

# Unemployment, Social Networks, and Health Inequalities



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## Overview

- Unemployment leads to impairment of physical and mental health.
- There are two important theses on the role of social networks in this context:
  - Thesis 1: Unemployment changes social networks so that they no longer fulfill their positive function for health (mediator thesis).
  - Thesis 2: Unemployment leaves social networks unchanged and persons with resource-rich networks suffer less from health losses due to unemployment (moderator thesis).

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- There is little empirical evidence to support either of these theses.
- The few quantitative analyses measure networks only indirectly and are strongly limited in their informative value due to the lack of longitudinal data.
- Qualitative studies would benefit from a more systematic approach to network influences and thus make them accessible for quantitative analyses.

## 1 Introduction

The loss of employment is an event that interferes with the lives of everyone affected, causes stress (Pearlin, 1989), and can have a negative impact on their health. Meta-analyses show that unemployed people have a worse state of health and a mortality risk that is at least 1.6 times higher than those who are employed (Herbig et al., 2013; Norström et al., 2014; Roelfs et al., 2011). Unemployment is associated with a lower mental and physical health status and, in some cases, with riskier health behavior (particularly tobacco consumption) (Freyer-Adam et al., 2011; Khlat et al., 2004; Paul & Moser, 2009; McKee-Ryan et al., 2005).

Recent survey (Kroll et al., 2016) and health insurance data (Knieps & Pfaff, 2016) show that psychological problems (depression, anxiety disorders, etc.) are more frequent among the unemployed. They assess their state of health as significantly worse than employed persons, as they smoke more often and exercise less often. While some studies tend to point to higher alcohol consumption among the unemployed (Henkel, 2011), no significant differences can be found in this respect in other investigations: Unemployed women in Germany even consume alcohol less frequently to an extent that is harmful to their health (see also Eggs et al., 2014).

Unemployment also has a negative impact on the daily consumption of healthy food such as fresh fruit and vegetables and a hot meal. In international research, this is referred to as “food insecurity.” In the USA, for example, a study on the effects of the 2007–2009 recession showed that unemployment and food insecurity are strongly correlated (Huang et al., 2016). Evaluations made by the German Socio-Economic Panel (SOEP) show that the share of the household budget spent on food (19.2%) is significantly higher for unemployed people, but the absolute sum of €205 is considerably lower compared to working households (13.7% and 362€) (Pfeiffer et al., 2016).

A number of theoretical analyses assume that social networks play an important role in how unemployment affects health. Some literature assumes that unemployment has an impact on the network and that this change in the network, in turn, has an impact on health (mediation effect, see e.g., Jahoda, 1981; Warr, 1987). Another argument assumes that networks reduce the negative consequences of the stress caused by unemployment on health (moderator effect, see e.g., Cassel, 1976; Cobb, 1976; Atkinson et al., 1986).

This article provides an overview of empirical analyses on the topic of networks and unemployment.

Section 2 presents the state of research on unemployment and health. Section 3 deals with the concrete significance of social networks in relation to unemployment and health. Section 3.1 summarizes empirical research findings on the role of networks as mediators, and Sect. 3.2 summarizes research on the role of moderators. Section 4 concludes with a summary and evaluation of the state of research.

## 2 Unemployment and Health

Usually, the thesis that unemployment causes health problems (causation thesis) is contrasted with the thesis that those with poorer health are more likely to become unemployed. However, most of the literature follows the causation thesis and assumes that selection plays only a minor role (Kroll et al., 2016; Brand, 2015; Wanberg, 2012). This assumption is also supported by recent empirical evidence (Krug & Eberl, 2018).

In their meta-analysis, Paul and Moser (2009) report that most research on unemployment and health deals with the effects on mental or general health. Physical health plays a rather subordinate role here. This is still true even if one limits oneself to analyses with an explicitly causal-analytical design.

