosen occupation), 21 of them were health and social care professionals 42 specialist service participants (14 men and 28 women with an average age of 41 years 5 months and worked for an average of 16 years in their chosen occupation), 24 of them were health and social care professionals	Participants responded to the Ten Minute Survey that contains an attitude scale and a measure of emotional experience They were also asked to rate their emotions working with different client types, those with learning disabilities and those with mental health problems
7	Ruedrich et al. (2008) United States	To compare the attitudes between psychiatry residents and those who have graduated regarding community living for people with learning disabilities	21 psychiatric resident graduates and 16 current residents	Participants completed Community Living Attitudes Scale, Mental Retardation version
8	Sajith et al. (2017) Singapore	To explore perceptions of care towards people with learning disabilities and mental health problems among trainee psychiatrists and generalist doctors as well as finding out their training needs and knowledge	28 nonspecialist doctors and 20 trainee psychiatrists (26 males and 22 females with an age range from 25 to 36 years)	Participants completed the questionnaire that assessed knowledge and perception of psychiatric care for people with learning disabilities, clinical experience and training in learning disabilities and mental health problems
9	Torr et al. (2008) Australia	To compare the perceptions of psychiatrists over a decade from 1994 to 2004	170 psychiatrists (69% were male)	Participants completed 50-item questionnaire and open-ended questions on their opinions of assessment and management, and role of psychiatry in learning disabilities. The results of this questionnaire were compared to the previous results in 1994

Method of Data Analysis	Key Findings	Strengths	Limitations
Nonparametric Mann-Whitney U test, t test, MANOVA, Pearson's coefficient	<p>Specialist staff had more positive attitudes and more contact with people with learning disabilities</p> <p>No significant differences in attitudes between mainstream and specialist staff</p> <p>Specialist staff had higher positive emotions when working with people with learning disabilities than mainstream staff</p> <p>Mainstream staff had higher positive emotions when working with people with mental health problems</p>	<p>Clear aims and hypotheses</p> <p>High response rate</p> <p>Appropriate use of analysis</p> <p>Identification of extraneous variable and taken into account during analysis</p> <p>Comparison between mainstream and specialist staff</p>	<p>Additional extraneous variables such as gender, years of experience are not identified and explored</p> <p>Small representation of professionals with different specialities</p>
t tests, ANOVAs	<p>No differences in the group mean scores between the two groups.</p> <p>Differences were found within the subscales of Empowerment, Sheltering and Exclusion</p> <p>Current residents were more likely to prefer people with learning disabilities to be sheltered and excluded while psychiatric graduates were more likely to more likely to favour empowerment in people with learning disabilities</p>	<p>Use of standardised instrument</p> <p>Provide information about nonrespondent</p>	<p>Lacks clear aims</p> <p>Lacks description of analysis used</p> <p>Small sample size</p> <p>Respondents' biases as the length of training provided is minimal and participants' characteristics may explain the results</p>
Chi-square	<p>Nearly 90% of respondents agreed that specialist team should manage people with learning disabilities, an overuse of medication and restraints to manage behaviours. Most agreed that postgraduate training was required and current training was inadequate. Majority agreed that people with learning disabilities were vulnerable to exploitation when accessing mainstream mental health services.</p> <p>Majority were willing to see people with learning disabilities and agreed that people with learning disabilities should have the same level of care as general population</p>	<p>Adequate response rate</p> <p>Clear aims</p> <p>Detailed literature background</p>	<p>Lacks consideration of extraneous variables</p> <p>Lacks generalisability</p> <p>Lacked validated measures to explore attitudes and perception</p> <p>Unclear on the internal consistency of the questionnaire</p>
t test	<p>Participants agreed people with learning disabilities were vulnerable to exploitation staying in acute wards. They indicated that they were better trained to assess and treat mental health problems of people with learning disabilities compared to ten years ago.</p> <p>Participants were supportive of additional training to become specialised in learning disabilities, dissatisfaction with mainstream mental health model</p>	<p>Clear objectives in focusing the trend of attitudes over a 10-year period</p>	<p>Low response rate</p> <p>Lacks generalisability</p> <p>Lacks appropriate statistical analysis to note significant trends</p>

