The mental health effects of a universal basic income

Mental Health Foundation Scotland

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Introduction

Amid the economic fall out of the Coronavirus pandemic, with widespread unemployment and rising income inequality, calls for a Universal Basic Income (UBI) have once again resurfaced and risen to prominence within global policy discussions. Consisting of a periodic cash payment made on an individual basis to all, without means-testing or work requirement, the policy aims to end poverty through providing a financial safety net through which no one can fall (Tory & Jenner, 2019). In Scotland, where close to a quarter of all children and a fifth of 'working age' adults live in poverty, interest in the concept has surged, with four local authorities announcing proposals for UBI pilots in their respective areas (Danson, 2019; General Register Office for Scotland, 2020). Integral to this mounting support is the hypothesised potential for UBI to address the unacceptably high levels of mental health inequities which the country faces. The link between Scotland's endemic poverty and its poor mental wellbeing is undeniable. Suicide rates are among the highest in the UK and rising (Pompili, O'Connor & Van Heeringen, 2020), and the country has become infamous as home to the highest drug related deaths in western Europe (Nicholls et al. 2019), with those living in Scotland's most deprived areas shouldering the vast majority of the burden (General Register Office for Scotland, 2020). Therefore, for its proponents, UBI possesses not only the potential to improve the economic situation of individuals and their families, but through doing so to improve population mental health.

Box 1. Defining Features of a Universal Basic Income (BIEN, 2019).

Periodic - It is paid at regular intervals (for example every month), not as a one-off grant.

Cash payment - Paid in cash as opposed to in kind (such as food or services) or in vouchers dedicated to a specific use.

Individual - It is paid on an individual basis and not, for instance, to households.

Universal - Paid to all by virtue of their legal residence in a country.

Unconditional - Paid without a requirement to work or to seek work.

Yet, the ability for UBI to achieve this continues to be fiercely debated. Vehement opposition from critics has questioned the affordability of such a policy and queried the value of UBI over other poverty alleviating strategies (Goulden, 2018; Downes & Lansley, 2018). Others have stressed the potential for this to divert funds currently targeted at those most in need and have cast doubt on UBI's potential to redistribute wealth amongst the population, with economic modelling studies producing conflicting results (Nikiforos, Steinbaum & Zezza, 2017; Kozminski & Baek, 2017; Hoynes & Rothstein, 2019).

However, the proposed mental health benefits of UBI do not merely centre on its debatable poverty alleviating potential. The universal, unconditional and individual tenets of UBI are also argued to hold unique benefits for population wellbeing. In the first instance it is argued that universal payments that are not targeted at particular social groups may forge increased social solidarity through reducing poverty stigma (Bueskens, 2017; Tory & Jenner, 2019). Secondly, it is claimed that the per capita basis of payments could be potentially freedom enhancing for many, allowing them social and financial independence from partners, family members, caregivers and, in some cases, perpetrators of violence (Mays, 2019). Thirdly, it is asserted that the unconditional nature of UBI payments may have untold benefits for the mental health of recipients who would otherwise be exposed to stress-inducing benefit sanctions and strict eligibility conditions applied to traditional welfare payments (Painter & Thoung, 2015).

Despite these arguments, while several previous reports have examined the effects of UBI on income (Conner & Taggart, 2013; Berman, 2018), employment (Jones & Marinescu, 2018), labour market demand and consumption (Gibson, Hearty and Craig, 2020; Calnitsky, 2020) with conflicting results, the direct mental health consequences of previous UBI pilots have been less rigorously examined (Ruckert, Huynh & Labonté, 2018; Aiden et al. 2020). **To better inform policymakers, there would be considerable value in knowing to what extent the universal, unconditional and individual tenets of a UBI are likely to improve mental health.** This report does not therefore seek to add to the existing conflicting literature on UBI's potential to reduce poverty and income inequality. **Rather, it aims to fill the gap in this literature base, through providing a summary of findings from previous UBI pilots on the mental health effects of these unique principles.**

Methodology

A rapid review of the literature was conducted searching for empirical research studies of any design published since the year 2000, exploring the effects of interventions similar to a UBI, on the mental health of children or working-age adults. Since transferability between contexts is likely to be limited, we narrowed the focus to studies conducted in high-income countries. In addition, in line with previous reviews of UBI, we did not determine universality or permanence as a prerequisite for inclusion as there are very few such interventions which would have met these criteria. As such, studies were deemed eligible for initial inclusion if they (a) investigated an intervention which provided substantial cash transfers; (b) on either a universal, unconditional or individual basis and (c) included a measure of associated mental wellbeing.

Summary of identified pilots

We identified 15 studies exploring the mental health outcomes associated with seven pilots in five countries.

A summary of interventions, including information regarding how far each intervention met the key basic income criteria is provided in Table 1. Overall, four interventions used unconditional cash transfers and two interventions applied a negative income tax model, in order to deliver a UBI. Eligibility criteria, the level at which payments were set and withdrawn, associated conditions and the duration of interventions all varied significantly. However, the majority targeted unemployed individuals already in receipt of welfare benefits or low-income households.

