Title: **Friends Interventions in Early Psychosis: a narrative review and call to action**.

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Abstract

Aim

To highlight the importance of friendships to young people with psychosis, and the need for clinical interventions to help maintain peer relationships during illness. To structure a research agenda for developing evidence-based interventions with friends.

Method

An argument is developed through a narrative review of: 1) the proven efficacy of Family Interventions, and (by comparison) a relative absence of friend-based interventions 2) the particular primacy of friendships and dating for young people, and typical effects of exclusion. 3) reduced friendship networks and dating experiences in psychosis, in pre, during and post-psychosis phases, and links between exclusion and psychosis.

Results

We put forward a model of how poor friendships can potentially be a cause and/or maintenance factor for psychotic symptoms. Given this model, our thesis is that interventions aiming to maintain social networks can be hugely beneficial clinically for young people with psychosis. We give a case study to show how such an intervention can work.

Conclusions

We call for 'Friends Interventions' for young people with psychosis to be developed, where professionals directly work with a young person's authentic social group to support key friendships and maintain social continuity. An agenda for future research is presented that will develop and test theoretically driven interventions.

(204 words)

Keywords: friends, peers, psychosis, social, intervention, model

Introduction

Anyone who has worked in services with young people experiencing psychosis will have observed that often the main concerns the young person will bring are their anxieties about social status and friendships following the onset of their difficulties. ~~It is clear working in this setting how important friendships are for a young person's self esteem and recovery~~. Our clinical experience suggested to us that psychosis presents a significant challenge to maintaining peer relationships, but that the maintenance of these relationships has positive effects on clinical outcomes. In our respective services, we therefore began work on developing 'Friends Interventions', in which professionals work face-to-face with friends, directly involving them in treatment in a way analogous with Family Interventions, with the aim of facilitating an ongoing positive relationship. This is a novel area of work and has not, as yet, been empirically tested. In this article we therefore aim to outline the relevant background literature in this area, present a theoretical model of the role of the loss of peer relationships in the development and maintenance of psychosis, and to outline a research agenda for the development and evaluation of the proposed Friends Interventions. We hope that this call to action will generate further research and developments in this important area of work.

Family Interventions work and are recommended

Following the pioneering work in the sixties and seventies by Brown,[1] Leff and Vaughn[2] and Falloon,[3] Family Interventions are now very well developed.[4] Three more decades of careful scientific study have yielded well structured, easily disseminated[5] and widely applicable intervention packages[6] and examples of good practice.[7] Research in the last decade has shown these packages are successful, in

terms of reducing relapse rates,[8] carer burden[9] and improving family atmosphere.[10] They have been shown to reduce symptoms and improve medication compliance.[8,11] In the UK, the National Institute of Health and Clinical Excellence (NICE) assesses the state of the evidential base for practitioners, and for "schizophrenia", the NICE guidelines recommend offering family intervention to "all families of people with schizophrenia who live with, or are in close contact with, the service user".[12]

The evidence for family interventions is based overwhelmingly on work with service users and parents. By contrast, there are currently no formally tested and developed Friends Interventions, working with significant friends in an individual's social network. In this paper we use "friends" to refer to longer-standing friends, typically school friends, but also others such as work colleagues. In this respect we differentiate from literature referring to "Peers", which usually refers to fellow users of mental health services (although there are some important and encouraging initiatives with users of services contributing to each other's recovery,[13] and they can also become long-term friends). We think most (but by no means all) of our young people would prefer to have a social network with their original friends where possible, people whom they see as an authentic reference group, and with whom there is a more long-standing investment, and a sense of shared identity. "Friends" in this paper refers both to best friends, wider group-friends, and also romantic partners. Literature searches on "Web of Science", "PubMed" and "PsycInfo" using the search terms "friendship interventions psychosis", "peer interventions psychosis", and "social network intervention psychosis" return that there are no published interventions involving professionals meeting with friends of people with psychosis. There may

well be clinicians who meet with peers, but there does not appear to be any research empirically testing the effectiveness of this work.

Friendships are important for young adults

The exclusive focus on family members is surprising given empirical evidence that peers are crucially important, particularly in the young adult years. Adolescents increasingly invest in peers as primary sources of social and emotional support while simultaneously using feedback and acceptance from their peers as bases for a sense of self-concept.[14,15] Problems with peer relationships are stronger predictors of emotional dysfunction than are family problems.[16]

In a study examining sources of support in 549 non-clinical young people, Furman and Buhrmester found that whereas 9-10 year olds cited their parents as the most supportive parts of their social networks, 13-14, 15-16 year olds and 19 year olds rated their same sex friends as more important support than their mothers or fathers.[17] By the age of 19, romantic partners are rated more important than parents or same sex friends. Young people have also been found to be more likely to seek help from friends than their parents.[18]

Friends are so important that young people will engage in adolescent behaviours which might otherwise seem maladaptive or self-destructive, such as excessive drinking, substance misuse, early (and risky) sexual behaviour, and delinquency[19] (all especially statistically predicted by peer influence[20]) because they bring higher status amongst friends (shown to be a major goal of many adolescents in large ethnographic

studies[21]). Aggressive and anti-social boys are rated amongst the most popular in school year groups.[19~~19~~] Similar motivations are also apparent in psychosis samples - friends are as uniquely persuasive for people with psychosis as non-clinical samples. For example, the biggest predictor of current and future cannabis use in a psychosis group was found to be attitudes held by the wider peer group (not best friends, and emphatically not the attitudes of parents or teachers).[22]