(Continues)

TABLE 2 (Continued)

No	Author (Year) and Country	Aims	Participants	Method of data collection
10	Werner and Araten-Bergman (2017) Israel	To examine differences in attitudes by social workers towards people with learning disabilities, mental health problems and those with learning disabilities and mental health problems	279 social workers (219 females and 60 males with an average age of 34.5 and worked for an average of 9 years) – Same sample as in study 1	Participants read a vignette that is similar in study 1, answered an adapted version of the Attribution Questionnaire 27 (AQ-27)
11	Werner et al. (2013) Israel	To explore how psychiatrists evaluate their training, knowledge and skills working with people with learning disabilities and mental health problems. To examine the availability of educational resources in their workplaces	256 psychiatrists (53.6% males and 46.4% females with an average age of 47.9 and worked average of 14.1 years)	Participants were asked to report any previous training and experience working with people with dual diagnosis, after which they were given two clinical vignettes and asked to provide likely causes for the patient's problems
12	Werner et al. (2013) Israel	To examine the opinions about their training, their knowledge in the mental health needs of people with learning disabilities, skills and attitudes among psychiatrists with differing levels of experience	256 psychiatrists (53.6% males and 46.4% females with an average age of 47.9 and worked average of 14.1 years) – Same sample as in Study 11	Participants filled in a questionnaire that asked them to rate their subjective knowledge and attitudes. They were also asked to read two vignettes, which are similar in study 11, and answer questions that assessed their objective knowledge
13	Weise and Trollor (2017) Australia	To investigate the attitudes, confidence and training needs for mainstream health and social care professionals	566 mainstream health and social care professionals comprised of different professional background (164 males and 401 females). 290 of them had more than 10 years of training.	Participants were asked to complete an online questionnaire. The questionnaire consisted of demographics and workplace details; attitudes towards providing services to people with learning disabilities; their level of confidence working with this population and their training and/or professional development needs

Method of Data Analysis	Key Findings	Strengths	Limitations
ANOVA, t test, Pearson's coefficient	<p>Majority of the participants reported pity, fear and anger as negative emotional responses. People with mental health problems and people with learning disabilities and mental health problems were perceived more dangerous than people with learning disabilities. Social workers reported less fear towards people with learning disabilities than the other two groups. They agreed on using more coercive and segregating behaviours towards individuals with mental health problems and those with learning disabilities and mental health problems DD. Social workers preferred segregation, coercion and avoidance when they perceived danger. felt fear and anger</p>	<p>Clear aims Findings are presented in a clear manner Clear focus on exploring attitudes and perceptions of health and social care professionals</p>	<p>Convenience sampling Lacks details of the participants' characteristics in the results The use of vignettes may not accurately capture the working experiences of healthcare professional working with someone with learning disabilities and mental health</p>
ANOVA, regression analysis	<p>Majority did not have adequate training to assess and treat mental health problems of people with learning disabilities, agreed on the need to improve training due to poor knowledge and skills. Older male psychiatrists were previous training and exposure had higher levels of knowledge similar to those working in specialist service.</p> <p>Low available of educational resources on the topic related to people with learning disabilities include journal clubs and research</p>	<p>Clear description of methodology Detailed information about sample characteristics</p>	<p>Response biases Nonrandom sampling Lacks the use of validated questionnaire</p>
Chi-square	<p>Most lacked knowledge to identify the mental health needs in people with learning disabilities, perceive a lack of adequate training.</p> <p>Majority agreed that people with learning disabilities and mental health problems have poor standard of treatment, need to have specialist services</p> <p>Majority expressed that people with learning disabilities can benefit from medication and counselling but not willing to treat them</p>	<p>Clear and detailed findings Details of recruitment strategy Relevant literature to support the study</p>	<p>Nonrandom sampling Low response rate Response biases, such as the possibility of social desirability Lack clear hypotheses and aims</p>
Descriptive analysis	<p>Almost all the health and social care professionals had professional contact with people with learning disabilities and mental health problems and agreed that they should have equal access to mainstream services. However, they perceived that the mental health needs of people with learning disabilities were not adequately met in the service.</p> <p>More than half of the professionals rated less confidence to detect mental health problems and understand the effects of psychotropic medication on people with learning disabilities and mental health problems</p> <p>Majority of them reported receiving training but found it insufficient when working with people with learning disabilities and mental health problems</p>	<p>Use of measures with strong internal consistency Responses from a diverse range of health and social care professionals Summary of key findings included in a table</p>	<p>Use of descriptive statistics Low response rate Results may be positively skewed Lack clear hypotheses</p>