Table 1. Universal Basic Income Pilot Characteristics

Intervention	Location	Intervention dates	Eligibile participants	Universal payments	Individual payments	Unconditional payments	Level of payment and withdrawal rate	Treatment Groups and Co-interventions
Basic Income Experiment	Finland	2017-2019	Unemployed adults (aged 25-58) already in receipt of unemployment benefits.	N	Y	Y	€560 per month, which is lower than standard unemployment benefit.	Only one treatment group, as welfare benefits in Finland appear to be paid on an individual basis already, the main difference between treatment and controls was the removal of conditionality.
B-MINCOME	Barcelona, Spain	2017-2019	Low-income households which include an individual aged 21-40 in receipt of social assistance.	N	N	Y (in one arm of the trial)	The payment amount will depend upon household composition and financial status and is expected to range from €100 to €1,676 per month per household.	10 different treatment groups: In two, no conditions were applied to payments, which were provided on either a limited or unlimited basis. In the remaining eight participants had to take part in either a training and employment programme; a social economy programme; a community participation programme or a housing renovation programme, on either a conditional or unconditional basis.
Casino Dividends	11 counties in North Carolina	1996-ongoing	All members of Eastern Cherokee tribe	Y	Y	Y	Initially approximately $4,000 per person annually; $9,000 a year by 2006. Represented 20-40% of households' income. Paid biannually. Children's cash transfers are banked for them until age 18	Only one intervention group, no co-interventions
Netherlands Social Assistance Experiments	Utrecht, Groningen, Wageningen, Tilburg	2017-2019	Current welfare benefit recipients	N	Y	Y (in one arm of the trial)	Amounts are not reported but seem to be at same level as current welfare benefits.	Three treatment groups: in one all conditionality associated with payments was removed; in another, individuals continued to receive traditional welfare payments as usual, but also received increased help finding employment; and a final group of participants were allowed to keep a larger part of their income from work (50% up to a maximum of 202 EUR) and to do so for a longer period of time (16 vs 6 months).

Table 1 (Continued). Universal Basic Income Pilot Characteristics

Intervention	Location	Intervention dates	Eligibile participants	Universal payments	Individual payments	Unconditional payments	Level of payment and withdrawal rate	Treatment Groups and Co-interventions
Ontario Basic Income Pilot	Ontario, Canada	2018-2018	Individuals (aged 18-64) living on low or no income as determined by taxable family income (equal to or less than $34,000 per year for a single person $48,000 per year for a couple), within one of the test locations.	N	N	Y	Payments were made on a monthly basis and varied in amount so that participants had a guaranteed income of 75% of the Low-Income Measure (LIM). This ($16,989 per year for a single person, and $24,027 per year for a couple). People with a disability will also receive up to $500 per month on top.	Only one treatment group, no co-interventions
Manitoba Basic Annual Income Experiment Pilot	Dauphin and Winnipeg	1975-1979	All residents (aged between 18-58) were eligible to participate if their income fell below the threshold (did not exceed 150% of the official poverty line, which at that time was $3300 for a family of 4).	N	N	Y	Provided subsistence level income for those with no other income source. eight combinations of maximum benefit level and tax rate (CAD $) (1) 3800, 35% (2) 4,800, 35% (2) 3,800, 50% (2) 4,800, 50% (2) 5,800, 50% (2) 3,800, 75% (2) 4,800, 75% (2) 5,800, 75% The Dauphin saturation site only tested one combination. 30% of Dauphin residents received Mincome payments during the study.	Only one treatment group, no co-interventions.
Alaska Permanent Dividend Fund (APDF)	Alaska	1982-ongoing	Whole population of Alaska	Y	Y	Y	Paid annually. Payment amounts fluctuate according to value of oil reserves; however, they have remained relatively stable over the past decade. In 2019 the dividend was $1606 per person.	Only one treatment group, no co-interventions.

Summary of study findings

Adult Mental Health and Wellbeing

Our focus of interest was on payments that were provided on an individual, universal or unconditional basis. Unfortunately, none of the identified studies directly compared the mental health effects of individual payments with those made on a household basis, and only one explored the effects of payments which were close to universal. As such, our ability to draw inferences on the potential mental health effects of these tenets is limited.

However, several studies directly compared the mental health outcomes associated with payments provided unconditionally with those offered on a conditional basis and their results are striking. Although few in number...

studies have consistently identified considerable improvements in mental wellbeing when the conditionality associated with traditional welfare payments are removed or replaced with more supportive, tailored interventions.

In Finland, researchers identified significant increases in general satisfaction with life (7.32 vs 6.76, p<0.001) and confidence in one's future (58.2% vs 46.2%, p<0.0001) amongst those in receipt of UBI payments compared with those who continued to receive standard unemployment benefits, even though the unemployment benefit was of higher monetary value (Kela, 2020). Significant improvements in perceived cognitive functioning were also observed, with a significantly higher proportion of UBI recipients reporting their memory (22% vs 16.1%, p=0.001); learning (23.8% vs. 16.7%, p<0.001); and concentration (16.1% vs 10.3%, p<0.001) was 'very good'. Self-perceived general health was likewise significantly higher among UBI participants, with a higher proportion reporting their health was good or very good (58.5% vs. 51.4%, p=0.05). Lastly, UBI recipients reported significantly fewer subjective feelings of stress (17% vs 25%, p=0.0005); experiences of depressed mood (32.4% vs 22.3%, p<0.001) and experiences of

apathy (35.9% vs 24.4%, p<0.001).