Cygan-Rehm et al. (2017) report negative effects on mental health among respondents in the U.S., Great Britain, Australia, and Germany. In addition, the results of Mandemakers and Monden (2013) also show that the negative effect on mental health depends on the level of education. At the same time, higher educated unemployed people suffer less from health problems because their prospects of re-employment are better. Although Mandemakers and Monden (2013) also report a negative health trend before unemployment, they do not interpret this as evidence of health selection, but rather as negative consequences of anticipating unemployment. Young (2012) also points to the negative effects on mental health in the U.S. These can be explained neither by the loss of income due to unemployment nor by the (non-) availability of health insurance. In addition, health status, as measured by a depression scale, does not return to the level before unemployment even after the return to work.

For Italy, Minelli et al. (2014) cannot find any causal unemployment effects referring to self-assessed health. With regard to Finland, Böckerman and Ilmakunnas (2009) also find no causal effects of unemployment on self-assessed health, but they show that people who become unemployed at some point already had a poor health status. They interpret this as evidence for the thesis of direct selection. In contrast, Tøge and Blekesaune (2015) report a strong negative causal effect of unemployment on self-assessed health in 28 EU countries, which increases with the duration of unemployment. As they find no negative health trends before entering unemployment, they dismiss the selection hypothesis. According to Pearlman (2015), unemployment as a result of firm closures has a negative impact on self-rated health, while

unemployment for other reasons does not affect health. Gebel and Voßemer (2014) find statistically negative effects on life satisfaction, but no effects on the health satisfaction of respondents in Germany. They interpret their results as evidence of the negative causal effects on mental rather than physical health. In contrast, Schmitz (2011) initially finds negative health effects of unemployment on health satisfaction, mental health, and hospital stays, but not for unemployed people who have lost their jobs due to a firm's closure. Since this particular group of unemployed people does not show any health effects, Schmitz sees a pure selection of employees who have fallen ill into unemployment but not the negative health effects of unemployment itself. Salm (2009) comes to similar conclusions for the USA. He finds no effects on the physical or mental health of workers that became unemployed due to plant closures and concludes that there are no causal effects of unemployment.

Based on Norwegian data, Black et al. (2012) identify unemployment effects on physical health, in this case, coronary diseases. Korpi (2001) analyses Swedish data and, using causal analysis, reports no effects of current unemployment on health, but notes negative effects related to the duration of past unemployment. In an additional analysis, which, in contrast, does not allow for the control of unobserved third variables, Korpi (2001) identifies a correlation between poor health and the increased risk of becoming unemployed. In doing so, he confirms both the causation and selection hypotheses.

Other work deals with health behavior, which can ultimately have an impact on physical health. Marcus (2014) finds significant positive effects of unemployment on cigarette consumption and body mass index in Germany. However, this is contradicted by the analyses of Schunck and Rogge (2012), who also examine the effects of unemployment on smoking behavior in Germany, but find no significant effect of the duration of unemployment.

Qualitative research focuses primarily on how those affected cope with being unemployed. Based on an identity-theoretical heuristic, Rogge (2013, p. 64) describes the effects of unemployment as an interplay of contextual and individual processes. He identifies five biographical modes of identity: "conversion of the self," "liberation of the self," "struggle for the self," "decay of the self," and "transformation of the self," whereby the psychological burden of unemployment varies with the respective mode. Decisive for the mode in which people experience unemployment are, not least reference persons in the social network of unemployed people. Rogge (2013, p. 272) describes a normative division of personal relationship networks by separating "into persons who (supposedly) stigmatize unemployment on the one hand, and persons who (supposedly) destigmatize it, normalize it, or represent alternative and solidary interpretations." This split not only results in the selection of relationship partners, but is also "highly relevant for the mental health of the unemployed" (Rogge, 2013, p. 272).

### 3 The Role of Networks in the Link Between Unemployment and Health

Most of the literature assumes that unemployment has a negative impact on health. In this context, networks can have two different roles, which are often not clearly separated in the literature. On the one hand, networks can represent one of the causal paths through which unemployment has a negative impact on health. Jahoda (1981), for example, cites a number of functions of gainful employment, and the loss of each leads to a loss of health. She identifies income as the manifest function of work and a number of latent functions: structuring the daily routine, participation in collective goals, activity, status, and identity, and social contacts. In this case, networks would help precipitate the health effects of unemployment. It is also said that networks mediate the relationship between unemployment and poor health and thus *act as a mediator* (see Fig. 1). If the networks are weakened, they can no longer fulfill their health-promoting function and this leads to poorer health among the unemployed.