et al. (2013) indicated a moderate internal consistency of 0.59 for this subscale.

Studies 4 and 7 used the Community Living Attitudes Scale (CLAS; Henry et al., 1996) to measure participants' attitudes towards empowering and integrating people with learning disabilities and mental health problems into the community. There was no information about its internal consistency in the studies, but Henry et al. (1996) reported stable internal consistency of above 0.7 and good construct validity. Study 4 additionally used a self-designed questionnaire to measure participants' views of self-efficacy towards people with learning disabilities. No further information of the self-designed questionnaire was provided other than high internal consistency of 0.94.

Study 3 used a modified version of the Illness Perception Questionnaire–Schizophrenia Carers Version (Barrowclough et al., 2001). The questionnaire underwent a few iterations, and the final version achieved an internal consistency ranging from 0.496 to 0.862.

Study 6 used a self-designed questionnaire called the “Ten Minute Survey,” which adapted the attitude scale developed by Hardy (2006) and included the Emotion scale developed by Gill et al. (2002). Internal consistency of this new survey demonstrated good internal consistency of 0.824. Study 13 used the questionnaire from study 6 and an unpublished questionnaire that was previously piloted. No information about the questionnaire was provided other than high internal consistency of 0.92.

Five studies (studies 2, 5, 8, 9 and 12) used a modified version of questionnaire from previous research (Lennox & Chaplin, 1995, 1996). The authors in studies 2, 5, 8 and 9 did not provide information regarding the changes made to the questionnaire and its internal consistency. The authors in study 12 designed a new questionnaire including 14 items on the role of psychiatry in learning disabilities from Lennox and Chaplin (1995), four items from the Psychiatric Disability Attribution Questionnaire (Corrigan et al., 2001) that measures the attitudes towards people with learning disabilities and mental health problems and six new items to measure specific attitudes relevant to psychiatrists. The questionnaire indicated a good internal consistency of 0.73.

3.3 | Quality assessment tool

The final 13 studies that met the inclusion criteria were evaluated and critically appraised using a quality assessment tool developed by Sale and Brazil (2004) that focused on evaluating the internal and external validity of the quantitative studies to determine their quality. Table 3 shows the ratings for each study.

Two of the studies (studies 1 and 6) attained the highest quality standard. These two studies stood out for taking into account the extraneous variables and controlled for them during analysis. The authors of these studies defined the outcome measures used to investigate the attitudes of health and social care professionals and chose appropriate statistical tests. In addition, they provided a

clear description of hypotheses and described the data procedures clearly.

Ten of the studies (studies 3, 4, 5, 7, 8, 9, 10, 11, 12 and 13) attained moderate-quality standard. There were some weaknesses in these studies, such as not including clear descriptions of hypotheses, lack of clear objectives, failure to describe the outcome measures and lack of clarity of the research purpose. They did not identify and take into account some extraneous variables such as age, gender, amount of contact and training. Overall, these studies provided sound descriptions of the methodology and data procedures, and the statistical tools used for analysis.

Study 2 attained a poor-quality standard. The study failed to describe ethical issues, lacked clear hypotheses and did not state the research purpose. There was no clear description of the statistical procedures used.

3.4 | Studies examining training, knowledge and competency

Health and social care professionals in the research studies perceived a lack of adequate training in and knowledge of the mental health needs of people with learning disabilities.

In studies 2 and 5, Australian psychiatrists continued to report a lack of adequate training, insufficient knowledge and confidence to meet the mental health needs of people with learning disabilities. Additionally, they expressed a reluctance to work with this client population.