Overall, at the end of the study, almost a quarter of those who didn't receive UBI payments (24%) were found to have Mental Health Inventory scores indicative of a mental health difficulty, compared with less than one fifth of UBI recipients (17%) (p=0.001) (Kela, 2020).

It is worth noting that, as contrasted with UBI pilots in other High-Income Countries, Finland's Basic Income experiment was statutory and randomised, significantly increasing confidence in their findings. In addition, all of these findings were found to remain significant after controlling for sociodemographic variables, including gender, age, education, household structure and income.

Barcelona's B-MINCOME study compared traditional welfare benefits, with the effects of four forms of cash payments, namely; (1) cash payments received on an unlimited basis; (2) cash payments received on a limited basis (whereby they were incrementally reduced according to any household earnings in excess of the basic threshold); (3) cash payments received unconditionally; and (4) cash payments received conditionally on the basis of involvement in a social programme (Kirchner et al. 2019). Although B-MINCOME had a complex study design, with various different treatment groups, the key distinction between B-MINCOME payments and traditional welfare benefits in Spain, was that they were not granted on the basis of being legally unemployed and providing proof of actively seeking employment. Rather they were granted to low-income households irrespective of employment status and the only condition applied to one of the study arms was the requirement to engage in a community-based group.

Again...

significant improvements in wellbeing among all four groups receiving B-MINCOME payments were observed in comparison with the control group who continued to receive standard benefits.

General satisfaction with life, assessed according to a 10-point Likert scale, increased by 27% amongst B-MINCOME groups as a whole, and at the end of the study the probability of participants reporting a 'high level of life satisfaction' (rating their wellbeing as ≥ 7/10) was 11% higher amongst those receiving any form of B-MINCOME payment compared with those in the control group (Kirchner et al. 2019). Self-reported experiences of mental illness were also found to be significantly lower (9.6%), although it is not clear from the study reporting exactly how 'experiences of mental illness' were enquired about. In comparison with the control group, the biggest differences

in these outcomes were found amongst those receiving payments in an unlimited fashion and amongst those receiving payments based on their involvement in a social participation programme. Interviews with participants also found that a renewed sense of hope for the future was ubiquitous among recipients (The Young Foundation, 2019; 2020).

The Netherlands Social Assistance Experiments sought to explore whether changes to social security payments could improve employment rates. As such, a sample of participants who were already in receipt of welfare benefits had their payments changed in one of three ways, with a control group who remained on welfare benefits as usual. In one group all conditionality surrounding social security was removed, in a second group increased help and guidance in finding employment was provided and in a third group recipients were allowed to earn extra money before their social security payments were withdrawn (Verlaat et al. 2020). A survey of all groups conducted at the end of the pilot identified positive treatment effects in terms of subjective wellbeing for all three interventions compared to the control group, although these did not reach statistical significance. However, a statistically significant treatment effect on participant's self-efficacy (defined as a combined measure of self-confidence and perceived ability to find work) was found among both those who had had the conditionality surrounding their benefits removed (0.489, p=0.047) and among those who had received additional help in finding employment (0.573, p=0.055) (Verlaat et al. 2020). In addition, in interviews, participants in both of these groups consistently reported increased wellbeing and a reduction in stress and anxiety.

The Ontario Basic Income Pilot (OBIP) was first launched in 2018, with the aim of providing a fixed income for three years to residents of three communities (Hamilton, Thunder Bay and Lindsay). Potential participants were those aged 18 to 64 who were living on low or no income, and data was collected from 4000 individuals receiving payments and 2000 control participants (Mendelson, 2019). Although, all of the tenets of UBI were therefore clearly not met, the pilot did provide a guaranteed, unconditional income equivalent to 75% of the Low-Income Measure (Mendelson, 2019). Two cross-sectional surveys of OBIP recipients subsequently explored recipients' experiences of these payments in comparison with the traditional welfare assistance payments they had previously

been receiving (Basic Income Canada Network, 2019; Ferdosi et al. 2020). Both identified reported reductions in stress or anxiety (reported by 86-88% of recipients) and in symptoms of depression (reported by 73-83% of recipients). Improvements in self-reported mental wellbeing (80%), a reduction in feelings of anger (78%), improved self-confidence (81%) and a more hopeful outlook on life (86%) were also cited. Qualitative interviews with OBIP recipients similarly identified an alleviation of the stress and anxiety experienced under traditional welfare programs and a renewed sense of being able to make plans for their future, as a result of the financial security created by basic income (Hamilton & Mulvale, 2019).

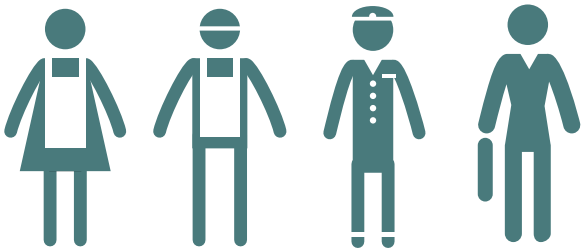
In 1996, the Eastern Band of the Cherokee Indians (EBCI) in rural North Carolina introduced a casino on their reservation, which provided each of its roughly 15,000 inhabitants with a proportion of the profits (Costello et al. 2010). Payments were subsequently made to these members biannually, unconditionally and per capita, while children's payments were placed in a trust fund which they could access when they reached 18 (Costello et al. 2010). This allowed for a natural experiment and longitudinal analysis, of differences in wellbeing among EBCI individuals in receipt of the casino dividends and individuals from the surrounding area who had not. Subsequently, in 2019, Singh and colleagues explored the effect of these UBI-like payments on 'self-reported lifespan' (SRL) among young adults who had received casino dividends since childhood, compared with a sample of young adults who had not. Self-reported lifespan is a measure of an individual's perceived life expectancy, with lower subjective survival indicating the anticipation of inevitable negative life events, with considerable implications for mental wellbeing.