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Dating is important for young adults

If peers are the most important arena, dating is arguably both the potentially most positive and most negative aspect.[23] Positive romantic experiences have an iterative and reciprocal relationship on most aspects of development, such as social acceptance with peers, self-esteem, confidence and social skills.[24] There is evidence that romantic partners are unique and significant socializing agents, often having large influences despite relationships frequently being short-lived and low in intimacy.[25,26] Negative dating experiences are the strongest predictors of depression and suicidality in young people,[27] which is unsurprising as such experiences include unwanted pregnancies, sexually-transmitted disease, physical and emotional violence from partners.[28] Resisting drugs or alcohol from a romantic partner is particularly difficult.[29]

Social Exclusion

The recent experimental field of social ostracism has shown that being socially ostracised or excluded is a painful and difficult process even for non-clinical people, and at all ages.[30] Probably the degree of difficulty reflects the importance (in evolutionary terms) of group membership (and thereby access to resources and

support). Empirical evidence shows that following ostracisation, most people experience substantial subjective distress,[31] sometimes anger, denigration of others and rumination[32], and physiological responses such as raised cortisol,[33] followed by a period of reflection and sadness, with significantly decreased cognitive facility,[34] negative self-appraisals[35] and a tendency to generalise to future events.[36] Bullying has been shown to be linked to future higher levels of psychotic-like thinking,[37] including predisposition to auditory hallucinations, paranoia and dissociation.[38]

Williams[30~~30~~] talks about the "long-term" socially-excluded, who accept their ostracised status rather than attempting to belong again, keeping social contacts to a minimum to avoid risking more complete ostracisation. The evolutionary threat of complete exclusion is strong enough to keep them hypersensitive to rejection from others.[39]

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Psychosis and poor peer relationships – before, during and after

Psychosis most typically develops during adolescence and young adulthood (A World Health Organisation study in nine countries found that 82.5% of their sample first presented between the ages of 15 and 35.[40]) Therefore it can be imagined that disruptions to social development at this crucial stage of adolescence can have a negative long-term impact on a person's future functioning and opportunities.

Pre-psychosis

A large amount of evidence shows that loss of social networks predates the onset of psychosis, and reduced social networks are a risk factor for later psychosis.[41] The huge Swedish Conscript study showed that having "fewer than two close friends" and

"interpersonal sensitivity" were amongst the most substantial and robust predictors of later psychosis.[42] More recently, Velthorst et al. found that difficulties maintaining friendships, making new friendships, and joining community activities was a key differentiation between those who transitioned from risky state to full psychosis in 158 high-risk young people.[43]

During psychosis

18-34 year olds with first episode psychosis have been found to be less satisfied with their group of friends, feel more excluded by their peer group, and view themselves as lower social rank and more inferior, compared to non-clinical controls.[44] Other studies have confirmed smaller support networks, with fewer friends, fewer people to turn to in a crisis and a higher likelihood of mental health professionals as friends, compared to a control group.[45] Furthermore, the earlier onset is, the worse social problems seem to be: in a sample with adolescent-onset psychosis (aged 10-18), 82% described difficulties with friendships, in comparison to six percent of a non clinical sample of the same age group.[46] In a long-term follow-up of childhood onset psychosis, almost half had no social contacts other than professionals; only 14% had any friends, and only one (out of 52) had a romantic relationship.[47]

Long-term psychosis

A wealth of empirical research has established that individuals experiencing psychosis have fewer extra-familial social contacts than people without psychosis,[48] and social support from outside the family has been found to be predictive of positive mental health in general.[49] Social isolation is common, for example, Harvey, Jeffreys, McNaught, Blizard and King[50] surveyed 114 adults with a diagnosis of schizophrenia as part of a larger longitudinal study and found that two fifths had not had contact

with a friend in the previous month. It seems that social network size has a strong relationship with the number of hospital admissions, with smaller social networks being related to more hospital admissions[51] and higher levels of positive symptoms (irrespective or gender, age, and premorbid adjustment).[52] Social isolation at baseline is also a significant predictor of poorer outcomes in terms of social functioning, behaviour and symptomatology over a five year follow up.[5050]

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Dating and psychosis

Compared to non-psychiatric controls, a significantly smaller proportion of people with psychosis successfully navigate arguably the third developmental task, that of developing close romantic relationships; males with psychosis find this particularly difficult and reasons for this may include earlier onset of illness, more severe symptoms (frequently with a more negative profile), and several important socio-cultural factors.[53] In a qualitative investigation of attitudes towards dating, a first episode psychosis sample (aged 21-31) said romantic relationships were something both hugely important to them, but which felt overwhelmingly risky, even impossible.[54] They said they had no one to support them or give them advice, that it seemed to them they were meant to "know all this stuff by now", when in fact many had never dated. They also worried (and were often warned by cautious family members and professionals) that the stress of dating would be detrimental to them. These factors worked to effectively bar many psychosis sufferers from romantic relationships altogether, when these relationships are a major source of interest, support and esteem to most adults.[55]

Social exclusion in psychosis

Empirical research shows overall themes of increasing isolation in psychosis, characterised both by rejection by peers, and rejection of peers; after the first episode, participants felt that peers were more hostile to them (for example, calling them names) and also that peers saw them as being 'different',[56] as well as feeling significantly "down-rank" and showing subordinate behaviours and entrapment by others,[4444] both now and potentially in the future.[57] They also self-stigmatise, effectively agreeing with their rejection from peers.[58] Many of the known symptoms of social exclusion covered previously also apply in psychosis and are all linked to the ebbing and flowing of symptoms;[59]; experiences such as subjective distress,[60] significantly decreased cognitive facility,[61] negative self-appraisals[62] and a tendency to generalise to future events,[63] as well as rumination,[64] and physiological responses such as raised cortisol.[65] There is also a very high prevalence of social anxiety in psychosis.[66]