Inpatient staff in study 4 reported low levels of self-efficacy with regard to working with people with learning disabilities and mental health problems. They reported that they did not receive adequate training and experience to work with this group, and as such felt less confident to provide treatment and communicate with this client population. Because of their lack of training and experience, they perceived that they were inadequately equipped to support people with learning disabilities, to make decisions about their care and help them express their views regarding their treatment and care plans. This was similarly reported in study 13 in which majority of the health and social care professionals reported they received inadequate professional training, and lacked the knowledge to manage the mental health problems of people with learning disabilities after they graduated from their undergraduate course. The findings in study 11 found that psychiatrists who were older, spent more time working with people with learning disabilities and had previous training in the field of learning disability and mental health perceived themselves as having more knowledge and skills. The actual level of knowledge among psychiatrists was assessed to be low in this study, and the psychiatrists reported a lack of educational resources in their place of work, hence finding it difficult to improve their knowledge and skills. The psychiatrists in study 12 preferred not to treat people with learning disabilities due to their lack of training and poor knowledge.

The participants (including psychiatrists, psychiatric residents and newly graduated doctors) in studies 2, 5, 8, 9, 11 and 12 agreed

on the need for further training before they could become confident in addressing the mental health needs in people with learning disabilities. Psychiatrists in studies 2 and 9 indicated that training in the field of learning disabilities should be offered to all mainstream staff. The authors of studies 8, 9 and 12 emphasised the need for training in learning disabilities for mainstream staff because they were likely to come into contact with people with learning disabilities when they accessed mainstream mental health services. However, half of the trainee psychiatrists in study 8 reported that specialist learning disability training should be limited to health and social care professionals working in specialist learning disability settings. Participants in all these studies provided suggestions for delivering postgraduate training on the mental health needs including assessment and treatment of people with learning disabilities and having educational resources dedicated to this field, attending seminars or journal clubs and conducting research projects. The participants were generally positive towards attending such training to improve their competency and knowledge in this field.

3.5 | Studies examining attitudes and the perception of people with learning disabilities

The medical staff in studies 8 and 9 suggested that people with learning disabilities and mental health problems need to be segregated when accessing mainstream mental health services as they perceived this group as vulnerable and easily exploited by other patients in acute general wards.

Study 6 found that specialist staff had more contact with people with learning disabilities and more positive attitudes than mainstream staff. However, no significant difference in attitudes between these two groups was found after taking into account the presence of extraneous variables such as training and professional contact.

Social workers in study 10 were found to have stigmatising attitudes towards people with learning disabilities and mental health problems and other people with mental health problems. The findings indicated that social workers viewed these two groups of clients as more dangerous and thus required segregation in comparison with people with learning disabilities with no mental health problems. There were no differences in perception of dangerousness between people with learning disabilities and mental health problems and those with mental health problems (no learning disabilities). Additionally, they considered that people with learning disabilities and mental health problems lacked control over their challenging behaviours. These findings of study 1 indicated that social workers were likely to attribute challenging behaviours of people with learning disabilities to biological and internal causes (such as a chemical imbalance of the brain, lack of willpower and bad character); hence, they did not consider people with learning disabilities and mental health problems to be responsible for their challenging behaviours and more likely to recommend segregation for people with learning disabilities and mental health problems.

The learning disability staff in study 3 perceived people with learning disabilities as less likely to recover from their mental health problems despite receiving treatment and predicted that the mental health problems of people with learning disabilities would significantly impact negatively the lives and well-being of their carers. Inpatient staff in study 4 were less willing to empower people with learning disabilities and mental health problems as compared to those with mental health problems (no learning disabilities). Findings of study 7 indicated differences in attitudes concerning empowerment and sheltering among medical staff with and without additional training whereby those with postgraduate training (i.e. exposure and knowledge in the field of learning disabilities) were more supportive of empowering people with learning disabilities to make decisions regarding their treatment and life choices such as getting married than staff without such training. Medical staff without additional postgraduate learning disability training held the view that people with learning disabilities should live in sheltered facilities as they were unable to deal with challenges faced in the community.