The study found a mammoth 15.23-year mean increase in Self-reported lifespan among young men who had received payments compared with those who had not.

While it was not the purpose of this review to explore the effects of previous pilots on rates of employment, given the main argument for applying conditions to the receipt of benefits is to encourage individuals to return to work, this is worth mention.

In none of the above studies was the removal of conditionality associated with a significant reduction in the rates of employment amongst recipients.

In fact, most studies identified that no significant effect on employment was observed at all. In the Netherlands findings from all three intervention groups indicated slight, non-significant increases in labour participation compared with controls, with a particular increase in the percentage of people securing permanent contracts amongst those who had the conditionality associated with their benefits removed (Verlaat et al. 2020). Similarly, in Finland, researchers noted a non-statistically significant positive effect on employment, particularly in certain categories, such as families with children (Kela, 2020). In addition, a comprehensive review of basic income studies in North America, which included MINCOME, the Alaska Permanent Fund Dividend, and the Eastern Band of Cherokees casino dividend program concluded there was no evidence to suggest an average worker will drop out of the labour force when provided with unconditional cash, even



when the transfer is large (Marinescu, 2018). Finally, a further systematic review of UBI interventions from around the world found evidence that labour supply actually increases globally among adults, men and women, young and old, and that the insignificant reductions in employment among some groups do not reduce the overall labour supply since it is largely offset by increased supply from other members of the community (De Paz-Báñez et al. 2020).

Parenting and Child Mental Health, Wellbeing and Development

In only one site have the effects of payments similar to a UBI on children's mental health, wellbeing and development been explored, however numerous studies of this scheme have been conducted and their results are both promising and significant. The Great Smokey Mountains Study (GSMS) offers a rare opportunity to assess differences in development and wellbeing among children from the Eastern Band of Cherokee Indians (EBCI) who received UBI-like payments and a sample of children who did not over time.

In two such studies researchers explored the prevalence of behavioural and emotional disorders amongst EBCI

children over the course of their childhood. They found that among EBCI children who received payments, levels of psychiatric symptoms fell significantly, with a clear downward trend in the prevalence of these disorders amongst EBCI children in receipt of payments over time. Specifically, Akee and colleagues (2018) identified a reduction in the prevalence of symptoms of behavioural disorders (-23% of a standard deviation) and emotional disorders (-37% of a standard deviation) among EBCI children who had received UBI-like payments for four years. Similarly, Costello and colleagues (2003) identified a 40% decrease in symptoms of behavioural disorders (such as conduct and oppositional disorders) amongst EBCI children who were lifted from poverty as a result of payments (p=0.002). Given the known trajectory of such disorders in childhood toward substance misuse, criminality and unemployment in adulthood, this is of considerable significance.

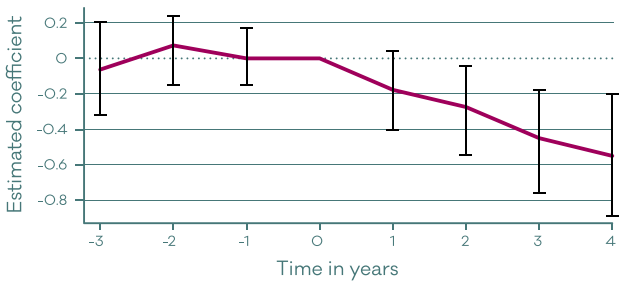
Secondary analyses conducted by both studies subsequently explored which factors mediated these findings. Both found that...

income changes alone did not account for the observed improvements in child wellbeing, rather the most significant mediating factor was an improvement in parental supervision.

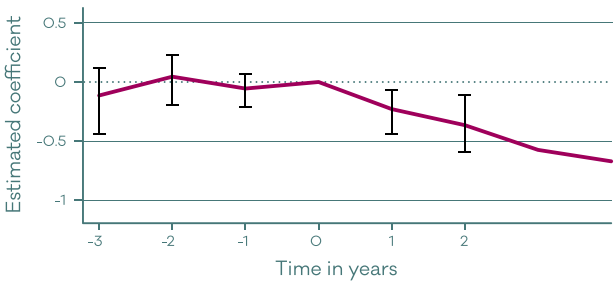
In fact, in isolation, the effect of changing poverty status was nonsignificant, while the effect of increased parental supervision accounted for approximately 77% of the reduction in the number of psychiatric symptoms observed. Further analysis found that the increased parental supervision amongst those receiving payments was almost exclusively due to reduced time constraints within the family. Simply put, providing unconditional payments offered parents the opportunity to spend more quality time with their children, with significant and long-lasting benefits.

