

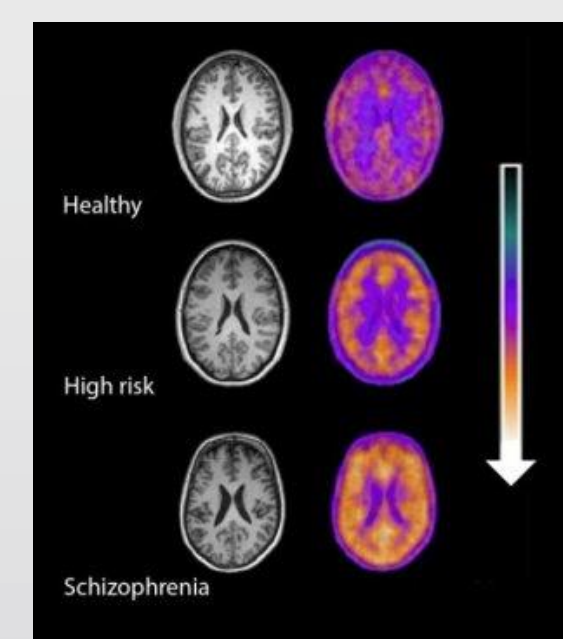
The chicken and the egg: whether interventions to alleviate financial stress affect the experience of schizophrenia or whether addressing the mental illness improves the financial situation.

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Abstract

Background: Schizophrenia is a mental disorder characterized by disorganized and delusional thinking, faulty perceptions and inappropriate emotions and actions. Persons with schizophrenia are often of a lower socioeconomic status due to a variety of factors including higher rates of unemployment. **Objective:** Through a structured review of the literature, this review aimed to differentiate whether interventions to alleviate financial stress affect the experience of schizophrenia or whether addressing the mental illness improves the financial situation. **Methods:** The review used a series of keywords to find articles from the past decade pertaining to the research question. Medline and the University of Ottawa general library search engine were used to find articles in English. Grey literature was also included to broaden the scope of the review. **Results:** Studies showed mixed findings. The review revealed that persons with schizophrenia who were employed had lower levels of relapse and outpatient psychiatric treatment. Findings also suggest that employment does not worsen outcomes for persons with schizophrenia. Employment status may also be associated with improved well-being, satisfaction in life, and a better prognosis. On the other hand, research suggests that employment outcomes were enhanced due to active cognitive improvements. **Conclusion:** From a sociological perspective, community health professionals can consider implementing employment programs targeting persons with schizophrenia in order to help manage their illness and integrate into society. The findings of this review can be used for policy amendments to address potential outcomes for persons with schizophrenia in terms of their employment status.



Picture 1. PET imaging in healthy volunteers, high-risk subjects and patients with schizophrenia shows a stepwise elevation in microglial activity (in orange) as the severity of the illness increases.¹

Introduction:

- The World Health Organization (WHO) estimates that 26 million people in the world have schizophrenia² and is one of the most burdensome illnesses worldwide.
- It causes a high degree of disability and it is the 8th leading cause of DALYs worldwide in the age range 15-44 years old.³
- Schizophrenia is a chronic mental health disorder that affects 300,000 Canadians.
- Psychosis, being a common symptom of schizophrenia, is when an individual loses sense of reality and experience hallucinations and delusions. Individuals with schizophrenia have difficulty organizing thoughts.
- Medication is recommended in the treatment, particularly for psychotic symptoms, but therapy is also important.⁴
- The cause of this disease is unknown, but epigenetic factors may be triggered by environmental stimuli.
- According to the WHO, "mental health conditions account for the highest rates of unemployment in the world," and 70-90% of people with schizophrenia are unemployed.²
- Two theories explaining the link between socioeconomic status and schizophrenia: social causation theory and social selection or social drift theory.
- Social causation theory proposes that the social environment, including poverty, triggers the onset of mental health disorders.
- Social selection or social drift theory, says that the presence of a mental disorder causes people's socioeconomic status to decrease.
- The purpose of this study is to determine what kind of intervention yields the best results for people with schizophrenia: interventions based on the social causation theory or interventions based on the social drift theory.^{5,6}