Ostracism mechanisms seem promising as an explanation of the passive withdrawal from friendships often seen in psychosis;[4444] It is certainly true that many people with psychosis would rather let a friendship dwindle on relatively good terms than try to reconnect and risk the atmosphere in the relationship getting worse.[67] It is also worth reiterating that, as a group, people with psychosis have experienced significantly higher levels of bullying, as well as other types of childhood adversity such as parental abuse and neglect.[68] The potential for optimisim is high, as evidence shows that even a therapy-free but supportive relationship with a professional helps. [69,70]

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Perspective of friends

One area which had, until recently, been neglected was the experiences of friends themselves and their motivation to persevere with their friendship with the young person with psychosis. Brand, Harrop and Ellett[71] explored this topic using qualitative interviews with friends of young people experiencing psychosis. Friends reported that the person with psychosis' difficulties had a negative emotional impact on them and that the friendship was more effortful. They also reported that their friendship became more difficult because of perceived changes in the quality of their friendship, including a loss of shared activities and reduced time spent together.

Building a model linking social problems to psychosis symptoms

We have made the case that peer relationships are crucially important and currently under researched in psychosis, and deteriorate before and after symptoms develop; they are also linked to symptom development and maintenance. It is now possible to model how disruptions to friendships can be seen as both a causal factor and a maintenance factor for psychosis symptoms (Figure 1).

This model is consistent with already established risk factors for psychosis, such as genetics,[72] cannabis use,[73] family problems,[22] ethnic isolation[74] and trauma,[75,6867] It is proposed that social risk factors, such as peer rejection,[4141] social isolation and bullying[6867] can then precipitate initial psychosis-like symptoms[4141] in the manner outlined in the ostracism section. (Other established life events like traumas or parental divorce[6867] can probably also precipitate symptoms irrespective of peer interactions.) It is also worth pointing out that the key psychology of adolescence and developmental tasks ongoing at these times can also be directly linked to symptoms.

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Harrop and Trower theorised that many psychosis experiences can be understood as emerging directly from the key psychology of adolescence,[76] including egocentricity, grandiosity, depression and self consciousness, all of which are typical "young adult" characteristics.[6766] They theorised that psychosis results from a process in which young people become 'stuck' in adolescence, having failed to achieve the key tasks of individuation from parents and attachment to peers.[7673]

These initial symptoms then lead to a further decline in the young person's peer network[4545] as both the young person and their peers withdraw from each other.[5656] The iterative "vicious circle" nature of social problems linking with symptoms means 1) fewer "normalising" social interactions means fewer opportunities to 'reality test', leading to more acceptance of psychotic appraisals[77] (for example, size of social network is strongly related to insight in clients with psychosis[78]). 2) Ongoing negative schemas of self and others, which are implicated in most other models of psychotic symptoms, including persecution[79] and delusions.[80] (For example, it is striking that voices operate in a very similar way to critical peers,[81] and are driven by negative interpersonal schemas of oneself or others – particularly overpowering voices reflecting the perceived power differential between self and significant others in the actual social world.[8178]) 3) High anxiety, jumping-to-conclusions reasoning style[82] and other cognitive biases seen in psychosis such as meta-cognitive biases.[83] 4) Inactivity and isolation leading to negative symptoms,[84,85] and deficits in social-cognitive skills,[86,87] perhaps leading to *faux-pas* or a high emotional impact on friends.[7168] Further decline in social networks in turn increases symptoms and leads to worse outcomes[5050] in a circular manner.

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Friends Interventions

Why have professionals not routinely involved friends in interventions?

The model indicates the importance of sustaining friendships. In our study, friends reported that it would be helpful for them if services offered them more information, advice and support.[71~~68~~] Professionals have historically not routinely involved friends, despite the well-developed parallel of family interventions for psychosis, although interestingly, professionals for other conditions do, such as with diabetes.[88] The lack of work in this area may be due to the individualistic nature of our psychiatric system. Indeed, this was a challenge for family interventions, which broadened this scope of 'treatment' and recognised that social systems had a direct impact on wellbeing and clinical presentation. Family interventions still struggle to overcome organisational difficulties such as under-resourcing to undertake additional work with family members.[89]

In our experience, professionals have two main anxieties; 1) difficulties with patient confidentiality and 2) the person may not want professionals talking to their friends (for a variety of reasons, but particularly to do with embarrassment or loss of status). In practice, these concerns are usually either not substantiated or can be successfully negotiated. The confidentiality issues are similar to those encountered in family interventions; with careful negotiation about what can and cannot be shared in advance, interventions can be useful for all involved. Similarly, people with psychosis have been surprisingly receptive to the idea of researchers or clinicians talking to their friends and have not reported many concerns. Once asked, friends seem very willing

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and pleased to get involved. Friends that have attended have reported finding it also seemed to find this a very positive experience.