A further study conducted in 2010, assessed the prevalence of psychiatric disorders amongst the original sample of EBCI children

Panel A. Coefficients on EBCI children by wave for behavioural disorder



Panel B. Coefficients on EBCI children by wave for emotional disorder



Note: From "Akee, R., Copeland, W., Costello, E. J., & Simeonova, E. (2018). How does household income affect child personality traits and behaviors?. American Economic Review, 108(3), 775-827."

at 21 years of age (Costello et al. 2010). This additionally allowed for a comparison of the effects of onset and length of exposure to payments (participants aged 12, 14 and 16 at the onset of payments). In doing so it was identified that...

EBCI adults who had benefited from payments as children were significantly less likely to suffer from any form of psychiatric disorder as adults than adults who had not received payments as children (30.2% vs 36.0%; p=0.001) and were less likely to suffer from substance use disorders in particular

(28.6% vs 30.6%; p=0.014), with a reduction in alcohol (20.3% vs 23.8%; p=0.006) and cannabis use or dependence (16.7% vs 19.5%; p=0.049). On closer analysis these differences were most pronounced amongst the youngest EBCI study cohort (aged 12 at onset of casino dividends) who had had the longest exposure to the intervention, among whom there was a lower prevalence of psychiatric disorders (31.4%) in comparison with EBCI adults who had been older (aged 14) when payments were initiated (41.7%, p=0.005).

Finally, one further study explored whether length of exposure to UBI-like payments in childhood (six years versus two years) resulted in differences in years of education, school attendance, probability of being arrested and probability of dealing drugs. They found that...

children with longer dividend exposure were 22% less likely to have been arrested at ages 16-17 and 7% less likely to have dealt drugs by age 21

(Akee et al. 2010).

For children who were in poverty at baseline, $4,000 p.a. in extra income was associated with completing an extra year of education, and school attendance increased by four days per quarter. Again, secondary analysis identified that the most significant factors accounting for this change, was an improvement in parental supervision (by 3-5%) due to reduced time constraints within the family.

It is unfortunate that race/ethnicity in these studies was almost entirely merged with the intervention, making it difficult to differentiate the effects of the UBI like payments from the effects of being an EBCI member. However, it would appear race alone did not solely account for the observed findings, as onset and length of exposure to UBI-like payments were also of particular significance, suggesting these payments accounted for at least some of the observed effect. As such, they suggest that UBI-style interventions introduced in childhood can not only hold immediate benefits for children's mental health, but can also influence outcomes into adulthood, particularly if introduced early. More specifically...

providing payments in a way which enables rather than prevents parents from spending

quality time with their children are of particular benefit.

Such findings may be of benefit to policymakers when considering welfare reforms with regard to children's mental health outcomes.

Mental Health Service Utilisation

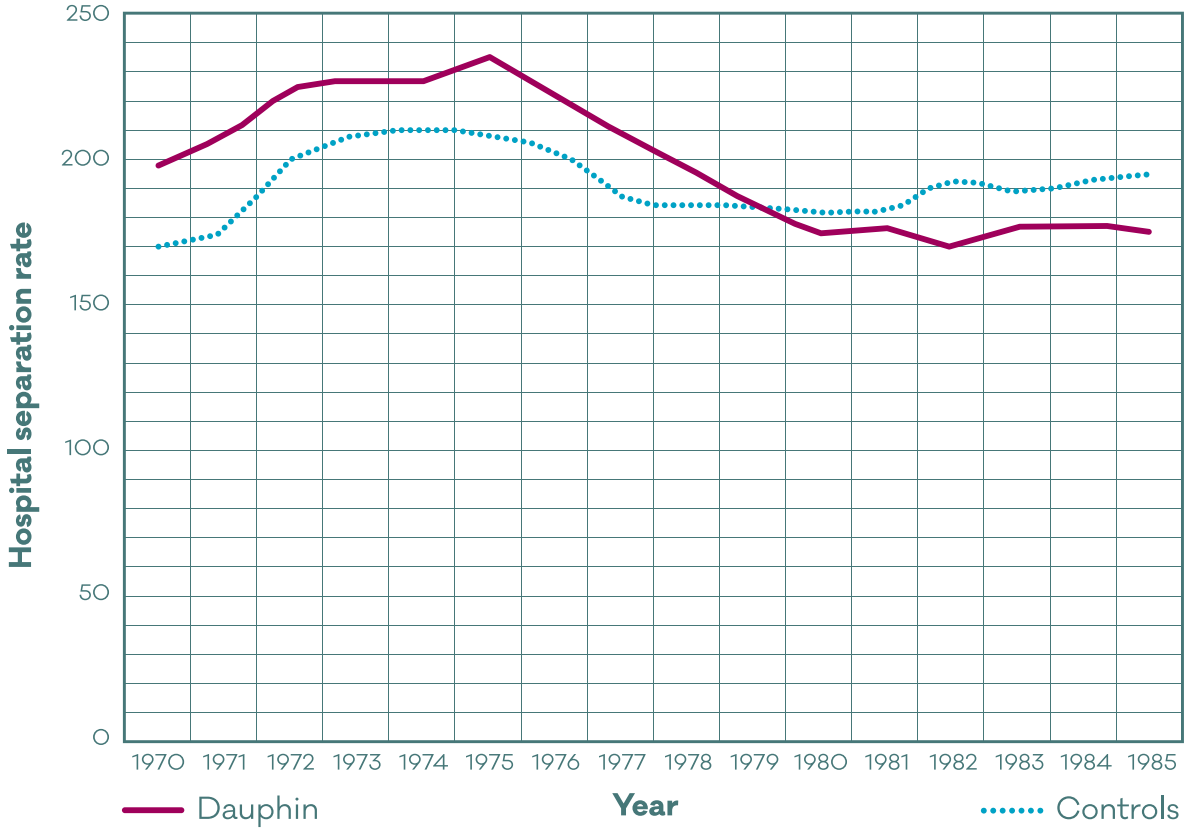
Few studies have rigorously explored the effects of UBI on mental health service utilisation, and self-reported service use among recipients from cross-sectional surveys have produced conflicting results. In Ontario a large percentage of recipients reported reductions in visits to health practitioners (33%) and hospital emergency rooms (37%) (Ferdosi et al. 2020). Conversely, in Finland, no difference in the reported number of hospital attendances or general practitioner visits were observed between groups (Kela, 2020).