Methods

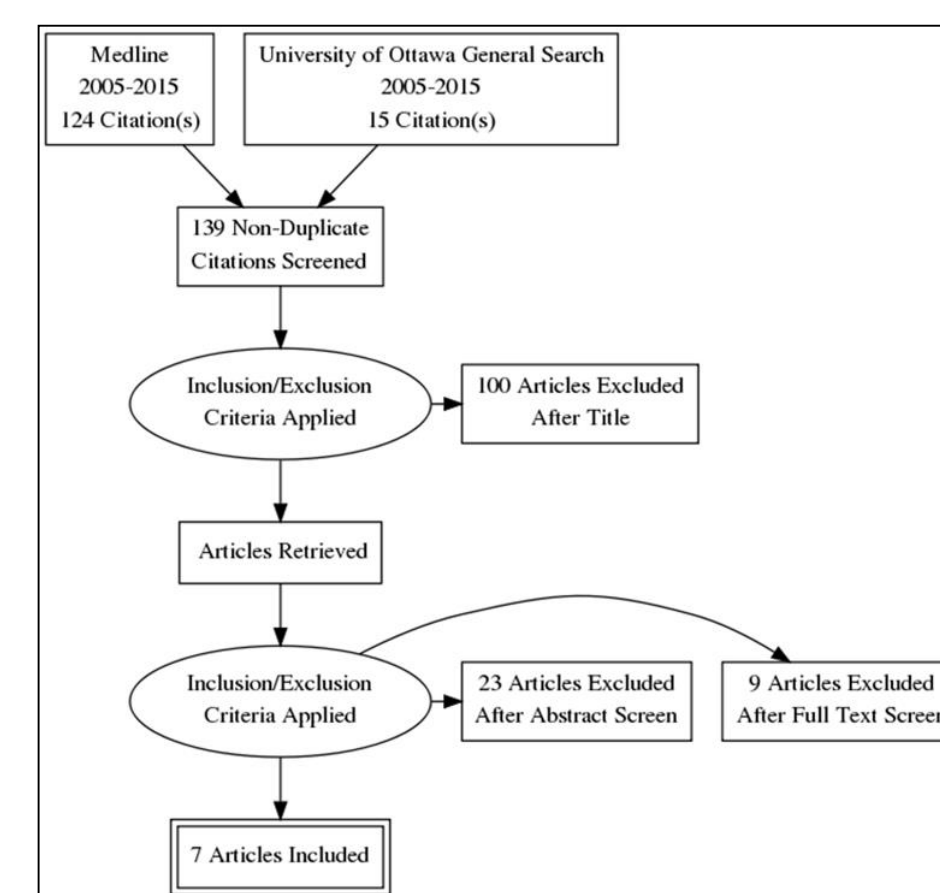


Figure 1. Flow chart diagram of phases of structured review.

We searched the MEDLINE and University of Ottawa General Search+ for journal articles published in 2005 and later. We chose to limit our search to literature published in the past ten years to refine our search and account for socioeconomic trends that are relevant to present day. In order to capture articles relating to schizophrenia, all types of schizophrenia were included. Terms used to capture socio-economic-related studies included:

"social class", "poverty", "employment", "unemployment", "income", and "socioeconomic factors". Reference sections of key articles were reviewed to find further literature to address the research question. Grey literature was attained by means of reviewing the reference sections of these key pieces of literature. If articles did not address both socioeconomic status and mental illness then they were excluded. Using the aforementioned search methods, we identified 7 articles (figure 1). Articles were excluded after either reading the title, abstract and/or full article. A 2 by 2 chart was created and agreement was calculated between the reviewers. Cohen's Kappa between the two reviewers was 0.68 meaning that there was substantial agreement. In the event of a disagreement on inclusion the two reviewers would discuss the article further to reach a consensus.