Table 1 provides an overview of the components of Friends Interventions; these components are derived both from the parallel field of Family Interventions, and our clinical observations about what has proven useful; it follows there is a need for future testing and improving the interventions, which is partly the point of this current review. It is important that the components of the intervention are used flexibly and the intervention is tailored to meet the needs of the individuals involved. Therefore, the intervention may not necessarily draw on all components. Our interventions involve a young person and their closest identified friends agreeing to meet somewhere private and informal, typically for 1-4 sessions. This has varied from working with dyads, to working with groups of several friends. Sometimes this has included friends that the person's parents would have preferred we did not include (our reasoning being that they are still influential and important to the young person). After the table, a case study is given to illustrate how such interventions work in practice.

Table 1. Overview of components of Friends Interventions.

Components of Friends Interventions	**Content**
Information-gathering	The whole group is encouraged to share experiences. This identifies areas of concern and difficulty in the relationship and guides the rest of the intervention.
Information sharing	A psycho-educational component in which the client, their friends and the therapist explore and swap ideas about the person's difficulty, with the aim of reaching an

	understanding of the situation that is shared (at least at some level). The young person is supported to share their own idiosyncratic experience of psychosis, but the therapist also includes relevant pieces of psycho-educational material. Friends are encouraged to discuss their own experiences, raise any of their own queries and the person with psychosis supported to provide information about this.
Re-establishing shared activities.	Young people and their friends are supported to think about previously valued shared activities and how they can support each other to re-establish these activities or to include the young person again. This will involve elements of activity scheduling and problem solving.
Support planning.	Friends are offered guidance on how best to support the young person in specific situations. This is done mostly by supporting the young person to share what they feel would be helpful. This is often based on the friends' concerns, for example 'what should I do if he says he is hearing voices?' The therapist also offers practical advice and guidance. This can include creating a shared relapse prevention plan, so that friends can help should they suspect a relapse is likely. The group devises channels of information-sharing with consent (for example, someone the friends have permission to talk to if they are concerned), sharing 'first aid guidelines' and developing a personalised support plan.
Substance misuse	An important topic may well be substance misuse, something which for many members of the group may not be a problem, but which for the person with psychosis may be extremely damaging. This topic is often raised by the group members themselves, as they are usually fully aware if misuse of substances has played a role in their friend's problems. The therapist can share evidence-based information and the group can explore the impact of substances for them and the client, and can discuss ways to support the client in avoiding unhelpful substance use.
Grief, loss and self-blame	This topic is important in family interventions, and also applies with friends. Friends equally have a high investment in the person with psychosis, perhaps going back many years (substantial proportions of their own lives), and may be having trouble coping with unusual, status-reducing behaviours, or the loss of their friend as a resource to themselves. Equally, friends can be worried that they let their friend down in some way, and feel guilty.

Case Study

Gareth was 20 and had become very socially isolated since leaving school at 16 with no qualifications. He had distant relationships with his mum and sister whom he lived with, feeling they were constantly critical of him. Since leaving school, he had had a succession of painting and decorating jobs, but when these jobs stopped, he did not know how to go about finding another one. He become very sensitive to the usual banter amongst his friends and was extremely worried they did not like him or laughed at him. As a group, they had been involved with one or two fights against other groups of lads, which had shaken Gareth considerably.

Gareth heard violent voices and saw violent images, and because these images scared him so much, he barely left the house unless he really had to. He had lost social contact with everyone except his best friend John. John had been his best friend all his life, and although John was popular, had many girlfriends and lots of other friends, he still regarded Gareth as his closest friend. Gareth avoided all their other friends as he worried they thought he was weird; he also would not drink alcohol as he was scared that he would get violent, although he had never done this.

Gareth agreed for the professional (CH) to invite John to a shared session, and they met in a quiet café locally. John was already aware of some of Gareth's troubles, but was surprised and sympathetic. They were able to swap perspectives on what had happened to Gareth, John clarified some issues that had been confusing him, and asked a lot of questions about what to expect, particularly around the issue of the voices and violence. They were able to complete some relapse prevention together, around issues such as how John would know when Gareth was feeling anxious

socially, and what he could do to help. John helped with a plan to re-establish contact with the wider group, which included John coming around to pick up Gareth to go out socially (making arriving easier). Gareth found John's acceptance very encouraging, and liked getting reassurance that the wider group still liked him; he felt "much much better" after the session. Saturday night with the lads became a regular event for Gareth again. John also managed to help Gareth find a job. With increased social contact, Gareth felt better about himself, less depressed, and he was more able to ignore negative messages from voices and images; over time his symptoms diminished to a negligible level.

Friends Interventions in Early Psychosis: Research agenda

If the above overview of Friends Interventions and the case study presented seem to raise as many questions as they answer, this is because there is a substantial research effort required. Friends Interventions need to be greatly explored and refined, and proven both clinically effective, and cost effective to become widely available, particularly given the limitations of insurance-based systems like in the US. We propose an urgent research agenda.

1. Intervention development

An important first priority in the development of Friends Interventions is to further develop the intervention protocol and to pilot and assess initial effectiveness, including acceptability and feasibility. Our work to date suggests that such interventions are largely perceived as timely and appreciated, but this work needs extending. It will be important to include friends and young people with psychosis in the development as experts with lived experience. Eventually, the intervention will

need to be tested at a more rigorous level, using randomised controlled trials. There are many questions which will need addressing in the development and testing of the intervention, for example, to find what sort of input is most effective, and how it is best delivered. Some phases of illness will be better times for intervention than others. There will undoubtedly be great variation in the needs of friends, and the types of interventions needed – romantic partners will have different needs to longstanding lifelong friends, or recently-made friends. Changes will be needed for co-morbid problems, (including co-morbidity in peers, not unlikely given the literature on "contagion" in social networks[90]), or for different cultural groups.