However, of particular interest is the work of Forget (2011) who used health administration data to examine whether any changes in healthcare utilisation occurred in Dauphin during the MINCOME pilot of the 1970's. MINCOME payments were not universal, nor were they individual, however they were granted to low-income households regardless of employment status, and 30% of Dauphin residents ultimately received them during the trial. The aim of this study was therefore to explore whether this change in the conditionality associated with receiving social security benefits had any spillover effects for wider population health in Dauphin, compared with surrounding areas where no such change occurred. In doing so it was identified that...

hospital admissions reduced by 8.5% during the trial in comparison with surrounding local areas.

Further analysis identified this reduction was primarily due to a significant fall in the number of admissions related to "accidents and injuries" and "mental health diagnoses". Physician visits were also noticed to follow a similar trend, with a significant reduction in visits related to mental health diagnoses for the duration of the pilot. In addition, the decline in Dauphin hospitalisation rates relative to rates in the surrounding areas stopped when the trial ended, indicating MINCOME payments were at least partially driving these changes. For policymakers in Scotland, where mental health and drug-related hospital admissions continue to soar, on a purely economic level, these findings should be of considerable interest.

Fig. 1 - Hospitalisations per 1000 people by fiscal year. (Dauphin, MB versus controls, 1971-1985).



Note: From "Forget, E. L. (2011). The town with no poverty: The health effects of a Canadian guaranteed annual income field experiment. Canadian Public Policy, 37(3), 283-305.

Health Risk Behaviours

While not the focus of this review, a smaller number of the studies we reviewed explored the impacts of UBI-style payments on health risk behaviours, including dietary habits and substance misuse. The human and economic costs of such health risk behaviours are vast. In Scotland specifically, where childhood obesity is endemic (Milovanska-Farrington, 2020) and drug related deaths are the highest in Europe (Nicholls et al. 2019), this is an area of particular interest where relatively small changes on an individual level may have wide ranging implications for population health. In addition, the link between physical health and wellbeing is well established and as such these findings are also pertinent to policymakers interested in the mental health effects of UBI.

In Alaska, longitudinal administrative data was used to explore whether variations in the value of UBI-like payments affected childhood obesity rates. This was possible as Alaskan payments vary annually with oil prices, and researchers were therefore able to explore whether differences in the cumulative amount received by age 3 affected obesity status. In doing so, they identified that...

controlling for all other variables, an additional $1,000 in accumulated payments reduced the relative probability of being obese as a three-year old by 5.2 percentage points

(Watson, Guettabi & Reimer, 2019).

Similarly, in Western Carolina researchers found that receiving UBI-like payments in childhood reduced the probability of obesity by 2- 4% at age 21 for every $5,000 increase in annual household income (Akee et al. 2013). However, it must be noted that these findings varied according to initial household socio-economic status, with an initial increase in BMI among children from lower income households. The authors concluded this suggests that not all of the negative effects of childhood poverty can be addressed by UBI. These observations also support the findings of recent study which analysed longitudinal data collected in Scotland and identified a positive association between maternal hours worked and child BMI, in addition to an increase in the likelihood of children being overweight or obese with increasing maternal hours worked (Milovanska-Farrington, 2020).

As policymakers and others often express concern that poor households may use UBI-like payments to buy tobacco, alcohol and other recreational substances, exploring the association between cash transfers and substance use is an area of particular interest (Gibson et al. 2018). Previous reviews of cash transfers in LMIC have identified that total expenditures on temptation goods actually reduce in response to UBI, suggesting that concerns about the use of cash transfers for alcohol and tobacco are unfounded (Evans & Popova, 2014). Yet few studies exploring the effects of cash transfers on drug or alcohol consumption in High Income Countries have been conducted (Gibson et al. 2018). A survey of cash transfer recipients in Ontario did identify that almost half (48%) reported a reduction in alcohol consumption. It has also been hypothesised that the large reduction in hospital attendances for "accidents and injuries" observed in Dauphin during the MINCOME pilot, may reflect a reduction in alcohol misuse (Forget, 2011). In addition, the findings from Western Carolina, where, as previously discussed, a reduction in the prevalence of substance use disorders amongst young adults who had received UBI like payments since childhood was identified, suggest payments may contribute to reducing substance misuse. However, other studies have identified that infrequent, high value

payments appear to lead to temporary spikes in the consumption of substances with implied benefits in staggering payments over the year (Evans & Moore, 2011; Watson, Guettabi & Reimer, 2020).