3.6 | Studies examining emotional reactions of health and social care professionals

Study 6 found that health and social care professionals providing mainstream mental health services (i.e. psychiatrists, nurses, psychologists and occupational therapists) reported more negative emotions towards people with learning disabilities and mental health problems than those providing specialist learning disability services. The authors of the study argued that increased interactions and contact with people with learning disabilities and mental health problems contributed to more positive emotions among specialist staff than mainstream mental health staff.

The findings in studies 1 and 10 indicate that social workers reported a mixture of pity, fear and anger towards people with learning disabilities and mental health problems. Social workers in study 10 who perceived people with learning disabilities and mental health as dangerous were more likely to express fear and avoid interacting with them. However, the findings in study 1 indicated that fear and anger did not predict an inclination to discriminatory behaviours or coercion. Social workers in study 1 were more likely to express pity when they attributed the challenging behaviours of people with learning disabilities to biological causes and were more inclined to help them as compared to those who attributed to internal reasons such as negative characteristics or character traits.

3.7 | Impact of attitudes and perceptions on service delivery

3.7.1 | Use of medication and restraints

An over-reliance on the use of antipsychotic medication in mainstream mental health services among psychiatrists had been noted

TABLE 3 Quality assessment of quantitative studies

STUDY NO			1	2	3
Area of critical appraisal	Criteria		Araten-Bergman and Werner (2017)	Edwards et al. (2007)	McCorkindale et al. (2017)
Truth value (Internal validity)	Extraneous variable	Identification of extraneous variables	✓	X	X
		Extraneous variables controlled for in analysis	✓	X	X
	Ethical issues	Informed consent stated	✓	X	✓
		Ethical review undertaken	✓	X	✓
Applicability (External validity/Generalisability)	Rationale	Statement of the research purpose	✓	X	✓
		Objective or aims explicitly described	✓	X	✓
		Outcome measure(s) defined or described	✓	X	✓
	Design	Description of the setting under which data collected	✓	✓	✓
		Design stated explicitly	✓	✓	✓
	Research sample	Description of sampling selection	✓	✓	✓
		Inclusion and exclusion criteria of participants defined	X	X	✓
		Study population defined	✓	✓	✓
		Source of participants stated	✓	✓	✓
	Missing data	Statement about nonrespondents	X	✓	X
		Missing data addressed	X	X	X
		Power calculation to assess adequacy of sample size	X	X	X
	Statistical analysis	Statistical procedures described	✓	X	✓
		<i>p</i> values stated	✓	X	✓
		Confidence intervals given for main results	X	X	X
		Data collecting procedures described	✓	✓	✓
		At least one hypothesis stated	✓	X	X
	Rating		High	Poor	Moderate

(studies 2, 5 and 12), which the authors suggested was due to the mental health needs of people with learning disabilities being attributed to biological causes without considering social or environmental factors. Trainee psychiatrists and nonspecialist medical staff in study 8 similarly reported an overuse of medication and restraints employed to manage challenging behaviours of people with learning disabilities in hospital settings. Health and social care professionals lacked confidence to work with this group because of the lack of knowledge regarding the potential adverse effects of psychotropic medication. Social workers in study 1 agreed that people with learning disabilities and mental health problems need to comply with medical treatment and lack competency in making medical decisions. Hence, social workers preferred to act on behalf of people with learning disabilities when it came to medical treatment and saw little need to involve and discuss treatment with them, perceiving that it was in their best interests to comply with medical treatment to manage their challenging behaviours.

3.7.2 | Development of specialist services

The psychiatrists in five studies reported that mainstream services were inadequate and ill-equipped to meet the mental health needs

of people with learning disabilities due to inadequate knowledge and low competence to provide psychiatric care (studies 2, 5, 8, 9 and 12). The authors of the studies recommended the development of specialist mental health learning disability services that offer separate psychiatric services to people with learning disabilities tailored to their unique mental health needs. Psychiatrists in studies 9 and 12 suggested establishing such specialist services within mainstream mental health settings. On the other hand, the health and social care professionals in study 13 felt that people with learning disabilities should have the same access to mainstream services as the general population instead of a separate service; however, they also felt that people with learning disabilities would receive poor-quality service because their mental health needs would not be adequately met given the limited resources.