Currently, surprisingly little is known about friends themselves, and this is another fruitful area to be researched, both qualitatively and quantitatively. It will be interesting to discover what characteristics of friends lend themselves towards remaining in contact when their friends have psychosis (as well as canvassing those friends who have given up).

The Friends Interventions research agenda also includes investigating whether there are any therapeutic interventions that can enable new friendships where the old ones have already all been lost. This is possibly even more desirable, because old friends often "move on", both developmentally and physically (e.g moving away to University). Interventions have so far tended to focus on befriending (in which semi-professional friendships are formed with volunteers from the community[91]) and peer support (in which service users create support networks amongst themselves[92]) to do this, with some success[13~~13~~] (although it depends on the quality of the

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relationship[93]).~~13~~ We believe further research into encouraging new friendships and friendship-related skills in 'mainstream' arenas ~~may also potentially be beneficial~~is absolutely crucial. For example, it may be helpful to support young people with psychosis to use internet dating to gain experience with dating situations. There is also a burgeoning "dating self-help" and "dating coach" scene developing for young people, particularly in the US[94], but also in the UK, and we have been experimenting with using principles and ideas from this literature with our psychosis groups[95], as have other groups.[96]

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2. Measurement

When interventions are sufficiently developed, rigorous evaluation will be required to see whether they do actually work. Part of evaluating will involve deciding which measurements appropriately capture progress. For example, it would be important to measure whether Friends Interventions result in positive improvements in symptoms (psychotic and affective), relapse rates, and service use, as well as other measures of well-being, such as social skill, social functioning, self-image or quality of life. In addition, it seems important to measure quality of friendships, as perceived by both the client and their friends. Additional important outcomes might be beliefs and expectations about friendships, and romantic beliefs, as well as friends' well-being, perceived burden and likelihood of continuing the friendship. Finally, measuring amount of time spent together will also be important.

3. Service delivery context

Reassuringly, this work fits well within current trends towards "Youth-Orientated services", and facilitating more ownership of services by young people,[97] including a greater use of buddy systems and service user expert input. However, the addition of another group of people from the client's network will place obvious strains on limited resources, and this will need suitable prioritisation. There are further training and staff development implications. It is likely that evidence can be drawn from the family interventions literature to inform practice.

In countries that need to charge for psychological input, clinicians will be interested in knowing whether such work will be "chargeable". There doesn't seem to us to be any reason why clinicians shouldn't be able to bill for this sort of work; certainly, parents of our young people seem to clearly see the need for it, and have been enthusiastically behind it. In the future, an established evidence base would help persuade reticient funders, in the same way Family Interventions has become accepted.

Conclusions

We have argued that peers are crucially important in psychosis, that people who have a psychosis typically lose their friends early on and suffer reduced social networks for life after this. This is important because social network and social self-image play a major role in symptoms and prognosis. We have outlined a model to understand the relationship with symptoms and how this might change over time. We have shown how clinical interventions to address friendships have been developed by our group, and set out an agenda for future research. Our belief is that friendships and love-relationships will help people a lot more than medication and professionals.

References

[1] Brown GW. Birley JLT ,Wing JK. Influence of family life on the course of schizophrenia: a replication. Br J Psychiatry 1972; 121: 241-258.

[2] Leff JP, Vaughn CE. Expressed Emotion in families. New York: Guildford Press, 1985.

[3] Falloon IHR, Boyd JL, McGill CW et al. Family management in the prevention of morbidity in schizophrenia: clinical outcome of a two-year longitudinal study. Arch Gen Psychiatry 1985; 133: 32-6.

[4] Onwumere J, Bebbington P, & Kuipers E. Family interventions in early psychosis: specificity and effectiveness. Epidemiol Psychiatr Sci, 2011; 20(2): 113-119.

[5] Lobban F, Glentworth D, Chapman L et al. Feasibility of a supported self-management intervention for relatives of people with recent onset psychosis: REACT study. Br J Psychiatry (in press)

[6] Falloon IRH, Fadden G, Mueser K, et al. Family Work Manual. Birmingham: Meriden Family Programme, 2004.

[7] Lobban F, Barrowclough C. A Casebook of Family Interventions for Psychosis. Chichester: Wiley and Sons, 2009.

[8] Pilling S, Bebbington P, Kuipers E et al.. Psychological treatments in schizophrenia. I: Meta-analysis of family intervention and cognitive behaviour therapy. Psychol Med, 2002; 32: 763-782.

[9] Giron M, Fernandez-Yanez A, Mana-Alvarenga S, Molina-Habas A, Nolasco A,

Gomez-Beneyto M. Efficacy and effectiveness of individual family intervention on social and clinical functioning and family burden in severe schizophrenia: a 2-year randomized controlled study. Psychol Med 2010; 40: 73–84.

[10] Pfammater M, Junghan MJ, Brenner HD. Efficacy of psychological therapy in schizophrenia: Conclusions from meta-analyses. Schizophr Bull, 2006; 32: 64-80.

[11] Pharoah F, Mari J, Rathbone J, Wong W. Family intervention for schizophrenia. Cochrane Database of Systematic Reviews 12: Art. No.: CD000088:2010

[12] National Institute for Health and Care Excellence Schizophrenia: Core interventions in the treatment and management of schizophrenia in adults in primary and secondary care CG82. 2009: London: National Institute for Health and Care Excellence.