Secondly, networks can help mitigate the negative effects of unemployment. This thesis of mitigating negative effects assumes, in contrast to the production thesis, that networks remain basically unchanged. It states that unemployed people with a resource-strong network are better able to compensate for negative effects such as loss of income or meaning. The network then provides social, material, emotional, or instrumental support to cope with unemployment. The thesis of mitigation is also often referred to as the *buffer or facilitator thesis* (see Fig. 1) (see also chapter “[Social Status, Social Relations, and Health](#)”).

In the following two sections, the literature on the respective theses is presented. It becomes clear that empirical research on health inequalities has so far rarely dealt with the testing of either thesis, even though they are prominently featured in the literature on unemployment and health.

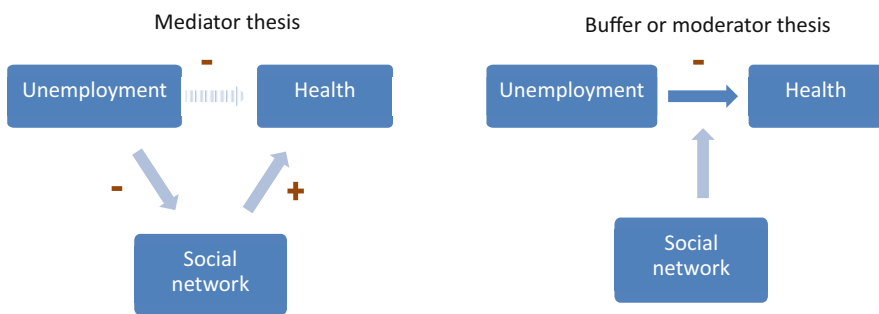


Fig. 1 Unemployment, networks, and health: Mediator and moderator theses. Source: The authors

### ***3.1 Mediator Thesis: Network Change as a Cause of Health Effects***

The mediator thesis assumes a causal chain in which in the first step unemployment has a negative impact on the existence and composition of the network. In a second step, the altered networks then have a negative effect on health. The mediator thesis is often referred to when explaining the negative health effects of unemployment by describing social contacts as one of the latent functions of work that are impaired by unemployment. Yet, very few studies can be found that subject the thesis to direct empirical testing.

Paul et al. (2009) conclude that the negative effect of unemployment on mental health can be fully explained by deprivation in terms of the latent functions of employment. However, the authors do not provide any analysis of the relevance of deprivation referring to the role of social relations. Janlert and Hammarström (2009) examine a number of theoretical concepts on the relationship between unemployment and health, including social support and network scope. They do not find significant effects for either of them. Similarly, Creed and Macintyre (2001) find no correlation of social contacts with mental health among the unemployed, but do find significant correlations of mental health with financial burdens (manifest function) and the latent functions of collective goals, time structure, and status. In a study by Krug and Eberl (2018), panel data analyses were conducted taking into account unobserved heterogeneity and potentially reversed causal directions. Neither the number of close friends (strong ties) nor membership in at least one association (weak ties) gave any indication of mediation effects, nor did household income. Instead, some of the negative health effects were mediated via the lower subjective social status of the unemployed. In addition, Krug and Prechsl (2020) present results for conflict within the household, general as well as job search specific social support, all of which did not explain the adverse effects of unemployment.

Only a few papers deal empirically with the complete causal chain between unemployment, networks, and health, which is assumed in the mediator thesis. However, many papers examine at least part of this process. Besides the relationship between networks and health, the influence of unemployment on social networks also plays a role. Thus, a number of analyses can be found in the literature that focus on the changes in the size and structure of networks of unemployed people. Klärner and Knabe (2016), for example, show that the transition to unemployment is associated with the loss of the opportunity structure of the job to establish and maintain social relationships. Diewald (2007) states that the effect of unemployment on the number of friends can vary depending on the length of unemployment. Short-term unemployed people experience a slight increase, whereas long-term unemployed experience a decrease in the number of friends. Atkinson et al. (1986) analyze the social relationship networks of about 80 male labor market participants. They report no influence of unemployment on the size of the network, but show a change in the composition of the network members that is not further described. Russell (1999) shows that the networks of unemployed people largely consist of others who