Additionally, the psychiatrists in study 2 considered more training resources would be available in the specialist mental health learning disability services and that increased exposure to people with learning disabilities would improve health and social care professionals' attitudes. Indeed, study 11 found that psychiatrists working in specialist services had more access to educational resources dedicated to the knowledge of mental health problems of people with learning disabilities as compared to those working in mainstream mental health services. The authors in study 6 argued

4	5	6	7	8	9	10	11	12	13
Mesa and Tsakanikos (2014)	Jess et al. (2008)	Rose et al. (2012)	Ruedrich et al. (2008)	Sajith et al. (2017)	Torr et al. (2008)	Werner and Araten-Bergman (2017)	Werner, Levav, et al. (2013)	Werner, Stawski, et al. (2013)	Weise and Troller (2017)
X	X	✓	X	X	X	X	X	X	X
X	X	✓	X	X	X	X	X	X	X
X	✓	✓	✓	✓	✓	✓	✓	✓	✓
X	✓	✓	✓	✓	✓	✓	✓	✓	✓
X	✓	✓	X	X	X	✓	✓	✓	✓
✓	✓	✓	X	✓	✓	✓	✓	✓	✓
✓	X	✓	✓	X	X	✓	✓	✓	X
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
X	✓	✓	X	✓	✓	✓	✓	✓	✓
X	X	✓	X	X	X	X	X	X	X
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
X	X	X	✓	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	X	✓	✓	✓	✓	X
X	X	X	X	X	X	X	X	X	X
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	X	X	✓	✓	X	X	X
Moderate	Moderate	High	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate

that factors, such as the nature of contact and organisational work culture, could have an impact on the formation of positive attitudes and service delivery. Health and social care professionals in study 13 prioritised high importance to attend further training, for example face-to-face training seminars and workshops, and believed that their management would be supportive towards their professional development in this area.

4 | DISCUSSION

This paper examined the attitudes and perceptions of health and social care professionals working with people with learning disabilities and mental health problems, and how these attitudes and perceptions may impact or affect the mental health service provision to this client population. Of all the thirteen papers that were included, this review rated two papers to be of good quality (gold standard), ten papers to be of acceptable quality (silver standard) and one paper to be of poor quality (bronze standard). Four studies used standardised measures, seven adapted existing questionnaires, while two studies developed new questionnaires to address the aims of their research questions. The standardised measures had good internal consistency, and the authors provided information about the

internal consistency when they developed new or adapted existing questionnaires. However, there was a lack of information about the newly developed questionnaires and it is not known whether these questionnaires can be suitably standardised.

All the studies, except two (study 2 and 13), used inferential statistics to analyse the results. Most of the papers encountered issues with internal validity, such as not identifying and controlling for extraneous variables (e.g. gender, age, level of experience or work environment). This suggests that the findings of the review need to be interpreted with caution and no casual references can be drawn to explain the health and social care professionals' attitudes and perceptions towards people with learning disabilities and mental health problems. Despite this, the findings across the papers show consistency and are in line with other review findings (Pelleboer-Gunnink et al., 2017; Werner & Stawski, 2012).

Most of the findings identified that health and social care professionals had limited knowledge in the field of learning disability and a lack of training to understand the mental health needs of people with learning disabilities. In addition, they noted a lack of available resources in mainstream work settings for health and social care professionals to improve their knowledge and skills. Negative attitudes and perceptions towards this client population influenced health and social care professionals' willingness to treat them in mainstream

mental health service and many advocated specialist mental health services to provide care and management.