[13] Davidson L, Guy K. Peer support among persons with severe mental illnesses: a review of evidence and experience. World Psychiatry 2012; 11(2): 123-128.

[14] Brown BB. Peer groups and peer cultures. In: Feldman SS, Elliott GR editors. At the threshold: The developing adolescent. Harvard University Press: Cambridge, MA, 1990. p171-196.

[15] Harter S, Stocker C, Robinson NS. The perceived directionality of the link between approval and self-worth: the liabilities of a looking glass self-orientation among young adolescents. J Res Adolescence, 1996; 285-308.

[16] Nelson EE, Leibenluft E, McClure EB, Pine DS. The social re-orientation of adolescence: a neuroscience perspective on the process and its relation to psychopathology. Psychol Med, 2005; 35(2): 163-174.

[17] Fuhrman W, Buhrmester D. Age and sex differences in perceptions of networks of personal relationships. Child Dev, 1992; 63: 103-115.

[18] Rickwood D, Deane FP, Wilson C, Ciarrochi J. Young people's help-seeking for mental health problems. Aust J Adv Mental Health, 2005: 4(3): Supplement.

[19] Rodkin P, Farmer T, Pearl R, Van Acker R. Heterogeneity of popular boys: Antisocial and presocial configurations. Dev Psychol, 2000; 36: 14-24.

[20] Dishion T, McCord J, Poulin, F. When interventions harm: Peer groups and problem behvaviour. Am Psychol, 1999; 54: 755-764.

[21] Adler PA, Adler P. Dynamics of inclusion and exclusion in preadolescent cliques. Soc Psychol Quarterly, 1995; 58: 145-162.

[22] Hames A, Evangeli M, Harrop C, di Forti M. Understanding cannabis use in first-episode psychosis: an application of the Theory of Planned Behaviour. Early Interv Psychiatry. 2012; 6(1): 38–44.

[23] Fuhrman W, Shaffer L. The role of romantic relationships in adolescent development. In Florsheim P editor. Adolescent romantic relations and sexual behaviour: Theory, research and practice implications. Mahweh, NJ: Lawrence Erlbaum, 2003; p. 3-22.

[24] Neeman J, Hubbard J, Masten AS. The changing importance of romantic relationships involvement to competence from late childhood to late adolescence. Dev Psychopathol, 1995; 7: 727-750.

[25] Simon VA, Aikins JW, Prinstein MJ. Romantic partner selection and socialization during early adolescence. Child Dev, 2008; 79: 1676-1692.

[26] Collins AW. More than myth: the developmental significance of romantic relationships during adolescence. J Res Adolescence, 2003: 13: 1-25.

[27] Joyner K, Udry JR. You don't bring me anything but down: adolescent romance and depression. J Health Soc Behav, 2000; 41: 369-391.

[28] Silverman JG., Raj A, Mucci LA., Hathaway JE. Dating violence against adolescent girls and associated substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicidality. J Amer Med Ass 2001; 286(5): 572.

[29] Trost M, Langan EJ, Kellar-Guenteher Y. Not everyone listens when you 'just say no': Drug resistance in relational context. J App Communication Res 199; 27:120–138.

[30] Williams KD. Ostracism. Annu Rev Psychol, 2007; *58*: 425-452.

[31] Leary MR, Tambor ES, Terdal SK, Downs DL. Self-esteem as an interpersonal monitor: the sociometer hypothesis. J Pers Soc Psychol, 1995; 68: 518–30.

[32] Downey G, Feldman SI, Ayduk O. 2000. Rejection sensitivity and male violence in romantic relationships. Pers. Relat. 7:45–61.

[33] Dickerson SS, Kemeny ME. Acute stressors and cortisol responses: a theoretical integration and synthesis of laboratory research. Psychol Bull, 2004; 130: 355–91

[34] Baumeister RF, Twenge JM, Nuss CK. Effects of social exclusion on cognitive processes: anticipated aloneness reduces intelligent thought. J Pers Soc Psychol, 2002; 83: 817–27.

[35] Ayduk O, Downey G, Testa A, Yen Y, Shoda Y. Does rejection elicit hostility in rejection sensitive women? Soc. Cogn. 1999; 17:245–71.

[36] Zadro L. Boland C, Richardson, R. "How long does it last? The persistence of the effects of ostracism in the socially anxious." J Exp Soc Psychol 2006; 42.5: 692-697.

[37] Kelleher I, Harley M, Lynch F, Arseneault L, Fitzpatrick C, Cannon M. Associations between childhood trauma, bullying and psychotic symptoms among a school-based adolescent sample. Br J Psychiatry, 2008; 193(5): 378-382.

[38] Campbell ML, Morrison AP. The relationship between bullying, psychotic-like experiences and appraisals in 14–16-year olds. Behav Res Ther 2007; 45(7):1579-1591.

[39] Zadro L, Williams KD, Richardson R. How low can you go? Ostracism by a computer lowers belonging, control, self-esteem, and meaningful existence J Exp Soc Psychol, 2004; 40: 560–67.

[40] Jablensky A, Cole SW. Demography and age at onset of schizophrenia. Br J Psychiatry, 1997; 170: 485-486.

[41] Gayner-Anderson C, Morgan C. Social Networks, Support and Early Psychosis: A Systematic Review. Epidemiol Psychiatr Sci, 2013; 22 (2): 131 – 146.

[42] Malmberg A, Lewis G, David A, Allebeck P. Premorbid adjustment and personality in people with schizophrenia. Br J Psychiatry, 1998; 172(4): 308-313

[43] Velthorst E, Nieman DH, Linszen D et al. Disability in people clinically at high risk of psychosis. Br J Psychiatry, 2010; 197(4): 278-284.