Given Scotland's unique relationship with alcohol and other recreational substances, clearly further research is needed to establish how the population may respond to such a form of social provision. However, these preliminary findings suggest the impact of UBI on drug consumption is largely influenced by the length of exposure to and the value of, cash transfers, with staggered payments beginning in childhood appearing to have a beneficial effect.

Social Cohesion and Social Participation

According to proponents, one of the key benefits of UBI is its unique ability to enhance social cohesion through reducing poverty stigma and narrowing the growing social divide (Tory & Jenner, 2019). Our findings go some way to supporting this theory, with reports of increased social participation, reduced perceptions of stigma and enhanced relationships with family and friends being cited in several of the identified studies. In Finland, significant reductions in feelings of loneliness and an increased confidence in one's ability to influence societal matters (28.9% vs 22.6%, p<0.0001) were found among recipients compared with controls (Kela, 2020). Similarly, in the Netherlands, enhanced perceptions of freedom, autonomy and social integration were identified during interviews with recipients who had had the conditionality associated with their benefits removed (Kool, 2019), while in Barcelona time spent on social activities or with family and friends significantly increased among recipients (Kirchner et al. 2019). A survey of recipients from Ontario also found improvements in social engagement, through increased time with family (57%) or on recreational activities (63%), as well as an increased sense of dignity (61%) and a reduction in feelings of marginalisation (47%) (Basic Income Canada Network, 2019). Finally, a qualitative evaluation of MINCOME identified widespread reports of psychological distress as a result of the perceived social stigma associated with receiving traditional welfare benefits. This contrasted with the experiences of MINCOME recipients, who reported increased social participation and a large reduction in feelings of shame and stigma due to the avoidance of having

their work and personal lives monitored (The Young Foundation, 2019;2020). Although further methodologically robust studies are warranted, these findings would suggest that minimising the barriers to accessing social security benefits and reducing the conditionality applied to them, would contribute to reducing poverty stigma, with implied societal and population benefits.

Conclusions

The purpose of this review was to examine the existing literature on previous UBI pilots, in order to assess the relative influence of individual, universal and unconditional payments on mental wellbeing. In Scotland, where close to a quarter of all children and a fifth of 'working age' adults live in poverty, public and political interest in UBI is growing. There is therefore a need for evidence on the potential benefits and drawbacks of the policy.

Unfortunately, given the limited available evidence, it is not possible to draw any conclusions on the potential benefits or pitfalls of universal cash transfers. However, several pilots did directly compare the mental health effects of conditional versus unconditional cash transfers and their findings are striking. For adults, studies consistently found that removing the conditions associated with traditional welfare benefits was associated with improved mental wellbeing among participants, suggesting this holds considerable gains for population mental health. From a reduction in reported feelings of stress, symptoms of psychiatric disorder and perceptions of stigma and marginalisation, to overall improvements in mental wellbeing and better cognitive functioning, studies consistently reported clear and significant improvements in mental health when the conditionality associated with traditional welfare was removed or replaced with more supportive, tailored, unconditional interventions.

Furthermore, while UBI opponents assert that the conditions associated with traditional welfare benefits are necessary in order to ensure individuals are motivated to return to work, in the studies we identified the removal of conditionality had no effect on either the rate of employment amongst recipients or their motivation for and attempts to secure it. Although the current review is limited to the previous UBI pilots, these findings echo the results of other benefit sanction reviews. In 2016, a comprehensive review by the National Audit Office concluded there was limited evidence sanctions actually worked and concluded the sanctions system was in urgent need of reform (National Audit Office, 2016). More recently, in the most extensive study of welfare conditionality in the UK ever conducted, sanctions were overall found to be ineffective at getting jobless people into work (Economic and Social Research Council [ESRC], 2018). Moreover, it emerged that they do little to enhance motivation to find employment and for some individuals, increase their risk of exposure to further poverty, ill-health and even survival crime (ESRC, 2018). Apportioning benefit sanctions based on the failure to comply with the current conditionality attached to Universal Credit would therefore appear not only detrimental to mental wellbeing,

but also potentially harmful, ineffective and unnecessary.

There was also some preliminary evidence to suggest that removing conditionality is associated with a decrease in healthcare utilisation and reduction in health-risk behaviours, including alcohol and substance misuse. However more rigorous research is needed in order to definitively establish this, as well as further studies to determine the particular tenets of UBI which contribute to these reductions. Nonetheless, given the staggering human and financial cost of hospital admissions, as well as drug and alcohol misuse in Scotland, these results are of considerable interest.

Finally, in the studies of unconditional cash transfers for children, we identified significant and long-lasting benefits in their mental health, particularly when these were introduced early. The detrimental effects of growing up in poverty for children's mental health and overall development are well known. However, findings from Western Carolina indicate that income changes in isolation did not significantly mediate improved mental health outcomes for children. Rather it was increased parental supervision and an improvement in parent-child relationships due to reduced time constraints within the family which were central. As such, Scotland's efforts to improve children's mental wellbeing through reducing childhood poverty will be ineffective if the wider effects of all policies on children's wellbeing are not evaluated. This must therefore be carefully considered by policymakers when determining the most effective strategies for improving children's wellbeing, with implications that providing low-income households with non-stigmatising, unconditional payments offers parents the opportunity to spend more quality time with their children, with significant and long-lasting benefits.