are also unemployed. This has a negative impact on the availability of social support and job search assistance. Lindsay (2009), based on a standardized survey of unemployed people in Glasgow, shows that long-term unemployed people are less likely than other unemployed people to turn to former work colleagues when looking for a job, but are just as likely to look for work through close family and friends. According to Jackson (1988), an analysis of male unemployed people shows that, as unemployment progresses, the non-family network shrinks, thereby increasing the proportion of family ties in the network. In an analysis based on only 60 teachers, but comprehensive in terms of networks, Röhrle and Hellmann (1989) also report slight differences in the size of networks among teachers with shorter, longer, or no unemployment at the time of the survey.

Another strand of the literature examines the effects of unemployment on the level of social support and on the frequency of contact with network members. According to Atkinson et al. (1986), unemployment reduces both family support and the frequency of contact with acquaintances and friends. An additional analysis, where the authors stratified those persons surveyed according to occupational status (blue-collar worker vs. white-collar worker), shows that the contact frequency only decreases among blue-collar workers. According to the authors, the fact that blue-collar workers are more affected by financial restrictions due to unemployment than white-collar workers cannot fully explain this finding. Gallie et al. (2001) also use data from several countries to show that unemployed people on the whole more often meet friends and acquaintances but are less likely to receive special support than employed people. Röhrle and Hellmann (1989), in their aforementioned analysis, report no effects of unemployment on the frequency or intensity of contact among teachers. In contrast, unemployed teachers were more satisfied with their network and received more social support than their employed colleagues.

Qualitative analyses document the dissolution or disappearance of relationships with colleagues or friends from the world of employment and the reduction and homogenization of networks to the closest (usually family) groups (Cattell, 2001; Stead et al., 2001). The social stigmatization and devaluation of the unemployed are cited as the cause for these processes as a consequence of unemployment (Knabe et al., 2018; Hirsland & Ramos Lobato, 2014; Stead et al., 2001).

In particular, lack of involvement in gainful employment leads to social dependence, social pressure, and negative well-being due to a lack of moral support and social opportunities to build self-confidence (Cattell, 2001).

However, networks are not only the cause of problems, but can also help to overcome the negative and health-damaging psychological consequences of unemployment. The negative consequences of unemployment on social networks can be countered by the actors themselves using network-based strategies to expand their scope for action by shifting social activities to social circles outside the labor market—in neighborhoods or political groups (cf. Marquardsen, 2012). The availability of opportunity structures as well as the social and institutional recognition for these strategies are unequally distributed, referring to spatial and social dimensions (Knabe et al., 2018; Klärner & Knabe, 2019).

### 3.2 *Moderator Thesis: Networks as Protection Against Negative Health Effects of Unemployment*

The thesis of the buffer function assumes that social support, which is embedded in an individual's social network, reduces the negative material and emotional consequences of critical life events such as unemployment and thus strengthens the resistance to cope with unemployment (Cassel, 1976; Cobb, 1976; summarized in Sattler & Diewald, 2010).

As in the case of the mediator effects of social networks, there are only a few quantitative studies that explicitly address the moderator effects of social networks in the case of unemployment.

Atkinson et al. (1986) report that the negative impact of unemployment on mental health is mitigated by family support. They do not provide results for network size and frequency of contact. However, they emphasize the greater relevance of the analysis of extra-familial networks, since in the area of the nuclear family the simultaneous impact of unemployment renders the question of the support function irrelevant. Gore (1978) examines how the health development of 100 men from two company closures relates to social support. Those who claimed to have access to social support were less likely to show symptoms of physical illness than other unemployed people. Axelsson and Ejlertsson (2002) compare mental health among unemployed and employed young adults in a cross-sectional study. Unemployment is negatively related to health, although this relationship is mitigated by social support. Schwarzer et al. (1994) examine more than 200 migrants moving from East to West Germany. They show that those who had access to social support had fewer physical complaints. However, they also point to the negative impact of illness on the availability of social support. The studies by Milner et al. (2016) and Krug and Prechsl (2020) are the only ones known to us that investigate the moderator effect on the basis of a population sample and with the aid of causal-analytical methods. The focus is on the impact of social support on mental health. Milner et al. (2016) use the panel study Household, Income and Labor Dynamics in Australia (HILDA) to confirm the moderator effect in fixed-effects analyses. Social support is measured using a cumulative score of 10 items, which is then coarsened for further analysis into an ordered categorical variable with the characteristics low, medium, and high social support. They show that the negative effect of unemployment on mental health is mitigated by high social support, but cannot be avoided completely. In contrast, Krug and Prechsl (2020) use data from the German Panel "Labour Market and Social Security." They find no buffering effects, after applying fixed-effects regressions, for two indices of social support (general and job search specific support), the number of weak ties, the number of strong ties, and conflict in the household.