[44] Allison G, Harrop C, Ellett L. Perception of peer group rank of individuals with early psychosis. Br J Clin Psychol, 2013; 52(1):,1 – 11.

[45] Macdonald EM, Hayes RL, Baglioni AJ. The quantity and quality of social networks of young people with early psychosis compared with closely matched controls. Schizophr Res, 2000;, 46: 25–30.

[46] Boeing L, Murray V, Pelosi A, McCabe R, Blackwood D, Wrate R. Adolescent-onset psychosis: prevalence, needs and service provision. Br J Psychiatry, 2007; 190: 18 –26.

[47] Remschmidt HE, Schulz E, Martin M, Warnke A, Trott GE. Childhood-onset schizophrenia: history of the concept and recent studies. Schizophr Bull, 1994; 20: 727-745.

[48] Buchanan J. Social support and schizophrenia: A review of the literature. Arch Psychiatr Nurs, 1995; 9: 68–76.

[49] Cohen S, Willis TA. Stress, social support, and the buffering hypothesis. Psychological Bulletin, 1995; 98: 310-357.

[50] Harvey CA, Jeffreys SE, McNaught AS, Blizard RA, King MB. The Camden schizophrenia surveys. III: Five-year outcome of a sample of individuals from a prevalence survey and the importance of social relationships. Int J Soc Psychiatry, 2007; 53(4):340 - 356.

[51] Becker T, Thornicroft G, Leese M, McCrone P, Johnson S, Albert M, Turner D. Social networks and service use among representative cases of psychosis in South London. Br J Psychiatry, 1997; 171: 15–19.

[52] Norman RM, Malla AK, Manchanda R, Harricharan R, Takhar J, Northcott S. Social support and three-year symptom and admission outcomes for first episode psychosis, Schizophr Res, 2005; 80: 227–234.

[53] Redmond C. How do young people with psychosis make sense of romantic relationships? Unpublished ClinPsyD thesis, University of Birmingham, UK, 2007.

[54]Redmond C, Larkin M, Harrop C. The personal meaning of romantic relationships for young people with psychosis. Clin Child Psychol Psychiatry, 2010; 15(2):151-170.

[55] Fuhrman W, Ho MJ, Low SM. The rocky road of adolescent dating experience: dating and adjustment. In: Engels RM, Kerr M, Stattin H editors. Friends, Lovers and

Groups: Key relationships in adolescence. Wiley & Sons, Chichester UK, 2007.p.61-80.

[56] Mackrell L, Lavender T. Peer relationships in adolescents experiencing a first episode of psychosis. J Men Health, 2004; 13 (5): 467–479.

[57] Birchwood M, Iqbal Z, Chadwick P, Trower P. Cognitive approach to depression and suicidal thinking in psychosis 2. Testing the validity of a social ranking model. Br J Psychiatry, 2000; 177(6), 522-528.

[58] Ritsher JB, Phelan JC Internalized stigma predicts erosion of morale among psychiatric outpatients. Psychiatry research, 2004, 129.3, 257-265.

[59] Smith B, Fowler D, Freeman D. et al. Emotion and psychosis: links between depression, self-esteem, negative schematic beliefs and delusions and hallucinations. Schizophr Res, 2006; 86(1), 181-188.

[60] Birchwood M, Iqbal Z, Chadwick P, Trower P. Cognitive approach to depression and suicidal thinking in psychosis I. Ontogeny of post-psychotic depression. Br J Psychiatry, 2000; 177(6), 516-528.

[61] Leeson VC, Sharma P, Harrison M, Ron MA, Barnes TR, Joyce EM. IQ trajectory, cognitive reserve, and clinical outcome following a first episode of psychosis: a 3-year longitudinal study. Schizophr Bull, 2011; 37(4), 768-777.

[62] Shahar G, Trower P, Iqbal Z, Birchwood M, Davidson L, Chadwick P. The person in recovery from acute and severe psychosis: the role of dependency, self-criticism, and efficacy. Am J Orthopsychiatry, 2004; 74(4), 480-488.

[63] Chadwick P, Trower P, Dagnan D. Measuring negative person evaluations: The evaluative beliefs scale. Cog Ther Research, 1999; 23(5), 549-559.

[64] Halari R, Premkumar P, Farquharson L, Fannon D, Kuipers E, Kumari V. Rumination and negative symptoms in schizophrenia. J Nerv Ment Dis , 2009; 197(9), 703-706.

[65] Corcoran CM, Smith C, McLaughlin D, Auther A, Malaspina D, Cornblatt B. HPA axis function and symptoms in adolescents at clinical high risk for schizophrenia. Schizophr Res, 2012; 135(1-3), 170-174.

[66] Michail M, Birchwood M. Social anxiety disorder and shame cognitions in psychosis. Psychol Med, 2012; 1(1), 1-10.

[67] Harrop CE, Trower P. Why does schizophrenia develop at late adolescence? Wiley, Chichester, UK, 2003.

[68] Varese F, Smeets F, Drukker M, et al. Childhood adversities increase the risk of psychosis: a meta-analysis of patient-control, prospective-and cross-sectional cohort studies. Schizophr Bull, 2012; 38(4), 661-671.

[69] Penn DL, Mueser KT, Tarrier N, Gloege A, Cather C, Serrano D & Otto MW. Supportive therapy for schizophrenia. Schiz Bull 2004; 30(1), 101-112.