In summary, it was not the purpose of this review to explore the economic impact or affordability of UBI, or indeed its ability to lift people out of poverty, rather our aim was to explore the impact of UBI-like schemes on mental health and wellbeing. Although none of the identified studies evaluated the mental health effects of a UBI in its purest sense, given none of these pilots were truly universal, our findings add an important contribution to our understanding of how the current welfare system could be improved to better support everyone's mental health. Numerous reports have highlighted the detrimental mental health impacts the UK's existing social security system holds for claimants. It is complicated, difficult to navigate and devoid of values of kindness, dignity or respect. Our findings would suggest that removing some of the existing barriers to accessing welfare benefits could lead to better population wellbeing and may reduce the prevalence of mental ill health. A range of models which remove the harsh conditionality currently associated with Universal Credit should therefore be explored, whether that be UBI; a Guaranteed Minimum Income to ensure that household income cannot fall below a certain threshold; or a Negative Income Tax model. In addition, the included studies suggest that most people who will

benefit from unconditional cash transfers will also engage in work to some extent. It is therefore crucial that such policies are also combined with those that promote the mental health of those in work, through ensuring fair and equitable pay, a better work-life balance and reducing employment insecurity. Our mental health is a powerful asset. It is a key that allows us to unlock a wide range of health and social advantages. Only through such transformational changes to the social welfare system and the world of work, will we be able to reduce Scotland's mental health inequalities and unlock both the potential of both our current working age population, as well as the potential of future generations.

Strengths and limitations

Despite the promising findings of these identified studies, they were not without their limitations and methodological flaws. In the first instance, research on UBI is limited and as demonstrated by this review, almost none of the pilots which have been conducted have explored the mental health impacts of a complete UBI, with all of its defining features. The majority of studies did not explore payments which were universal in nature, instead primarily focusing on those already in receipt of welfare assistance. Almost all studies were relatively short in duration, with a lack of more longitudinal studies limiting the ability to explore the relationship between UBI and mental health over time. In addition, the majority of the studies consist of cross-sectional self-reported surveys, with few employing objective or validated mental health outcome measures. This approach means that the findings may reflect higher or lower levels of mental health problems depending on people's tendencies to self-report on this topic. In some instances, studies did not include a control group for comparison, making it more difficult to determine if the effects reported were the result of the UBI intervention. Finally, some studies were at risk of bias as a result of voluntary participation in the pilot, large percentages of participants dropping out, failure to properly account for multiple confounding factors and poor standards of reporting.

However, despite these limitations, several of the identified studies combined large sample sizes with rigorous study designs, providing credible evidence of effect and the majority of the identified studies were determined to be of medium quality. In particular, studies of the Casino Dividends granted to the EBCI provide robust evidence of the significant impact UBI can have on children's long-term mental health, while the saturation sample investigated in Dauphin, allows for an interpretation of how such a policy may affect the population as a whole.

Policy recommendations

1. If and when pilots of redistributive unconditional cash transfer schemes, such as Universal Basic Income, a Guaranteed Minimum Income or a Negative Income Tax are implemented in Scotland, they should incorporate measures of recipients' and children's mental health and wellbeing in order to evaluate the potential mental health benefits of such schemes.

2. Benefit sanctions, which often lead to unwanted stress and a worsening of mental health problems, should be halted entirely by the UK Government. In Scotland, to the extent that it is not possible to eliminate sanctions, the Scottish Government should continue to express its opposition to sanctions and continue to embark on a compassionate welfare system based on the values of dignity and respect.

3. The stigma experienced by Universal Credit claimants should be tackled. This could be partially addressed by removing some of the barriers to accessing it, through reducing the 5-week wait for payments, making advance payments available immediately and removing the current requirement to repay them over the following 12 months. In addition, the UK Government's proposals to end the Universal Credit uplift introduced during the COVID-19 pandemic should be dropped.

4. The evidence supports positive mental health outcomes from unconditional benefits for children. In order to improve children's prospects, existing unconditional benefits for children should be expanded by ending the two-child limit on tax credits and making parents of 0-3-year olds exempt from the benefit cap.

5. We welcome the commitments to doubling the Scottish Child Payment. However, we would recommend that increases to the payment should be assessed annually, to ensure that the payment is reaching all families

who might need it and to evaluate the effects of this on children's mental health, with the potential to increase both the level and reach of the payment further.

6. To further our understanding of how policies similar to UBI might affect mental health service utilisation and health risk behaviours, proposals to pilot unconditional cash transfers for low-income families in four local authority areas across Scotland should incorporate an analysis of their effect on health service utilisation and health risk behaviours.

7. Research should be conducted on both the affordability of a UBI-like scheme and its relative cost-effectiveness compared to other poverty-reducing and income-enhancing measures such as the Living Wage, the Child Payment, etc. Research comparing UBI with other models aimed at redistributing wealth amongst the population is also needed. Specifically, the relative poverty-reducing benefits of a UBI-like scheme compared to a Guaranteed Minimum Income delivered through either Social Security Scotland or through the tax system, using a Negative Income Tax model, should be evaluated. This research should take account of the potential mental health benefits of each intervention.

8. In light of the introduction of COVID-19 pandemic income supports, research should be conducted on the mental health effects of these supports on recipients.

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