The homogenization of social relationships not only has negative effects on health. Networks of predominantly unemployed people can provide a shelter from stigmatization and be an important source of emotional support. In this context, Stead et al. (2001) point out ambivalences of health-promoting and health-damaging



mechanisms in social networks. They analyze social inclusion in disadvantaged communities in Glasgow on the basis of eight group discussions with a total of 53 participants. The respondents' networks are characterized as relatively homogeneous in terms of social status, resource-poor, and sometimes with strong group-internal norms of health-damaging behavior (Stead et al., 2001, p. 137). Simultaneously they observe an "isolation from wider social norms" (Stead et al., 2001, p. 338). Unemployment is the rule rather than the exception in the networks of the participants. On the one hand, the relationship structures researched in this way offer identification possibilities and practical help and thus have a buffer function for negative (psychological) consequences of long-term unemployment. On the other hand, the respondents were encouraged to smoke rather than be supported in quitting.

With regard to available sources of social support, it is evident that the social network is one of the first and most important sources of contact for alleviating the negative consequences of unemployment, mostly through practical help in emergencies (e.g., payment of medical treatment costs by relatives) and emotional support (Edin & Lein, 1997; Hill & Kauff, 2001).

Heflin et al. (2011) examine the management of emergencies in low-income families on the basis of qualitative interviews with 50 women from the USA and find that the costs of medical emergencies in the absence of state aid and already exhausted individual strategies (less important bills not paid, accumulating debts, etc.) are managed in particular through recourse to social networks. In this way, emergencies can sometimes be mitigated by the financial resources from the network. However, aid remains uncertain, often ineffective, and not very sustainable. Networks are even less suitable for covering continuous needs. The result is health risks due to the lack of medication and treatments such as painkillers, contraceptives, and asthma medication or treatment by a family doctor or dentist.

Hill and Kauff (2001) describe very detailed mechanisms of recourse to social support based on an analysis of 16 unstructured qualitative individual interviews with employed and unemployed mothers living in very low-income (under \$500) households in urban and rural areas of in Iowa. Many of the women interviewed were very reluctant to borrow money. Informal work opportunities, such as baby-sitting for relatives, friends, and neighbors, are much more popular. Social support appears in the analysis as an important resource in the network. In particular, almost all mothers interviewed received small gifts of money, clothing, and toys for the children or food from their families. Social support from neighbors and friends appears to be less material than practical in everyday life, for example, in the form of childcare, transport, and donating children's clothes. Social support from the everyday network of relationships is more often taken up than institutional offers. But, this form of support is often only available to a limited extent because the network partners also often have limited resources. Furthermore, the extent of support received from the network is reduced by the fact that it is often not called upon in order to maintain a feeling of self-efficacy and not become too dependent on this rather unreliable form of support.

## 4 Summary and Evaluation of the State of Research

For those affected, unemployment is associated with lower mental and, to a lesser degree, physical health. There is a continuing debate as to whether this association reflects a causal impact of unemployment. In order to answer this question, research designs that are particularly suitable for causal analyses are necessary. In this respect, significant progress can be observed in the quantitative analyses of recent years, such as the more frequent use of longitudinal data and the application of statistical methods to control observable third-party variables. On the other hand, analyses of the causal mechanisms by which unemployment causes health impairments are also needed. One of these hypothetical mechanisms is based on the idea that social networks have a high relevance for health inequalities. To the extent that this mechanism can not only be theoretically explained but also empirically confirmed, research on this topic also serves as a contribution to the overarching discussion on the causal influence of unemployment as opposed to selection effects.