Results:

- A total of 7 studies were included in the final analysis.
- Socioeconomic status was defined as occupation, education, place of residence, income or by a combination of these variables.
- When looking at mental illness as a whole, it was found that mental health interventions relatively improved economic outcomes.
- When looking at just schizophrenia specifically, not all literature supports that theory and that providing employment and economic opportunities also improves the outcomes of schizophrenia.
- One study found that employment outcomes were enhanced due to active cognitive improvements.
- Must integrate neurocognition and social cognition into treatment
- Neurocognitive improvements include the physiological improvements in the brain as it pertains to mental illness. Attention, memory and problem solving abilities are enriched as a result of neurocognitive improvements.
- Social cognitive improvements explain how people process, store and apply information about other people and other situations. Perspective taking, social context appraisal, and recognizing emotional cues would improve as a result of the social cognitive therapy. Both areas of cognition contributed to improved employment.⁷
- In contrast, three other articles suggested that employment is associated with improved outcomes for persons with schizophrenia.
- The incidence rate of schizophrenia has remained constant as a result of many full time employment opportunities.
- More job opportunities leads to better outcomes.⁵
- No statistically significant relationship between employment and worsening outcomes.
- One study found that employment status was related to a reduction in outpatient psychiatric treatment in addition to improved self-esteem.⁸
- Employment status was also found to be a significant factor in the well-being of persons with schizophrenia and their prognosis.
- Greater risk of relapse for persons with schizophrenia if they are unemployed.⁹

Results

Article Authors	Suggests that financial interventions improve health outcomes of schizophrenia	Suggests that mental health interventions improve financial outcomes of persons with schizophrenia
Payne et al.	X	
Saraceno, Levav & Kohn	X	
Schmennach et al.	X	
Lund et al.		X
Bell et al.		X
Eack et al.		X
Nuechterlein et al.		X