The findings of this review indicate that knowledge and competence of health and social care professionals need to be improved through exposure and contact with people with learning disabilities in addition to specialist learning disability training. Support from management is needed to provide educational resources and training opportunities, such as allowing health and social care professionals to attend professional courses dedicated to the field of learning disability and mental health. Costello et al. (2007) found that additional training may improve attitudes towards people with learning disabilities and an increased awareness of their mental health problems. The results in study 6 are an exception that found the amount of training and frequency of contact did not account for significant differences in attitudes between mainstream and specialist staff, which could suggest that external factors such as the nature of contact are also important in the formation of positive attitudes. However, the findings of that study were that the amount of training has a significant impact on the positive attitudes in both mainstream and specialist staff. Research has shown that regular quality contact with individuals with learning disabilities can lead to more positive feelings and reduced levels of prejudice and may subsequently lead to more positive attitudes (Keith et al., 2015; Manetti et al., 2001; McManus et al., 2011).

People with learning disabilities will inevitably continue to access mainstream services for their mental health problems. They are found to disproportionately access emergency hospital services and are thus rarely seen by a psychiatrist with specialist training and knowledge in the field of learning disability to manage their mental health crisis (Lunsky et al., 2011). Health and social care professionals in mainstream services are inclined to focus on the severity of the cognitive impairment rather than the severity of the mental health symptoms; hence, symptoms of people with mild learning disabilities or borderline level of cognitive functioning may be ignored or undetected, denying them the appropriate help that they require (Spassiani et al., 2017; Tint & Lunsky, 2015). Thus, poor screening and assessment by mainstream staff pose an additional barrier and delay for this population to access appropriate services (Standen et al., 2017; Whittle et al., 2018).

Many health and social care professionals in this review expressed the view that specialist mental health learning disability services are better equipped to meet the mental health needs of people with learning disabilities, some authors have argued that having such specialist services may not be feasible due to the increased costs in providing such resources and limited opportunities for health and social care professionals to receive training in working with this client group (Leyin, 2011; Scior & Grierson, 2004; Standen et al., 2017). The issue of training costs and opportunities to work with people with learning disabilities are not adequately addressed in the studies reviewed here. Bhaumik et al. (2008) found that only a small number of people with learning disabilities accessed specialist mental health learning disability services due to poor collaboration with mainstream service providers as they were not aware of such

services. As such, the costs of establishing a specialist mental health learning disability service with additional training for staff may outweigh its benefits when there is a low utilisation rate, and hence, the feasibility of such service needs to be explored in future research.

This review also found that some health and social care professionals viewed people with learning disabilities and mental health problems as being vulnerable to exploitation and thus considered segregation from other patients necessary. They were not inclined to involve them in decision-making related to their own mental health condition, and many viewed people with learning disabilities and mental health problems as dangerous. However, whether this was due to mental health problems or their learning disabilities (or a combination of both) is not clear as the similar views towards people with mental health problems (without learning disabilities) were recorded.

The participants included in this review saw little need to empower people with learning disabilities to understand more about their conditions and treatment from mental health or general health-care services. Hall and Deb (2008) found that people with learning disabilities lacked knowledge of their medication and were not informed by health and social care professionals why the medications were prescribed. This may reflect the findings above; that is, many health and social care professionals view people with learning disabilities to lack competency to understand their mental health conditions and as such are unwilling to empower them or consult them during the treatment process.

Moreover, health and social care professionals included in this review acknowledged over-reliance on psychotropic medication and did not know how to address this issue. Findings from a prevalence study revealed that 70.57% of people with learning disabilities were prescribed psychotropic medication when they accessed mental health service (Bowring et al., 2017). An initiative in the UK called stopping over-medication of people with learning disability, autism or both (STOMP) addresses the concerns regarding the use of psychotropic medication in people with learning disabilities and provides guidelines for medical professionals on the appropriate use of psychotropic medication in people with learning disabilities (National Health Service England, 2016). There are also public campaigns to educate different stakeholders (including people with learning disabilities and their carers) on how they can work with medical professionals to ensure that the use of psychotropic medication remains minimal (Branford et al., 2019).

4.1 | Limitations

The studies reviewed here used correlational research designs and thus are unable to establish causal relationships between factors; hence, it is not possible to ascertain whether lack of knowledge and experience are causal factors that contribute to negative attitudes in health and social care professionals. Similarly, the findings are unable to confirm that having additional training will lead to an improvement in the attitudes.