[70] Buckley LA, Pettit TACL, Adams CE. Supportive therapy for schizophrenia. Cochrane Database of Systematic Reviews 2007, Issue 3. Art. No.: CD004716. DOI: 10.1002/14651858.CD004716.pub3.

[71] Brand RM, Harrop C, Ellett L. What is it like to be friends with a young person with psychosis? A qualitative study. Psychosis, 2011; 3(3):205-215.

[72] Van Os J, Kapur S. Schizophrenia. Lancet, 2009; 374: 635–45.

[73] Arseneault L, Cannon M, Witton J, Murray RM. Causal association between cannabis and psychosis: examination of the evidence. Br J Psychiatry, 2004; 184(2): 110–117.

[74] Fung WLA, Bhugra D, Jones PB. Ethnicity and mental health: the example of schizophrenia and related psychoses in migrant populations in the Western world. Psychiatry, 2009; 8(9): 335–341.

[75] Morrison AP, Frame L, Larkin W. Relationships between trauma and psychosis: A review and integration. Br J Clin Psychol, 2003; 42(4) 331–353.

[76] Harrop C, Trower P. Why does schizophrenia develop at late adolescence? Clin Psychol Rev, 2001; 21(2): 241–265.

[77] Garety PA, Kuipers E, Fowler D, Freeman D, Bebbington PE. A cognitive model of the positive symptoms of psychosis. Psychol Med, 2001; 31: 189-195.

[78] White R, Bebbington P, Pearson J, Johnson S, Ellis D. The social context of insight in schizophrenia. Soc Psychiatry Psychiatr Epidemiol , 2000; 35(11): 500–507.

[79] Freeman D, Garety PA, Kuipers E, Fowler D, Bebbington PE. A cognitive model of persecutory delusions. Br J Clin Psychol, 2002; 41(4): 331–347.

[80] Garety PA, Freeman D. Cognitive approaches to delusions: A critical review of theories and evidence. Br J Clin Psychol, 1999; 38(2): 113–154.

[81] Birchwood M, Gilbert P, Gilbert J et al. Interpersonal and role-related schema influence the relationship with the dominant "voice" in schizophrenia: a comparison of three models. Psychol Med; 34(08): 1571.

[82] So SH, Freeman D, Dunn G, et al. Jumping to conclusions, a lack of belief flexibility and delusional conviction in psychosis: a longitudinal investigation of the structure, frequency, and relatedness of reasoning biases. J Abnorm Psychol, 2012; 121(1), 129.

[83] Perona-Garcelán S, García-Montes JM, Ductor-Recuerda MJ Relationship of metacognition, absorption, and depersonalization in patients with auditory hallucinations. Br J Clin Psychol, 2012; 51(1), 100-118.

[84] Dickerson F, Boronow JJ, Ringel N, Parente F. Social functioning and neurocognitive deficits in outpatients with schizophrenia: a 2-year follow-up, Schizophrenia Res, 1999; 37: 13–20.

[85] Giacco D, McCabe R, Kallert T, Hansson L Fiorillo A et al. Friends and Symptom Dimensions in Patients with Psychosis: A Pooled Analysis. PLoS ONE, 2012; 7(11): e50119. doi:10.1371/journal.pone.0050119

[86] Penn DL, Sanna LJ, Roberts DL. Social cognition in schizophrenia: an overview. Schizophr Bull, 2008; 34(3): 408-11.

[87] Waters F, Rock D. Dragovic M, Jablensky A .'Social dysmetria' in first-episode psychosis patients. Acta Psychiatr Scand, 2011; 123 (6): 475-484.

[88] Greco P, Pendley JS, McDonell K, Reeves G. A peer group intervention for adolescents with type 1 diabetes and their best friends. J Ped Psychol, 2001; 26(8): 485–490.

[89] Fadden G. Training and disseminating family interventions for schizophrenia: developing family intervention skills with multi-disciplinary groups. J Fam Ther, 2006; 28: 23-38.

[90] Giletta M, Scholte RHJ, Burk WJ, Engels RCME, Larsen JK, Prinstein MJ, Ciairano S. Similarity in depressive symptoms in adolescents' friendship dyads: Selection or socialization?. Dev Psychol, 2011; 4: 1804-1814.

[91] McCorkle BH, Rogers SE, Dunn EC, Lyass A, Wan YM. Increasing social support for individuals with serious mental illness: Evaluating the compeer model of intentional friendship. Community Ment Health J, 2008; 44: 359-366.

[92] Davidson L, Chinman M, Sells D, Rowe M. Peer support among adults with serious mental illness: A report from the field. Schizophr Bull, 2006; 32 (3): 443 – 450.

[93] Couture SM, Penn DL. The effects of prospective naturalistic contact on the stigma of mental illness. J. Community Psychol., 2006, 34: 635–645. oi: 10.1002/jcop.20119

[94] Strauss N. The Game: Undercover in the Secret Society of Pickup Artists. Canongate Books Ltd, New York. 2007.

[95] Harrop C. Mates and Dates: The importance of friendships. Presentation to the British Psychological Society DCP Psychosis and Complex Mental Health Faculty, July 2008.

[96] Harper K, Penn DL. Improvement in social skills following participation in a dating skills group for first episode psychosis. Poster, Association for Behavioral and Cognitive Therapies, Toronto, CA. November, 2010.

[97] McGorry P. Should youth mental health become a specialty in its own right? Yes. Br Med J, 2009; 339: 10-11.