Figure 2. Summary of results and supporting theories

Discussion

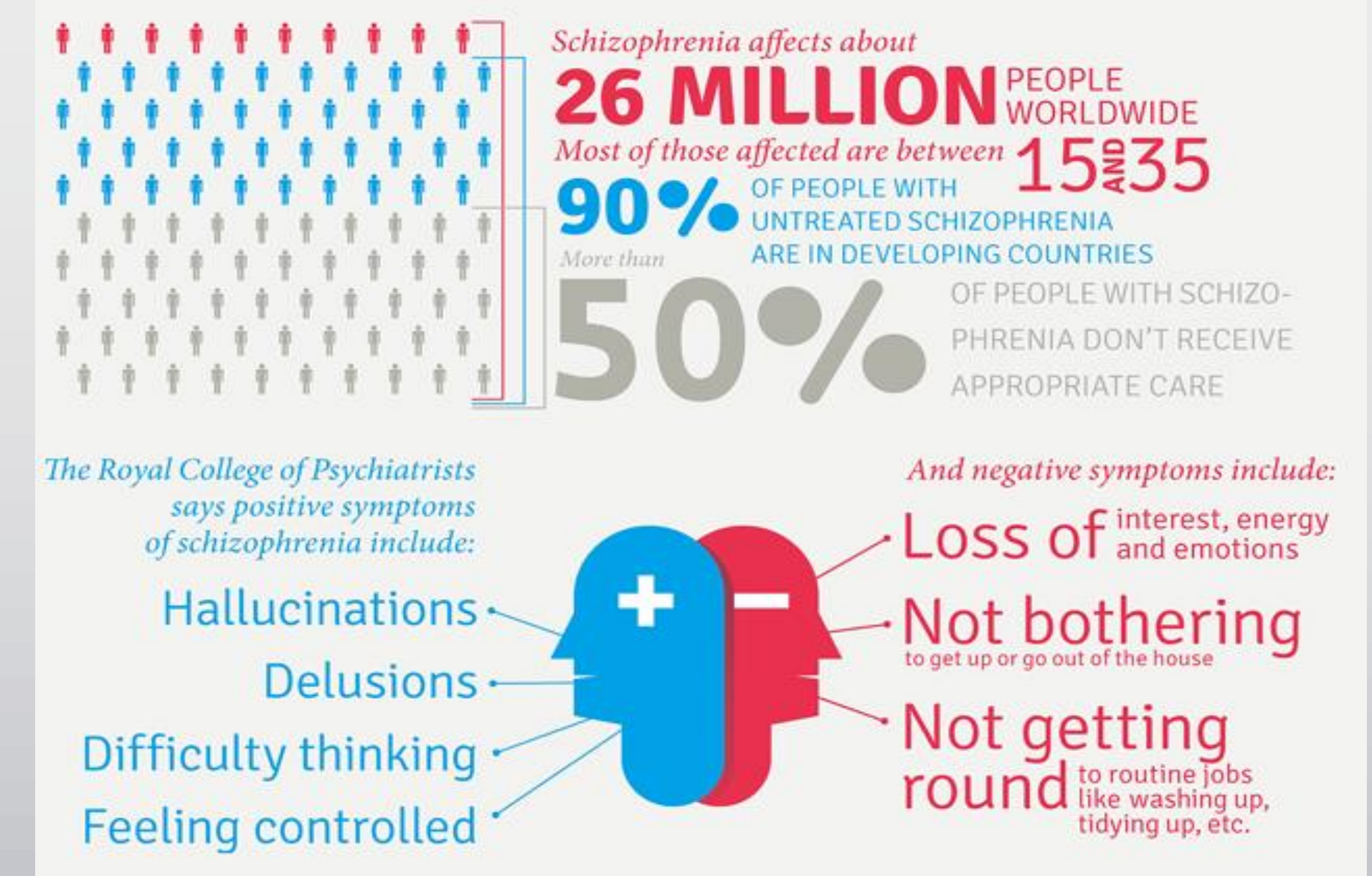
- Inconclusive findings about which program type yields better outcomes for individuals with schizophrenia: if the impact employment has on mental health is greater and more positive than the impact that programs on improving psychological health have on employment.
- None of the studies showed that there were negative outcomes for either program type. It is suggested that both psychological health and employment programs be used in unison.
- These types of programs better the economy
- Stigma around schizophrenia and Mental Health must be addressed
- Implementation of development goals would help educate and support the global community as a whole.
- Of all disabilities, those with mental health conditions have significantly lower employment rates.²
- Social grants are a type of grant distributed by the federal government and they have beneficial effects on the community. Social grants specifically target persons with disabilities by providing them with money to support themselves. However, when these grants are given, they're only available to those with physical disabilities. This puts persons with mental health conditions, especially schizophrenia, at a disadvantage if they are not able to find employment to support themselves.²
- Since results from this literature review were inconclusive, we suggest that more rigorous research be done.
- In future instances there should be a control group included to provide a baseline of comparison for improved outcomes.
- The three systematic reviews that supported the finding that employment improves the mental illness included studies of different research designs.
- One of the articles that found that employment improves the outcomes of schizophrenia used a longitudinal approach to monitor outcomes over the two year period. However, there wasn't a control group to compare and evaluate how significant the improvement could be attributed to the employment or other factors.¹⁰
- The three studies that concluded that employment outcomes were improved by treatment of schizophrenia were conducted using the Randomized Controlled Trials (RCTs).^{7,11,12}
- Systematic Reviews and RCTs hold high levels of rigor; therefore one type of study cannot hold more value than the other in answering the research question.
- It was surprising to see that some literature highlighted the importance of having the targets of both interventions combined, not separate.
- It is a reciprocal process whereby giving direct mental health treatment has a positive effect on employment status, and giving support in employment plays a contributing role in rehabilitation of these same patients.

Limitations

- Only two search engines were used to search for literature
- This may have led to inadvertent exclusion of relative studies.
- Although the University of Ottawa General Search+ searches many different academic search engines at once, there still remains a chance that some articles may have been excluded.
- Although group members can comprehend English and Spanish, only articles published in English were included in the review.
- Articles published before the year 2005 were excluded from the review in an effort to reflect current economic trends.
- This literature review only encapsulates person with schizophrenia who are diagnosed. Persons who have not been diagnosed with schizophrenia would not be included in any of the studies included in our literature review. Insight from these populations and what their employment experiences are would therefore be missing from these types of studies.

Conclusion

This literature review revealed that neither approach to schizophrenia and socioeconomic status is more effective. It is important that both the mental illness and employment are addressed in unison for optimal health outcomes. More research should be done to determine whether one method takes precedence over the other. Schizophrenia, being one of the world's most burdensome disabilities, is an important public health matter and economic development issue.



Picture 2. Global prevalence of schizophrenia and its symptoms.¹³

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