The differences in the perception and attitudes towards people with learning disabilities may be attributed to the sample of health and social care professionals working in different work environments, such as hospital and community settings where there could be varying levels of organisational support, and this is not investigated in detail. The studies selected in this review lack a standardised way of measuring attitudes and perceptions. Studies employed a variety of standardised questionnaires based on different theoretical models of attitudes, perceptions and attributions. For example, the contact theory is used to explain how attitudes can be improved with more frequent contact, while the attribution theory is used to explain how lack of knowledge and understanding can contribute to negative attributions about the mental health problems of people with learning disabilities. The use of researcher-developed, nonstandardised questionnaires means that there is no standard way of measuring attitudes. This makes it difficult to compare findings across different attitudinal studies and determine the significance of the differences in perception and attitudes between professionals in different work environments.

Lastly, most studies were carried out mainly in Western countries where the cultures and clinical practices may be different from other parts of the world. The one Asian study included in this review may not be representative, and further studies are needed to explore the attitudes of health and social care professionals in Asian countries.

4.2 | Clinical implications

The findings of the review indicate that more needs to be done to improve the competency, skills and knowledge of health and social care professionals when working with people with learning disabilities. Some health and social care professionals preferred specialist mental health learning disability services to cater for the specific needs of people with learning disabilities. However, in current clinical practices, accessibility to these services may be an issue given a lack of awareness among mainstream staff regarding how to refer to these specialist services. Thus, there is a need to identify a referral pathway for people with learning disabilities to access specialist mental health learning disability services. The role of specialist mental health service can be additionally expanded to support mainstream staff when they encounter people with learning disabilities in general healthcare services. Specialist mental health services could be established in community settings to support mainstream mental health services where health and social care professionals can collaborate with carers to provide training and resources to reduce inpatient hospital admission rates in people with learning disabilities. This would improve the accessibility and utilisation of specialist mental health services as people with learning disabilities may access them nearer their homes.

Mainstream medical staff should have some exposure to working in specialist mental health learning disability services to gain clinical experience of this client group. Having some experience working

in a specialist mental health learning disability setting would encourage them to consider whether they wish to specialise in this subspeciality and thus potentially improve recruitment in an under-staffed clinical area.

It is important that organisations identify factors that promote a safe environment for people with learning disabilities when they receive mental health services in mainstream settings. Lack of knowledge about the mental health problems in people with learning disabilities, negative reactions (i.e. fear, lack of confidence) and stigmatising attitudes among health and social care professionals may impact on the quality of services and rapport during the treatment process (Donner et al., 2010). There has been a push towards making reasonable adjustments in mainstream mental health services to improve accessibility for people with learning disabilities, and some health and care professional participants in the current review argued for this approach. However, there is also an indication that mainstream services may not be ready because of negative reactions from staff, limited resources within the mainstream setting and inadequate skills to identify and treat mental health problems, at times resulting in restraints and excessive use of medication.

Additional factors such as organisational work culture (Humphreys et al., 2020) can contribute to the development of positive or negative attitudes towards people with learning disabilities and mental health problems, which may impact on the quality of services and safety of people with learning disabilities. Organisations should focus on improving the attitudes of their staff by training opportunities, which can lead to an improvement in knowledge and competency. Other factors to consider include hiring more staff, allowing more time during consultations with people with learning disabilities. Other less formal learning opportunities, such as supervision, journal clubs and case discussion, may also upgrade their skills and knowledge.

CONFLICT OF INTEREST

There are no known conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author, [JE], upon reasonable request.

ORCID

Jonathan Ee  <https://orcid.org/0000-0002-8965-8639>

John Rose  <https://orcid.org/0000-0003-2672-9767>

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How to cite this article: Ee, J., Stenfert Kroese, B., & Rose, J. (2021). A systematic review of the knowledge, attitudes and perceptions of health and social care professionals towards people with learning disabilities and mental health problems. *British Journal of Learning Disabilities*, 00, 1–17. <https://doi.org/10.1111/bld.12401>