However, a comparatively small number of empirical research papers deal with the role of social networks in the relationship between unemployment and health. This is all the more surprising as the literature almost routinely refers to Jahoda's (1981) concept of the loss of latent functions of work, which includes social integration, to justify expected negative connections. Thus, the theoretical importance of social networks in the literature on unemployment and health is not reflected in a number of research papers dealing with their role as a mediator or moderator in this relationship.

In addition, the existing research on moderator and mediator effects of social networks lags behind not only in terms of quantity. First, in contrast to research on unemployment and health, state-of-the-art causal-analytical research designs hardly play a role. Thus, many analyses are based on very small and presumably selective samples, where no employed comparison group is used and no panel data regressions or related statistical methods of causal analysis are implemented. Of course, especially for older studies, methodological standards differed, and longitudinal data was not available. With the exception of Milner et al. (2016), Krug and Eberl (2018), and Krug and Prechsl (2020), there is still a lack of newer studies that make use of the current potential of statistical data analysis for the topic.

Second, in contrast to the research on social networks and health, it is striking that hardly any studies apply measures that reflect network structure and composition. This is probably due to the fact that the literature on moderator effects in particular argues less about the actual networks, their structures, and the resources they mediate. Instead, reference is made to the concepts of "social support" or "perceived social support." In addition, the effort required to survey ego-centered networks is very high and therefore hardly ever applied in surveys. Here, a special network survey procedure tailored to health aspects would have to be constructed and tested. There is great relevance for action here.

Qualitative studies show possible mechanisms of influence of social networks on the relationship between unemployment and health. A systematic categorization of

network influences on the relationship between unemployment and health is still lacking. The classification into mediator and moderator effects proposed here remains very fragmentary and theses-like in view of the few empirical studies.

### Reading Recommendations

- Cattell, V. (2001). Poor people, poor places, and poor health: The mediating role of social networks and social capital. *Social Science and Medicine*, 52(10), 1501–1516. *A widely cited paper, based on qualitative studies, discussing the dynamics of poverty and exclusion, the living environment, and health and well-being, considering the role of social networks and social capital.*
- Jahoda, M. (1981). Work, employment, and unemployment. Values, theories, and approaches in social research. *American Psychologist*, 36(2), 184–191. *This paper provides a basic overview of social psychological theories on (gainful) work and unemployment and emphasizes in particular the latent functions of gainful employment.*
- Milner, A., Krnjacki, L., Butterworth, P., & LaMontagne, A. D. (2016). The role of social support in protecting mental health when employed and unemployed: A longitudinal fixed-effects analysis using 12 annual waves of the HILDA cohort. *Social Science and Medicine*, 153, 20–26. *One of the few studies on the moderator effect using panel data regressions, but the focus is on social support and not on social networks.*
- Krug, G. & Prechsl, S. (2020). The role of social integration in the adverse effect of unemployment on mental health—Testing the causal pathway and buffering hypotheses using panel data. *Social Science Research*, 86, Art. 102379. *This paper uses pane data for a comprehensive test of mediator and moderator effects of various social capital, social support and social networks measures.*

### Data Sets/Overview

- Panel Labour Market and Social Security (PASS): An annual longitudinal survey of the Institute for Employment Research (IAB), since 2007, focusing on the social and economic situation of unemployed and employed persons. Regular surveys focus on social networks and health. <http://www.iab.de/en/befragungen/iab-haushaltspanel-pass.aspx>
- Socio-Economic Panel (SOEP): An annual longitudinal survey of the German Institute for Economic Research (DIW), since 1984 for West Germany and 1990 for East Germany, with a focus on the social and economic situation of unemployed and employed persons. Regular surveys focus on social networks and health. <http://www.diw.de/en/soep>

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Panel on poverty dynamics and the labour market: A nationwide qualitative long-term study on changes in the lives and living conditions of recipients of basic income support for jobseekers in connection with activation strategies. It includes narrative interviews on the influence of the assistance system on life contexts in multi-person communities and on overcoming or consolidating integration problems of benefit recipients with a migration background. <https://www.iab.de/en/forschung-und-beratung/projektetails.aspx/Projektetails/k140110309>

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